

July 31st , 2018

## CURRICULUM VITAE

**Mariusz Z. Ratajczak, M.D., Ph.D., D.Sci. *d.hc.***

### ADDRESSES

Office: Stem Cell Institute  
James Graham Brown Cancer Center  
University of Louisville  
500 South Floyd St.  
Louisville, KY 40202 USA  
Phone: (502)-852-1788  
Fax: (502) -852-3032

Home: 15311 Champion Lakes Place  
Louisville, Ky 40245

**PLACE OF BIRTH** Szczecin, Poland

**CITIZENSHIP** American, Polish

### EDUCATION

1989	<b>D.Sci.</b>	Habilitated Doctor in Internal Medicine Central Clinical Hospital WAM, Warsaw, Poland; based on published papers and prepared thesis: " <i>Changes in the biochemical parameters related to the bone marrow transplantation. Clinical and experimental studies.</i> "
1986	<b>Ph.D.</b>	Experimental Hematology, Polish Academy of Sciences, Warsaw, Poland; based on the dissertation: " <i>Fetal liver as a source of hematopoietic stem cells for transplantations. Experimental and technical aspects.</i> "
1981	<b>M.D.</b>	Pomeranian School of Medicine, Szczecin, Poland; Diploma Magna cum laude; first in the class (among 280 students).

### POSTGRADUATE TRAINING

1989-1992	Research Fellowship	University of Pennsylvania, Philadelphia, USA
1984-1986	Research Fellowship:	Polish Academy of Sciences, Warsaw, Poland
1984-1989	Residency:	CSK WAM, Warsaw
1986	Board Certification	Internal Medicine, Poland
1981-1984	Internship:	Pomeranian Medical School, Szczecin, Poland

## ACADEMIC APPOINTMENTS

2018 -	Profesor	Director Stem Cell Institute, Division of Hematology/Oncology, Department of Medicine, James Graham Brown Cancer Center, University of Louisville, Louisville, USA
2015-	Visiting Professor	Department of Regenerative Medicine Warsaw Medical University, Warsaw, Poland
2007 - 2018	Professor	Director Stem Cell Institute, James Graham Brown Cancer Center, University of Louisville, Louisville, USA
2007-	Visiting Professor	Kansai University, Osaka, Japan.
2008-	Visiting Professor	Fudan University, Shanghai.
2006- 2014	Professor	Department of Physiology, Pomeranian, Medical University, Poland.
2002–	Professor	Department of Microbiology and Immunology, University of Louisville, KY, USA
2001 - 2007	Director	Stem Cell Biology Program, James Graham Brown Cancer Center, Louisville
2001–	Professor	Medicine, Department of Medicine, University of Louisville, Louisville
1999 - 2005	Professor	Head of Department of Transplantation at Polish-American Children's Hospital, CMUJ, Krakow, Poland
2000–2001	Research Associate Professor	Department of Pathology & Lab. Medicine, University of Pennsylvania School of Medicine, Philadelphia
1999–2000	Research Associate Professor	Medicine, Department of Medicine, University of Pennsylvania School of Medicine, Philadelphia
1998–1999	Research Assistant Professor	Medicine, Department of Medicine, University of Pennsylvania School of Medicine, Philadelphia
1996–1998	Research Assistant Professor	Department of Pathology and Laboratory Medicine, University of Pennsylvania School of Medicine, Philadelphia
1992–1995	Senior Research Investigator	Department of Pathology, University of Pennsylvania School of Medicine, Philadelphia
1989–1994	Associate Professor	Internal Medicine, Center for Clinical and Experimental Medicine, Polish Academy of Sciences, Warsaw
1986–1989	Research Adjunct	Center for Clinical and Experimental Medicine, Polish Academy of Sciences, Warsaw
1981–1984	Research Assistant	Department of Clinical Gastroenterology, Pomeranian School of Medicine, Szczecin

## AWARDS AND HONORS

2014	Karl Landsteiner Life Achievement Award from the German Society of Transfusiology and Hematotherapy for discovery of VSELs and for identification of new mechanisms regulating stem cell mobilization.
2009- now	Visitng Professor, Kansai University, Osaka, Japan
2010	Honorary Professorship, Ji Nan University, Guangzhou, China
2008	Distinguished Faculty Award for Outstanding Scholarship and Research from the President of the University of Louisville.
2008	Doctor honoris causa from the Medical University of Silesia.
2008	Foreign Member of the Polish Academy of Art and Science
2007	Mosaic Award from Jewish Family and Vocational Service.
2006 – now	Visiting Professor Fudan University, Shanghai, China.
2006	The Annual Award in Medicine and Biology from The Foundation for Polish Science (The highest scientific award in Poland).
2006	Hoening Endowed Chair in Cancer Biology at James Graham Brown Cancer Center, University of Louisville, Ky
2005	Sniadecki Award from Polish Academy of Sciences
2004	Individual Award from Polish Ministry of Health for Scientific Achievements
2002	Chad Kopple Spirit Award from the Leukemia & Lymphoma Society
2001	Honorary Member of Polish Society of Cytobiology and Histochemistry
1986	Ph.D. thesis with Award
1981	M.D. <i>magna cum laude</i> – first in class of 280 students
1980	Nicolaus Copernicus Award from Polish Ministry of Health
1979	Special Award for Young Student Scientists from Polish Academy of Sciences

## MEDICAL & SCIENTIFIC SOCIETY MEMBERSHIPS

2008-	Foreign Member of the Polish Academy of Art and Science
2007-	Polish Academy of Sciences Committee for Pathophysiology
1999-	International Society of Experimental Hematology
1999–	American Society for Cancer Research
1997– 2006	Polish Academy of Sciences, Committee for Tissue Culture & Molecular Pathology
1993–	American Society of Hematology
1986– 2005	Polish Academy of Sciences, Committee for Experimental Hematology,
1981–	Polish Medical Society

## EDITORIAL POSITONS

### Current:

1997-present	<i>Stem Cells</i> , Editorial Board
2003-present	Editor, <i>Central European Journal of Biology</i>
2004-present	<i>Journal of Cellular and Molecular Medicine</i> , Editorial Board
2005-present	<i>Journal of Applied Genetics</i> , Editorial Board
2014-present	Editor, <i>Journal of Cancer Stem Cells Research</i>
2015-present	Editor, <i>Folia Histochemica et Cytobiologica</i>
2015-present	<i>Cell Transplantation</i> , Editorial Board.
2015-present	<i>Leukemia</i> , Associate Editor
2016-present	<i>Clinical and Tranlational Medicine</i> , Section Editor
2016-present	Editor-in-Chief, <i>Stem Cell Reviews &amp; Reports</i>

**Past:** 2008-2012 Consulting Editor, *Journal of Clinical Investigation*, 2006-2014 Section Editor *Leukemia*, 2012-2014 Associate Editor *Journal of Blood Cancer*. 2008–2010, Assoc. Editor, *Experimental Hematology*,

Reviewer for: *Science, Journal of Clinical Investigation, Blood, Proceedings of National Academy of Sciences USA, Journal of Cell Biology, Cancer Research, Molecular cancer Research, Experimental Cell Research, Experimental Hematology, Stem Cells, Leukemia, Nucleic Acids Research, Experimental Neurology*

#### Grant Study Sections:

2008 - 2009 National Institute of Health – Hematopoiesis Study Section – standing member  
 2010 - 2012 National Institute of Health – Molecular and Cellular Hematology – standing member  
 2017-2022 National Institute of Health, T32 PhD Training Grant Study Section

#### Ad hoc:

2017 - National Heart, Lung and Blood Institute, Molecular and Cellular Hematology – ad hoc  
 2016 - National Heart, Lung and Blood Institute, Molecular and Cellular Hematology – ad hoc  
 2015 - National Heart, Lung and Blood Institute, Molecular and Cellular Hematology – ad hoc  
 2014 -- National Heart, Lung and Blood Institute, Molecular and Cellular Hematology – ad hoc  
 2013- National Institute of Health, Tumor Microenvironment Study Section – ad hoc  
 2008- National Institute of Health, Intercellular Interactions Study Section – ad hoc  
 2007- National Heart, Lung and Blood Institute, Hematopoiesis Study Section – ad hoc  
 2006- National Heart, Lung and Blood Institute, Hematopoiesis Study Section – ad hoc  
 2006- National Institute of Health, Hematopoiesis Special Panel – ad hoc  
 2005 - National Heart, Lung and Blood Institute, Hematopoiesis Study Section Special Panel  
 2005- National Heart, Lung and Blood Institute, Hemostasis/Thromb. – ad hoc  
 2005- National Heart, Lung and Blood Institute, Stem Cell Therapy Centers  
 2004- National Cancer Institute Review Group, Clinical Studies

## GRANT SUPPORT

NIH 2R01DK07420-10 07/31/17-06/30/21  
 (PI: Ratajczak, MZ)  
 “Novel mechanisms involving complement cascade in stem cell trafficking”.

The aim of this study is to investigate a role of complement in homing and mobilization of hematopoietic stem cells.

NIH T32 HL134644-01A1 (contact PI: Ratajczak MZ) 05/01/18-04/31/22  
 “Current Trends in Stem Cell Therapies”  
 The aim of this grant to train postdoc in area of stem cell research and regenerative medicine.

NIH 1R01HL112788-01A1 (PI: Ratajczak, MZ) 03/31/17-02/28/19  
 Bioactive Lipids in Stem Cell Homing and Mobilization  
 The role of bioactive lipids S1P and C1P in homing and mobilization of HSPCs.  
 No cost extension

#### Past Research Support (past three years)

NIH 1 R01: DK07420 03/01/07-02/29/17  
 Ratajczak, MZ (PI)  
 Novel hematopoietic effects of C3 cleavage fragments.

NIH 2P01HL078825-06 07/01/11-05/31/16  
 (PI: Bolli R)  
 Protection of Ischemic Myocardium- CORE C

**INVITED LECTURES (selected)**

- September 23, 1992. "Antisense oligodeoxynucleotides as probes for studying human hematopoiesis". Jahrestagung der Deutschen Gesellschaft fuer Haematologie und Onkologie, Berlin, Germany.
- June 9, 1993. "Antisense strategy. The perspectives of therapeutical use of antisense oligomers in the treatment of human leukemias. Symposium in memory of Rudolf Virchow, Szczecin, Poland.
- June 14, 1993. "The role of receptors with intrinsic tyrosine kinase activity in regulation of normal human haematopoiesis. V Annual Conference on Cell Biology, Wroclaw, Poland.
- June 22, 1994. "Molecular mechanisms of the regulation of the human erythropoiesis. Clinical implications". Conference of the Polish Society of Haematology and Transfusiology, Wroclaw.
- June 26, 1994. "Oligodeoxynucleotide-based therapeutics of human leukemias." 1st Berlin Symposium on the application of molecular biology to cancer patients. Berlin, Germany.
- October 22, 1994. "Isolation, storage and expansion of CD34+ bone marrow cells. Transplantological implications". Conference on Bone Marrow Transplantation in Poland, Warsaw, Poland.
- March 15, 1995. "Oligonucleotide therapeutics for human leukemias." Antisense Therapy - International IBC. Conference. Charing Cross Medical School, London, UK.
- April 12, 1995. "Oligonucleotide therapeutics for human leukemias." The Treatment of Cancer: Beyond Chemotherapy. IBC International Conference, London, UK.
- June 14, 1995. "Molecular mechanisms regulating the proliferation of the earliest human hematopoietic cells." XVI Meeting of Polish Society of Haematology and Transfusiology. Warsaw, Poland.
- November 14, 1995. "Contemporary methods of investigation of the molecular mechanisms regulating the proliferation and differentiation of human hemopoietic stem and progenitor cells". 3rd Annual Meeting of The Polish Section of the European Cell and Tissue Culture Society. Krakow, Poland.
- June 22, 1996. "The biology of human hematopoietic stem cells. Transplantological implications". Annual Meeting on Bone Marrow Transplantation, Poznan, Poland.
- September, 24, 1996. "The role of receptors possessing intrinsic tyrosinekinase activity in regulating biology of the human earliest hematopoietic cells". International Conference on Cellular Interactions, Poznan, Poland.
- September, 24, 1996. "The pathogenesis of the anemia of chronic disorders". International Conference on Cellular Interactions, Poznan, Poland.
- June 19, 1997. "The biology of human hematopoietic stem and progenitor cells". 2nd Symposium of Tissue Cultures of Central European Countries, Krakow, Poland.
- June 19, 1997. "The new trends for isolating and ex vivo expanding of human early hematopoietic cells. Clinical implications." 2nd Symposium of Tissue Cultures of Central European Countries, Krakow, Poland.
- September 17, 1997. "The application of FACS for studying expression of the intracellular proteins". Annual Conference on Advances of Cytometry in Clinical Medicine. Poznan, Poland.
- September 17, 1997. "The application of FACS for isolating human earliest hematopoietic cells". Annual Conference on Advances of Cytometry in Clinical Medicine. Poznan, Poland.
- September 24, 1997. "A new strategies for isolating and ex vivo expanding of human early hematopoietic cells. Clinical implications". XVIIIth Congress of the Polish Society of Hematology and Transfusiology. Krakow, Poland.
- May 13, 1998. "Isolation of human hematopoietic stem cells" Puget Sound Blood Center, Seattle, University of Washington.
- August 13, 1998. "New strategies for isolating human earliest hematopoietic cells". Center for Gene Therapy, Allegheny University, Philadelphia.
- September 25, 1998. "The role of chemokines in HIV infection". Annual Conference of the Polish Histochemical Society, Szczecin, Poland.
- October 6, 1998. "Hunting for the stem cells" University of Pennsylvania, Hematology/Oncology Research Conferences, Philadelphia.

May 11, 1999. "New strategies for isolation and ex vivo expansion of early human hematopoietic cells". Coriell Institute, Camden.

June 24, 1999. "Influence of HIV infection on human hematopoiesis. Clinical implications". XVIII Meeting of the Polish Society of Haematology, Lodz, Poland.

November 2, 1999. "Of CD34<sup>+</sup> cells and HIV" University of Pennsylvania, Hematology/Oncology Research Conferences, Philadelphia.

September 11, 2000. "Of CD34<sup>+</sup> cells and HIV". University of Louisville, Louisville, KY.

September 17, 2000. "New strategies to ameliorate posttransplant related thrombocytopenia" – Plenary lecture - Annual Conference of Polish Society of Hematology, Warsaw, Poland.

March 4, 2002. "The role of CXCR4-SDF-1 axis in hematopoiesis", Jewish Hospital, Louisville, Ky.

August 8, 2002. "CXCR4 – one receptor many functions", Purdue University, West Lafayette, IN.

May 29, 2003. "The role of circulating stem cells in regeneration", Plenary lecture – Annual Meeting of Polish Society of Hematology, Krakow, Poland.

June 18<sup>th</sup>, 2003. "Priming of SDF-1–CXCR4 axis: a new strategy to improve engraftment of hematopoietic stem cells." American Red Cross Holland Laboratories, Rockville, MD.

October 23<sup>rd</sup>, 2003. "The role of SDF-1-CXCR4 axis in circulation of tissue committed stem cells" Plenary lecture at 1<sup>st</sup> Annual Meeting of European Stem Cell Therapeutic Excellence Center, Cracow, Poland.

December 18<sup>th</sup>, 2003. "Tissue-committed early muscle, liver and neural cells reside in the bone marrow and can be isolated by chemotactic gradients to SDF-1, HGF/SF or LIF: A new perspective on plasticity of bone marrow-derived stem cells and aging." Plenary lecture at 2<sup>nd</sup> International Meeting on Stem Cells, Beijing, China.

January 12<sup>th</sup>, 2004. "A new perspective on plasticity of bone marrow-derived stem cells and aging". SCIRC Louisville, KY

May 16<sup>th</sup>, 2004. "Tissue committed stem cells reside in the bone marrow: novel insights into the "plasticity of adult stem cells" and the aging process. Plenary lecture at "From oocytes to stem cells. Progress in basics and applications". Prague, Czech Republic.

May 18<sup>th</sup>, 2004. "Microparticles and their effects on stem cells." Plenary lecture at 8<sup>th</sup> European Symposium on Platelet and Granulocyte Immunobiology, Rust, Burgenland, Austria.

June 7<sup>th</sup>, 2004. "Are stem cells plastic or heterogenous – that is the question." – Plenary lecture at 2<sup>nd</sup> Annual Meeting of European Stem Cell Therapeutic Excellence Center, Cracow, Poland.

July 20<sup>th</sup>, 2004. "Tissue committed stem cells (TCSC) are deposited in the bone marrow early during ontogenesis as a mobile pool of stem cells for tissue/organ regeneration. A new insight into the phenomenon of stem cell plasticity and aging". Presidential Symposium at 33<sup>rd</sup> Annual Meeting of the International Society of Experimental Hematology, New Orleans.

September 29<sup>th</sup>, 2004. "Are bone marrow stem cells plastic or heterogenous?" – Invited Speaker and Visiting Professor, Roger Williams Hospital and Cancer Center, Providence.

October 30<sup>th</sup>, 2004. "Bone marrow as a source of circulating CXCR4<sup>+</sup> tissue committed stem cells for cardiac regeneration." The 9<sup>th</sup> Myocardial Ischemia Symposium 2004. Seoul, Korea.

December 17<sup>th</sup>, 2004. "Are bone marrow stem cells plastic or heterogenous – that is the question". 3<sup>rd</sup> International Symposium on Hematopoietic Stem Cell Transplantation in Children. Poznan, Poland.

January 21<sup>st</sup>, 2005. "Incorporation of CXCR4 into membrane lipid rafts primes homing-related responses of hematopoietic stem/progenitor cells to an SDF-1 gradient." 5<sup>th</sup> International Workshop on Non-meyloablative Stem Cell Transplantation. Cancun, Mexico.

February 15<sup>th</sup>, 2005. "A novel insight into cancer metastasis" University of Alberta, Cross Cancer Institute, Edmonton, Canada.

March 3<sup>rd</sup>, 2005. "Are Bone Marrow Stem Cells Plastic or Heterogenous – That is the Question". Cancer Center at University of Indiana, Indianapolis, USA.

April 6<sup>th</sup>, 2005. "Bone Marrow as a Home of Heterogenous Populations of Nonhematopoietic Stem Cells". Harvard Medical School Boston, USA.

April 15<sup>th</sup>, 2005. "Are Bone Marrow Stem Cells Plastic or Heterogenous – That is the Question". European School of Hematology, Cascais, Portugal.

May 19<sup>th</sup>, 2005. "Stem cells our key to longevity" – Opening lecture – XII Meeting of the Polish Society of Experimental and Clinical Immunology, Lublin, Poland.

June 27<sup>th</sup>, 2005. "Isolation of cardiac progenitors from bone marrow and mobilized peripheral blood using flow sorting capabilities" – Plenary lecture at International Meeting "New Frontiers in

Cytometry”, Moscow, Russia.

September 11<sup>th</sup>, 2005. “Bone marrow as a source of non-hematopoietic stem cells”. Meeting of the Polish Society of Hematology and Transfusiology. Wisla, Poland.

September 18<sup>th</sup>, 2005. “Nonhematopoietic bone marrow-derived stem cells” – Invited Lecture 67th Annual Meeting of the Japanese Society of Hematology (JSH) and the 47th Annual Meeting of the Japanese Society of Clinical Hematology (JSCH) in Yokohama, Japan.

September 21<sup>st</sup>, 2005. “A population of embryonic-like stem cells identified in human bone marrow” Kansai University, Osaka, Japan.

October 7<sup>th</sup>, 2005. “Normal Stem Cells “Jedi” that went over to the “dark side”. Plenary lecture at 3<sup>rd</sup> Annual Meeting of European Stem Cell Therapeutic Excellence Center, Cracow, Poland.

November 4<sup>th</sup>, 2005. “UCB Hematopoietic Stem Cell Homing: Implications for Engraftment”. Case Western Reserve University. Cleveland, USA.

March 2<sup>nd</sup>, 2006. “VSEL – very small embryonic like stem cells”. Southern Society for Clinical Investigation, Atlanta, USA.

March 23<sup>rd</sup>, 2005. “Stem cells our key to longevity”. Polish Academy of Sciences, Warsaw, Poland.

April 24<sup>th</sup>, 2006. “Adult bone marrow derived very small embryonic like (VSEL) stem cells”. Annual Canadian Blood and Marrow Transplant Group Meeting, Edmonton, Canada.

May 24<sup>th</sup>, 2006. – “Novel biological aspects of bone marrow stem cells”. The 10<sup>th</sup> ESH-EBMT Training Course on Blood and Marrow Transplantation, Warsaw, Poland.

June 5<sup>th</sup>, 2006. – “In vivo and in vitro evidence that the third complement component (C3) cleavage fragments enhance platelet production during reactive thrombocytosis”. 3<sup>rd</sup> Annual Innate Immunity Meeting, Corfu, Greece.

June 10<sup>th</sup>, 2006. – “Stem cell therapies a key to longevity” XXII Annual Congress “Fetus as a patient”. Poznan, Poland

June 15<sup>th</sup>, 2006. – “Very small embryonic like stem cells” – University of Illinois. Chicago, USA.

June 24<sup>th</sup>, 2006. – “Stem cell plasticity – new paradigms” – Medical College of Georgia, Augusta, USA.

August 1<sup>st</sup>, 2006. – “Very small embryonic like (VSEL) stem cells – our key to longevity. Blood Center Milwaukee, USA.

September 15<sup>th</sup>, 2006. “Physiological and patho-physiological consequences of circulation of very small embryonic like (VSEL) stem cells”. XXIII Annual Meeting of Polish Physiological Society. Inauguration lecture, Warsaw, Poland.

September 19<sup>th</sup>, 2006 – “Very small embryonic like (VSEL) stem cells – our key to longevity and passkey to cancerogenesis”. Alfried Krupp Tumorbiology Conference, University of Greifswald, Greifswald, Germany.

October 6, 2006. –“VSEL our key to longevity”, Biology and Clinical Applications of Mesenchymal Stem Cells. Mandelieu La Napoule, France.

October 10, 2006. – “Non-hematopoietic bone marrow-derived stem cells”. 21 Annual Clinical Cytometry Society Meeting, Long Beach, CA, USA.

October 23, 2006 – “A role of SDF-1-CXCR4 axis in stem cell mobilization, trafficking and homing”. Fudan University, Shanghai, China.

October 24, 2006 – “A role of bone marrow in organ/tissue regeneration”. Fudan University, Shanghai, China.

October 26, 2006 – “The role of SDF-1-CXCR4 axis in developmental migration of normal stem cells and metastasis of cancer stem cells”. Fudan University, Shanghai, China.

November 1, 2006 – “Physiological and Pathological Consequences of Very Small Embryonic Like (VSEL) Stem Cells in Adult Bone Marrow”. Lerner Research Institute, Cleveland, OH.

November 8<sup>th</sup>, 2006 - “Physiological and Pathological Consequences of Very Small Embryonic Like (VSEL) Stem Cells in Adult Bone Marrow”. Medical College of Georgia, Augusta, GA.

November 20<sup>st</sup>, 2006. – “Very small embryonic like (VSEL) stem cells – our key to longevity. University of Pennsylvania, Philadelphia, PA.

January 9<sup>th</sup>, 2007 – “Embryonic like stem cells in adult tissues”. Case Western Univ., Cleveland, OH

January 18<sup>th</sup>, 2007 – “The role of complement in homing and mobilization of stem cells” – Univ. of Greifswald, Greifswald, Germany.

January 26<sup>th</sup>, 2007 – “Physiological and pathological consequences of a presence of circulating very small embryonic-like stem cells”. University of Dresden, Dresden, Germany.

January 31<sup>st</sup>, 2007 – “SDF-1-CXCR4 axis as regulator of stem cell trafficking”. Med. Coll. Wisconsin, Milwaukee, WI.

February 13<sup>th</sup>, 2007 – “Heterogeneous populations of stem cells reside in the bone marrow: which therapeutic implications?” “Normal and malignant stem cells 2007”, Collegio Ghislieri, Pavia, Italy.

February 22<sup>nd</sup>, 2007 – “A hypothesis for an embryonic origin of pluripotent Oct-4+ stem cells in adult bone marrow and other tissues”. University of Florida, Gainesville, FL.

March 15<sup>th</sup>, 2007 – “A hypothesis for an embryonic origin of pluripotent Oct-4+ stem cells in adult bone marrow and other tissues”. Univ. of Michigan, Ann Arbor, MI

April 28<sup>th</sup>, 2007 – “Stem cells and stem cell plasticity – fact or artifact?” – University of Southern Indiana, Evansville, IN.

May 23<sup>rd</sup>, 2007 – “VSEL and heart regeneration” – 5<sup>th</sup> EuroPCR Meeting, Barcelona, Spain.

June 14<sup>th</sup>, 2007 – “The role of complement in stem cell trafficking”. IV Innate Immunity Meeting, Porto Heli, Greece.

June 26<sup>th</sup>, 2007 – “The identification of embryonic like SSEA+ OCT-4+ CXCR4+ stem cells in adult bone marrow and cord blood”. Plenary lecture at 13<sup>th</sup> Annual Meeting of the International Society for Cellular Therapy”.

July 25<sup>th</sup>, 2007 – “The role of complement system in trafficking of stem cells”. International stem cell meeting. Foz do Iguassu, Brazil.

September 6<sup>th</sup>, 2007 – “Stem cells key to longevity” - Plenary lecture at Annual Meeting of Polish Society of Pediatric Endocrinology, Cracow, Poland.

September 7<sup>th</sup>, 2007 – “Stem cells in regenerative medicine” – Plenary lecture at Pomeranian Allergy Symposium, Szczecin, Poland.

September 19<sup>th</sup>, 2007 – “The role of bone marrow-derived stem cells in regenerative medicine – new paradigms and future directions” – Plenary lecture at 2<sup>nd</sup> Annual Congress of Genetic, Warsaw, Poland.

September 24<sup>th</sup>, 2007 – “Adult bone marrow - and cord blood-derived very small embryonic like stem cells” – Plenary lecture at International Meeting on Regeneration, Mulhouse, France.

October 6<sup>th</sup>, 2007 – “Very small embryonic-like (VSEL) stem cells – implications for aging”. Plenary lecture at European Conference on Cancer and Aging “Seneca 2007”, Warsaw, Poland.

October 8<sup>th</sup>, 2007 – “Stem cells our key to longevity”. Opening Lecture at the Central Inauguration of Academic Year of the Medical Schools in Poland. Katowice, Poland.

October 13<sup>th</sup>, 2007 – “Stem cells in regenerative medicine” – Plenary lecture at Annual Meeting of the Polish Gynecological Society. Lublin, Poland.

October 19<sup>th</sup>, 2007 – “Identification of very small embryonic like (VSEL) stem cells in cord blood”. Invited talk at Annual European Cord Blood Meeting, Paris, France.

October 27<sup>th</sup>, 2007 – “A hypothesis for an embryonic origin of pluripotent Oct-4+ stem cells in adult bone marrow and other tissues”. Plenary lecture at the 21<sup>st</sup> Century Center of Excellence Meeting, Osaka, Japan.

November 26<sup>th</sup>, 2007 – “Stem cell plasticity – revised”. Jewish Hospital Louisville, KY

December 5<sup>th</sup>, 2007 – “Bone marrow-derived stem cells”. Kentucky Lion Eye Clinic Louisville, Ky.

January 26<sup>th</sup>, - “Small cells in bone marrow”. Graft versus Host – Graft versus Leukemia symposium, Bad Aibling, Germany.

February 17<sup>th</sup>, 2008 - “Identification of VSEL stem cells in adult tissues”. Plenary lecture at ABBMT Tandem Meeting. San Diego, CA

February 23<sup>rd</sup>, 2008 – “Hypothesis for embryonic deposition of VSEL in adult tissues”. Plenary lecture at the symposium “Stem Cells: from Bench to Bedside”- organized by Swiss Institute for Stem Cell Biology. Zurich, Switzerland.

April 18<sup>th</sup>, 2008 – “A role of complement in homing and mobilization of stem cells”. Plenary lecture at Polish School of Hematology, Cracow, Poland.

May 1<sup>st</sup>, 2008. – “Small cells with great potential”. Derby Lecture at the University of Louisville, Louisville, Ky.

June 4<sup>th</sup>, 2008 – “Very small embryonic like stem cells in adult tissues” – 2<sup>nd</sup> Annual ESTOOL Meeting, Budapest, Hungary.

June 19<sup>th</sup>, 2008 – “Identification of pluripotent stem cells in adult tissues”. XVII Stem Cell Meeting, Wilsede, Germany.

June 24<sup>th</sup>, 2008 – “The studies in various murine strains with defects in activation of complement cascade (CC) reveal both pivotal and peritropic role of CC in mobilization of hematopoietic/stem progenitor cells. 5<sup>th</sup> International Conference on Innate Immunity. Chania, Greece.



August 23<sup>rd</sup>, 2008 – “Identification of very small embryonic like stem cells in adult tissues”. XIII International Congress of Histochemistry and Cytochemistry, Gdansk, Poland.

September 1<sup>st</sup>, 2008 – “VSEL – physiological and pathological consequences”. Ludwig Boltzmann Institute for Cancer Research, Vienna, Austria.

September 5<sup>th</sup>, 2008 – “The role of stem cells in aging”. Annual Meeting of the Anti-Aging Society. Warsaw, Poland

September 8<sup>th</sup>, 2008 – “The identification of VSEL stem cells in adult organs”. Opening lecture at the Annual Meeting of the Polish Society of Cell Biology and Biochemistry, Olsztyn, Poland.

September 15<sup>th</sup>, 2008 – “Stem cell therapeutics – hope and reality”. EVG Meeting, Cracow, Poland.

September 18<sup>th</sup>, 2008 – “VSEL – newly discovered population of stem cells”. 7<sup>th</sup> Stem Cell Meeting, Meersburg, Germany.

October 13<sup>th</sup>, 2008 – “Very small embryonic like stem cells (VSELs) identified in adult tissues”. Thomas Jefferson University, Philadelphia, PA.

October 17<sup>th</sup>, 2008 – “Cord blood-derived VSELs” – 20<sup>th</sup> Anniversary Cord Blood Symposium, Mandelieu, France.

November 8<sup>th</sup>, 2008 – “Identification of very small embryonic like (VSEL) stem cells in adult tissues - physiological and pathological consequences” – 2008 Taiwan International Somatic Stem Cell Symposium, Taipei, Taiwan.

November 13<sup>th</sup>, 2008 – “Stem cells and regenerative medicine”. Soochow University, Suzhou, China.

November 22<sup>nd</sup>, 2008 – “Future of stem cell therapies”. Jagiellonian University, Cracow, Poland.

December 4<sup>th</sup>, 2008 – “The novel role of complement in stem cell trafficking”. Thomas Jefferson University, Philadelphia, PA.

February 26<sup>th</sup>, 2009 – “The novel role of complement in stem cell homing and mobilization”. University of Texas, Houston, TX.

April 13<sup>th</sup>, 2009 – “Stem cells our key to longevity” – New York Blood Center, NY.

April 21<sup>st</sup>, 2009 – “Very small embryonic like stem cells, characterization and biological relevance” Annual Experimental Biology Meeting, New Orleans, LA.

April 30<sup>th</sup>, 2009 – “Stem cells in regenerative medicine”. Louisiana State University at Paddington, Baton Rouge, LA

June 6<sup>th</sup>, 2009 – “Optimization of Isolation and Further Molecular and Functional Characterization of SSEA-4<sup>+</sup>/Oct-4<sup>+</sup>/CD133<sup>+</sup>/CXCR4<sup>+</sup>/LIN<sup>-</sup>/CD45<sup>-</sup> Very Small Embryonic-Like Stem Cells (VSELs) Isolated from Umbilical Cord Blood.” 7<sup>th</sup> Annual International Cord Blood Transplantation Symposium, Los Angeles, CA.

June 14<sup>th</sup>, 2009 – “Multilineage differentiation of small Oct-4<sup>+</sup> cells isolated from adult tissues”. Weizmann Institute, Rehovot, Israel.

June 15<sup>th</sup>, 2009 – “Adult Tissues-derived Very Small Embryonic Like (VSEL) Stem Cells – Characterization, Developmental Origin and Biological Significance”, 3<sup>rg</sup> Israeli Stem Cell Meeting, Tel Aviv, Israel.

June 19<sup>th</sup>, 2009 – “Stem Cell therapeutics – hope and dangers”. XVIII Congress of Polish Society of Hematology and Transfusiology, Wroclaw, Poland.

June 23<sup>rd</sup>, 2009 – “The role of C5 complement component in stem cell mobilization”. 6<sup>th</sup> Congress on Innate Immunity, Heraklion, Greece.

September 12<sup>th</sup>, 2009 – “Very Small Embryonic Stem Cells – further characterization”. 3<sup>rd</sup> Meeting of European Vascular Biology Organization, Marseille, France.

September 17<sup>th</sup>, 2009 – “Stem cells and regenerative medicine” – 50<sup>th</sup> Congress of Polish Society of Gynecology, Lublin, Poland.

September 27<sup>th</sup>, 2009 – “Very Small Embryonic Like (VSEL) Stem Cells – Characterization, Developmental Origin and Biological Significance”. Medical University of South Carolina, Charleston, SC.

October 23<sup>rd</sup>, 2009 – “VSELs and potential clinical applications”. Nebraska University Medical College, Omaha, NE.

November 19<sup>th</sup>, 2009 – “VSELs – identification and biological role”. 3<sup>rd</sup> International Meeting on Non-Hematopoietic Stem Cells. Tübingen, Germany

November 22<sup>nd</sup>, 2009 – Very Small Embryonic Like (VSEL) Stem Cells – Characterization, Developmental Origin and Biological Significance “. University of Ulm, Germany.

November 27<sup>th</sup>, 2009 - “Non-hematopoietic Stem Cells in BM” – International Bone Marrow Transplantation Conference. Warsaw, Poland.

January 22<sup>nd</sup>, 2010 – "Innate Immunity – an underappreciated conductor of stem cell trafficking" – Kentucky Lion Eye Clinic Louisville, Ky.

January 27<sup>th</sup>, 2010 – "Developmental Origin and Biological Significance of Oct-4+ Very Small Embryonic Like Stem Cells (VSELs) Isolated From Adult Tissues" – Yale University, New Haven CT.

February 18<sup>th</sup>, 2010 – "Very small embryonic like stem cells (VSELs) and regenerative medicine". University of WV, Morgantown, WV.

March 9<sup>th</sup>, 2010 – The role of complement cascade in stem cell trafficking. ISCT Univ. of Louisville, Louisville, Ky.

April 26<sup>th</sup>, 2010 - Novel View on Stem Cell Homing/Engraftment and Mobilization – Involvement of Complement Cascade – Translational Implications. University of West Virginia, Morgantown, WV.

May 14<sup>th</sup>, 2010 – VSELs and their potential clinical applications. 1<sup>st</sup> International Conference of Frontiers of Regenerative Medicine and Biomedical Science. Guangzhou, China.

May 26<sup>th</sup>, 2010 - Umbilical cord blood (UCB)-derived CD45<sup>+</sup>/SSEA-4<sup>+</sup>/OCT-4<sup>+</sup>/CD133<sup>+</sup>/CXCR4<sup>+</sup>/Lin<sup>-</sup> very small embryonic/epiblast like stem cells (VSELs) - Potential Clinical Applications. 16<sup>th</sup> Presidential Symposium - Annual Meeting of International Society for Cellular Therapy. Philadelphia, PA.

June 3<sup>rd</sup>, 2010 – Umbilical cord blood-derived VSELs – an update. International Umbilical Cord Blood Transplantation Symposium. San Francisco, CA.

June 4<sup>th</sup>, 2010 – New strategies to accelerate engraftment/homing of UCB HSPCs. International Umbilical Cord Blood Transplantation Symposium. San Francisco, CA.

June 12<sup>th</sup>, 2010 – Future of Stem Cell Therapies. Opening Lecture - XIV Congress of Polish Society of Gastroenterology. Szczecin, Poland.

July 5<sup>th</sup>, 2010 – The role of complement system in stem cell mobilization. VII International Meeting on Innate Immunity. Rhodes, Greece.

July 14<sup>th</sup>, 2010 – VSELs – potential application in regenerative medicine. 3<sup>rd</sup> International Congress on Stem Cells and Tissue Formation. Dresden, Germany.

August 14<sup>th</sup>, 2010 – Potential application of VSELs in regenerative medicine. Burnham Institute, La Jolla, CA.

September 7<sup>th</sup>, 2010 – Very small embryonic like stem cells – a key for longevity and passkey for tumorigenesis. Feinstein Medical Institute, Manhasset, NY.

September 9<sup>th</sup>, 2010 – Umbilical Cord Blood derived VSELs- an update. 2<sup>nd</sup> International Symposium Stem Cells: from bench to bedside. Gmunden, Austria.

September 21<sup>st</sup>, 2010 – VSELs – origin, biology and clinical implications. 1st International Stem Cell Meeting on Neurogenesis. Sao Paulo, Brazil.

October 6<sup>th</sup>, 2010 – Future of Stem Cell Therapies. National Korean University, Seoul, Korea.

October 8<sup>th</sup> 2010 – Very small embryonic like stem cells isolated from adult tissues – origin, biological significance and potential applications. 22<sup>nd</sup> Annual Meeting of the Korean Society for Molecular and Cellular Biology, Seoul, Korea.

October 22<sup>nd</sup>, 2010 – VSELs - developmental origin and potential clinical applications. Keynote speaker at 18<sup>th</sup> Annual Research Celebration, Rhode Island Hospital, Providence, RI.

December 18<sup>th</sup>, 2010 – VSELs research – update and future directions. 3<sup>rd</sup> POIG Meeting, Warsaw, Poland.

December 27<sup>th</sup>, 2010 – Molecular signature and epigenetic mechanisms that regulate VSELs proliferation. Invited lecture at Fudan University, Shanghai, China.

December 28<sup>th</sup>, 2010 - The novel role of complement system and bioactive lipids in stem cell homing and mobilization. Invited lecture at Fudan University, Shanghai, China.

January 11<sup>th</sup>, 2011 - VSELs – an update. Neostem SAB, Boston, MA, USA..

February 18<sup>th</sup> 2011 - Pluripotent stem cells isolated from adult tissues. NYMC, Valhalla, NY, USA.

March 17<sup>th</sup>, 2011 – The role of complement and bioactive lipids in stem cell trafficking. Lion Eye Clinic, UofL, Louisville, KY, USA.

April 15<sup>th</sup>, 2011 - Pluripotent stem cells: iPS and VSELs Technology in Hematopoietic Regenerative Medicine. 2011 ASPHO Meeting, Baltimore, MD, USA.

April 22<sup>nd</sup>, 2011 – Pleiotropic effects of microvesicles. 1<sup>st</sup> International Symposium on exosomes. Providence, RI, USA.

May 26<sup>th</sup>, 2011 – Stem Cells in tissue organ regeneration. Opening lecture, Annual Meeting of Polish

Society of Psychiatry. Miedzyzdroje, Poland.

May 27<sup>th</sup>, 2011 – VSELs an update. 1<sup>st</sup> Baltic Stem Cell Meeting, Opening lecture. Szczecin, Poland.

June 8<sup>th</sup>, 2011 – Stem Cell Therapies, 75<sup>th</sup> Annual meeting of Polish-American Institute of Science. Washington DC, USA

June 27<sup>th</sup>, 2011 – The role of sphingolipids in stem cell trafficking. 6<sup>th</sup> Aegean Innate Immunity Meeting, Rhodes, Greece.

August 31<sup>st</sup>, 2011 – Very small embryonic like stem cells – our key to longevity and passkey to tumorigenesis. 5<sup>th</sup> SENS Aging Foundation Meeting, Cambridge, UK.

September 17<sup>th</sup>, 2011 – Stem cells and aging. XXV Meeting of Polish Society of Physiology, Olsztyn, Poland.

October 17<sup>th</sup>, 2011 – VSELs an update. Stem Cell Symposium. University of Lund, Lund, Sweden.

October 26<sup>th</sup>, 2011 – Stem cells in regeneration. XII Annual Meeting of German Blood Banks, Dresden, Germany.

November 12<sup>th</sup>, 2011 – VSELs non-controversial PSCs. 1<sup>st</sup> Vatican conference on Adult Stem Cells. Vatican City, Rome, Italy.

November 17<sup>th</sup>, 2011. Stem cells and regenerative medicine. University of Kentucky, Lexington, USA.

November 29<sup>th</sup>, 2011 – Stem cells and regenerative medicine. Medical University of Bialystok, Bialystok, Poland.

December 1<sup>st</sup>, 2011 – Mechanisms regulating trafficking of stem cells. Medical University of Bialystok, Bialystok, Poland.

December 19<sup>th</sup>, 2011 - Adult stem cell therapies – time for VSELs. Soochow University, Suzhou, China.

January 19<sup>th</sup>, 2012 – VSELs our key to longevity. Tulane University, New Orleans, Louisiana, USA.

February 24<sup>th</sup>, 2012 – VSELs are key to longevity. 34<sup>th</sup> Annual Meeting of Japanese Society for Stem Cell Therapies. Osaka, Japan.

February 27<sup>th</sup>, 2012 - VSELs an update. Special Forum on Stem Cell Therapies. Osaka, Japan.

March 8<sup>th</sup>, 2012 – Controversies in stem cell therapy. Conference on Ethics in Science Bialystok, Poland.

March 17<sup>th</sup>, 2012 – Potential role of VSELs in regenerative medicine. Perspectives in Cell- and Gene-Based Medicines. Frankfurt, Germany.

March 19<sup>th</sup>, 2012 - Very Small Embryonic Like Stem Cells (VSELs) – our key to regeneration, longevity and passkey to cancer. Disputations 2012, Florence, Italy.

April 8<sup>th</sup>, 2012 – VSELs a rosetts stone to understand aging and cancer. JGB Cancer Center, Louisville, USA

April 25<sup>th</sup>, 2012 – Vest small embryonic likes stem cells as a rosetta stone to undesratnd aging and cancer. Stony Brook, USA.

May 10<sup>th</sup>, 2012 – The role of complement and bioactive lipids in stem cell trafficking. XI! European Symposium on Granulocytes and Platelets. Opening Lecture, Warsaw, Poland.

May 15<sup>th</sup>, 2012 – Mechanisms of mobilization and homing of hematopoietic stem cells revisited. – Inst. Cell. Therap., Louisville, USA.

May 18<sup>th</sup>, 2012 - Basic biology of paracrine factors and stem cells. American Association of Aging, Orlando, Florida.

May 18<sup>th</sup>, 2012 - Clinical effects of stem cell/paracrine interactions. American Association of Aging, Orlando, Florida.

May 18<sup>th</sup>, 2012 - Current research on the effects of stem cell paracrine factors e.g., exosomes. American Association of Aging, Orlando, Florida.

June 7<sup>th</sup>, 2012 – Very small embryonic like stem cells (VSELs) as Rosetta stone to understand aging and cancer. Fudan University, Shanghai, China.

June 8<sup>th</sup>, 2012 – The role of complement in mobilization, homing and engraftment of hematopoietic setm/progenitor cells – a novel link between innate immunity and hematopoiesis. Fudan University, Shanghai, China.

June 11<sup>th</sup>, 2012 – Clinical effects of stem cell-derived paracrine soluble factors and microvesciels. Fudan University, Shanghai, China.

June 15<sup>th</sup>, 2012 – VSELs a Rosetta stone to understand cancer and aging. Hematology conference. UofL, Louisville, Ky

June 20<sup>th</sup>, 2012 – VSELs a new players. Digestive Disorder Federeation Meeting, Liverpool, UK.

July 11<sup>th</sup>, 2012 - VSELs - as Rosetta stone to understanding tissue rejuvenation, aging and cancer, Center of Biomedical Research Excellence (COBRE), Roger Williams Medical Center, Providence, Rhode Island.

August 21<sup>st</sup>, 2012 – VSELs and their potential clinical applications. FECTs Meeting, Katowice, Poland.

September 12<sup>th</sup>, 2012 – VSELs and update – UofL Dept. of Cardiology Ground Rounds, Louisville, Poland.

September 21<sup>st</sup>, 2012 – Mechanisms that orchestrate stem cell mobilization. Hematologica Conference. Sopot, Poland.

October 5<sup>th</sup>, 2012 – Stem cells current status of research, ethics and future. Innauguration lecture for new academic year. Medical University, Bialystok, Poland.

October 6<sup>th</sup>, 2012 – Stem cells current status of research, ethics and future. Innauguration lecture for new academic year. Pomeranian Medical University, Szczecin, Poland.

October 12<sup>th</sup>, 2012 – VSEL – our key to longevity and passkey to cancerogenesis. XVII World Cancer Congress. Hersonissos, Greece.

November 29<sup>th</sup>, 2012 – VSEL a Rosetta Stone to understand aging and cancer. Boston CHOP, Harvard University, Boston, MA.

December 3<sup>rd</sup>, 2012 – Stem cells and regenerative medicine. Warsaw Medical University, Warsaw, Poland.

March 19<sup>th</sup>, 2013 – Quo Vadis Regenrative Medicine? EU Parliament, Brussels, Belgium.

April 13<sup>th</sup>, 2013 – VSELs and aging. 2<sup>nd</sup> International Conference on Regenerative Medicne, Vatican, Rome, Italy.

May 3<sup>rd</sup>, 2013 - The presence of very small embryonic like stem cells (VSELs) in adult tissues and an emerging role of microvesicles, exosomes and paracrine signals in regenerative medicine – towards development of novel therapeutic approaches. Univ of Dresden, Dresden, Germany.

May 6<sup>th</sup>, 2013 - New strategies in regenerative medicine. Fudan Univ. Shanghai, China.

May 7<sup>th</sup>, 2013 - VSELs and update. Fudan. Univ, China.

May 13<sup>th</sup>, 2013. The role of bioactive lipids in stem cell trafficking. Fudan Univ. Shanghai, China.

May 14<sup>th</sup>, 2013 – The role of complement in stem cell homing and mobilization. Fudan Univ. Shanghai, China.

May 30<sup>th</sup>, 2013 – Quo vadis regenerative medicine? Opening lecture. 2<sup>nd</sup> Baltic Stem Cell Meeting, Szczecin, Poland.

June 13<sup>th</sup>, 2013 – HIV unwanted guest in bone marrow. Opening lecture, AIDS Symposium, Cracow, Poland.

June 22<sup>nd</sup>, 2013 - A novel view on involvement of complement cascade (CC) and sphingosine-1 phosphate (S1P) in pathogenesis of Paroxysmal Nocturnal Hemoglobinuria (PNH). Complement Therapeutic Conference, Kos, Greece.

July 2<sup>nd</sup>, 2013 - The presence of very small embryonic like stem cells (VSELs) in adult tissues and an emerging role of microvesicles, exosomes and paracrine signals in regenerative medicine – towards development of novel therapeutic approaches. XIII World Congress on Toxicology, Seoul, Korea.

July 2<sup>nd</sup>, 2013 – Novek strategies in regenerative medicine. Catholic University, Seoul, Korea.

July 3<sup>rd</sup>, 2013 - The presence of very small embryonic like stem cells (VSELs) in adult tissues and an emerging role of microvesicles, exosomes and paracrine signals in regenerative medicine. Seoul National University, Seoul, Korea.

July 3<sup>rd</sup>, 2013 – Very Small Embryonic Like Stem Cells – practical applications. Ulsan University, Seoul, Korea.

August 22<sup>nd</sup>, 2013 – Effect of insulin growth factors and somatotrophic signaling on stem cells, tissue organ regeneration, aging and tumor development. 20<sup>th</sup> Meeting of Brazilian Society of Biology, Caxambu, Brasil.

August 27<sup>th</sup>, 2013 – VSELs and insulin like growth factors signaling. Sao Paulo University, Sao Paulo, Brasil.

September 18<sup>th</sup>, 2013 – Stem cells and regenerative medicine. 66<sup>th</sup> Congress of Polish Surgeons, Warsaw, Poland.

September 26<sup>th</sup>, 2013 – Quo vadis regenerative medicine? Opening Lecture at 25<sup>th</sup> Congress of Polish Society of Hematology and Transfusiology. Poznan, Poland.

October 11<sup>th</sup>, 2013 – The role of bioactive sphingolipids in metastasis of rhabdomyosarcoma cells. XVIII World Congress Advances in Oncology. Hersonissos, Greece.

October 16<sup>th</sup>, 2013 – Regenerative medicine in cardiovascular diseases – cell therapies and paracrine effects. Innovative Technologies in Biomedicine. Cracow, Poland.

October 22<sup>nd</sup>, 2013 – VSELs as a key to understand regeneration and aging. Univ. of California Davis,

Los Angeles, CA.

November 24<sup>th</sup>, 2013. Umbilical Cord Blood Stem Cells. Annual Meeting of Obstetricians. Cracow, Poland.

December 13<sup>th</sup>, 2013. Stem cells in lung regeneration. Annual Meeting of Pulmonary Surgeons. Szczecin, Poland.

December 16<sup>th</sup>, 2013. Very small embryonic-like stem cells and update. Annual Meeting on Stem Cells. Wroclaw, Poland.

December 19<sup>th</sup>, 2013. Regenerative Medicine today and tomorrow. Medical University of Bialystok, Bialystok, Poland.

January 24<sup>th</sup>, 2014. Quo Vadis Regenerative Medicine? - of stem cells, regeneration, aging and cancer. European Conference of Oncology Pharmacy. Hamburg, Germany.

February 20<sup>th</sup>, 2014. Stem cells and regenerative medicine. Meharry Medical College, Nashville, TN, USA.

March 11<sup>th</sup>, 2014. Novel view on stem cell homing and mobilization. Stem Cell Meeting. Providence, Rhode Island, USA.

May 13<sup>th</sup>, 2014. Current status and future of regenerative medicine. Biotechnology 2014 Meeting. Jagiellonian University, Cracow, Poland.

May 18<sup>th</sup>, 2014. Stem cells in aging and regeneration. 43rd Annual Meeting of Brazilian Society of Biochemistry. Foz Do Igazu, Brazil.

June 5<sup>th</sup>, 2014. Quo Vadis Regenerative Medicine? International Meeting on Advances in Psychiatry. Warsaw, Poland.

June 13<sup>th</sup>, 2014. Pivotal Role of Paracrine Effects in Stem Cell Therapies in Regenerative Medicine – Can we Translate Stem Cell-Secreted Paracrine Factors and Extracellular Microvesicles into Better Therapeutic Strategies? International Extracellular Vesicles Symposium. Providence, Rhode Island, USA.

June 18<sup>th</sup>, 2014. Quo vadis regenerative medicine – stem cells in regeneration, aging and cancerogenesis. Opening lecture at the Annual Meeting of the European Society of Oncological Therapy. Cracow, Poland.

June 19<sup>th</sup>, 2014. Today and future of regenerative medicine. XV Meeting of the Polish Society of Experimental and Clinical Immunology. Wroclaw, Poland.

September 1<sup>st</sup>, 2014. Quo Vadis Regenerative Medicine – of stem cells aging and cancerogenesis. Univ of Bern, Switzerland.

September 9<sup>th</sup>, 2014 – Novel view on compartment of adult stem cells and stem cell trafficking. Karl Landsteiner distinguished lecture at 47 Annual Meeting of German Society of Transfusion Medicine and Immunohaematotherapy, Dresden, Germany.

October 8<sup>th</sup>, 2014 – The role of purinergic signaling in metastasis of lung cancer. 17 Annual World Congress Meeting, Athens, Greece.

October 16<sup>th</sup>, 2014 - Novel view on stem cell compartment – of germ line and parental imprinting. 2014 International Experimental Biology and Medicine Conference. Shanghai, China.

October 29<sup>th</sup>, 2014 - Very Small Embryonic Like Stem Cells (VSELs) – A Novel View on Hierarchy of Stem Cells in Adult Tissues. Novel Stem cells and vesicles Symposium. Rhode Island, USA.

February 18<sup>th</sup>, 2015 – Novel view on hierarchy of stem cells in adult bone marrow. Frontiers in Regenerative Medicine, Torino, Italy.

March 19<sup>th</sup>, 2015 – Novel view on hierarchy of stem cell in bone marrow. 8<sup>th</sup> Annual World Congress of Regenerative Medicine & Stem Cells. Busan, South Korea.

March 21<sup>st</sup>, 2015 – Germ line potential of bone marrow derived stem cells. 8<sup>th</sup> Annual World Congress of Regenerative Medicine & Stem Cells. Busan, South Korea.

May 19<sup>th</sup>, 2015. Stem cells and aging. 3<sup>rd</sup> Baltic Meeting on Aging, Szczecin, Poland.

May 30<sup>th</sup>, 2015 - Extracellular nucleotides as novel, underappreciated pro-metastatic factors that stimulate purinergic signaling in human lung cancer cells. 5<sup>th</sup> Brazilian Purine Club Meeting. Maresijas, Brazil.

June 19<sup>th</sup>, 2015 - Challenging questions to hierarchy of bone marrow stem cells and their developmental and postnatal trafficking. 3<sup>rd</sup> Baltic Stem Cell Meeting, Warsaw, Poland.

June 24<sup>th</sup>, 2015 – Bone marrow stem cell hierarchy. Visiting Professor Lecture at Medical University of Bialystok, Poland.

September 26<sup>th</sup>, 2015 – Novel view on stem cell compartment. XXVI Meeting of Polish Society of Hematology and Transfusiology. Szczecin, Poland.

October 9<sup>th</sup>, 2015 – Embryonic hypothesis of tumor development – 150 years later. XX World Cancer Meeting, Athens, Greece.

October 17<sup>th</sup>, 2015 – Novel view on stem cell mobilization and homing. II International Conference on Regenerative Medicine, Antalya, Turkey.

November 1<sup>st</sup>, 2015 – Novel view on stem cell hierarchy in bone marrow. Opening lecture at Annual Meeting of MEPSA and ANZBMS, Hobart, Australia.

November 3<sup>rd</sup>, 2015 – Novel view on stem cell trafficking. Plenary lecture at Annual Meeting of MEPSA and ANZBMS, Hobart, Australia.

January 12<sup>th</sup>, 2016 - Novel view on hierarchy of bone marrow stem cells – implications for tissue/organ regeneration. State Key Laboratory of Experimental Hematology. Tianjin, China.

January 13<sup>th</sup>, 2016 - Novel view on mobilization and homing of hematopoietic stem cells. State Key Laboratory of Experimental Hematology. Tianjin, China.

March 15<sup>th</sup>, 2016 - Adult stem cell therapies - current status and future directions. 9<sup>th</sup> World Congress of Regenerative Medicine and Stem Cells. Seoul, South Korea.

March 16<sup>th</sup>, 2016 - Novel view on hematopoietic stem cell mobilization and homing – an emerging role of innate immunity, bioactive lipids and extracellular nucleotides. 9<sup>th</sup> World Congress of Regenerative Medicine and Stem Cells. Seoul, South Korea.

April 26<sup>th</sup>, 2016 - Novel View on Hematopoietic Stem Cell Mobilization and Homing – An Emerging Role of Innate Immunity, Bioactive Lipids and Extracellular Nucleotides. 9<sup>th</sup> BIT World Congress, Dalian, China.

May 16<sup>th</sup>, 2016 - Extracellular nucleotides as novel, underappreciated pro-metastatic factors for human lung cancer cells. Opening lecture at 5<sup>th</sup> Brazilian Purinergic Signaling Meeting, Joao Pessoa, Brazil.

June 19<sup>th</sup>, 2016 – Stem cells a key to longevity. 14<sup>th</sup> National Congress of Psychiatry, Katowice, Poland.

June 29<sup>th</sup>, 2016 – The novel role of activation of complement cascade in pathogenesis of hematopoietic malignancies - modulatory effect of heme oxygenase-1 (HO-1). 8<sup>th</sup> Innate Immunity Aegean Conference, Rhodes, Greece.

September 28<sup>th</sup>, 2016 – Novel View of Stem Cell Hierarchy in Adult Bone Marrow: An Evidence for a Presence of Pluripotent Stem Cells from Embryonic Development. 5<sup>th</sup> Congress of World Union of Wound Healing Societies. Florence, Italy.

October 6<sup>th</sup>, 2016 – The novel role of the activation of complement cascade in the pathogenesis of hematopoietic malignancies and the modulatory effect of heme oxygenase-1 (HO-1). 21<sup>st</sup> World Congress on Advances in Oncology. Athens, Greece.

November 17<sup>th</sup>, 2016. Quo vadis regenerative medicine. 5<sup>th</sup> Science Polish Perspective Sympozjum. Oxford, UK.

February 17<sup>th</sup>, 2017. Quo vadis medicina regenerativa? Warsaw Medical University Symposium. Warsaw, Poland.

March 9<sup>th</sup>, 2017. The novel role of complement cascade and bioactive phosphosphingolipids in trafficking of hematopoietic stem cells. University of Virginia, Charlottesville, Virginia, USA.

April 19<sup>th</sup>, 2017. Pivotal role of innate immunity in stem cell mobilization. 8<sup>th</sup> CETO Meeting, Portoroze, Slovenia.

April 24<sup>th</sup>, 2017. Novel view on hematopoietic stem cell mobilization and homing – an emerging role of innate immunity, bioactive lipids and extracellular nucleotides. 8<sup>th</sup> BIT Congress, Xian, China.

May 5<sup>th</sup>, 2017. Potential VSELs therapy in hematological disorders. Plenary lecture at 2<sup>nd</sup> International Conference on Hematology. Shiraz, Iran.

May 5<sup>th</sup>, 2017. New challenges in hematopoietic stem cell homing and engraftment. Plenary lecture at 2<sup>nd</sup> International Conference on Hematology. Shiraz, Iran.

May 19<sup>th</sup>, 2017. Adult stem cell therapies - old concepts and recent progress. Plenary lecture at 15<sup>th</sup> International Meeting of ICHC. Antalya, Turkey.

June 26<sup>th</sup>, 2017. Innate Immunity as a Pivotal Player in Mobilization of Hematopoietic Stem Cells from Bone Marrow Into Peripheral Blood. 8<sup>th</sup> Innate Immunity Aegean Conference. Hersonisos, Crete, Greece.

September 24<sup>th</sup>, 2017. Pathogenesis of paroxysmal nocturnal hemoglobinuria – do we know everything? XXIV Meeting of Polish Society of Hematology and Transfusiology. Warsaw, Poland.

September 25<sup>th</sup>, 2017. Novel view on hierarchy of bone marrow stem cell compartment. XXIV Meeting of Polish Society of Hematology and Transfusiology. Warsaw, Poland.

October 23<sup>rd</sup>, 2017. Novel view on stem cell compartment. IRHT Meeting, Mulhouse, France.

November 12<sup>th</sup>, 2017. Current status and future of stem cell therapies - novel view on stem cells isolated from adult tissues. 8<sup>th</sup> BIT Congress. Macau, China.

November 13<sup>th</sup>, 2017. Novel view on hematopoietic stem cell mobilization and homing – an emerging role of innate immunity, bioactive lipids and extracellular nucleotides. 8<sup>th</sup> BIT Congress. Macau, China.

November 14<sup>th</sup>, 2017. Current status and future of stem cell therapies - novel view on stem cells isolated from adult tissues. University of Macau. Macau, China.

March 6<sup>th</sup>, 2018. Innate Immunity and Purinergic Signaling orchestrate mobilization of Hematopoietic Stem Cells. Penn State University, Hershey, PA, USA.

May 15<sup>th</sup>, 2018. Pluripotent stem cells in adult tissues. River Side University, Riverside, CA.

June 21<sup>st</sup>, 2018. Novel evidence that extracellular nucleotides and purinergic signaling induce innate immunity-mediated mobilization of hematopoietic stem/progenitor cells. Foz d'Igasu, Brazil.

July 23<sup>rd</sup>, 2018. Pluripotent stem cells in adult tissues. Cancer Meeting, Rome, Italy.

August 26<sup>th</sup>, 2018. Isolation and culture of very small embryonic-like stem cells, and their applications in regenerative medicine. Fudan University, Shanghai, China.

August 27<sup>th</sup>, 2018. A role of purinergic signaling in stem cell trafficking and regeneration. Fudan University, Shanghai, China.

September 27<sup>th</sup>, 2018. Current status of regenerative medicine. IVth Baltic Stem Cell Meeting, Warsaw, Poland.

October 10<sup>th</sup>, 2018. Thunder from Louisville - VSELs shake the stem cell world and if we are right textbooks will be rewritten. Lion Eye Clinic, UofL, Louisville.

**HIRSCH FACTOR = 70**

#### **Ph.D. THESES SUPERVISION (MENTHOR)**

1995 - Kuczyński, Wojtek MD, PhD - *summa cum laude*  
 1996 - Nieborowska, Skorska Margaret MD, PhD - *summa cum laude*  
 1997 - Hałasa, Maciek MD, PhD - *summa cum laude*  
 1997 - Marlicz, Wojtek MD, PhD - *summa cum laude*  
 1997 - Honczarenko, Marek MD, PhD - *summa cum laude*  
 2000 - Majka, Marcin PhD - *cum laude*  
 2000 - Paczkowska, Edyta MD, PhD  
 2002 - Baj-Krzyworzeka, Monika PhD - *summa cum laude*  
 2003 - Kijowski, Jacek MD, PhD - *summa cum laude*  
 2004 - Kucia, Magda PhD - *summa cum laude*  
 2004 - Jankowski, Kacper PhD - *summa cum laude*  
 2004 - Reca, Ryan PhD - *Dean's Citation*  
 2005 - Trzyna, Ela PhD  
 2007 - Danuta Jarocha PhD  
 2007 - Marcinowska, Agnieszka – MD, PhD  
 2007 - Michalowska, Anna – MD, PhD  
 2009 - Wysoczynski, Marcin – PhD - *summa cum laude*  
 2011 - Wan Wu MD, PhD  
 2013 – Katarzyna Mierzejewska – PhD – *summa cum laude*  
 2013 – Ewa Bryndza – PhD  
 2013 – Joanna Tarnowska – MD, PhD  
 2015 – Malwina Suszynska – PhD  
 2015 – Sylwia Brokowska – PhD – *summa cum laude*  
 2015 – Karol Serwin – PhD  
 2017 – Zacharias Sellers - PhD

## PUBLICATIONS

### BOOKS

1. Ratajczak M.Z. Changes in the biochemical parameters of the patients after bone marrow transplantation. Clinical and experimental studies. Medical Center of Postgraduate Education WAM, Lodz 1989.
2. Ratajczak MZ. Adult Stem Cell Therapies: Alternatives to Plasticity. Springer 2014.

### BOOK CHAPTERS

1. Ratajczak M.Z., Gewirtz A.M.: Role of the c-kit protooncogene in normal and malignant human hematopoiesis. In: Molecular Biology of Haematopoiesis, vol. II (red. Abraham N., Konwalinka G., Marks P., Sachs L., Tavassoli M.) , Intercept Ltd, 1992 (449-456).
2. Ratajczak M.Z., Gewirtz A.M.: Oligonucleotide based therapeutics of human malignancies. In: Nucleic Acids & Molecular Biology, vol. VIII, (red. F. Eckstein), Springer Verlag, Berlin - Heidelberg 1994, 298 - 326.
3. Kregenow D., Ratajczak M.Z., Gewirtz A.M.: Disrupting the flow of genetic information with antisense oligodeoxynucleotides: research and therapeutic applications. In: Delivery strategies for antisense oligonucleotide therapeutics. S. Akhtar (ed.), CRC, New York, 1994, pp. 1-15.
4. Gewirtz A.M., Ratajczak M.Z.: Perturbing hematopoietic cell gene expression with oligodeoxynucleotides. Research and clinical applications. In: Applied Antisense Oligonucleotide Technology, (CA. Stein, AM. Krieg, eds.) Wiley-Liss 1998, New York, Singapore, Toronto, pp. 299-315.
5. Ptaszniak A., Ratajczak M.Z.: Hematology of mononuclear phagocytes. In: Ultrastructure and cell function. Vol 4 (J. Kawiak and E. Osuchowska eds.), PWN, Warsaw, 1989.
6. Jedrzejczak W.W., Szczylik C., Ratajczak M.Z., Pojda Z.: Bone marrow transplantation. In: Ultrastructure and cell function. Vol 5. (J. Kawiak and E. Osuchowska, eds.), PWN, Warsaw, 1991.
7. Ratajczak M.Z., Szwach P.: Hybrid hematopoietins. In: Cytokines. Clinical applications. (W.W. Jedrzejczak, M. Podolak-Dawidziak, eds.), Volume, Warsaw. 1997.
8. Ratajczak M.Z.: The role of the growth factors acting through the receptors with intrinsic tyrosine kinase activity in the regulation of the proliferation of the early human haematopoietic cells. In: Fizjologia krwiotworzenia wraz z metodyka badawacza. (Dabrowski Z. ed.), PWN, Krakow, 1998.
9. Ratajczak M.Z., Gewirtz A.M.: Oligodeoxynucleotide based therapeutics for human leukemias. In: Molecular aspects of cancer and its therapy. (A. Mackiewicz, P.B. Sehgal, eds.), Birkhauser Verlag, Basel, 1998, pp. 163-177.
10. Calabretta B., Skorski T., Zon G., Ratajczak M.Z., Gewirtz A.M.: Antisense strategies in the treatment of leukemias. In: Gene therapy of cancer. (E.C. Lattime, S.L. Gerson, eds.), Academic Press, San Diego, London, Boston 1998, pp. 223-232.
11. Allendorf, D. J., G. R. Ostroff, J. T. Baran, C. W. Dyke, M. Z. Ratajczak, G. D. Ross. 2003. Oral WGP beta glucan treatment accelerates myeloid recovery and survival after radiation exposure. In: BTR 2003: Unified Science & Technology for Reducing Biological Threats & Countering Terrorism. Univ. New Mexico, Albuquerque. pp. 104-113.
12. Majka M, Ratajczak M.Z. 2006. Biological role of the CXCR4-SDF-1 axis in normal human hematopoietic cells. In: Transmembrane signaling protocols (Ydar A, Bodduluri H, eds.), Humana Press, Totowa, New Jersey. pp. 103-114.
13. Ratajczak M.Z. 2007. Heterogeneous populations of stem cells reside in the bone marrow: which therapeutic implications? In: Progressi in Biologia e Medicina, Bernasconi C (ed), Collegio Ghislieri, Pavia, Italy. pp.72-81.
14. Ratajczak MZ, Reca R, Wysoczynski M, Kucia M, Ratajczak J. A role of complement system in mobilization and homing of hematopoietic stem/progenitor cells. In: Frontiers in Research vol 1. Georgiev VSt, Westen KA, McGovern JJ (eds). Humana Press 2008, pp. 357-363.
15. Zuba-Surma EK, Shin DM, Klich I, Ratajczak J, Kucia M, Ratajczak MZ. Identification of very small embryonic like stem cells from murine and human specimens. In: Applications of Flow Cytometry in Stem Cell Research and Tissue Regeneration. (Krishan A, Krishnamutry H and Torey S eds), Wiley-Blackwell 2010, pp. 91 -101.
16. Ratajczak MZ, Zuba-Surma E, Kucia M, Nowacki P, Machalinski B. Potential Application of Very Small Embryonic Like (VSEL) Stem Cells in Neural Regeneration. In: Perspectives of Stem



Cells From Tools for Studying Mechanisms of Neuronal Differentiation towards Therapy (Ulrich H ed.). Springer 2009, pp. 231-243.

17. Shin DM, Lui R, Nowacki P, Ratajczak J, M Kucia M, Ratajczak MZ. Very small embryonic-like stem cells and their potential relevance for kidney homeostasis. In: Regenerative Nephrology. (Goligorsky M (ed). Academic Press 2010, pp. 189-199.
18. Shin DM, Klich I, Ratajczak J, Kucia M, Ratajczak MZ. Very small embryonic-like stem cells (VSELs) and importance in growth. In: Handbook of Growth and Growth Monitoring in Health and Disease. (Preedy VR (ed). Springer Science 2012, pp. 1257-1271.
19. Shin DM, Ratajczak J, Kucia M, Ratajczak MZ. Very small embryonic/epiblast-like stem cells (VSELs) residing in adult tissues and their role in tissue rejuvenation and regeneration. In: Embryonic Stem Cells – Differentiation and Pluripotent Alternatives. Intech 2011, pp. 433-450.
20. Ratajczak J, Shin DM, Kucia M, Ratajczak MZ. Very small embryonic-like stem cells from umbilical cord blood. In: Cord Blood, Biology, Transplantation, Banking and regulation. (Broxmeyer H (ed.) AABB Press 2011, pp. 113-131.
21. Ratajczak MZ, Tarnowski M, Borkowska S, Serwin K. The embryonic rest hypothesis of cancer development: 150 years later. In: Trends in Stem Cell Proliferation and Cancer Research. (Resende RR and Ulrich H (eds.) Springer 2013, pp 51-63.
22. Ratajczak MZ. Regenerative Medicine and the Search for Pluripotent/Multipotent Stem Cells. In: Adult Stem Cell Therapies: Alternatives to Plasticity. (Ratajczak MZ ed.) Springer 2014, pp 1-17.
23. Kucia M, Suszynska M, Ratajczak J, Ratajczak MZ. Novel Therapeutic Approaches in Regenerative Medicine - Adult Tissue-Derived Very Small Embryonic-like Stem Cells and Harnessing Paracrine Signals of Adult Stem Cells. In: Adult Stem Cell Therapies: Alternatives to Plasticity. (Ratajczak MZ ed.) Springer 2014, pp 19-33.
24. Ratajczak MZ, Schneider G, Ratajczak J. Paracrine effects of fetal stem cells. In: Fetal Stem Cells in Regenerative Medicine (Fauza DO and Bani M. eds). Humana Press 2016, pp 47-56.
25. Suszynska M, Ratajczak J, Ratajczak MZ. Very Small Embryonic Like Stem Cells (VSELs) and Their Hematopoietic Specification. In: Working with Stem Cells (Ulrich H, Davidson Negraes P eds.) Springer 2016, pp. 97-110.
26. Schneider G, Ratajczak MZ. Ceramide-1-phosphate and its role in trafficking of normal setm cells and cancer metastasis. In: Lipidomics of Stem Cells (Pebay A, Wong R.C.B) Sringer 2017, pp. 137-150.

#### ORIGINAL PEER-REVIEWED ARTICLES

1. Jedrzejczak W.W., Ratajczak M.Z.: Eosinophilic granulocyte deficiency in mice mutant in sl and w loci. *Experientia* 1985, 41, 1596- 1598. PMID: 3841073
2. Jedrzejczak W.W., Szczylik C., Ratajczak M.Z., Ahmed A.: Congenital murine osteopetrosis inherited with osteosclerotic (oc) gene: hematological characterization. *Exp. Hematol.* 1986, 14, 819 - 826. PMID: 3758233
3. Jedrzejczak W.W., Szczylik C., Pojda Z., Siekierzynski M., Kansy J., Klos M., Ratajczak M.Z., Pejcz J., Jaskulski D., Gornas P.: Success of bone marrow transplantation in congenital Diamond - Blackfan anaemia: a case report. *Eur.J.Haemtol.* 1987, 38, 204 - 206. PMID: 3109937
4. Jedrzejczak W.W., Pojda Z., Ahmed A., Ratajczak M.Z.: Hematological compensation of microphthalmic mice with congenital osteopetrosis. *Bone* 1987, 8, 315 - 317. PMID: 3426889
5. Ratajczak M.Z., Jaskulski D., Pojda Z., Jedrzejczak W.W.: Omental lymphoid organ as a source of macrophage colony stimulating activity in peritoneal cavity. *Clin.Exp.Immunol.* 1987, 69, 198 - 203. PMID: 3498587
6. Skorski T., Kawalec M., Hoser G., Ratajczak M.Z., Gnatowski B., Kawiak J.: The kinetics of immunologic and hematologic recover in mice after lethal total body irradiation and reconstitution with syngeneic bone marrow cells treated or untreated with mafosfamide (ASTA Z 7654). *Bone Marrow Transplant* 1988, 3, 543 - 551. PMID: 2905613
7. Ratajczak M.Z.: Evaluation of technical aspects of the preparation of haemopoietic cells from human fetal liver. *Arch. Immunol. Ther. Exp.* 1988, 36, 223 - 233. PMID: 3240057
8. Ratajczak M.Z.: Experimental aspects of transplantation of haemopoietic cells of fetal liver. *Arch. Immunol. Ther. Exp.* 1988, 36, 235 - 243. PMID: 2907283
9. Kaczmarek L., Ratajczak M.Z., Jedrzejczak W.W.: Postirradiation recovery of haemopoiesis in Steel mutant mice. *Int. J. Radiat. Biol.* 1988, 53, 703 - 708. PMID: 3258849

10. Jedrzejczak W.W., Szczylik C., Matej H., Pojda Z., Ratajczak M.Z., Myc A., Siekierzynski M., Kansy J., Klos M., Rybicki Z. et al. Allogeneic bone marrow transplantation from HLA-identical siblings following conditioning with busulfan and cyclophosphamide. First results. *Folia Hematol.* 1989, 116, 403 - 408. PMID: 2480281
11. Ratajczak M.Z., Szczylik C., Jedrzejczak W.W.: Elimination of red blood cells from marrow suspension prior to transplantation using polysaccharide-ditrizoate gradient centrifugation. Experimental studies. *Folia. Hematol.* 1989, 116, 469 - 473. PMID: 2480292
12. Jedrzejczak W.W., Ratajczak M.Z., Szczylik C.: Bone marrow transplantation in Polish conditions. Method for removal of red cells from the transplant in the case of major blood group incompatibility. *Arch. Immunol. Therap. Exp.* 1989, 37, 261 - 267. PMID: 2639626
13. Ratajczak M.Z., Szczylik C., Berger L.: Assessment of the viability of haemopoietic cells in the livers of mouse fetuses stored at 4 degrees C. Comparison of various methods of testing their usefulness for haemopoietic transplantation. *Arch. Immunol. Therap. Exp.* 1989, 37, 269 - 276. PMID: 2639627
14. Szczylik C., Ratajczak M.Z., Urbanowska E., Jedrzejczak W.W.: Kinetics of destruction and regeneration of the haematopoietic system after administration of busulphan and cyclophosphamide followed by bone marrow transplantation. Peripheral blood parameters. *Acta Med. Pol.* 1989, 30, 93 - 109. PMID: 2519630
15. Skorski T., Kawalec M., Ratajczak M.Z., Szczylik C., Kawiak J.: Return of immunohematopoietic impairment a long time after murine syngeneic bone marrow transplantation. *Bone Marrow Transplant.* 1990, 6, 315 - 319. PMID: 2149830
16. Ratajczak M.Z.: Values of certain biochemical parameters in mouse serum after syngeneic bone marrow transplantation. Effect of various methods of myeloablation-immunosuppression preparation and recipient's age. *Arch. Immunol. Therap. Exp.* 1990, 38, 299 - 308. PMID: 2102662
17. Calabretta B., Sims R.B., Valtieri M., Caracciolo D., Szczylik C., Venturelli D., Ratajczak M.Z., Beran M., Gewirtz A.: Normal and leukemic hematopoietic cells manifest differential sensitivity to inhibitory effects of c-myb antisense oligodeoxynucleotides: an invitro study relevant to bone marrow purging. *Proc. Natl. Acad. Sci. USA*, 1991, 88, 2351 - 2355. PMID: 2006173
18. Skorski T., Ratajczak M.Z., Kawalec M., Kawiak J.: Induction of immune resistance against L1210 lymphatic leukemia in mice after lethal irradiation and reconstitution with fetal liver cells. *Folia Histochem. Cytobiol.* 1991, 29, 121 - 124. PMID: 1794437
19. Jedrzejczak W.W., Szczylik C., Matej H., Pojda Z., Ratajczak M.Z., Myc A., Siekierzynski M., Kansy J., Klos M., Rybicki Z., Dumanski Z., Zaborowski P., Zaboklicki S., Nowakowska B., Urbanowska E., Kuryl J.: Allogeneic bone marrow transplantation from HLA - identical siblings following conditioning with busulphan and cyclophosphamide. *Arch. Immunol. Therap. Exp.* 1991, 39, 441 - 447. PMID: 1821620
20. Ratajczak M.Z., Luger S.M., DeRiel K., Abraham J., Calabretta B., Gewirtz A.M.: Role of the KIT protooncogene in normal and malignant human hematopoiesis. *Proc. Natl. Acad. Sci. USA*, 1992, 89, 1710 - 1714. PMID: 1371882
21. Skorski T., Szczylik C., Ratajczak M.Z., Malaguarnera L., Gewirtz A.M., Calabretta B.: Growth factor - dependent inhibition of normal hematopoiesis by N-ras antisense oligodeoxynucleotides. *J. Exp. Med.* 1992, 175, 743 - 750. PMID: 1371302
22. Ratajczak M.Z., Hijiya N., Catani L., DeRiel K., Luger S.M., McGlave Ph., Gewirtz A.: Acute- and Chronic- Phase Myelogenous Leukemia Colony-Forming Units are highly sensitive to the growth inhibitory effects of c-myb antisense oligodeoxynucleotides. *Blood* 1992, 79, 1956 - 1961. PMID: 1562723
23. Gewirtz A.M., Boghosian-Sell L., Catani L., Ratajczak M.Z., Shen Y.M. Expression of FcRII and CD4 receptors by normal human megakaryocytes. *Exp. Hematol* 1992, 20, 512-516. PMID: 1533189
24. Ratajczak M.Z., Luger S.M., Gewirtz A.M.: The role of c-kit protooncogene in normal and malignant human hemopoiesis. (Concise Review). *Int. J. Cell Clon.* 1992, 10, 205-214. PMID: 1379619
25. Jedrzejczak W.W., Ratajczak M.Z., Ptasznik A., Sell K.W., Ahmed A. A., Ostertag W.: CSF-1 deficiency in the op/op mouse has differential effects on macrophage populations and differentiation stages. *Exp. Hematol.* 1992, 20, 1004 - 1010. PMID: 1505635
26. Ratajczak M.Z., Kant J.A., Hijiya N., Luger S.M., Zhang J., Zon G., Gewirtz A. M.: In vivo treatment of human leukemia in a SCID mouse model with c-myb antisense oligodeoxynucleotides. *Proc. Natl. Acad. Sci. USA*, 1992, 89, 11823-11827. PMID: 1281545

27. Takeshita K., Bollekens J.A., Hijiya N., Ratajczak M.Z., Ruddle F., Gewirtz A.M.: A homeobox gene of the Antennapedia class is required for human adult erythropoiesis. *Proc. Natl Acad. Sci. USA* 1993, 90, 3535 - 3538. PMID: 8097318
28. Ratajczak M.Z., Light B., Ratajczak J., Kuczynski W.I., Gewirtz A.M.: Human erythropoiesis in vitro: definition, and clinical implications, of optimal stimulatory conditions. *Cancer Res. Ther. Cont.* 1993, 3, 269 - 272.
29. Ratajczak M.Z., Skorski T., Kuczynski W., Ratajczak J.: The influence of 4°C storage on proliferative potential of human bone marrow CD34<sup>+</sup> cells. Transplantological implications. *Folia Histochem. Cytobiol.* 1993, 3, 109 -112. PMID: 7505239
30. Migliaccio A.R., Migliaccio G., Mancini G., Ratajczak M., Gewirtz A.M., Adamson J.W.: Induction of the murine "W phenotype" in long-term cultures of human cord blood cells by c-kit antisense oligomers. *J. Cell. Physiol.* 1993, 157, 158-163. PMID: 7691834
31. Ratajczak M.Z., Ratajczak J., Kuczynski W., Light B., Gewirtz A.M.: In vitro sensitivity of human hemopoietic progenitor cells to 4-Hydroperoxycyclophosphamide. *Exp. Hematol* 1993, 21, 1663 - 1667. PMID: 8243568
32. Small D., Levenstein M., Kim E., Carow C., Amin S., Rockwell P., Witte L., Burrow Ch., Ratajczak M.Z., Gewirtz A.M., Civin C.I.: STK-1, the human homolog of Flk-2/Flt-3, is selectively expressed in CD34<sup>+</sup> human bone marrow cells and is involved in the proliferation of early progenitor/stem cells. *Proc. Natl. Acad. Sci. USA* 1994, 91, 459-463. PMID: 7507245
33. Skorski T., Palanisamy K., Skorska M., Ratajczak M., Szczylik C., Zon G, Arlinghaus R., Gewirtz A., Perussia B., Calabretta B.: p210 GAP requirement in normal and malignant human hematopoiesis. *J. Exp. Med.* 1993, 178, 1923-1933. PMID: 8245773
34. Ratajczak M.Z., Kuczynski W.I., Ratajczak J.: The influence of different cryopreservation procedures on the proliferative potential of human bone marrow progenitor cells. Transplantological implications. *Arch. Immunol. Therap. Exp.* 1994, 42, 217 - 221. PMID: 7487356
35. Hijiya N., Zhang J., Ratajczak M.Z., DeRiel K., Herlyn M., Gewirtz A.M.: The biologic and therapeutic significance of c-Myb expression in human melanoma. *Proc. Natl. Acad. Sci. USA* 1994, 91, 4499-4503. PMID: 8183937
36. Kuczynski W.I., Ratajczak M.Z.: STK-1 receptor gene is expressed in the various human non-hematopoietic tumor cell lines - RT-PCR directed analysis of STK-1 mRNA expression. Preliminary report. *Acta Haematol. Pol.* 1994, 25, 43-46. PMID: 8209613
37. Skorska-Nieborowska M., Skorski T, Ratajczak M.Z., Szczylik C., Malaguarnera L, Calabretta B.: Successful mafosfamide purging of bone marrow from chronic myelogenous leukemia (CML) cells. *Folia Histochem. Cytobiol.* 1993, 31, 161 - 167. PMID: 8137996
38. Nieborowska M., Skorski T., Nakashima M., Ratajczak M.Z., Steplewski Z., Calabretta B.: Oncogene-targeted antisense oligodeoxynucleotides combined with chemotherapy or immunotherapy: a new approach for tumor treatment. *Folia Histochem. Cytobiol.* 1994, 32, 35-40. PMID: 8026602
39. Ratajczak M.Z., Kuczynski W.I., Skorski T., Ratajczak J.: Pre-stimulation of the human bone marrow CD34<sup>+</sup> cells before storage at 4°C with the early acting cytokines enhance their survival and increase proliferative potential. Transplantological implications. *Mater. Med. Pol.* 1993, 3-4, 133 - 136. PMID: 7520961
40. Ratajczak M.Z., Ratajczak J., Kregenov D., Kuczynski W., Skorski T., Gewirtz A.M.: Cytokine stimulation of the CD34<sup>+</sup> bone marrow cells prior to cryopreservation enhances their post-thawing proliferative potential. *Folia. Histochem. Cytobiol.* 1994, 3, 145 - 149. PMID: 7531164
41. Ratajczak M.Z., Kuczynski W.I., Onodera K., Moore J., Ratajczak J., Kregenov A.A., DeRiel K., Gewirtz A.M.: A reappraisal of the function of the insuline like growth factor -1 (IGF - 1) in the regulation of the human hematopoiesis. *J. Clin. Invest.* 1994, 94, 320 - 327. PMID: 8040273
42. Ratajczak M.Z., Kregenov D.A, Gewirtz A.M.: The storage of the cells from different tumor lines in the mechanical freezer at -80°C. Comparison to cryopreservation in liquid nitrogen. *Mat. Med. Pol.* 1994, 2, 69 - 72. PMID: 7745987
43. Ratajczak M.Z., Ratajczak J., Kregenow D., Gewirtz A.M.: Growth factor stimulation of cryopreserved CD34<sup>+</sup> bone marrow cells for transplant. An in vitro study to determine optimal timing of exposure to early acting cytokines. *Stem Cells* 1994, 12, 599 - 603. PMID: 7533578
44. Nieborowska-Skorska M., Ratajczak M.Z., Calabretta B., Skorski T.: The role of c-myc protooncogene in CML. *Folia Histochem. Cytobiol.* 1994, 32, 231-234. PMID: 7758616

45. Morrow D.M., Xiong N., Getty R.R., Ratajczak M.Z., Morgan D., Seppala M., Rittinen L., Gewirtz A.M., Tykocinski M.L.: Hematopoietic placental protein-14 an immunosuppressive factor in cells of the megakaryocytic lineage. *Am. J. Pathol.* 1994, 145, 1485-1495. PMID: 7992851
46. Skorski T., Kanakaraj P., Nieborowska-Skorska M., Ratajczak M.Z., Wen S.C., Zon G., Gewirtz A.M., Perussia B., Calabretta B.: Phosphatidylinositol-3 kinase activity is regulated by bcr/abl and is required for the growth of Philadelphia chromosome-positive cells. *Blood* 1995, 86, 726-736. PMID: 7606002
47. Ratajczak M.Z., Gewirtz A.M.: The biology of hemopoietic stem cells. *Semin. Oncol.* 1995, 22, 210-217. PMID: 7777865
48. Ratajczak M.Z., Kuczynski W.I., Sokol L.D., Moore J., Pletcher, C., Gewirtz A.M.: Expression, and physiologic significance, of Kit Ligand and Stem Cell Tyrosine Kinase-1 Receptor Ligand in normal human CD34<sup>+</sup>, C-Kit R<sup>+</sup> marrow cells. *Blood* 1995, 86, 2161 - 2167. PMID: 7545021
49. Gewirtz A.M., Zhang J., Ratajczak J., Ratajczak M.Z., Park K.S., Li C., Yan Z., Poncz M.: Chemokine regulation of human megakaryocytopoiesis. *Blood*, 1995, 86, 2559 - 2567. PMID: 7670101
50. Luger S.M., Ratajczak J., Ratajczak M.Z., DiPaola R., Clevenger R., Gewirtz A.M.: Role of the p95<sup>vav</sup> protooncogene in normal and malignant human hematopoiesis. *Blood* 1996, 87, 1326-1334. PMID: 8608221
51. Ratajczak M.Z., Ratajczak J., Ford J., Kregenow R., Marlicz W., Gewirtz A.M.: FLT3/FLK-2 (STK-1) ligand does not stimulate human megakaryopoiesis in vitro. *Stem Cells* 1996, 14, 147-150. PMID: 8820960
52. Ratajczak M.Z., Gewirtz A.M.: Current experimental strategies for investigating human hematopoietic stem cell biology. (Editorial Review). *Folia Histochem. Cytobiol.* 1996, 34, 59-67. PMID: 8875212
53. Calabretta B., Skorski T., Ratajczak M.Z., Gewirtz A.M.: Antisense strategies in the treatment of leukemias. *Seminars in Oncology* 1996, 23, 78-87. PMID: 8607034
54. Ratajczak M.Z., Ratajczak J., Skorska M., Calabretta B., Pletcher Ch.J., Marlicz W., Moore J., Gewirtz A.M.: Effect of basic (FGF-2) and acidic (FGF-1) fibroblast growth factors on early hematopoietic cell development. *Brit. J. Haematol.* 1996, 93, 772-782. PMID: 8703802
55. Ratajczak J., Marlicz W., Keidel A., Machalinski B., Ratajczak M.Z., Gewirtz A.M.: In vitro studies on the anemia of chronic inflammatory disorders. Effect of Interleukin-1 $\alpha$  and interleukin-1 $\alpha$  on erythroid progenitor cell growth in serum free cultures: An in vitro study relevant to the pathogenesis of the anemia of chronic disease. *Hematology* 1997, 2, 21-28. PMID: 10907020
56. Ratajczak M.Z., Gewirtz A.M.: Hematopoietic stem cells. *Helix* 1997, 6, 4-9.
57. Ratajczak J., Machalianski B., Marlicz W., Halasa M., Ratajczak M.Z.: Influence of leukemia inhibitory factor (LIF) on the survival, proliferation, and differentiation of human erythroid progenitor cells. In vitro studies under serum free conditions. *Folia Histochem. et Cytobiol.* 1997, 35, 63-68. PMID: 9151079
58. Ratajczak J., Marlicz W., Rozmyslowicz T., Machalinski B., Ratajczak M.Z.: Comparison of the different strategies for cryopreserving and storage of the bone marrow CD34<sup>+</sup> cells. Possibility of uncontrolled rate freezing and storage at -80°C mechanical freezer. *Ann. Transplant.* 1997, 1, 35-38. PMID: 9869904
59. Ratajczak M.Z.: Fibroblast growth factors and early hemopoietic cell development. *Leukemia & Lymphoma* 1997, 27, 221-229. PMID: 9402321
60. DiPaola R.S., Kuczynski W., Onodera K., Ratajczak M.Z., Hijiya N., Moore J., Gewirtz A.: Evidence for a Functional Kit Receptor in Melanoma, Breast and Lung Carcinoma Cells. *Cancer & Gene Ther.* 1997, 4, 176-182. PMID: 9171936
61. Ratajczak M.Z., Ratajczak J., Marlicz W., Pletcher Ch.H., Moore J., Hung H., Gewirtz A.M.: Recombinant human thrombopoietin (TPO) stimulates erythropoiesis by inhibiting erythroid progenitor cell apoptosis. *Brit. J. Haematol.* 1997, 98, 8-17. PMID: 9233556
62. Ratajczak M.Z., Ratajczak J., Kregenow D.A., Marlicz W., Machalinski B., Simon M., Luger S., Gewirtz A.M.: An optimization study on unprogrammed cryopreservation of human CD34<sup>+</sup> bone marrow cells and their subsequent storage in an -80°C mechanical freezer. *Ann. Transpl.* 1997, 2, 5-11. PMID: 9869847
63. Ratajczak M.Z., Marlicz W., Ratajczak J., Machalinski B., Wasik M., Carter A., Gewirtz A.M.:

- Effect of hepatocyte growth factor (HGF) on human early haematopoietic cell development. *Brit. J. Haematol.* 1997, 99, 228-236. PMID: 9359529
64. Ratajczak M.Z., Ratajczak J., Machalinski B., Mick R., Gewirtz A.M.: In vitro and in vivo evidence that ex vivo cytokine priming of donor marrow cells may ameliorate post-transplant thrombocytopenia. *Blood* 1998, 91, 353-359. PMID: 9414305
  65. Ratajczak M.Z., Perrotti D., Meloti P., Powzaniuk M., Calabretta B., Onodera K., Kregenow D.A., Machalinski B., A.M. Gewirtz.: Myb and Ets proteins are candidate regulators of c-kit expression in human hematopoietic cells. *Blood* 1998, 91, 1934-1946. PMID: 9490676
  66. Ratajczak J., Marlicz W., Machalinski B., Pertusini E., Czajka R., Ratajczak M.Z.: An improved serum free system for cloning human "pure" erythroid colonies. The role of the different growth factors and cytokines on BFU-E formation by the bone marrow and cord blood CD34+ cells. *Folia Histochem. et Cytobiol.* 1998, 36, 61-66. PMID: 9606618
  67. Ratajczak J., Machalinski B., Samuel A., Pertusini E., Majka M., Czajka R., Ratajczak M.Z.: A novel serum free system for cloning human megakaryocytic progenitors (CFU-Meg): The role of thrombopoietin and other cytokines on bone marrow and cord blood CFU-Meg growth under serum free conditions. *Folia Histochem. et Cytobiol.* 1998, 36, 55-60. PMID: 9606619
  68. Ratajczak J., Zhang Q., Wojczyk S., Pertusini E., Wasik M., Ratajczak M.Z.: The role of insulin, and insulin like growth factor-I in regulating human erythropoiesis. Studies in vitro under serum free conditions - comparison to other cytokines and growth factors. *Leukemia* 1998, 12, 371-381. PMID: 9529132
  69. Ratajczak M.Z., Plecher Ch. H., Marlicz W., Machalinski B., Moore J., Wasik M., Ratajczak J., Gewirtz A.M.: CD34<sup>+</sup>, Kit<sup>+</sup>, Rhodamine123<sup>low</sup> phenotype identifies a marrow cell population highly enriched for human hematopoietic stem cells. *Leukemia.* 1998, 12, 942-950. PMID: 9639424
  70. Parker R.I., Siegel R.S., Ratajczak M.Z., Gewirtz A.M.: Deficient in vitro megakaryocytopoiesis and decreased in vivo platelet turnover in children and young adults with chronic thrombocytopenia. *J. Ped. Hem. & Oncol.* 1998, 20, 196-201. PMID: 9628429
  71. Wlodarski P., Wasik M., Ratajczak M.Z., Seignani C., Hoser G., Kawiak J., Gewirtz A.M., Calabretta B., Skorski T.: Role of p53 in hematopoietic recovery after cytostatic treatment. *Blood* 1998, 91, 2998-3006. PMID: 9531612
  72. Lee B., Dornkranz B.J., Ratajczak M.Z., Doms B.W.: An intricate web: chemokine receptors, HIV-1, and hematopoiesis. *Stem Cells* 1998, 16, 79-88. PMID: 9554031
  73. Gewirtz A.M., Sokol D.L., Ratajczak M.Z.: Nucleic acid therapeutics: State of the art and future prospects. *Blood* 1998, 92, 712-736. PMID: 9680338
  74. Ratajczak M.Z., Ratajczak J., Machalinski B., Majka M., Marlicz W., Carter A., Pietrzkowski Z., Gewirtz A.M.: Role of vascular endothelial growth factor (VEGF), placenta derived growth factor (PlGF)/Flt-1 and Flk-1/KDR receptor axes in human adult and fetal hematopoiesis. *Brit. J. Haematol.* 1998, 103, 969-979. PMID: 9886308
  75. Machalinski B., Zejmo M., Steciewicz I., Machalinska A., Machoy Z., Ratajczak M.Z.: The influence of sodium fluoride on the clonogenicity of the human hematopoietic progenitor cells. Preliminary report. *Fluoride* 2000, 4, 174-179.
  76. Kowalska M.A., Ratajczak J., Hoxie J., Brass L., Gewirtz A.M., Poncz M., Ratajczak M.Z.: Platelet and megakaryocytes express the HIV co-receptor CXCR4 on their surface but do not respond to stromal derived factor (SDF) - 1. *Brit. J. Haematol.* 1999, 104, 220-229. PMID: 10050701
  77. Machalinski B., Wiszniewska B., Balcewicz M., Marchlewicz M., Majka M., Wenda-Rozewicka L., Ratajczak M.Z.: In vivo and in vitro studies on the toxicity of Hoechst 33342 (Ho342). Implications for employing Ho342 for the isolation of the hematopoietic stem cells. *Annals of Transpl.* 1998, 3, 5-13. PMID: 10234429
  78. Lee B., Ratajczak J., Doms RW, Gewirtz AM, Ratajczak M.Z.: Coreceptor/chemokine receptor expression on human hematopoietic cells: Biological implications for HIV-1 infection. *Blood* 1999, 93, 1145-1156. PMID: 9949156
  79. Zent CS, Ratajczak J, Ratajczak MZ, Anastasi J, Hoffman PC, Gewirtz AM: Relationship between megakaryocyte mass and serum thrombopoietin levels as revealed by a case of cyclic amegakaryocytic thrombocytopenia purpura. *Brit. J. Haematol.* 1999, 105, 452-458. PMID: 10233421
  80. Marlicz W., Paczkowski M., Kijowski J., Machalinski B., Gontarewicz A., Paczkowska E., Zukowski M., Bohatyrewicz R., Czajkowski Z., Ostrowski M. Ratajczak MZ: Isolation of the hematopoietic stem cells (HSC) from the heparinized cadaveric multiple organ donors

- (HCMOD). Potential clinical implications. *Transpl. Proceedings* 1999, 31, 2099-2101. PMID: 10455982
81. Ratajczak J, W, Machalinski B, Majka M, Kijowski J, Marlicz Rozmyslowicz T, Ostrowski M, Ratajczak MZ: Evidence that human haematopoietic stem cells (HSC) do not reside within the CD34+KIT- cell population. *Annals of Transplant.* 1999, 4, 23-31. PMID: 10850597
  82. Honczarenko M, Douglas RS, Mathias C, Lee B, Ratajczak MZ, Silberstein LE.: SDF-1 responsiveness does not correlate with CXCR4 expression levels of developing human bone marrow B cells. *Blood* 1999, 94, 2990-2998. PMID: 10556181
  83. Machalinski B, Szolomicka P, Baskiewicz M, Karbicka A, Kijowski J, Byra E, Majka M, Giedrys-Kalemba S, Ratajczak M.Z.: Short-term storage of human hematopoietic cells. Influence of the air and deoxyribonuclease I. *Annals of Transplant.* 1999, 4, 29-36. PMID: 10850588
  84. Majka M, Ratajczak J, Kowalska MA, Ratajczak MZ.: Binding of stromal derived factor-1a (SDF-1a) to CXCR4 chemokine receptor in normal human megakaryoblasts but not in platelets induces phosphorylation of mitogen-activated protein kinase p42/44 (MAPK), ELK-1 transcription factor and serine/threonine kinase AKT. *Eur. J. Haematol.* 2000, 64, 164-172. PMID: 10997882
  85. Majka M, Ratajczak J, Machalinski B, Carter A, Pizzini D, Wasik MA, Gewirtz AM, Ratajczak MZ: Expression, regulation, and function of AC133, a putative cell surface marker of primitive human haematopoietic cells. *Folia Histochem. et Cytobiol.* 2000, 38, 53-63. PMID: 10833669
  86. Majka M, Rozmyslowicz T, Lee B, Pietrkowski Z, Gaulton GN, Silberstein L, Ratajczak MZ.: Bone Marrow CD34+ cells and megakaryoblasts secrete  $\alpha$ -chemokines; implications for infectability by M-tropic human immunodeficiency virus (R5 HIV). *J. Clin. Invest.* 1999, 104, 1739-1749. PMID: 10606628
  87. Kowalska, M.A., Ratajczak, M.Z., Majka, M., Brass, L.W., Poncz, M.: SDF-1 and MDC: complementary chemokines at the crossroads between inflammation and thrombosis. *Blood* 2000, 96, 50-57. PMID: 10891429
  88. Majka M, Ratajczak J, Lee B, Honczarenko M, Douglas R, Kowalska MA, Silberstein L, Gewirtz AM, Ratajczak MZ: The role of HIV related chemokine receptors and chemokines in human erythropoiesis in vitro. *Stem Cells* 2000, 18, 128-138. PMID: 10742385
  89. Majka M, Rozmyslowicz T, Honczarenko M, Ratajczak J, Wasik M, Gaulton GN, Ratajczak MZ.: Biological significance of the expression of HIV related chemokine coreceptors (CCR5 and CXCR4) and their ligands by human hematopoietic cell lines. *Leukemia* 2000, 14, 1821-1832. PMID: 11021758
  90. Janowska-Wieczorek A, Marquez LA, Dobrowsky A, Ratajczak MZ, Cabuhat ML. Differential MMP and TIMP production by human marrow and blood CD34+ cells in response to chemokines. *Exp. Hematol.* 2000, 28, 1274-1285. PMID: 11063876
  91. Majka M, Rozmyslowicz T, Ratajczak J, Dobrowsky A, Pietrkowski Z, Gaulton GN, Janowska-Wieczorek A, Ratajczak MZ.: The limited infectability by R5 HIV of CD34+ cells from thymus, cord and peripheral blood and bone marrow is explained by their ability to produce  $\alpha$ -chemokines. *Exp. Hematol.* 2000, 28, 1334-1342. PMID: 11146155
  92. Majka M, Janowska-Wieczorek A, Ratajczak J, Kowalska MA, Vilaire G, Pan ZK, Honczarenko M, Marquez LA, Poncz M, Ratajczak MZ.: Stromal Derived Factor-1 and Thrombopoietin Regulate Distinct Aspects of Human Megakaryopoiesis. *Blood*, 2000, 96, 4142-4151. PMID: 11110685
  93. Pertussini E, Ratajczak J, Majka M, Vaughan D, Ratajczak M.Z, Gewirtz AM.: Investigating the platelet sparing mechanism of Paclitaxel/Carboplatin combination chemotherapy. *Blood* 2001, 97, 638-644. PMID: 11157479
  94. Janowska-Wieczorek A, Majka M, Ratajczak J, Ratajczak MZ.: Autocrine/paracrine mechanisms in human hematopoiesis. *Stem Cells* 2001, 19, 99-107. PMID: 11239164
  95. Machalinski B, Kijowski J, Marlicz W, Gontarewicz A, Markiewski M, Paczkowski M, Kopkowski A, Majka M, Ostrowski M, Ratajczak M.Z.: Heparinized cadaveric organ donors (HCOD) – a potential source of hematopoietic cells from transplantation and gene therapy. *Transplantation* 2001, 71, 1003-1007. PMID: 11349709
  96. Majka M, Janowska-Wieczorek A, Ratajczak J, Ehrenman K, M.A. Kowalska, Gewirtz AM, Emerson SG, Ratajczak MZ. Numerous growth factors, cytokines and chemokines are secreted by human CD34+ cells, myeloblasts, erythroblasts and megakaryoblasts and regulate normal hematopoiesis in an autocrine/paracrine manner. *Blood* 2001, 97, 3075-3085. PMID: 11342433
  97. Majka M, Ratajczak J, Baj M, Kijowski J, Reca R, Kubiczek K, Ratajczak MZ.: Biological

- significance of chemokine receptors expression by normal human megakaryoblasts. *Folia Histochem. et Cytobiol* 2001, 39, 235-244. PMID: 11534779
98. Majka M, Baj M, Kijowski J, Reca R, Ratajczak J, Ratajczak MZ.: In vitro expansion of human megakaryocytes as a tool for studying megakaryocytic development and function. *Platelets* 2001, 12, 325-332. PMID: 11672471
  99. Kijowski J, Baj M, Majka M, Reca R, Marquez LA, Christofidou-Solomidou M, Janowska-Wieczorek A, Ratajczak MZ.: The SDF-1-CXCR4 axis stimulates VEGF secretion and activates integrins but does not affect proliferation and survival in lymphohematopoietic cells. *Stem Cells* 2001, 19, 453-466. PMID: 11553854
  100. Ratajczak J, Majka M, Kijowski J, Baj M, Pan ZK, Marquez LA, Janowska-Wieczorek A, Ratajczak MZ.: Biological significance of MAPK, AKT and JAK-STAT protein activation by various erythropoietic factors in normal human early erythroid cells. *Brit. J. Haematol.* 2001, 114, 195-205. PMID: 11722433
  101. Janowska-Wieczorek A, Majka M, Kijowski J, Baj-Krzyworzeka M, Reca R, Turner AR, Ratajczak J, Kowalska MA, Ratajczak MZ.: Platelet-derived microparticles (PMPs) bind to hematopoietic stem/progenitor cells (HSPC) and enhance their engraftment. *Blood* 2001, 98, 3143-3149. PMID: 11698303
  102. Rozmyslowicz T, Kijowski J, Conover DO, Majka M, Baj-Krzyworzeka M, Reca R, J. Libura, Gaulton GN, Ratajczak MZ.: The role of selected intrinsic factors in the infectability of T-lymphocytic cell lines by HIV. *Eur. J. Haematol.* 2001, 67, 142-151. PMID: 11737246
  103. Marquez LA, Dobrowsky A, Montano J, Turner AR, Ratajczak J, Ratajczak MZ, Janowska-Wieczorek A.: Matrix metalloproteinase and tissue inhibitors of metalloproteinase secretion by hematopoietic and stromal precursors and their production in normal and leukaemic long-term marrow cultures. *Brit. J. Haematol.* 2001, 115, 595-604. PMID: 11736941
  104. Luger SM, O'Brien SG, Ratajczak J, Ratajczak MZ, Mick R, Stadmauer EA, Nowell PC, Goldman JM, Gewirtz AM.: Oligodeoxynucleotide-mediated inhibition of c-myc gene expression in autografted bone marrow: a pilot study. *Blood* 2002, 99, 1150-1158. PMID: 11830460
  105. Machalinski B, Gontarewicz A, Ratajczak MZ.: Morphological analysis of the bone marrow biopsies derived from heparinized cadaveric organ donors before and after disconnecting from the respirator. *Annals of Transplant.* 2002, 4, 48-52. PMID: 12035459
  106. Janowska-Wieczorek A, Majka M, Marquez-Curtis L, Wertheim JA, Turner AR, Ratajczak MZ.: Bcr-abl-positive cells secrete angiogenic factors including matrix metalloproteinases and stimulate angiogenesis in vivo in matrigel implants. *Leukemia* 2002, 16, 1160-1166. PMID: 12040448
  107. Baj-Krzyworzeka M, Majka M, Pratico D, Ratajczak J, Vilaire G, Kijowski J, Reca R, Janowska-Wieczorek A, Ratajczak MZ.: Platelet-derived microparticles stimulate proliferation, survival, adhesion and chemotaxis of hematopoietic cells. *Exp. Hematol.* 2002, 30, 450-459. PMID: 12031651
  108. Majka M, Ratajczak J, Vilaire G, Kubiczek K, Marquez LA, Janowska-Wieczorek A, Ratajczak MZ.: Thrombopoietin, but not cytokines binding to gp130 protein-coupled receptors, activates MAPKp42/44, AKT and STAT proteins in normal human CD34+ cells, megakaryocytes and platelets. *Exp. Hematol.* 2002, 30, 751-760. PMID: 12135673
  109. Honczarenko M, Glodek AM, Majka M, Campbell JJ, Ratajczak MZ, Siberstein LE.: CCR5 binding chemokines modulate CXCL12(SDF-1) induced responses of progenitor B cells in human bone marrow through heterologous desensitization of the CXCR4 chemokine receptor. *Blood* 2002, 100, 2321-2329. PMID: 12239139
  110. Libura J, Drukala J, Majka M, Tomeascu O, Navenot JM, Kucia M, Marquez L, Peiper SC, Barr FG, Janowska-Wieczorek A, Ratajczak MZ.: CXCR4-SDF-1 signaling is active in rhabdomyosarcoma cells and regulates locomotion, chemotaxis and adhesion. *Blood* 2002, 100, 2597-2606. PMID: 12239174
  111. Ratajczak J, Kijowski J, Majka M, Jankowski K, Reca R, Ratajczak MZ.: Biological significance of the different erythropoietic factors secreted by normal human early erythroid cells. *Leukemia & Lymphoma* 2003, 44, 767-774. PMID: 12802912
  112. Rozmyslowicz T, Majka M, Kijowski J, Murphy SL, O'Conner D, Poncz M, Ratajczak J, Gaulton GN, Ratajczak MZ.: Platelet- and megakaryocyte-derived microparticles transfer CXCR4 receptor to CXCR4-null cells and make them susceptible to infection by X4-HIV. *AIDS* 2003, 17, 33-42. PMID: 12478067
  113. Wang ZY, Zhang Q, Wilson J, Ratajczak MZ, Wasik MA: Detection of protein

- tyrosine-kinase (PTK) gene expression pattern in normal and malignant T lymphocytes by combined PTK-specific PCR and parallel denaturing gradient gel electrophoresis (DGGE). *J. Molec. Diagn.* 2003, 5, 113-120. PMID: 12707376
114. Pituch-Noworolska A, Majka M, Janowska-Wieczorek A, Monika Baj, Urbanowicz B, Malec E, Ratajczak MZ.: Circulating CXCR4-positive stem/progenitor cells compete for SDF-1 positive niches in bone marrow, muscle and neural tissues: An alternative hypothesis to stem cells plasticity. *Folia Histochem. et Cytobiol.* 2003, 41, 13-21. PMID: 12705474
  115. Reca R, Mastellos D, Majka M, Marquez L, Ratajczak J, Franchini S, Glodek A, Honczarenko M, Spruce LA, Janowska-Wieczorek A, Lambris JD, Ratajczak MZ.: Functional receptor for C3a anaphylatoxin is expressed by normal hematopoietic stem/progenitor cells and C3a enhances homing-related responses of early hematopoietic cells to SDF-1. *Blood* 2003, 101, 3784-3793. PMID: 12511407
  116. Ratajczak MZ, Majka M, Kucia M, Drukala J, Pietrzkowski Z, Peiper S, Janowska-Wieczorek A.: Expression of functional CXCR4 by muscle satellite cells and secretion of SDF-1 by muscle-derived fibroblasts is associated with the presence of both muscle progenitors in bone marrow and hematopoietic stem/progenitor cells in muscles. *Stem Cells* 2003, 21, 363-371. PMID: 12743331
  117. Ratajczak J, Kucia M, Reca R, Zhang J, Machalinski B, Ratajczak M.Z.: Quiescent CD34<sup>+</sup> early erythroid progenitors are resistant to several erythropoietic "inhibitory" cytokines; role of FLIP. *Brit. J. Haematol.* 2003, 123, 160-169. PMID: 14510960
  118. Kucia M, Ratajczak J, Reca R, Janowska-Wieczorek A, Ratajczak M.Z.: Tissue-specific Muscle, Neural and Liver Stem/Progenitor Cells Reside in the Bone Marrow, Respond to an SDF-1 Gradient and Are Mobilized into Peripheral Blood during Stress and Tissue Injury. *Blood Cells Mol. Dis.* 2004, 32, 52-7. PMID: 14757413
  119. Jankowski K, Kucia M, Wysoczynski M, Reca R, Zhao D, Trzyna E, Zembala M, Ratajczak J, Houghton P, Janowska-Wieczorek A, Ratajczak M.Z.: Both HGF and SDF-1 Regulate the Metastatic Behavior of Human Rhabdomyosarcoma Cells, but only HGF Enhances their Resistance to Radio-chemotherapy. *Cancer Res.* 2003, 63, 7926-7935. PMID: 14633723
  120. Kucia M, Wysoczynski M, Reca R, Jankowski K, Bandura L, Allendorf DJ, Zhang J, Ratajczak J, Ratajczak M.Z.: CXCR4-SDF-1 signaling, locomotion, chemotaxis and adhesion. *Journal of Molecular Histology* 2004, 35, 233-245. PMID: 15339043
  121. Ratajczak M.Z., Kucia M, Reca R, Majka M, Janowska-Wieczorek A, Ratajczak J.: Stem cell plasticity revisited: CXCR4-positive cells expressing mRNA for early muscle, liver and neural cells "hide out" in the bone marrow. *Leukemia* 2004, 18, 29-40. PMID: 14586476
  122. Ratajczak J, Reca R, Kucia M, Majka M, Allendorf DJ, Baran JT, Janowska-Wieczorek A, Wetsel RA, Ross GD, Ratajczak M.Z.: Mobilization Studies in Mice Deficient in Either C3 or C3a-Receptor (C3aR) Reveal a Novel Role For Complement in Retention of Hematopoietic Stem/Progenitor Cells in Bone Marrow. *Blood* 2004, 103, 2071-2078. PMID: 14604969
  123. Ratajczak M.Z., Kucia M, Majka M, Reca R, Ratajczak J. Heterogenous populations of bone marrow stem cells – are we spotting on the same cells from the different angles? *Folia Histochem. et Cytobiol* 2004, 42, 139-146. PMID: 15493574
  124. Ratajczak M.Z., Reca R, Wysoczynski M, Kucia M, Baran JT, Allendorf DJ, Ratajczak J, Ross GD. Transplantation studies in C3-deficient animals reveal a novel role of the third complement component (C3) in engraftment of bone marrow cells. *Leukemia* 2004, 18, 1482-1490. PMID: 15284858
  125. Kucia M, Ratajczak J, Ratajczak MZ. Bone Marrow as a Source of Circulating CXCR4<sup>+</sup> Tissue Committed Stem Cells (TCSC). *Biol. Cell* 2005, 97, 133-146. PMID: 15656779
  125. Janowska-Wieczorek A, Wysoczynski M, Kijowski J, Marques-Curtis L, Machalinski B, Ratajczak J, Ratajczak M.Z. Microvesicles Derived from Activated Platelets Induce Metastasis and Angiogenesis in Lung Cancer. *Int J Cancer* 2005, 113, 752-760. PMID: 15499615
  126. Wysoczynski M, Reca R, Ratajczak J, Kucia M, Shirvaikar N, Mills M, Wanzeck J, Honczarenko M, Janowska-Wieczorek A, Ratajczak M.Z. Incorporation of CXCR4 into Membrane Lipid Rafts Primes Homing-related responses of Hematopoietic Stem Cells to an SDF-1 Gradient. *Blood* 2005, 105, 40-48. PMID: 15328152
  127. Wojakowski W, Tendera M, Michalowska A, Majka M, Kucia M, Maslankiewicz K, Wyderka R, Ochala A, Ratajczak M.Z. The mobilization of CD34<sup>+</sup>/CXCR4<sup>+</sup>, CD34<sup>+</sup>/CD117<sup>+</sup>, c-Met<sup>+</sup> stem cells and mononuclear cells expressing early cardiac, muscle and endothelial markers into peripheral blood in patients with acute myocardial infarction. *Circulation* 2004, 110, 3213-3220. PMID:



- 15533859
128. Chilton PM, Rezzoug F, Ratajczak M.Z., Fugier-Vivier I, Ratajczak J, Kucia M, Huang, Tanner MK, Ildstad ST Hematopoietic stem cells from NOD mice exhibit autonomous behavior and a competitive advantage in allogeneic recipients *Blood* 2005, 105, 2189-2197. PMID: 15522953
  129. Barcew K, Karbicka A, Wiszniewska B, Ratajczak M.Z., Machaliński B. Effect of stem cell mobilization with cyclophosphamide and G-CSF on morphology of hematopoietic organs in mice. *Cell Proliferation* 2005, 38, 47-61. PMID: 15679866
  130. Kucia M, Dawn D, Hunt G, Guo Y, Wysoczynski M, Majka M, Ratajczak J, Rezzoug F, Ildstad ST, Bolli R, Ratajczak M.Z. Cells expressing markers of cardiac tissue-committed stem cells reside in the bone marrow and are mobilized into peripheral blood following myocardial infraction. *Cir. Research* 2004, 95, 1191-1199. PMID: 15550692
  131. Kucia M, Ratajczak J, Ratajczak M.Z. Are Bone marrow stem cells plastic or heterogenous – that is the question. *Exp. Hematol.* 2005, 33, 613-623. PMID: 15911085
  132. Kucia M, Reca R, Miekus K, Wanzeck J, Wojakowski W, Janowska-Wieczorek A, Ratajczak J, Ratajczak M.Z. Trafficking of Normal Stem Cells and Metastasis of Cancer Stem Cells Involve Similar Mechanisms: Pivotal Role of the SDF-1–CXCR4 Axis. *Stem Cells* 2005, 23, 879-894. PMID: 15888687
  133. Kucia M, Reca R, Jala VR, Dawn B, Ratajczak J, Ratajczak M.Z. Bone marrow as a home of heterogenous populations of nonhematopoietic stem cells. *Leukemia* 2005, 19, 1118-1127. PMID: 15902288
  134. Ratajczak M.Z., Reca R., Wysoczynski M. Response to "C5L2 Receptor is not Involved in C3a/C3a-desArg Mediated Enhancement of Bone Marrow Hematopoietic Cell Migration to CXCL12" by Honczarenko et al. *Leukemia* 2005, 19, 1685-1686.
  135. Opalinska JB, Machalinski B, Ratajczak J, Ratajczak MZ, Gewirtz AM. Multi-Gene Targeting with Antisense Oligodeoxynucleotides: An Exploratory Study Employing Primary Human Leukemia Cells. *Clin Cancer Res* 2005, 11, 4948-4954. PMID: 16000594
  136. Majka M, Kucia M, Ratajczak MZ. Stem cell biology – a never ending quest for understanding. *Acta Biochem. Pol.* 2005, 52, 353-358. PMID: 15990920
  137. Paczkowska E, Larysz B, Rzeuski R, Karbicka A, Jałowiński R, Kornacewicz-Jach Z, Ratajczak M.Z, Machaliński B. Human hematopoietic stem/progenitor-enriched CD34<sup>+</sup> cells are mobilized into peripheral blood during stress related to ischemic stroke or acute myocardial infarction. *Eur. J. Hematol.* 2005, 75, 461-467. PMID: 16313257
  138. Ratajczak MZ. Cancer Stem Cells – Normal Stem Cells “Jedi” that went over to the “dark side”. *Folia Histochem. & Cytobiol.* 2005, 43, 175-181. PMID: 16382880
  139. Ratajczak MZ. RGS16 “tightens the reins” on CXCR4. *Blood* 2005, 106: 2928-2929.
  140. Honczarenko M, Ratajczak MZ, Nicholson-Weller A, Silberstein LE. Complement C3a Enhances CXCL12 (SDF-1)-Mediated Chemotaxis of Bone Marrow Hematopoietic Cells Independently of C3a Receptor. *J Immunol* 2005, 175, 3698-3706. PMID: 16148115
  141. Cramer DE, Allendorf D, Baran JT, Hansen R, Marroquin J, Li B, Ratajczak J, Ratajczak MZ, Yan J. Beta-Glucan Enhances Complement-Mediated Hematopoietic Recovery after Bone Marrow Injury. *Blood* 2006, 107, 835-840. PMID: 16179370
  142. Kucia M, Zhang PY, Reca R, Wysoczynski M, Machalinski B, Ildstad ST, Ratajczak J, Shields CB, Ratajczak MZ. Cells enriched in markers of neural tissue-committed stem cells (TCSC) reside in the bone marrow and are mobilized into the peripheral blood following stroke. *Leukemia* 2006, 20, 18-28. PMID: 16270036
  143. Wojakowski W, Tendera M, Zebzda A, Michalowska A, Majka M, Kucia M, Maslankiewicz K, Wyderka R, Krol M, Ochala A, Kozakiewicz K, Ratajczak M.Z. Mobilization of CD34<sup>+</sup>, CD117<sup>+</sup>, CXCR4<sup>+</sup>, c-met<sup>+</sup> stem cells is correlated with left ventricular ejection fraction and plasma NT-proBNP levels in patients with acute myocardial infarction. *Eur. Heart J.* 2006, 27:283-289. PMID: 16267071
  144. Baj-Krzyworzeka M, Szatanek R, Weglarczyk K, Baran J, Urbanowicz B, Branski P, Ratajczak MZ, Zembala M. Tumour-derived microvesicles carry several surface determinants and mRNA of tumour cells and transfer some of these determinants to monocytes. *Cancer Immunol Immunother.* 2006, 55: 808-818. PMID: 16283305
  145. Huang Y, Kucia M, Rezzoug F, Ratajczak J, Tanner MK, Ratajczak MZ, Schanie CL, Xu H, Fugier Vivier I, Ildstad ST. FL-mobilized peripheral blood but not FL-expanded bone marrow FC promote establishment of chimerism and tolerance. *Stem Cells* 2006, 4, 936-948. PMID: 16644924

146. Ratajczak MZ, Reca R, Wysoczynski M, Yan J, Ratajczak J. Modulation of the SDF-1-CXCR4 axis by the third complement component (C3) - Implications for trafficking of CXCR4<sup>+</sup> stem cells. *Exp. Hematol* 2006, 34: 986-995. PMID: 16863905
147. Kucia M, Wojakowski W, Reca R, Machalinski B, Gozdzik J, Majka M, Baran J, Ratajczak J, Ratajczak MZ. The migration of bone marrow-derived non-hematopoietic tissue committed stem cells (TCSC) is regulated in SDF-1, HGF and LIF-dependent manner. *Arch Immunol. Therap. Exp* 2006, 54, 121-135. PMID: 16648972
148. Ratajczak J, Miekus K, Kucia M, Zhang J, Reca R, Dvorak P, Ratajczak MZ. Embryonic stem cell-derived microvesicles reprogram hematopoietic progenitors: evidence for horizontal transfer of mRNA and protein delivery. *Leukemia* 2006, 20:847-856. PMID: 16453000
149. Li Y, Reca R, Sonmez P, Ratajczak MZ, Ildstad ST, Kaplan HJ, Enzmann V. Retinal pigment epithelium damage enhances expression of chemoattractants and migration of bone marrow-derived stem cells. *Invest Ophthalmol Vis Sci.* 2006, 47:1646-1652. PMID: 16565405
150. Kucia M, Reca R, Campbell FR, Majka M, Ratajczak J and Ratajczak MZ. A population of very small embryonic like (VSEL) CXCR4<sup>+</sup> SSEA-1<sup>+</sup> Oct-4<sup>+</sup> stem cells identified in adult bone marrow. *Leukemia* 2006, 20:857-869. PMID: 16498386
151. Ratajczak MZ, Kucia M, Dobrowolska H, Wanzeck J, Reca R, Ratajczak J. Emerging concept of cancer as a stem cell disorder. *Centr. Eur. J. Biol* 2006, 1:73-87.
152. Wojakowski W, Ratajczak MZ, Tendera M. Interleukin-8: More on mechanisms of progenitor cells mobilization in acute coronary syndromes. *Eur Heart J.* 2006, 27:1013-1015. PMID: 16595523
153. Kucia M, Zuba-Surma E, Wysoczynski M, Dobrowolska H, Reca R, Ratajczak J, Ratajczak MZ. Physiological and pathological consequences of identification of very small embryonic like (VSEL) stem cells in adult bone marrow. *J Phys. Pharm.* 2006, 57; Suppl 5, 5-18. PMID: 17218757
154. Kucia M, Ratajczak MZ. Stem cells as a two edged sword – from regeneration to tumor formation. *J. Phys. Pharm.* 2006, 57; Suppl 7, 5-16. PMID: 17228093
155. Machalinski B, Paczkowska E, Koziarska D, Ratajczak MZ. Mobilization of human hematopoietic stem/progenitor-enriched CD34<sup>+</sup> cells into peripheral blood during stress related to ischemic stroke. *Folia Histochem & Cytobil.* 2006, 44:97-101. PMID: 16805134
156. Ratajczak J, Wysoczynski M, Hayek F, Janowska-Wieczorek A, Ratajczak MZ. Membrane-derived microvesicles (MV): important and underappreciated mediators of cell to cell communication. *Leukemia* 2006, 20:1487-1495. PMID: 16791265
157. Janowska-Wieczorek A, Marquez-Curtis L, Wysoczynski M, Ratajczak MZ. Enhancing effect of platelet-derived microvesicles on the invasive potential of breast cancer cells. *Transfusion* 2006, 46, 1199-1209. PMID: 16836568
158. Ratajczak MZ, Zuba-Surma E, Kucia M, Reca R, Wojakowski W, Ratajczak J. The pleiotropic effects of the SDF-1-CXCR4 axis in organogenesis, regeneration and tumorigenesis. *Leukemia* 2006, 20:1915-1924. PMID: 16900209
159. Zuba-Surma EK, Abdel-Latif A, Case J, Tiwari S, Hunt G, Kucia M, Vincent RJ, Ranjan S, Ratajczak MZ, Srouf EF, Bolli R, Dawn B. Sca-1 expression is associated with decreased cardiomyogenic differentiation potential of skeletal muscle-derived adult primitive cells. *J Mol Cell Cardiol* 2006, 41:650-660. PMID: 16938308
160. Ratajczak MZ. Microparticles from “dust to crown”. *Blood* 2006, 108: 2885-2886.
161. Majka M, Drukala J, Lesko E, Wysoczynski M, Jenson AB, Ratajczak MZ. SDF-1 alone and in co-operation with HGF regulates biology of human cervical carcinoma cells. *Folia Histochem Cytobil* 2006, 44:155-164. PMID: 16977794
162. Ratajczak MZ, NM B-Killman. The fever of stem cells has taken possession of us. *Leukemia* 2006, 20:1747.
163. Kucia M, Machalinski B, Ratajczak MZ. The developmental deposition of epiblast/primordial germ cells in various organs as a hypothetical explanation of stem cell plasticity. *Acta Neurol. Exp.* 2006, 66; 331-341. PMID: 17265694
164. Reca R, Wysoczynski M, Yan J, Lambris JD, Ratajczak MZ. The role of third complement component (C3) in homing of hematopoietic stem/progenitor cells into bone marrow. *Adv Exp Med Biol.* 2006, 586, 35-51. PMID: 16893063
165. Son BR, Marquez-Curtis LA, Kucia M, Wysoczynski M, Turner AR, Ratajczak J, Ratajczak MZ, Janowska-Wieczorek A. Migration of bone marrow and cord blood mesenchymal stem cells in vitro is regulated by stromal derived factor-1-CXCR4 and hepatocyte growth factor-c-met axes and involves matrix metalloproteinases. *Stem Cells* 2006, 24, 1254-1264. PMID: 16410389

166. Kucia M, Halasa M, Wysoczynski M, Baskiewicz-Masiuk M, Moldenhawer S, Zuba-Surma E, Czajka R, Wojakowski W, Machalinski B, Ratajczak MZ. Morphological and molecular characterization of novel population of CXCR4<sup>+</sup> SSEA-4<sup>+</sup> Oct-4<sup>+</sup> very small embryonic-like (VSEL) cells purified from human cord blood – preliminary report. *Leukemia* 2007, 21:297–303. PMID: 17136117
167. Wysoczynski M, Miekus K, Jankowski K, Wanzeck J, Janowska-Wieczorek A, Ratajczak J, Ratajczak MZ. Leukemia Inhibitory Factor: A newly identified metastatic factor in rhabdomyosarcomas. *Cancer Res.* 2007, 67:2131-2140. PMID: 17332343
168. Wysoczynski M, Kucia M, Ratajczak J, Ratajczak MZ. Cleavage fragments of third complement component (C3) enhance SDF-1 mediated platelet production during reactive thrombocytosis. *Leukemia* 2007, 21, 860-867. PMID: 17330096
169. Ratajczak MZ, Machalinski B, Wojakowski W, Kucia M. A hypothesis for an embryonic origin of pluripotent Oct-4<sup>+</sup> stem cells in adult bone marrow and other tissues. *Leukemia* 2007, 21, 973-982. PMID: 17344915
170. Majka M, Kijowski J, Lesko E, Gozdzik J, Zupanska B, Ratajczak MZ. Evidence that platelet-derived microvesicles may transfer platelet-specific immunoreactive antigens to the surface of endothelial cells and CD34<sup>+</sup> hematopoietic stem/progenitor cells - implication for the pathogenesis of immune thrombocytopenias. *Folia Histochem. Cytobiol* 2007, 45, 27-32. PMID: 17378242
171. Wojakowski W, Kucia M, Kazimierski M, Ratajczak MZ, Tendera M. Circulating stem/progenitor cells in stable ischemic heart disease and acute coronary syndromes – relevant reparatory mechanism? *Heart* 2008, 94, 27-33. PMID: 17395668
172. Kucia M, Wu W, Ratajczak MZ. Bone marrow-derived very small embryonic like stem cells (VSEL) - their developmental origin and biological significance. *Develop. Dynamics* 2007, 236:3309-3320. PMID: 17497671
173. Wojakowski W, Kucia M, Korzeniewski B, Ratajczak MZ, Tendera M. Trafficking of stem/progenitor cells after myocardial injury. *EuroIntervention* 2007, 2 (Suppl B), B9-B15.
174. Zuba-Surma EK, Kucia M, Abdel-Latif A, Lillard JW, Ratajczak MZ. The ImageStream System: A Key Step to a New Era in Imaging. *Folia Histochem. & Cytobiol.* 2007, 45, 279-90. PMID: 18165167
175. Kucia M, Wysoczynski M, Ratajczak J, Ratajczak MZ. Identification of Very Small Embryonic Like (VSEL) Stem Cells in Bone Marrow. *Cell & Tissue Res.* 2008, 331, 125-34. PMID: 17828555
176. Kucia M, Zuba-Surma E, Wysoczynski M, Wu W, Ratajczak J, Ratajczak MZ. Adult marrow-derived very small embryonic-like stem cells (VSEL SC) and tissue engineering. *Exp. Opin Biol. Ther.* 2007, 10, 1499-1514. PMID: 17916043
177. Reza R, Cramer D, Yan J, Laughlin MJ, Janowska-Wieczorek A, Ratajczak J, Ratajczak MZ. A novel role of complement in mobilization; immunodeficient mice are poor G-CSF mobilizers because they lack complement-activating immunoglobulins. *Stem Cells* 2007, 25, 3093-3100. PMID: 17717064
178. Ratajczak MZ, Ewa K. Zuba-Surma, Machalinski B, Kucia M. Bone marrow-derived stem cells – our key to longevity? *J Appl Genet.* 2007, 48, 307-319. PMID: 17998587
179. Wysoczynski M, Ratajczak J, Reza R, Kucia M, Ratajczak MZ. The third complement component as modulator of platelet production. *Adv Exp Med Biol.* 2007, 598, 226-239. PMID: 17892215
180. Zuba-Surma EK, Kucia M, Ratajczak MZ. “Decoding the dot”: The image stream system (ISS) as a novel powerful tool for flow cytometric analysis. *Cent. Eur. J. Biol* 2008, 3, 1-10.
181. Ratajczak MZ, Zuba-Surma EK, Wysoczynski M, Wan W, Ratajczak J, Wojakowski W, Kucia M. “Hunt for pluripotent stem cell – regenerative medicine search for almighty cell” *J of Autoimmunity* 2008, 30, 151-162. PMID: 18243661
182. Zuba-Surma EK, Kucia M, Abdel-Latif A, Dawan B, Hall B, Singh R, Lillard JW, Ratajczak MZ. Morphological characterization of very small embryonic-like stem cells (VSELs) by ImageStream system analysis. *J Cell Mol Med* 2008, 12, 292-303. PMID: 18031297
183. Rezzoug F, Huang Y, Tanner MK, Wysoczynski M, Shcanie CL, Chilton PM, Ratajczak MZ, FugierVivier IJ, Ildstad ST. TNF- $\alpha$  is critical to facilitate hematopoietic stem cell engraftment and function. *J Immunol* 2008, 180, 49-57. PMID: 18097003
184. Zuba-Surma EK, Kucia M, Dawn B, Guo Y, Ratajczak MZ, Bolli R. Bone marrow-derived pluripotent very small embryonic-like stem cells (VSELs) are mobilized after acute myocardial infarction. *J Moll Cell Cardiol* 2008, 44, 865-873. PMID: 18430437
185. Ratajczak MZ. Microvesicles as immune orchestra conductors. *Blood* 2008, 111, 4832-4833. PMID:

- 18467599
186. Ratajczak MZ, Zuba-Surma EK, Wojakowski W, Ratajczak J, Kucia M. Bone marrow home of versatile stem cells. *Transf Med & Haemother*. 2008, 35, 248-259. PMID: 21547122
  187. Zuba-Surma EK, Wu W, Ratajczak J, M. Kucia & Ratajczak MZ. Very Small Embryonic-Like Stem Cells in adult tissues – potential implications for aging. *Mech Ageing & Develop*. 2009, 130, 58-66. PMID: 18377952
  188. Fanning L, Hegerfeldt Y, Tary-Lehmann M, Lesniewski M, Maciejewski J, Weitzel M, Kozik M, Finney M, Lazarus HM, Paul P, Ratajczak MZ, Meyerson H, Laughlin M. Allogeneic transplantation of multiple umbilical cord blood units in adults: role of pre-transplant mixed lymphocyte reaction to predict host vs. graft rejection. *Leukemia* 2008, 22, 1786-1790. PMID: 18354493
  189. Cramer DE, Wagner S, Li B, Liu J, Hansen R, Reca R, Wu W, Zuba-Surma E, Laber D, Ratajczak MZ, Yan J. Mobilization of Hematopoietic Progenitor Cells by Yeast-derived  $\beta$ -Glucan Requires Activation of Matrix Metalloproteinase-9. *Stem Cells* 2008, 26, 1231-1240. PMID: 18339771
  190. Ratajczak MZ, Zuba-Surma E, Ratajczak J, Wysoczynski M, Kucia M. Very Small Embryonic Like (VSEL) Stem Cells – Characterization, Developmental Origin and Biological Significance. *Exp Hematol*. 2008, 36, 742-751. PMID: 18474305
  191. Shirvaikar N, Reca R, Jalili A, Marquez-Curtis L, Fong Lee S, Ratajczak MZ, Janowska-Wieczorek A. CFU-megakaryocytic progenitors expanded *ex vivo* from cord blood maintain their *in vitro* homing potential and express matrix metalloproteinases. *Cytotherapy* 2008, 10, 182-192. PMID: 18368597
  192. Ratajczak MZ. Phenotypic and functional characterization of hematopoietic stem cells. *Current Opinion Hematol* 2008, 15, 293-300. PMID: 18536565
  193. Ratajczak MZ, Zuba-Surma EK, Machalinski B, Ratajczak J, Kucia M. Very small embryonic-like (VSEL) stem cells: purification from adult organs, characterization, and biological significance. *Stem Cell Rev*. 2008, 4, 89-99. PMID: 18459073
  194. Huang Y, Ratajczak MZ, Reca R, Xu H, Tanner M, Rezzoug F, Hussain LR, Fugier-Vivier I, Bolli R, Ildstad ST. Fms-Related Tyrosine Kinase 3 Expression Discriminates Hematopoietic Stem Cells Subpopulations With Differing Engraftment-Potential: Identifying the Most Potent Combination. *Transplantation*. 2008, 85, 1175-1184. PMID: 18431239
  195. Dawn B, Tiwari S, Kucia MJ, Zuba-Surma EK, Guo Y, Sanganalmath SK, Abdel-Latif A, Hunt G, Vincent RJ, Taher H, Reed NJ, Ratajczak MZ, Bolli R. Transplantation of Bone Marrow-Derived Very Small Embryonic-like Stem Cells (Vsels) Attenuates Left Ventricular Dysfunction and Remodeling after Myocardial Infarction. *Stem Cells* 2008, 26, 1646–1655. PMID: 18420834
  196. Kucia M, Wysoczynski M, Wan W, Zuba-Surma EK, Ratajczak J, Ratajczak MZ. Evidence that very small embryonic like (VSEL) stem cells are mobilized into peripheral blood. *Stem Cells* 2008, 26, 2083–2092. PMID: 18511604
  197. Ratajczak MZ, Zuba-Surma EK, Shin DM, Ratajczak J, Kucia M. Very small embryonic-like (VSEL) stem cells in adult organs and their potential role in rejuvenation of tissues and longevity. *Exp. Gerontol*. 2008, 43, 1009-1017. PMID: 18601995
  198. Lesniewski ML, Haviernik P, Wietzel RP, Kadereit S, Kozik MM, Fanning LR, Yang YC, Hegerfeldt Y, Finney MR, Ratajczak MZ, Greco N, Paul P, Maciejewski J, Laughlin MJ. Regulation of IL-2 Expression by Transcription Factor BACH2 in Umbilical Cord Blood CD4+ T-cells. *Leukemia* 2008, 22, 2201–2207. PMID: 18769450
  199. Wojakowski W, Tendera M, Kucia M, Zuba-Surma E, Paczkowska E, Ciosek J, Hałasa M, Król M, Kaźmierski M, Ochała A, Ratajczak J, Machaliński B, Ratajczak MZ. Mobilization of Bone Marrow-Derived Oct-4+SSEA-4+ Very Small Embryonic-Like Stem Cells in Patients with Acute Myocardial Infarction. *J Am Coll Cardiol*. 2009, 53, 1-9. PMID: 19118716
  200. Paczkowska E, Kucia M, Koziarska D, Hałasa M, Safranow K, Masiuk M, Karbicka A, Nowik M, Nowacki P, Ratajczak MZ, Machalinski B. Clinical evidence that very small embryonic-like (VSEL) stem cells are mobilized into peripheral blood in patients after stroke. *Stroke* 2009, 40, 1237-1244. PMID: 19246697
  201. Zuba-Surma EK, Kucia M, Ratajczak J, Ratajczak MZ. “Small stem cells” in adult tissues: Very Small Embryonic-like Stem Cells (VSELS) stand up! *Cytometry* 2009, 75A, 4-13. PMID: 18988270
  202. Wojakowski W, Kucia M, Machalinski B, Halasa M, Buszman P, Klimeczek P, Kazmierski M, Pasowicz M, Ratajczak MZ, Tendera M. The role of CXCR4/SDF-1, CD117/SCF, and c-met/HGF chemokine signalling in the mobilization of progenitor cells and the parameters of the left ventricular

- function, remodelling, and myocardial perfusion following acute myocardial infarction. *Eur Heart J* 2008, 10, K16-K23.
203. Ratajczak MZ, Kucia M, Ratajczak J, Zuba-Surma EK. A multi-instrumental approach to identify and purify Very Small Embryonic Like Stem Cells (VSELs) from adult tissues. *Micron* 2009, 40, 386-393. PMID: 19028104
  204. Zuba-Surma EK, Wan W, Kucia M, Klich I, Lillards JW, Ratajczak J, Ratajczak MZ. Very Small Embryonic- Like stem cells (VSELs) are present in adult murine organs: ImageStream based morphological analysis and distribution studies. *Cytometry* 2008, 73A, 1116-1127. PMID: 18951465
  205. Fan T, Kucia M, Jankowski K, Higashi RM, Ratajczak J, Ratajczak MZ, Lane AN. Rhabdomyosarcoma cells show an energy producing anabolic metabolic phenotype compared with primary myocytes. *Mol Cancer* 2008, 7, 79-89. PMID: 18939998
  206. Ratajczak MZ, Kucia M, Dong-Myung S, Liu R, Drukala J, Marlicz W, Ratajczak J, EK Zuba-Surma. A unique population of mobile very small embryonic/epiblast like (VSEL) stem cells resides in adult tissues: physiological and pathological consequences. *J. Cell Ther & Transpl.* 2008, 1, 2, 36-43
  207. Ratajczak MZ. Megakaryocyte-derived microvesicles, please stand up! *Blood* 2009, 113, 981-982. PMID: 19179472
  208. Drukala J, Majka M, Kwarciak A, Puchala J, Ratajczak MZ. Subpopulation of Rh123<sup>dim</sup> human keratinocytes is highly enriched for holoclone forming cells. *Centr Eur J Biol* 2009, 4, 154-162.
  209. Zuba-Surma EK, Kucia M, Liu R, Wojakowski W, Ratajczak J, Ratajczak MZ. Fetal liver very small embryonic like stem cells (VSELs) follow developmental migratory pathway of hematopoietic stem cells. *Ann New York Acad. Sci* 2009, 1176, 205-218. PMID: 19796249
  210. Ratajczak MZ, Wysoczynski M, Reza R, Wan W, Zuba-Surma EK, Kucia M, Ratajczak J. A pivotal role of complement cascade (CC) in mobilization of hematopoietic stem/progenitor cells (HSPC). *Adv. Exp. Med. Biol.* 2008, 632, 47-60. PMID: 19025113
  211. Tendera M, Wojakowski W, Ruzyllo W, Chojnowska L, Kepka C, Tracz W, Musialek P, Piwowarska W, Nessler J, Buszman P, Grajek S, Breborowicz P, Majka M, Ratajczak MZ. Intracoronary infusion of bone marrow-derived selected CD34+CXCR4+ cells and non-selected mononuclear cells in patients with acute STEMI and reduced left ventricular ejection fraction: results of randomized, multicentre Myocardial Regeneration by Intracoronary Infusion of Selected Population of Stem Cells in Acute Myocardial Infarction (REGENT) Trial. *Eur Heart J* 2009, 11, 1313-21. PMID: 19208649
  212. Ratajczak MZ, Dong-Myung Shin, Kucia M. Very small embryonic-like stem cells (VSELs): a missing link to support the germ line hypothesis of cancer development? *Am J Pathol* 2009, 174, 1985-1992. PMID: 19406990
  213. Wysoczynski M, Reza R, Lee H, Wu W, Ratajczak J, Ratajczak MZ. Defective engraftment of C3aR-/- hematopoietic stem cells reveals a novel role of the C3a-C3aR axis in bone marrow homing. *Leukemia* 2009, 23, 1455-61. PMID: 19357704
  214. Lee H, Ratajczak MZ. Innate immunity: a key player in mobilization of hematopoietic stem/progenitor cells. *Arch. Immunol. Therapie Experiment.* 2009, 57, 269-78. PMID: 19578812
  215. Maksym RB, Tarnowski M, Grymula K, Tarnowska J, Wysoczynski M, Liu R, Czerny B, Ratajczak J, Kucia M, Ratajczak MZ. The role of stromal derived factor-CXCR7 axis in development and cancer. *Eur. J Pharmacol.* 2009, 625, 31-40. PMID: 19835865
  216. Wysoczynski M, Ratajczak MZ. Lung cancer secreted microvesicles: underappreciated modulators of microenvironment in expanding tumors. *Int. J. Cancer* 2009, 125, 1595-1603. PMID: 19462451
  217. Liu Y, Clem B, Zuba-Surma E, El-Naggar S, Telang S, Jenson AB, Wang Y, Shao H, Ratajczak MZ, Chesney J, Dean DC. Mouse fibroblasts lacking RB1 function form spheres and undergo reprogramming to a cancer stem cell phenotype. *Cell Stem Cell* 2009, 4, 336-347. PMID: 19341623
  218. Liu R, Klich I, Ratajczak J, Ratajczak MZ, Zuba-Surma EK. Erythrocyte-derived microvesicles may transfer phosphatidylserine to the surface of nucleated cells and falsely "mark" them as apoptotic. *Eur. J Haematol* 2009, 174, 1985-1992. PMID: 19456851
  219. Shin DM, Zuba-Surma EK, Wu W, Ratajczak J, Wysoczynski M, Ratajczak MZ, Kucia M. Novel epigenetic mechanisms that control pluripotency and quiescence of adult bone marrow-derived Oct-4<sup>+</sup> very small embryonic like stem cells. *Leukemia* 2009, 23, 2042-2051. PMID: 19641521
  220. Liu Y, Gao L, Zuba-Surma EK, Peng X, Kucia M, Ratajczak MZ, Wang W, Enzman V, Kaplan HJ, Dean DC. Identification of small Sca1(+), Lin(-), CD45(-) multipotential cell in the neonatal murine retina. *Exp. Hematol* 2009, 37, 1096-1107. PMID: 19539690

221. Wysoczynski M, Shin DM, Kucia M, Ratajczak MZ. Selective up-regulation of interleukin-8 by human rhabdomyosarcomas in response to hypoxia: therapeutic implications. *Int. J. Cancer* 2010, 126, 371-381. PMID: 19588509
222. Lee H, Wan W, Wysoczynski M, Liu R, Zuba-Surma EK, Kucia M, Ratajczak J, Ratajczak MZ. Impaired mobilization of hematopoietic stem/progenitor cells in C5-deficient mice supports the pivotal involvement of innate immunity in this process and reveals novel effects of granulocytes. *Leukemia* 2009, 23, 2052-2062. PMID: 19657368
223. Zuba-Surma EK, Klich I, Greco N, Laughlin MJ, Ratajczak J, Ratajczak MZ. Optimization of Isolation and Further Characterization of Umbilical Cord Blood-derived Very Small Embryonic/Epiblast-Like Stem Cells (VSELs). *Eur. J Haematol* 2010, 84, 34-46. PMID: 19758351
224. Zuba-Surma EK, Ratajczak MZ. Overview of Very Small Embryonic-Like Stem Cells (VSELs) and Methodology of Their Identification and Isolation by Flow Cytometric Methods. *Current Protocols in Cytometry* 2010, Chapter 9:Unit 9.29. PMID: 20069527
225. Ratajczak MZ, Shin DM. Why some cells are more equal than others? *Blood* 2009, 114, 4913-4914. PMID: 19965701
226. Lee H, Wysoczynski M, Liu R, Shin DM, Kucia M, Botto M, Ratajczak J, Ratajczak MZ. Mobilization studies in complement-deficient mice reveal that optimal AMD3100 mobilization of hematopoietic stem cells depends on complement cascade activation by AMD3100-stimulated granulocytes. *Leukemia* 2010, 24, 573-582. PMID: 20033053
227. Shin DM, Kucia M, Ratajczak MZ. Nuclear and chromatin reorganization during cell senescence and aging. *Gerontology* 2011, 57, 76-84. PMID: 20134149
228. Tarnowski M, Grymula K, Reca R, Jankowski K, Maksym R, Tarnowska J, Przybylski G, Barr FG, Kucia M, Ratajczak MZ. Regulation of expression of stromal-derived factor-1 (SDF-1) receptors: CXCR4 and CXCR7 in human rhabdomyosarcomas. *Mol. Cancer Res.* 2010, 8, 1-14. PMID: 20068066
229. Huang Y, Kucia M, Hussain LR, Wen Y, Xu H, Yan J, Ratajczak MZ, Ildstad ST. Bone Marrow Transplantation Temporarily Improves Pancreatic Function in Streptozotocin-Induced Diabetes: Potential Involvement of Very Small Embryonic-Like Cells. *Transplantation* 2010, 89, 677-685. PMID: 20110858
230. Grymula K, Tarnowski M, Wysoczynski M, Drukala J, Barr FG, Ratajczak J, Kucia M, Ratajczak MZ. Overlapping and Distinct Role of CXCR7-SDF-1/ITAC and CXCR4-SDF-1 Axes in Regulating Metastatic Behavior of Human Rhabdomyosarcomas. *Int J Cancer* 2010, 127, 2554–2568. PMID: 20162608
231. Ratajczak MZ, Machalinski B, Czajka R, Zuba-Surma E, Poziomkowska-Gesicka I, Slowik-Zylka D. Physiological and pathological consequences of a presece of germ line stem cells in adult tissues. *Ginek. Pol.* 2009, 80, 935-941. PMID: 20120940
232. Ratajczak MZ, Shin DM, Liu R, Tarnowski M, Ratajczak J, Kucia M. Epiblast/Germ Line Hypothesis of Cancer Development Revisited: Lesson from the Presence of Oct-4<sup>+</sup> Cells in Adult Tissues. *Stem Cell Rev & Rep.* 2010, 6, 307-316. PMID: 20309650
233. Jalili A, Shirvaikar N, Marquez-Curtis N, Qiu Y, Korol Ch, Lee H, Turner AR, Ratajczak MZ, Janowska-Wieczorek A. Fifth complement cascade protein (C5) cleavage fragments disrupt the SDF-1/CXCR4 axis: Further evidence that innate immunity orchestrates the mobilization of hematopoietic stem/progenitor cells. *Exp Hematol* 2010, 38, 321-332. PMID: 20153802
234. Ratajczak MZ, Lee HK, Wysoczynski M, Wan W, Marlicz W, Laughlin MJ, Kucia M, Janowska-Wieczorek A, Ratajczak J. Novel insight into stem cell mobilization - Plasma Sphingosine 1 – phosphate is a major chemoattractant that directs egress of hematopoietic stem progenitor cells from bone marrow and its level in peripheral blood increases during mobilization due to activation of complement cascade/membrane attack complex. *Leukemia* 2010, 24, 976-985. PMID: 20357827
235. Ratajczak MZ, Tarnowski M, Staniszevska M, Sroczynski T, Banach B. Mechanisms of cancer metastasis: involvement of cancer stem cells? *Miverva Med.* 2010, 101, 179-191. PMID: 20562805
236. Wysoczynski M, Rui L, Kucia M, Drukala J, Ratajczak MZ. Thrombin regulates metastatic potential of human rhabdomyosarcoma cells – distinct role of PAR1 and PAR3 signaling. *Mol. Cancer Res* 2010, 8, 677-690. PMID: 20442298
237. Wojakowski W, Tendera M, Kucia M, Zuba-Surma E, Milewski K, Wallace-Bradley D, Kazimierski M, Buszman P, Hrycek E, Cybulski W, Kaluza G, Ratajczak J, Ratajczak MZ. Cardiomyocyte differentiation of bone marrow-derived Oct-4<sup>+</sup>CXCR4<sup>+</sup>SSEA-1<sup>+</sup> very small embryonic-like stem cells. *Int J Oncol* 2010, 37, 237-247. PMID: 20596650

238. Jalili A, Marquez-Curtis L, Shirvaikar N, Wysoczynski M, Ratajczak MZ, Janowska-Wieczorek A. Complement C1q enhances homing-related responses of hematopoietic stem/progenitor cells. *Transfusion* 2010, 50, 2002-2010. PMID: 20456695
239. Shin DM, Liu R, Klich I, Wu W, Ratajczak J, Kucia M, Ratajczak MZ. Molecular signature of adult bone marrow-purified very small embryonic-like stem cells supports their developmental epiblast/germ line origin. *Leukemia* 2010, 24, 1450–1461. PMID: 20508611
240. Delaney C, Ratajczak MZ, Laughlin MJ. Strategies to enhance UCB stem cell engraftment in adult patients. *Exp. Rev. Hemato.* 2010, 3, 273-283. PMID: 20835351
241. Shin DM, Liu R, Klich I, Ratajczak J, Kucia M, Ratajczak MZ. Molecular characterization of isolated from adult tissues very small embryonic/epiblast like stem cells. *Molecules & Cells* 2010, 29, 533-538. PMID: 20526817
242. Zuba-Surma EK, Guo Y, Taher H, Sanganalmath Sk, Hunt G, Vincent RJ, Kucia M, Abdel-Latif A, Tang XL, Ratajczak MZ, Dawn B, Bolli R. Transplantation of expanded bone marrow-derived very small embryonic-like stem cells (VSEL-SCs) improves left ventricular function and remodeling after myocardial infarction. *J Cell Mol Med* 2011, 15, 1319-1328. PMID: 20629987
243. Ratajczak MZ, Kim CW, Wojakowski W, Janowska-Wieczorek A, Kucia M, Ratajczak J. Innate Immunity as Orchestrator of Stem Cell Mobilization. *Leukemia* 2010, 24, 1667-75. PMID: 20703253
244. Abdel-Latif A, Zuba-Surma EK, Ziada KM, Kucia M, Cohen DA, Kaplan AM, Van Zant G, Selim S, Smyth SS, Ratajczak MZ. Evidence of Mobilization of Pluripotent Stem Cells into Peripheral Blood of Patients with Myocardial Ischemia. *Exp Hematol* 2010, 38, 1131-1142. PMID: 20800644
245. Ratajczak MZ. Spotlight Series on Stem Cell Mobilization: Many Hands on the Ball, but who is the Quarterback? *Leukemia* 2010, 24, 1665-1656. PMID: 20940722
246. Tarnowski M, Grymula K, Liu R, Tarnowska J, Drukala J, Ratajczak J, Mitchell RA, Ratajczak MZ, Kucia M. Macrophage Migration Inhibitory Factor is secreted by rhabdomyosarcoma cells, modulates tumor metastasis by binding to CXCR4 and CXCR7 receptors and inhibits recruitment of Cancer Associated Fibroblasts. *Mol. Cancer Res.* 2010, 8, 1328–1343. PMID: 20861157
247. Tarnowski M, Liu R, Wysoczynski M, Ratajczak J, Kucia M, Ratajczak MZ. CXCR7; A new SDF-1 binding receptor in contrast to nomal CD34<sup>+</sup> progenitors is functional and is expressed at higher level in human malignant hematopoietic cells. *Eur J Haematol.* 2010, 85, 472-483. PMID: 20887389
248. Taichman RS, Wang Z, Shiozawa Y, Jung J, Song J, Balduino A, Wang J, Patel LR, Havens AM, Kucia M, Ratajczak MZ, Krebsbach PH. Prospective identification and skeletal localization of cells capable of multilineage differentiation in vivo. *Stem Cells Dev* 2010, 19, 1557-1570. PMID: 20446812
249. Ratajczak J, Wysoczynski M, Zuba-Surma E, Wan W, Kucia M, Yoder MC, Ratajczak MZ. Adult murine bone marrow-derived very small embryonic-like stem cells (VSELs) differentiate into the hematopoietic lineage after co-culture over OP9 stromal cells. *Exp. Hematol.* 2011, 39, 225-237. PMID: 21034791
250. Wojakowski W, Kucia M, Zuba-Surma E, Jadczyk T, Ksiazek B, Ratajczak MZ, Tendera M. Very small embryonic-like stem cells in cardiovascular repair. *Pharmacol Ther* 2011, 129, 21–28. PMID: 20971132
251. Wojakowski W, Ratajczak MZ, Tendera M. Mobilization of very small embryonic-like stem cells in acute coronary syndromes and stroke. *Herz* 2010, 35, 467–473. PMID: 20981396
252. Ratajczak MZ, Shin DM, Ratajczak J, Kucia M, Bartke A. A novel insight into aging: are there pluripotent very small embryonic-like stem cells (VSELs) in adult tissues overtime depleted in an Igf-1-dependent manner? *Aging* 2010, 2, 875-883. PMID: 21084728
253. Ratajczak MZ, Liu R, Ratajczak J, Kucia M, Shin DM. The Role of Pluripotent Embryonic-like Stem Cells Residing in Adult Tissues in Regeneration and Longevity. *Differentiation* 2011, 81, 153-161. PMID: 21339038
254. Ratajczak J, Shin DM, Wan W, Liu R, Masternak M, Piotrowska K, Wiszniewska B, Kucia M, Bartke A, Ratajczak MZ. Higher number of stem cells in bone marrow of circulating Igf-1 level low Laron dwarf mice - novel view on Igf-1, stem cells and aging. *Leukemia* 2011, 25, 729–733. PMID: 21233833
255. Wojakowski W, Kucia M, Liu R, Zuba-Surma E, Jadczyk T, Bachowski R, Nabialek E, Kazmierski M, Ratajczak MZ, Tendera M. Circulating Very Small Embryonic-Like Stem Cells in Cardiovascular Disease. *J. Cardiovasc Transl Res.* 2011, 4, 138-44. PMID: 21165781



256. Zuba-Surma EK, Wojakowski W, Ratajczak MZ, Dawn B. Very small embryonic-like stem cells: Biology and therapeutic potential for heart repair. *Antioxidants & Redox Signaling* 2011, 15, 1821-1834. PMID: 21194389
257. Ratajczak MZ, Kim CH, Wan W, Shin DM, Kucia M, Ratajczak J. The Role of Innate Immunity in Trafficking of Hematopoietic Stem Cells – An Emerging Link between Activation of Complement Cascade and Chemotactic Gradients of Bioactive Sphingolipids. *Adv Exp Med Biol.* 2012, 946, 37-54. PMID: 21948361
258. Ratajczak J, Zuba-Surma E, Paczkowska E, Kucia M, Nowacki P, Ratajczak MZ. Stem cells for neural regeneration - a potential application of Very Small Embryonic-Like Stem Cells (VSELs). *J Physiol Pharmacol.* 2011, 62, 3-12. PMID: 21451204
259. Ratajczak MZ. The Emerging Role of Microvesicles in Cellular Therapies for Organ/Tissue Regeneration. *Nephrology Dial. Transpl.* 2011, 26, 1453-1456. PMID: 21531733
260. Ratajczak MZ, ChiHwa K. Bioactive Sphingolipids and Complement Cascade as new emerging regulators of stem cell mobilization and homing. *J Stem Cell Res & Ther.* 2011, 1, 2, 1000e102.
261. Ratajczak J, Zuba-Surma E, Klich I, Liu R, Wysoczynski M, Greco N, Kucia M, Laughlin MJ, Ratajczak MZ. Hematopoietic differentiation of umbilical cord blood-derived very small embryonic/epiblast-like stem cells. *Leukemia* 2011, 25, 1278–1285. PMID: 21483440
262. Ratajczak MZ. Alan M. Gewirtz, 1949–2010: Per aspera ad astra. *Stem Cells* 2011, 29, 743.
263. Kucia M, Shin DM, Liu R, Ratajczak J, Bryndza E, Masternak MM, Bartke A, Ratajczak MZ. Reduced number of VSELs in bone marrow of Growth Hormone transgenic mice indicate that chronically elevated Igf-1 level accelerates age-dependent exhaustion of pluripotent stem cell pool – novel view on aging. *Leukemia* 2011, 25, 1370-1374. PMID: 21566652
264. Drukała J, Paczkowska E, Kucia M, Młyńska E, Krajewski A, Machaliński B, Madeja Z, Ratajczak MZ. Stem cells, including a population of Very Small Embryonic-Like Stem Cells, are mobilized into peripheral blood in patients after skin burn injury. *Stem Cell Rev* 2012, 8, 184-194. PMID: 21573962
265. Kim CH, Wu W, Wysoczynski M, Abdel-Latif A, Sunkara M, Morris A, Kucia M, Ratajczak J, Ratajczak MZ. Conditioning for hematopoietic transplantation activates the complement cascade and induces a proteolytic environment in bone marrow – a novel role for bioactive lipids and soluble C5b-C9 as homing factors. *Leukemia* 2012, 26, 106–116. PMID: 21769103
266. Ratajczak MZ, Liu R, Marlicz W, Blogowski W, Starzynska T, Wojakowski W, Zuba-Surma E. Identification of Very Small Embryonic/Epiblast-Like Stem Cells (VSELs) Circulating in Peripheral Blood During Organ/Tissue Injuries. *Methods Cell Biol.* 2011, 103C, 31-54. PMID: 21722799
267. Zuba-Surma EK, Ratajczak MZ. Analytical Capabilities of the ImageStream Cytometer. *Methods Cell Biol.* 2011, 102, 207-230. PMID: 21704840
268. Ratajczak MZ. New Stem Cell Meeting on the Baltic Sea is Launched. *Leukemia* 2012, 26, 164-166. PMID: 21769102
269. Marquez-Curtis LA, Turner AR, Sridharan S, Ratajczak MZ, Janowska-Wieczorek A. The Ins and Outs of Hematopoietic Stem Cells: Studies to Improve Transplantation Outcomes. *Stem Cell Rev.* 2011, 7, 590-607. PMID: 21140298
270. Ratajczak MZ, Kucia M, Liu R, Shin DM, Bryndza E, Masternak MM, Tarnowski M, Ratajczak J, Bartke A. RasGrf1: genomic imprinting, VSELs, and aging. *Aging* 2011, 3, 692-697. PMID: 21765200
271. Ratajczak MZ, Kim CH, Abdel-Latif A, Schneider G, Kucia M, Morris AJ, Laughlin ML, Ratajczak J. A novel perspective on stem cell homing and mobilization – review on bioactive lipids as potent chemoattractants and cationic peptides as underappreciated modulators of responsiveness to SDF-1 gradients. *Leukemia* 2012, 26, 63–72. PMID: 21886175
272. Wu W, Kim CH, Liu R, Kucia M, Marlicz W, Greco N, Ratajczak J, Laughlin ML, Ratajczak MZ. Bone marrow expressed antimicrobial cationic peptide LL-37 enhances responsiveness of hematopoietic stem progenitor cells to an SDF-1 gradient and accelerates their engraftment after transplantation. *Leukemia* 2012 Apr; 26(4):736-45. PMID: 21931324
273. Chow R, Lin A, Tonai R, Bolanos R, Connor C, Mendoza A, Heminger R, Chow M, Ho E, Kang J, Gindy L, Fu C, Rao A, Gau JF, Wang BC, Klich I, Ratajczak J, Ratajczak M, Petz LD. Cell recovery comparison between plasma depletion/reduction- and red cell reduction-processing of umbilical cord blood. *Cytotherapy* 2011, 13, 1105-1119. PMID: 21867465
274. Shin DM, Liu R, Wu W, Waigel SJ, Zacharias W, Ratajczak MZ, Kucia M. Global gene expression analysis of very small embryonic-like stem cells reveals that the Ezh2-dependent bivalent domain mechanism contributes to their pluripotent state. *Stem Cells & Develop.* 2012 Jul 1; 21(10):1639-52.



- PMID: 22023227
275. Zuba-Surma EK, Wojakowski W, Madeja Z, Ratajczak MZ. Stem Cells as a Novel Tool for Drug Screening and Treatment of Degenerative Diseases. *Current Pharm Design* 2012;18(18):2644-56. PMID: 22512442
  276. Marlicz W, Zuba-Surma E, Kucia M, Blogowski W, Starzynska T, Ratajczak MZ. Various Types of Stem Cells, Including a Population of Very Small Embryonic-Like Stem Cells (VSELs), are Mobilized into Peripheral Blood in Patients with Crohn's Disease (CD). *Inflammatory Bowel Diseases* 2012 Sep; 18(9):1711-22. PMID: 22238186
  277. Ratajczak MZ, Kucia M, Jadczyk T, Greco NJ, Wojakowski W, Tendrea M, Ratajczak J. Pivotal Role of Paracrine Effects in Stem Cell Therapies in Regenerative Medicine - Can We Translate Stem Cell-Secreted Paracrine Factors and Microvesicles into Better Therapeutic Strategies? *Leukemia* 2012 Jun; 26(6):1166-73. PMID: 22182853
  278. Kucia M, Masternak M, Liu R, Shin DM, Ratajczak J, Mierzejewska K, Spong A, Kopchick JJ, Bartke A, Ratajczak MZ. The negative effect of prolonged somatotrophic/insulin signaling on an adult bone marrow-residing population of pluripotent very small embryonic-like stem cells (VSELs). *Age* 2013 Apr; 35(2):315-30. PMID: 22218782
  279. Wyderka R, Wojakowski W, Jadczyk T, Maslankiewicz K, Parma Z, Pawlowski T, Musialek P, Majka M, Król M, Kuczmik W, Dworowy S, Korzeniowska B, Ratajczak MZ, Tendera M. Mobilization of CD34+CXCR4+ stem/progenitor cells and the parameters of left ventricular function and remodeling in 1 year follow up of patients with acute myocardial infarction. *Med. Inflamm* 2012; 2012:564027. PMID: 22547906
  280. Ratajczak MZ, Kim CH. The use of chemokine receptor agonists in stem cell mobilization. *Exp Opinion Biol Ther.* 2012 Mar; 12(3):287-97. PMID: 22263752
  281. Golan K, Vagima Y, Ludin A, Cohen-Gut S, Kalinkovich A, Kollet O, Kim CH, Schajnovitz A, Ovadaya Y, Lapid K, Shvitiel S, Morris AJ, Ratajczak MZ, Lapidot T. S1P promotes murine progenitor cell egress and mobilization via S1P<sub>1</sub> mediated ROS signaling and SDF-1 release. *Blood* 2012, 119, 2478-2488. PMID: 22279055
  282. Ratajczak MZ, ChHwa Kim, Ratajczak J, Janowska-Wieczorek A. Innate immunity as orchestrator of bone marrow homing for hematopoietic stem/progenitor cells. *Adv Exp Med Biol* 2013; 735:219-32. PMID: 22990706
  283. Janowska-Wieczorek A, Marquez-Curtis LA, Shirvaikar N, Ratajczak MZ. The Role of Complement in the Trafficking of Hematopoietic Stem/Progenitor Cells. *Transfusion* 2012 Dec; 52(12):2706-16. doi: 10.1111/j.1537-2995.2012.03636.x. Epub 2012 Apr 9. PMID: 22486360
  284. Ratajczak MZ. Igf2-H19, an imprinted tandem gene, is an important regulator of embryonic development, a guardian of proliferation of adult pluripotent stem cells, a regulator of longevity, and a "passkey" to cancerogenesis. *Folia Histochem & Cytobiol* 2012 Jul 5; 50(2):171-9. PMID: 22763974
  285. Ratajczak MZ, Suszynska M, Pedziwiatr D, Mierzejewska K, Greco NJ. Umbilical Cord Blood-derived very small embryonic like stem cells (VSELs) as a source of pluripotent stem cells for regenerative medicine. *Ped. Endocrin Rev* 2011, 9, 546-551. PMID: 22523831
  286. Ratajczak J, Kucia M, Mierzejewska K, Liu R, Kim CH, Natarajan N, Sharma V, Miller DM, Maciejewski J, Ratajczak MZ. A novel view of Paroxysmal Nocturnal Hemoglobinuria (PNH) pathogenesis: more motile PNH hematopoietic stem/progenitor cells (HSPCs) displace normal HSPCs from their niches in bone marrow due to defective adhesion, enhanced migration and mobilization in response to erythrocyte-released sphingosine-1 phosphate (S1P) gradient. *Leukemia* 2012 Jul; 26(7):1722-5. doi: 10.1038/leu.2012.46. Epub 2012 Feb 20. PMID: 22343521
  287. Ratajczak MZ, Zuba-Surma E, Kucia M, Poniewierska A, Suszynska M, Ratajczak J. Pluripotent and multipotent stem cells in adult tissues. *Adv Med Sci* 2012 Jun 1; 57(1):1-17. doi: 10.2478/v10039-012-0020-z. PMID: 22515973
  288. Tarnowski M, Schneider G, Amann G, Clark G, Houghton P, Barr FG, Kenner L, Ratajczak MZ, Kucia M. RasGRF1 regulates proliferation and metastatic behavior of human alveolar rhabdomyosarcomas. *Int J Cancer* 2012 Sep; 41(3):995-1004. PMID: 22752028
  289. Ratajczak MZ, Kim CH, Janowska-Wieczorek A, Ratajczak J. The expanding family of bone marrow homing factors for hematopoietic stem cells (HSCs) – stromal derived factor-1 (SDF-1) is not the only player in the game. *World Sci Journal* 2012, Article ID 758512. PMID: 22701372
  290. Ratajczak MZ, Shin DM, Liu R, Mierzejewska K, Ratajczak J, Kucia M, Zuba-Surma EK. Very small embryonic/epiblast-like stem cells (VSELs) and their potential role in aging and organ rejuvenation – an update and comparison to other primitive small stem cells isolated from adult tissues. *Aging* 2012,

- 4, 235-246. PMID: 22498452
291. Błogowski W, Ratajczak MZ, Żyżniewska-Banaszak E, Dołęgowska B, Starzyńska T. Adipose tissue as a potential source of hematopoietic stem/progenitor cells. *Obesity (Silver Spring)* 2012, 20, 923-931. PMID: 22282043
292. Śluczankowska-Głabowska S, Laszczyńska M, Piotrowska K, Głabowski W, Kopchick JJ, Bartke A, Kucia M, Ratajczak MZ. Morphology of ovaries in Laron dwarf mice, with low circulating plasma levels of insulin-like growth factor-1 (IGF-1), and in bovine GH-transgenic mice, with high circulating plasma levels of IGF-1. *J Ovar Res.* 2012, 5:18. PMID: 22747742
293. Ratajczak MZ, Serwin K, Schneider G. Innate immunity derived factors as external modulators of the CXCL12 – CXCR4 axis and their role in stem cell homing and mobilization. *Theranostics* 2013, 3, 3-10. PMID: 23382780
294. Ratajczak MZ, Borkowska S, Ratajczak J. An emerging link in stem cell mobilization between activation of the complement cascade and the chemotactic gradient of sphingosine-1- phosphate. *Prostaglandins & Other Lipid Mediators* 2013, 104-105, 122– 129. PMID: 22981511
295. Liu R, Ratajczak MZ. Enumeration of very small embryonic-like stem cells in peripheral blood. *Methods Mol Biol* 2012, 904, 207-219. PMID: 22890934
296. Ratajczak MZ. Igf2-H19, an imprinted tandem Yin-Yang gene and its emerging role in development, proliferation of pluripotent stem cells, senescence and cancerogenesis. *J Stem Cell Res & Ther.* 2012, 2:e108. PMID: 24380039
297. Ratajczak J, Kucia M, Mierzejewska K, Marlicz W, Pietrkowski Z, Wojakowski W, Greco NJ, Tendera M, Ratajczak MZ. Paracrine pro-angiopoietic effects of human umbilical cord blood-derived purified CD133<sup>+</sup> cells - implications for stem cell therapies in regenerative medicine. *Stem Cells & Development* 2013, 22, 422-430. PMID: 23003001
298. Ratajczak MZ, Mierzejewska K, Ratajczak J, Kucia M. CD133 expression strongly correlates with the phenotype of very small embryonic/epiblast-like stem cells. *Adv. Exp. Med & Biol* 2013, 777, 125-141. PMID: 23161080
299. Ratajczak MZ, Shin DM, Schneider G, Ratajczak J, Kucia M. Parental imprinting regulates insulin-like growth factor signaling - a Rosetta Stone for understanding the biology of pluripotent stem cells, aging and cancerogenesis. *Leukemia* 2013, 27, 773–779. PMID: 23135355
300. Kim CH, Schneider G, Abdel-Latif A, Mierzejewska K, Sunkara M, Borkowska S, Ratajczak J, Morris AJ, Kucia K, Ratajczak MZ. Ceramide-1-phosphate regulates migration of multipotent stromal cells (MSCs) and endothelial progenitor cells (EPCs) – implications for tissue regeneration. *Stem Cells* 2013, 31, 500-510. PMID: 23193025
301. Kucharska-Mazur J, Pedziwiatr D, Poniewierska A, Tkacz M, Suszynska M, Tarnowski M, Samochowiec J, Ratajczak MZ. A lack of positive effect of enhanced vegetative nervous system tonus on mobilization of hematopoietic stem and progenitor cells in patients suffering from acute psychotic syndromes. *Leukemia* 2013, April; 27(4):959-61. doi:10.1038/leu.2012.349. Epub 2012 Dec 4. PMID: 23207520
302. Karapetyan AV, Klyachkin YM, Selim SM, Sunkara M, Ziada KM, Cohen DA, Zuba-Surma E, Ratajczak J, Smyth SS, Ratajczak MZ, Morris AJ, Abdel-Latif A. Bioactive Lipids and Cationic Antimicrobial Peptides As New Potential Regulators for Trafficking of Bone Marrow Derived Stem Cell In Patients With Acute Myocardial Infarction. *Stem Cells Dev.* 2013, 22, 1645-1656. PMID: 23282236
303. Piotrowska K, Borkowska S, Wiszniewska B, Laszczyńska M, Śluczankowska-Głabowska S, Havens A, Kopchick JJ, Bartke A, Taichman RS, Kucia M, Ratajczak MZ. The effect of low and high plasma levels of insulin-like growth factor-1 (IGF-1) on the morphology of major organs—studies of Laron dwarf and bovine growth hormone transgenic (bGHTg) mice. *Histol Histopathol* 2013, 28, 1325-1336. PMID: 23613169
304. Bartke A, Westbrook R, Sun L, Ratajczak M. Links between growth hormone and aging. *Endokrynol Pol.* 2013, 64, 46-52. PMID: 23450447
305. Borkowska S, Suszynska M, Wysoczynski M, Ratajczak MZ. Mobilization studies in C3-deficient mice unravel the involvement of a novel crosstalk between the coagulation and complement cascades in mobilization of hematopoietic stem/progenitor cells (HSPCs). *Leukemia* 2013 Sep; 27(9):1928-30. doi: 10.1038/leu.2013.84. Epub 2013 Mar 20. PMID: 23511127
306. Mierzejewska K, Heo J, Kang JW, Kang HS, Ratajczak J, Ratajczak MZ, Kucia M, Shin GM. Genome-wide analysis of murine bone marrow-derived very small embryonic-like stem cells reveals that mitogenic growth factor signaling pathways play a crucial role in their quiescence and ageing. *Int.*

- J. Mol Med. 2013, 32, 281-290. PMID: 23708325
307. Schneider G, Bryndza E, Abdel-Latif A, Ratajczak J, Maj M, Tarnowski M, Klyachkin Y, Houghton P, Morris AJ, Vater A, Klusmann S, Kucia M, Ratajczak MZ. Bioactive lipids sphingosine-1-phosphate and ceramide-1-phosphate are pro-metastatic factors in human rhabdomyosarcomas cell lines, and their tissue level increases in response to radio/chemotherapy. *Mol. Cancer Res.* 2013, 11, 793-807.
  308. Starzyńska T, Dąbkowski K, Błogowski W, Zuba-Surma E, Budkowska M, Salata D, Dołęgowska B, Marlicz W, Lubikowski J, Ratajczak MZ. An intensified systemic trafficking of bone marrow-derived stem/progenitor cells in patients with pancreatic cancer. *J Cell Mol Med* 2013, 17, 792-799. PMID: 23672538
  309. Brunstein CG, McKenna DH, Defor TE, Sumstad D, Paul P, Weisdorf DJ, Ratajczak M, Laughlin MJ, Wagner JE. Complement fragment 3a priming of umbilical cord blood progenitors: safety profile. *Biol Blood Marrow Transplant.* 2013 Oct; 19(10):1474-9. doi: 10.1016/j.bbmt.2013.07.016. Epub 2013 Jul 25. PMID: 23892047
  310. Ratajczak MZ, Zuba-Surma E, Wojakowski W, Suszynska M, Mierzejewska K, Liu R, Ratajczak J, Shin DM, Kucia M. Very Small Embryonic Like Stem Cells (VSELs) represent a real challenge in stem cell biology. Recent pros and cons in the midst of a lively debate. *Leukemia* 2014 Mar; 28(3):473-84. doi: 10.1038/leu.2013.255. Epub 2013 Sep 10. PMID: 24018851
  311. Wedrychowicz A, Sztefko K, Majka M, Ratajczak MZ. The role of Insulin-like Growth Factor 1, Receptor Activator for Nuclear Factor  $\kappa$ B ligand - Osteoprotegerin system, Interleukin 6 and  $1\beta$  in post-transplantation bone metabolic disease in childhood. *Endokrynol Pol.* 2013, 64, 248-54. PMID: 24002950
  312. Sluczanska-Glabowska S, Laszczynska M, Piotrowska K, Glabowski W, Rumianowski B, Masternak M, Arum O, Kucia M, Kopchick JJ, Bartke A, Ratajczak MZ. The effect of calorie restriction on the presence of apoptotic ovarian cells in normal wild type mice and low-plasma-IGF-1 Laron dwarf mice. *J Ovar Res* 2013 Sep 24; 6(1):67. doi: 10.1186/1757-2215-6-67. PMID: 24063422
  313. Ratajczak MZ, Suszynska M, Borkowska S, Ratajczak J, Schneider G. The role of sphingosine-1-phosphate (S1P) and ceramide-1-phosphate (C1P) in the trafficking of normal and malignant cells. *Exp Opin Ther Targets* 2014 Jan; 18(1):95-107. doi: 10.1517/14728222.2014.851671. Epub 2013 Nov 4. PMID: 24188167
  314. Schneider G, Bowser MJ, Shin DM, Barr FG, Ratajczak MZ. The paternally imprinted *DLK1-GTL2* locus is differentially methylated in embryonal and alveolar rhabdomyosarcomas. *Int J Oncol* 2014 Jan; 44(1):295-300. doi: 10.3892/ijo.2013.2153. Epub 2013 Oct 29. PMID: 24173021
  315. Mierzejewska K, Klatchkin Y, Ratajczak J, Kucia M, Abdel-Latif A, Ratajczak MZ. Sphingosine-1-phosphate-mediated mobilization of hematopoietic stem/progenitor cells during intravascular hemolysis requires attenuation of SDF-1-CXCR4 retention signaling in bone marrow. *BioMed Research International* 2013; 2013:814549. doi: 10.1155/2013/814549. Epub 2013 Dec 29. PMID: 24490172
  316. Kucharska Mazur J, Tarnowski M, Dołęgowska B, Budkowska M, Pędziwiatr D, Jabłoński M, Pełka Wyścieka J, Kazimierzczak A, Ratajczak MZ, Samochowiec J. Novel evidence for enhanced stem cell trafficking in antipsychotic-naïve subjects during their first psychotic episode. *J Psych Research* 2013, 2014 Feb; 49:18-24. doi: 10.1016/j.jpsychires.2013.10.016. Epub 2013 Nov 5. PMID: 24246416
  317. Shin DM, Suszynska M, Mierzejewska K, Ratajczak J, Ratajczak MZ. Very small embryonic-like stem-cell optimization of isolation protocols: an update of molecular signatures and a review of current in vivo applications. *Exp Mol Med.* 2013, 45, e56. PMID: 24232255
  318. Suszynska M, Zuba-Surma EK, Maj M, Mierzejewska K, Ratajczak J, Kucia M, Ratajczak MZ. The proper criteria for identification and sorting of very small embryonic-like stem cells (VSELs), and some nomenclature issues. *Stem Cells & Development* 2014, 23, 702-713. PMID: 24299281
  319. Ratajczak MZ, Jadczyk T, Schneider G, Kakar SS, Kucia M. Induction of a tumor-metastasis-receptive microenvironment as an unwanted and underestimated side effect of treatment by chemotherapy or radiotherapy. *J Ovarian Res.* 2013, 6, 95. PMID: 24373588
  320. Beach A, Zhang HG, Ratajczak MZ, Kakar SS. Exosomes: an overview of biogenesis, composition and role in ovarian cancer. *J Ovarian Res* 2014, 7, 14. PMID: 24460816
  321. Borkowska S, Suszynska M, Mierzejewska K, Ismail A, Budkowska M, Salata D, Dołęgowska B, Kucia M, Ratajczak J, Ratajczak MZ. Novel evidence that crosstalk between the complement, coagulation, and fibrinolysis proteolytic cascades is involved in mobilization of hematopoietic stem/progenitor cells (HSPCs). *Leukemia* 2014, 28, 2148–2154. PMID: 24667943

322. Grymula K, Tarnowski M, Piotrowska K, Suszynska M, Mierzejewska K, Borkowska S, Fiedorowicz K, Kucia M, Ratajczak MZ. Evidence that the population of quiescent bone marrow-residing very small embryonic/epiblast-like stem cells (VSELs) expands in response to neurotoxic treatment. *J Cell Mol Med* 2014, 18, 1797-1806. PMID: 24895014
323. Ratajczak MZ, Schneider G, Sellers ZP, Kucia M, Kakkar SS. The embryonic rest hypothesis of cancer development – an old XIX century theory revisited. *J Cancer Stem Cell Res* 2014 (in press).
324. Brodowska A, Brodowski J, Laszczyńska M, Rumianowski B, Słuczanowska-Głąbowska S, Rotter I, Starczewski A, Ratajczak MZ. Immunoexpression of aromatase cytochrome P450 and 17 $\beta$ -hydroxysteroid dehydrogenase in women's ovaries after menopause. *J Ovarian Res* 2014, 7, 52. PMID: 24855493
325. Wysoczynski M, Solanki M, Borkowska SJ, van Hoose P, Brittian KR, Prabhu SD, Ratajczak MZ, Rokosh G. Complement component 3 is necessary to preserve myocardium and myocardial function in chronic myocardial infarction. *Stem Cells* 2014; 32:2502-2515. PMID: 24806427
326. Wen Y, Elliott MJ, Huang Y, Miller TO, Corbin DR, Hussain LR, Ratajczak MZ, Fukui Y, Ildstad ST. DOCK2 is critical for CD8<sup>+</sup>TCR<sup>-</sup> graft facilitating cells to enhance engraftment of hematopoietic stem and progenitor cells. *Stem Cells* 2014; 32:2732-2743. PMID: 25044556
327. Suszynska M, Poniewierska-Baran A, Gunjal P, Ratajczak J, Marycz M, Kakkar SS, Kucia M, Ratajczak MZ. Expression of the erythropoietin receptor by germline-derived cells - further support for a potential developmental link between the germline and hematopoiesis. *J Ovarian Res* 2014, 7, 66. PMID: 24982693
328. Grymula K, Piotrowska K, Słuczanowska-Głąbowska S, Mierzejewska K, Tarnowski M, Tkacz M, Poniewierska – Baran A, Pędziwiatr D, Suszyńska E, Laszczyńska M, Ratajczak MZ. Positive effects of prolonged caloric restriction on the population of very small embryonic-like stem cells – hematopoietic and ovarian implications. *J Ovarian Res* 2014, 7, 68. PMID: 24987461
329. Ratajczak MZ, Jadczyk T, Pędziwiatr D, Wojakowski W. New advances in stem cell research: practical implications for regenerative medicine. *Pol Arch Med Wewn* 2014, 124, 417-426. PMID: 24956404
330. Schneider G, Sellers ZP, Abdel-Latif A, Morris AJ, Ratajczak MZ. Bioactive Lipids, LPC and LPA, are Novel Pro-metastatic Factors and Their Tissue Levels Increase in Response to Radio/Chemotherapy. *Mol Cancer Res* 2014, 12, 1560–1573. PMID: 25033840
331. Wysoczynski M, Ratajczak J, Pędziwiatr D, Rokosh G, Bolli R, Ratajczak MZ. Identification of heme oxygenase 1 (HO-1) as a novel negative regulator of mobilization of hematopoietic stem/progenitor cells. *Stem Cell Rev & Reports* 2015, 11, 110-118. PMID: 25086571
332. Ratajczak MZ, Marycz K, Poniewierska-Baran A, Fiedorowicz K, Zbucka-Kretowska M, Moniuszko M. Very small embryonic-like stem cells as a novel developmental concept and the hierarchy of the stem cell compartment. *Adv Med Sci.* 2014, 59, 273-280. PMID: 25170822.
333. Kakkar SS, Ratajczak MZ, Powell KS, Moghadamfalahi M, Miller DM, Batra SK, Singh SK. Withaferin A alone and in combination with Cisplatin suppresses growth and metastasis of ovarian cancer by targeting putative cancer stem cells. *PLoS One.* 2014, 9, e107596.
334. Ratajczak MZ. A novel view of the adult bone marrow stem cell hierarchy and stem cell trafficking. *Leukemia* 2015, 29, 776–782.
335. Mierzejewska K, Borkowska S, Suszynska E, Suszynska M, Poniewierska-Baran A, Maj M, Pędziwiatr D, Adamiak M, Abdel-Latif A, Kakkar SS, Ratajczak J, Kucia M, Ratajczak MZ. Hematopoietic stem/progenitor cells express several functional sex hormone receptors—novel evidence for a potential developmental link between hematopoiesis and primordial germ cells. *Stem Cells & Develop* 2015, 24, 927-937.
336. Ratajczak MZ. Novel view on hematopoietic stem cell mobilization and homing. *Leukemia Supplements* 2014, 3, S1–S2.
337. Tarnowski M, Tkacz M, Czerewaty M, Poniewierska-Baran A, Grymula K & Ratajczak MZ. 5-azacytidine inhibits human rhabdomyosarcoma cell growth by downregulating insulin-like growth factor 2 expression and reactivating the *H19* gene product miR-675, which negatively affects insulin-like growth factors and insulin signaling. *Int J Oncol* 2015, 46, 2241-2250.
338. Gunjal P, Pędziwiatr D, Ismail AA, Kakkar SS, Ratajczak MZ. An emerging question about putative cancer stem cells in established cell lines—are they true stem cells or a fluctuating cell phenotype? *J Cancer Stem Cell Res* 2015, 3:e1004.
339. Ratajczak MZ, Adamiak M. Membrane Lipid Rafts, Master Regulators of Hematopoietic Stem Cell Retention in Bone Marrow, and Their Trafficking. *Leukemia* 2015, 29, 1452-1457.

340. Gunjal PM, Schneider G, Ismail AA, Kakar SS, Kucia M, Ratajczak MZ. Evidence for induction of a tumor metastasis-receptive microenvironment for ovarian cancer cells in bone marrow and other organs as an unwanted and underestimated side effect of chemotherapy/radiotherapy. *J Ovarian Res.* 2015, 8:20.
341. Ratajczak MZ, Borkowska S, Mierzejewska K, Kucia M, Mendek-Czajkowska E, Suszynska M, Sharma VA, Deptala A, Song W, Platzbecker U, Larratt L, Janowska-Wieczorek A, Maciejewski J, Ratajczak J. Further evidence that paroxysmal nocturnal hemoglobinuria is a disorder of defective cell membrane lipid rafts. *J Cell Mol Med* 2015, 19, 2193-2201.
342. Ratajczak MZ. Circulation of stem cells and the biological meaning of this phenomenon. *Pediatric Transplant.* 2015, 19, 443-445.
343. Maj M, Schneider G, Ratajczak J, Suszynska M, Kucia M, Ratajczak MZ. The cell cycle- and insulin-signaling-inhibiting miRNA expression pattern of very small embryonic-like stem cells contributes to their quiescent state. *Exp Biol & Med.* 2015, 240, 1107–1111.
344. Marycz K, Mierzejewska K, Smieszek A, Suszynska E, Malicka I, Kucia M, Ratajczak MZ. Endurance exercise mobilizes developmentally early cells into peripheral blood and increases their number in bone marrow – implications for tissue regeneration. *Stem Cells International* 2016, 8530207.
355. Zbucka-Kretowska M, Eljaszewicz A, Lipinska D, Grubczak K, Rusak M, Mrugacz G, Dabrowska M, Ratajczak MZ, Moniuszko M. Effective mobilization of very small embryonic-like stem cells and hematopoietic stem/progenitor cells but not endothelial progenitor cells by follicle-stimulating hormone therapy. *Stem Cell International* 2016, 5756901.
356. Borkowska S, Suszynska M, Ratajczak J, Ratajczak MZ. Evidence of a pivotal role for the distal part of the complement cascade in the diurnal release of hematopoietic stem cells into peripheral blood. *Cell Transplantation* 2016, 25, 275-282.
357. Adamiak M, Borkowska S, Wysoczynski M, Suszynska M, Kucia M, Rokosh G, Abdel-Latif A, Ratajczak J, Ratajczak MZ. Evidence for the involvement of sphingosine-1-phosphate in the homing and engraftment of hematopoietic stem cells to bone marrow. *Oncotarget* 2015, 6, 18819-18828.
358. Sluczanowska-Głabowska S, Laszczynska M, Piotrowska K, Grabowska M, Grymala K, Ratajczak MZ. Caloric restriction increases ratio of estrogen to androgen expression in murine ovaries - potential therapeutic implications. *J Ovarian Res* 2015, 8:57.
359. Poniewierska-Baran A, Suszynska M, Sun W, Abdelbaset-Ismail A, Schneider G, Barr FG, Ratajczak MZ. Human rhabdomyosarcoma cells express functional erythropoietin receptor: potential therapeutic implications. *Int J Oncol* 2015 (in press).
360. Abdelbaset-Ismail A, Suszynska M, Borkowska S, Adamiak M, Ratajczak J, Kucia M, Ratajczak MZ. Human hematopoietic stem/progenitor cells express several functional sex hormone receptors. *J Cell Mol Med* 2015 (in press).
361. Piotrowska K, Sluczanowska-Glabowska S, Kucia M, Bartke A, Laszczynska M, Ratajczak MZ. Histological changes of testes in growth hormone transgenic mice with high plasma level of GH and insulin-like growth factor-1. *Folia Histochem Cytobiol.* 2015 (in press).
362. Ratajczak MZ, Suszynska M. Emerging strategies to enhance homing and engraftment of hematopoietic stem cells. *Stem Cell Rev & Rep* 2015, 47, 1989-1997.
363. Klyachkin YM, Nagareddy PR, Ye S, Wysoczynski M, Asfour A, Gao E, Sunkara M, Brandon JA, Annabathula R, Ponnappureddy R, Solanki M, Pervaiz ZH, Smyth SS, Ratajczak MZ, Morris AJ, Abdel-Latif A. Pharmacological Elevation of Circulating Bioactive Phosphosphingolipids Enhances Myocardial Recovery After Acute Infarction. *Stem Cells Transl Med.* 2015, 4, 1-11.
364. Ratajczak MZ, Wang X. Challenges, progress, and new directions in stem cell therapies—a new section launched in Clinical and Translational Medicine. *Clin Transl Med.* 2015, 4:30.
365. Adamiak M, Moore JB, Zhao J, Abdelbaset-Ismail A, Grubczak K, Borkowska S, Wysoczynski M, Ratajczak MZ. Downregulation of heme oxygenase 1 (HO-1) activity in hematopoietic cells enhances their engraftment after transplantation. *Cell Transplant.* 2015 (in press).
366. Virant-Klun I, Bui HT, Ratajczak MZ. Challenges in translating germinal stem cell research and therapy. *Stem Cell International* 2016, 4687378.
367. Adamiak M, Poniewierska-Baran A, Borkowska S, Schneider G, Abdelbaset-Ismail A, Suszynska M, Abdel-Latif A, Kucia M, Ratajczak J, Ratajczak MZ. Evidence that a lipolytic enzyme—hematopoietic-specific phospholipase C  $\beta 2$ —promotes mobilization of hematopoietic stem cells by decreasing their lipid raft-mediated bone marrow retention and increasing the pro-mobilizing effects of granulocytes. *Leukemia* 2015 (in press).



368. Huang Y, Elliott MJ, Yolcu ES, Miller TO, Ratajczak J, Bozulic LD, Wen Y, Xu H, Ratajczak MZ, Ildstad ST. Characterization of Human CD8<sup>+</sup> TCR. Facilitating Cells In Vitro and In Vivo in a NOD/SCID/IL2r<sup>γ</sup> null Mouse Model. *Am. J. Transplant.* 2016, 16, 440-453.
369. Schneider G, Glaser T, Lameu C, Abdelbaset Ismail A, Sellers ZP, Marcin Moniuszko M, Ulrich H, Ratajczak MZ. Extracellular nucleotides as novel, underappreciated pro-metastatic factors that stimulate purinergic signaling in human lung cancer cells. *Mol Cancer* 2015; 14:201.
370. Abdelbaset-Ismail A, Borkowska S, Janowska-Wieczorek A, Tonn T, Rodriguez C, Moniuszko M, Bolkun L, Koloczko J, Eljaszewicz A, Ratajczak J, Ratajczak MZ, Kucia M. Novel evidence that pituitary gonadotropins directly stimulate human leukemic cells -studies of myeloid cell lines and primary patient AML and CML cells. *Oncotarget* 2015 (in press).
371. Poniewierska-Baran A, Schneider G, Sun W, Abdelbaset-Ismail A, Barr FG, Ratajczak MZ. Human rhabdomyosarcoma cells express functional pituitary and gonadal sex hormone receptors—therapeutic implications. *Int J Oncology* 2016, 48, 1815-1824.
372. Ratajczak MZ, Ratajczak J. Horizontal transfer of RNA and proteins between cells by extracellular microvesicles: 14 years later. *Clin Trans Med.* 2016 (in press).
373. Schneider G, Sellers ZP, Ratajczak MZ. Induction of a tumor-metastasis-receptive microenvironment as an unwanted side effect after radio/chemotherapy and in vitro and in vivo assays to study this phenomenon. *Methods Mol Biol.* 2016 (in press).
374. Abdelbaset-Ismail A, Pedziwiatr D, Suszyńska E, Sluczanska-Glabowska S, Schneider G, Kakar SS, Ratajczak MZ. Vitamin D3 stimulates embryonic stem cells but inhibits migration and growth of ovarian cancer and teratocarcinoma cell lines. *J Ovarian Res.* 2016 (in press).
375. Ferensztajn-Rochowiak E, Kucharska-Mazur J, Samochowiec J, Ratajczak MZ, Michalak M, Rybakowski JK. The effect of long-term lithium treatment of bipolar disorder on stem cells circulating in peripheral blood. *World J Biol Psychiatry* 2016 (in press).
376. Abdelbaset-Ismail A, Borkowska-Rzeszutek S, Kubis E, Bujko K, Brzeźniakiewicz-Janus K, Bolkun L, Kloczko J, Moniuszko M, Basak GW, Wiktor-Jedrzejczak W, Ratajczak MZ. Activation of the complement cascade enhances motility of leukemic cells by downregulating expression of heme oxygenase 1 (HO-1). *Leukemia* 2017, 31, 446-458.
377. Wysoczynski M, Adamiak M, Suszynska M, Abdel-Latif A, Ratajczak J, Ratajczak MZ. Poor mobilization in T cell-deficient nude mice is explained by defective activation of granulocytes and monocytes. *Cell Transplant.* 2016 (in press).
378. Adamiak M, Abdelbaset-Ismail A, Kucia M, Ratajczak J, Ratajczak MZ. Toll-like receptor (TLR) signaling-deficient mice are easy mobilizers - evidence that TLR signaling prevents mobilization of hematopoietic stem/progenitor cells in HO-1-dependent manner. *Leukemia* 2016 (in press).
379. Ratajczak MZ, Suszynska M, Kucia M. Does it make sense to target one tumor cell chemotactic factor or its receptor when several chemotactic axes are involved in metastasis of the same cancer? *Clin. Transl Med.* 2016, 5:28.
380. Ferensztajn-Rochowiak E, Tarnowski M, Samochowiec J, Michalak M, Ratajczak MZ, Rybakowski JK. Peripheral mRNA expression of pluripotency markers in bipolar disorder and the effect of long-term lithium treatment. *Pharmacol Rep.* 2016, 68, 1042-1045.
381. Ferensztajn-Rochowiak E, Tarnowski M, Samochowiec J, Michalak M, Ratajczak MZ, Rybakowski JK. Increased mRNA expression of peripheral glial cell markers in bipolar disorder: The effect of long-term lithium treatment. *Eur Neuropsychopharmacol.* 2016 (in press).
382. Abdelbaset-Ismail A, Pedziwiatr D, Schneider G, Niklinski J, Charkiewicz R, Moniuszko M, Kucia M, Ratajczak MZ. Pituitary sex hormones enhance the pro-metastatic potential of human lung cancer cells by downregulating intracellular expression of heme oxygenase 1. *Int J Oncology* 2016 (in press).
383. Ratajczak MZ. Editor's Note. *Stem Cell Rev.* 2016 (in press).
384. Schneider G, Bryndza E, Poniewierska-Baran A, Serwin K, Suszynska M, Sellers ZP, Merchant ML, Kaliappan A, Ratajczak J, Kucia M, Garbett NC, Ratajczak MZ. Evidence that vitronectin is a potent migration-enhancing factor for cancer cells chaperoned by fibrinogen - a novel view of the metastasis of cancer cells to low-fibrinogen lymphatics and body cavities. *Oncotarget* 2016 (in press).
385. Marlicz W, Sielatycka K, Serwin K, Kubis E, Tkacz M, Głuszko R, Białek A, Starzyńska T, Ratajczak MZ. Effect of colorectal cancer on the number of normal stem cells circulating in peripheral blood. *Oncology Reports* (2016 in press).
386. Adamiak M, Abdelbaset-Ismail A, Suszynska M, Abdel-Latif A, Ratajczak J and MZ. Ratajczak. Novel evidence that the mannan-binding lectin (MBL) pathway of complement activation plays a pivotal role in triggering mobilization of hematopoietic stem/progenitor cells by activation of both the

- complement and coagulation cascades. *Leukemia* 2017, 31, 262-265.
387. Adamiak M, Suszynska M, Abdel-Latif A, Abdelbaset-Ismail A, Ratajczak J, Ratajczak MZ. The involvement of hematopoietic-specific PLC- $\beta$ 2 in homing and engraftment of hematopoietic stem/progenitor cells. *Stem Cell Rev & Reports* 2016 (in press).
  388. Adamiak M, Abdelbaset-Ismail A, Moore IV JB, Zhao J, Abdel-Latif A, Wysoczynski M, Ratajczak MZ. Inducible nitric oxide synthase (iNOS) is a novel negative regulator of hematopoietic stem/progenitor cell trafficking. *Stem Cell Reviews & Reports* 2016 (in press).
  389. Bolkun L, Grubczak K, Schneider G, Zembko P, Radzikowska U, Singh P, Kloczko J, Ratajczak MZ, Moniuszko M, Eljaszewicz A. Involvement of BAFF and APRIL in Resistance to Apoptosis of Acute Myeloid Leukemia. *Journal of Cancer* 2016, 14, 1979-1983.
  390. Ratajczak MZ, Ratajczak D, Pedziwiatr D. Extracellular Microvesicles (ExMV) in Cell to Cell Communication: A Role of Telocytes. *Adv Exp Med Biol*. 2016;913:41-49
  391. Ratajczak MZ, Bujko K, Wojakowski W. Stem cells and clinical practice: new advances and challenges at time of emerging problems with induced pluripotent stem cell therapies. *Pol Arch Med Wew* 2016 (in press).
  392. Ratajczak MZ, Ratajczak J, Suszynska M, Miller DM, Kucia M, Shin DM. A novel view of the adult stem cell compartment from the perspective of a quiescent population of very small embryonic-like stem cells. *Circ. Research* 2017;120:166-178.
  393. Jabłoński M, Mazur JK, Tarnowski M, Dołęgowska B, Pędziwiatr D, Kubiś E, Budkowska M, Sałata D, Wysocka JP, Kazimierczak A, Reginia A, Ratajczak MZ, Samochowiec J. Mobilization of Peripheral Blood Stem Cells and Changes in the Concentration of Plasma Factors Influencing their Movement in Patients with Panic Disorder. *Stem Cell Rev*. 2017 (in press).
  394. Ratajczak MZ, Bartke A, Darzynkiewicz Z. Prolonged growth hormone/insulin/insulin-like growth factor nutrient response signaling pathway as a silent killer of stem cells and a culprit in aging. *Stem Cell Rev* (2017) in press.
  395. Heo J, Lim J, Jeong J, Kang H, Kim YK, Kang JW, Yu HY, Kucia M, Jeong EM, Kim SW, Choi K, Kang MJ, Waigel SJ, Zacharias W, Kim IG, Ratajczak MZ, Shin DM. Sirt1 regulates DNA methylation of germline development genes in pluripotent stem cells by antagonizing Dnmt3L. *Cell Reports* 2017 (in press).
  396. Ratajczak MZ Stem Cell Reviews and Reports: New Directions and Developments. *Stem Cell Rev*. 2017 (in press).
  397. Ratajczak MZ. Why are hematopoietic stem cells so “sexy”? – on a search for developmental explanation. *Leukemia* 2017, 31, 1671-1677.
  398. Galkowski D, Ratajczak MZ, Kocki J, Darzynkiewicz Z. Of Cytometry, Stem Cells and Fountain of Youth. *Stem Cell Reviews and Reports*
  399. Jolanta KM, Marcin J, Błażej M, Dorota F, Rybakowski J, Ratajczak MZ, Jerzy S. Adult stem cells in psychiatric disorders - New discoveries in peripheral blood. *Prog Neuropsychopharmacol Biol Psychiatry*. 2017 (in press).
  400. Schneider G, Sellers ZP, Bujko K, Kakar SS, Kucia M, Ratajczak MZ. Novel pleiotropic effects of bioactive phospholipids in human lung cancer metastasis. *Oncotarget* 2017 (in press).
  401. Ratajczak MZ, Ciechanowicz AK, Kucharska-Mazur J, Samochowiec J. Stem cells and their potential clinical applications in psychiatric disorders. *Prog Neuropsychopharmacol Biol Psychiatry*. 2017 (in press).
  402. Poniewierska-Baran A, Rajewska-Majchrzak J, Ratajczak MZ. Erythropoietin enhances migration of human neuroblastoma cells: in vitro studies and potential therapeutic implications. *J Cancer Stem Cell Research* 2017 J Cancer Stem Cell Res. 2017;5. pii: e1003.
  403. Ratajczak MZ, Ratajczak J. Extracellular microvesicles as game changers in better understanding the complexity of cellular interactions—from bench to clinical applications. *Am J Med Sci* 2017 (in press).
  404. Ferensztajn-Rochowiak E, Kucharska-Mazur J, Tarnowski M, Samochowiec J, Ratajczak MZ, Rybakowski JK. Stem cells, pluripotency and glial cell markers in peripheral blood of bipolar patients on long-term lithium treatment. *Prog Neuropsychopharmacol Biol Psychiatry*. 2017 (in press).
  405. Kakar SS, Worth CA, Wang Z, Carter K, Ratajczak M, Gunjal P. DOXIL when combined with Withaferin A (WFA) targets ALDH1 positive cancer stem cells in ovarian cancer. *J Cancer Stem Cell Res*. 2016;4. pii: e1002.
  406. Adamiak M, Chelvarajan L, Lynch KR, Santos WL, Abdel-Latif A, Ratajczak MZ. Mobilization studies in mice deficient in sphingosine kinase 2 support a crucial role of the plasma level of

- sphingosine-1-phosphate in the egress of hematopoietic stem progenitor cells. *Oncotarget* 2017 (in press).
407. Adamiak M, Abdel-Latif A, Ratajczak MZ. Mannan binding lectin triggers mobilization of hematopoietic stem cells. *Oncotarget* 2017 (in press).
  408. Bujko K, Rzeszotek S, Hoehlig K, Yan J, Vater A, Ratajczak MZ. Signaling of the complement cleavage product anaphylatoxin C5a through C5aR (CD88) contributes to pharmacological hematopoietic stem cell mobilization. *Stem Cell Reviews & Reports* 2017 (in press).
  409. Sielatycka K, Poniewierska-Baran A, Nurek K, Torbé A, Ratajczak MZ. Novel view on umbilical cord blood and maternal peripheral blood – an evidence for an increase in the number of circulating stem cells on both sides of the fetal–maternal circulation barrier. *Stem Cell Reviews & Reports* 2017 (in press).
  410. Ratajczak MZ. HO-1 inhibits migration of leukemic cells. *Oncotarget* 2017 (in press).
  411. Carter K, Rameshwar P, Ratajczak MZ, Kakar SS. Verrucarin J inhibits ovarian cancer and targets cancer stem cells. *Oncotarget* 2017 (in press).
  412. Kakar SS, Parte S, Carter K, Joshua IG, Worth CH, Rameshwar P, Ratajczak MZ. Withaferin A (WFA) inhibits tumor growth and metastasis by targeting ovarian cancer stem cells. *Oncotarget* 2017, 43, 74494-74505.
  413. Ratajczak MZ. Looking back at the past year of Stem Cell Reviews and Reports. *Stem Cell Reviews & Reports* 2017 (in press).
  414. Sellers ZP, Bujko K, Schneider G, Kucia M, Ratajczak MZ. Novel evidence that pituitary sex hormones regulate migration, adhesion, and proliferation of embryonic stem cells and teratocarcinoma cells. *Oncology Reports* 2017 (in press).
  415. Marlicz W, Poniewierska-Baran A, Rzeszotek S, Bartoszewski R, Skonieczna-Żydecka K, Starzyńska T, Ratajczak MZ. The novel potential role of pituitary sex hormones in pathogenesis of human colorectal cancer. *PLOS One* 2018, 13(3): e0189337.
  416. Parte SC, Smolenkov A, Batra SK, Ratajczak MZ, Kakar SS. Ovarian Cancer Stem Cells: Unraveling a Germline Connection. *Stem Cells Dev.* 2017 (in press).
  417. Bliss SA, Paul S, Pobiarzyn PW, Ayer S, Sinha G, Pant S, Hilton H, Sharma N, Cunha MF, Engelberth DJ, Greco SJ, Bryan M, Kucia MJ, Kakar SS, Ratajczak MZ, Rameshwar P. Evaluation of a developmental hierarchy for breast cancer cells to assess risk-based patient selection for targeted treatment. *Sci Rep.* 2018; 8, 367-374.
  418. Ratajczak MZ, Adamiak M, Plonka M, Abdel-Latif A, Ratajczak J. Mobilization of Hematopoietic Stem Cells as a Result of Innate Immunity- Mediated Sterile Inflammation in the Bone Marrow Microenvironment—the Involvement of Extracellular Nucleotides and Purinergic Signaling. *Leukemia* 2018 (in press).
  419. Ratajczak MZ, Pedziwiatr D, Cymer M, Kucia M, Kucharska-Mazur J, Samochowiec J. Sterile inflammation of brain, due to activation of innate immunity, as a culprit in psychiatric disorders. *Front in Psych* 2018 (in press).
  420. Adamiak M, Bujko K, Cymer M, Plonka M, Glaser T, Kucia M, Ratajczak J, Ulrich H, Abdel-Latif A, Ratajczak MZ. Novel evidence that extracellular nucleotides and purinergic signaling induce innate immunity-mediated mobilization of hematopoietic stem/progenitor cells. *Leukemia* 2018 (in press).
  421. Ratajczak MZ. New hope for treatment of Duchene Dystrophy by employing dystrophin expressing chimeric cells – studies published in Stem Cell Reviews and Reports. *Stem Cell Reviews and Reports* 2018 (in press).
  422. Ratajczak MZ. Mulhouse strategy to expand ex vivo very small embryonic like stem cells (VSELs) – recent study published in Stem Cell Reviews and Reports. *Stem Cell Reviews & Reports* 2018 (in press).
  423. Ratajczak MZ, Adamiak M, Kucia M, Tse T, Ratajczak J, Jedrzejczak WW. The Emerging Link between the Complement Cascade and Purinergic Signaling in Stress Hematopoiesis. *Frontiers in Immunology* 2018 (in press).
  424. Ulrich H, Ratajczak MZ, Schneider G, Adinolfi E, Orioli E, Ferrazoli EG, Glaser T, Corrêa-Velloso J, Martins PCM, Coutinho F, Santos APJ, Pillat MM, Sack U, Lameu C. Kinin and Purine Signaling Contributes to Neuroblastoma Metastasis. *Front Pharmacol.* 2018 May 18;9:500.
  425. Budkowska M, Ostrycharz E, Wojtowicz A, Marcinowska Z, Woźniak J, Ratajczak MZ, Dołęgowska B. A circadian rhythm in both complement cascade (ComC) activation and sphingosine-1-phosphate (S1P) levels in human peripheral blood supports a role for the ComC–S1P axis in circadian changes in the number of stem cells circulating in peripheral blood. *Stem Cell Reviews & Reports* 2018 (in press).



- press).
426. Klyachkin YM, Idris A, Rodell CB, Tripathi H, Ye S, Nagareddy P, Asfour A, Gao E, Annabathula R, Ratajczak MZ, Burdick JA, Abdel-Latif A. Cathelicidin Related Antimicrobial Peptide (CRAMP) Enhances Bone Marrow Cell Retention and Attenuates Cardiac Dysfunction in a Mouse Model of Myocardial Infarction. *Stem Cell Reviews & Reports* 2018 (in press).
  427. Sellers ZP, Schneider G, Maj M, Ratajczak MZ. Analysis of the paternally-imprinted DLK1–MEG3 and IGF2–H19 tandem gene loci in NT2 embryonal carcinoma cells identifies DLK1 as a potential therapeutic target. *Stem Cell Reviews and Reports* 2018 (in press).
  428. Jadczyk T, Baranski K, Syzdot M, Nabialek E, Wanha W, Kurzelowski R, Ratajczak MZ, Kucia M, Dolegowska B, Niewczas M, Zejda J, Wojakowski W. Bioactive Sphingolipids, Complement Cascade, and Free Hemoglobin Levels in Stable Coronary Artery Disease and Acute Myocardial Infarction. *Mediators of Inflammation* 2018, 2691934.
  429. Ratajczak MZ. Circulating stem cells in physiology and pathology - recent studies published in *Stem Cell Reviews & Reports*. *Stem Cell Reviews and Reports* 2018 (in press).
  430. Golan K, Kumari A, Kollet O, Khatib-Massalha E, Subramaniam MD, Ferreira ZS, Avemaria F, Rzeszutek S, García-García A, Xie S, Flores-Figueroa E, Gur-Cohen S, Itkin T, Ludin-Tal A, Massalha H, Bernshtein B, Ciechanowicz AK, Brandis A, Mehlman T, Bhattacharya S, Bertagna M, Cheng H, Petrovich-Kopitman E, Janus T, Kaushansky N, Cheng T, Sagi I, Ratajczak MZ, Méndez-Ferrer S, Dick JE, Markus RP, Lapidot T. Daily Onset of Light and Darkness Differentially Controls Hematopoietic Stem Cell Differentiation and Maintenance. *Cell Stem Cell*. 2018 (in press).
  431. Ratajczak MZ, Bujko K, Mack A, Kucia M, Ratajczak J. Cancer from the perspective of stem cells and misappropriated tissue regeneration mechanisms. *Leukemia* 2018 (in press).
  432. Abdelbaset-Ismail A, Cymer M, Borkowska-Rzeszutek S, Brzeźniakiewicz-Janus K, Rameshwar P, Kakar SS, Ratajczak J, Ratajczak MZ. Bioactive phospholipids enhance migration and adhesion of human leukemic cells by inhibiting heme oxygenase 1 (HO-1) and inducible nitric oxygenase synthase (iNOS) in a p38 MAPK-dependent manner. *Stem Cell Reviews & Reports* 2018 (in press).

Publications in Polish: (refereed full papers indexed and abstracted in *Medline* or *Excerpta Medica*):

1. Ratajczak M.Z., Ptasznik A.: Application of monoclonal antibodies in clinical medicine (review). *Pol. Tyg. Lek.* 1984, 44, 1521 - 1525.
2. Ratajczak M.Z., Jaskulski D.: In vitro cytostatic assays – clinical implications (review). *Pol. Tyg. Lek.* 1984, 39, 1745 - 1749.
3. Ratajczak M.Z., Jedrzejczak W.W.: Fetal liver as a source of hemopoietic stem cells for potential transplantations (editorial review). *Pol. Tyg. Lek.* 1985, 40, 917 - 921.
4. Jedrzejczak W., Rokicka-Milewska R., Siekierzynski M., Szczylik C., Pojda Z., Derulska D., Ratajczak M.Z., Klos M., Kansy J., Nowakowska W.: Autologous bone marrow transplantation as an attempt to maintain complete remission in a child with lymphoblastic leukemia. *Ped. Pol.* 1986, 61, 177 - 180.
5. Jedrzejczak W.W., Szczylik C., Pojda Z., Ratajczak M.Z., Siekierzynski M., Kansy J., Klos M., Jaskulski D., Pejcz J., Urbanowska E., Gornas P.: Practical problems of bone marrow transplantation (review). *Pol. Tyg. Lek.* 1988, 48, 923 - 928.
6. Ratajczak M.Z., Jedrzejczak W.W.: Depletion of erythrocytes from the suspension of bone marrow cells in cases of major ABO incompatibility using polysaccharide - dextran gradient centrifugation. *Pol. Tyg. Lek.* 1987, 46, 908 - 912.
7. Ratajczak M.Z., Urbanowska E.: The role of oncogenes in human neoplasia (review). *Pol. Tyg. Lek.* 1988, 47, 148 - 152.
8. Szczylik C., Ratajczak M.Z., Siekierzynski M., Kansy J., Klos M., Dumanski Z., Zaborowski P., Matej H., Jedrzejczak W.W.: The rejection of HLA histocompatible bone marrow. A case report. *Pol. Arch. Med. Wew.* 1988, 1, 43 - 47.

9. Ratajczak M.Z., Szczylik C.: Autologous bone marrow transplantation (review). *Pol. Tyg. Lek.* 1988, 43, 148 - 152.
10. Ratajczak M.Z., Trawicki W.: The system of protein kinase C in regulation of cell growth (editorial review). *Pol. Tyg. Lek.* 1989, 43, 963 - 970.
11. Jedrzejczak W.W., Ratajczak M.Z.: Depletion of erythrocytes from bone marrow cell suspension using centrifugation over polysaccharide - dextran gradient. Description of method. *Acta. Haematol. Pol.* 1987, 3, 216 - 220.
12. Jedrzejczak W.W., Matej H., Szczylik C., Pojda Z., Ratajczak M.Z., Myc A., Siekierzynski M., Kansy J., Klos M., Rybicki Z., Dumanski Z., Zaborowski P., Zaboklicki S., Nowakowska B., Urbanowska E., Nowak J.: Allogeneic HLA histocompatible bone marrow transplants. First results. *Pol. Tyg. Lek.* 1988, 48, 125 - 129.
13. Ratajczak M.Z., Dudziak M.: Gastroenterological complications of bone marrow transplantation (review). *Pol. Tyg. Lek.* 1990, 49, 716 - 720.
14. Ratajczak M.Z., Dudziak M.: Renal complications of bone marrow transplantation (review). *Pol. Tyg. Lek.* 1990, 50, 836 - 840.
15. Ratajczak M.Z., Issakiewicz R.: Pulmonary complications of bone marrow transplantation (editorial review). *Pol. Tyg. Lek.* 1991, 50, 399 - 402.
16. Ratajczak M.Z., Szczylik C., Jedrzejczak W.W.: Changes in serum protein concentrations in patients after bone marrow transplantation. *Pol. Tyg. Lek.* 1990, 51, 1051 - 1055.
17. Ratajczak M.Z., Szczylik C., Jedrzejczak W.W.: Changes in selected parameters of renal function in allogeneic bone marrow recipients. *Pol. Tyg. Lek.* 1991, 51, 1789 - 1796.
18. Ratajczak M.Z., Szczylik C., Jedrzejczak W.W.: Changes in selected hepatic parameters in allogeneic bone marrow recipients. *Pol. Tyg. Lek.* 1993, 48, 276 - 281.
19. Ratajczak M.Z., Jedrzejczak W.W.: Changes in serum electrolyte concentrations in allogeneic bone marrow recipients. *Pol. Tyg. Lek.* 1992, 52, 125 - 132.
20. Ratajczak M.Z., Karwacki M.: Cardiac and endocrine complications in patients after bone marrow transplantations (review). *Pol. Tyg. Lek.* 1991, 52, 221 - 227.
21. Ratajczak M.Z., Szczylik C.: Negative hematopoietic regulators (editorial review). *Pol. Tyg. Lek.* 1992, 5-6, 115-119.
22. Szczylik C., Panasiuk E., Urbanowska E., Ratajczak M.Z., Wankowicz Z.: The effect of dialysing fluids with varying pH values and buffer types used in peritoneal dialysis on the system of peritoneal phagocytes. Experimental part. *Pol. Arch. Med. Wew.* 1990, 84, 138 - 143.
23. Szczylik C., Knap J., Badowski A., Ratajczak M.Z., Siekierzynski M.: Interleukin - 2 (IL-2) in the treatment of malignant melanoma. A case report. *Pol. Arch. Med. Wew.* 1990, 84, 328 - 334.
24. Ratajczak M.Z., Hijiya N., Catani L., Zhang J., Gewirtz A.M.: The protooncogene c-kit is expressed by human melanoma cell lines. *Pol. Tyg. Lek.* 1992, 48-49, 938-941.
25. Ratajczak M.Z., Luger S.M., Gewirtz A.M.: The role of c-kit protooncogene in human hemopoiesis (review). *Post. Biol. Kom.* 1992, 3, 203-243.
26. Ratajczak M.Z., Skorski T.: Potential application of oligodeoxynucleotides in clinical medicine. (Editorial Review). *Pol. Tyg. Lek.* 1992, 48-49, 913-917.
27. Ratajczak M.Z., Ratajczak J., Kuczynski W.I.: The influence of different hematopoietic growth factors on human granulocyte - monocytopoietic colony growth in vitro. Clinical implications. *Pol. Tyg. Lek.* 1993, 48, 511 - 513.
28. Ratajczak J., Kuczynski I.W., Ratajczak M.Z.: The influence of different hematopoietic growth factors on human megakaryocytic colony growth. Clinical Implications. *Pol. Arch. Med. Wewn.* 1994, 91, 356-362.
29. Ratajczak M.Z., Gewirtz A.M.: The role of the receptors with intrinsic tyrosine kinase activity in the regulation of human haematopoiesis. *Post. Biol. Kom.* 1993, 3, 279-295.
30. Ratajczak M.Z., Ratajczak J., Kuczynski W.I., Skorski T.: The influence of Interleukin - 1 $\alpha$  on the human erythropoiesis in vitro - its potential role in the pathogenesis of anemia of chronic disease. *Pol. Arch. Med. Wewn.* 1994, 91, 97 - 104.
31. Ratajczak M.Z., Ratajczak J.: The pathogenesis of the anemia of chronic disease. The influence of cachectin (TNF- $\alpha$ ) and (lipotechoxin) TNF- $\beta$  on human erythropoiesis in vitro. *Pol. Tyg. Lek.* 1994, 49, 280 - 283.
32. Ratajczak M.Z., Ratajczak J.: The influence of IL-8 on the human hematopoiesis in vitro. *Acta. Haematol. Pol.* 1994, 25, 269 - 275.
33. Ratajczak M.Z.: Molecular mechanisms regulating human erythropoiesis. Clinical implications. *Acta*

- Haematol. Pol. 1994, 25 suppl 1, 41-49.
34. Ratajczak M.Z., Skorski T.: The perspectives of antisense strategies in the experimental and clinical medicine. *Post. Biol. Kom.* 1994, 21, 177 - 196.
  35. Jedrzejczak W.W., Szczylik C., Ratajczak M.Z.: Health status of the allogeneic bone marrow transplant recipients. *Pol. Tyg. Lek.* 1993, 48, 543-545.
  36. Ratajczak M.Z.: Perspectives of the practical application of advances of biotechnology, molecular biology and cellular engineering in clinical haematology. (Editorial paper). *Pol. Arch. Med. Wewn.* 1994, 92, 373-379.
  37. Ratajczak M.Z., Kuczynski W.I.: The application of antisense oligodeoxynucleotides strategy in studies on molecular regulation of haematopoiesis. *Biotechnologia*, 1995, 1(28), 56 - 64.
  38. Ratajczak M.Z., Skorski T., Bialek M.: The perspectives of application of antisense strategies in the clinical medicine. *Biotechnologia*, 1995, 1 (28), 35 - 43.
  39. Ratajczak J., Ratajczak M.Z., Kuczynski W.: The influence of IL-11 on human erythropoiesis in vitro. Potential clinical implications. *Pol. Arch. Med. Wewn.*, 1995, 93, 461-467.
  40. Ratajczak J., Halasa M., Ratajczak M.Z.: The influence of macrophage inflammatory protein - 1a on human erythropoiesis in vitro. Clinical implications. *Acta Haematol. Pol.* 1995, 26, 171 - 177.
  41. Ratajczak M.Z., Halasa M., Kuczynski W.: The role of STK-1 receptor ligand in the regulation of human and murine hematopoiesis. *Post. Biol. Kom.* 1995, 22, 131-147.
  42. Ratajczak M.Z., Marlicz W., Ratajczak J., Skorski T.: Characterization, isolation and application of human early hematopoietic cells in clinical medicine - transplantological implications. *Post. Biol. Kom.* 1995, 22, 207-234.
  43. Ratajczak M.Z.: Molecular mechanisms regulating the proliferation of the earliest human hematopoietic cells. *Acta Haematol. Pol.* 1995, 26, 34-43.
  44. Ratajczak J., Marlicz W., Ratajczak M.Z.: The influence of human recombinant ligand of STK-1R (FLK2/FLT3) on human erythropoiesis in vitro. Potential clinical implications. *Pol. Arch. Med. Wewn.* 1995, 94, 418-424.
  45. Machalinski B., Grzegorzolka R., Ratajczak M.Z. Evaluation of the toxicity of rhodamine123 (Rh123) against human hematopoietic progenitor cells. *Acta. Haematol. Pol.* 1997, 28, 137-145.
  46. Ratajczak J., Machalinski B., Pluciennik E., Halasa M., Ratajczak M.Z.: Influence of neutrophils activating peptide-2 (NAP-2) on human erythropoietic progenitors growth in vitro. Studies relevant to the pathogenesis of the anemia of chronic diseases. *Acta Haematol. Pol.* 1997, 28, 125-135.
  47. Ratajczak M.Z.: Biology and methods for isolating and ex vivo expanding of human early hematopoietic cells. Clinical implications. *Acta Haematol. Pol.* 1997, 28 suppl 2, 132-137.
  48. Machalinski B., Marlicz W., Pluciennik E., Ratajczak J., Ratajczak M.Z.: The influence of thrombopoietin on human erythropoiesis. Studies in vitro - clinical implications. *Pol. Arch. Med. Wewn.* 1997, 97, 307-315.
  49. Machalinski B., Ratajczak M.Z.: Evaluation of the toxicity of selected anticoagulants on clonogenicity of human hematopoietic progenitors. *Pol. Arch. Med. Wewn.* 1997, 97, 509-517.
  50. Machalinski B., Ratajczak M.Z.: The toxicity of Hoechst33342 against normal human bone marrow progenitors. Preliminary report. *Acta Haematol. Pol.* 1997, 28, 433-441.
  51. Machalinski B., Honczarenko M., Gontarewicz A., Ratajczak M.Z.: The isolation of hematopoietic mononuclear cells from bone marrow, peripheral, and cord blood employing Ficoll-Paque (Pharmacia) or GradiSol-L (Polfa, Kutno). Comparison of both methods. *Pol. Arch. Med. Wewn.* 1998, 99, 15-23.
  52. Ratajczak M.Z., Skorski T., Kuczynski W.I., Ratajczak J.: Storage of human bone marrow before transplantation at 4 degrees C. *Pol. Merk. Lek.* 1998, 4, 143-146.
  53. Machalinski B., Gabriel A., Honczarenko M., Karbicka A., Ratajczak M.Z.: Toxicity of Pyronin Y against human cord blood and bone marrow hematopoietic progenitor cells. Preliminary report. *Acta Haematol. Pol.* 1998, 29, 319-326.
  54. Machalinski B., Majka M., Ratajczak M.Z.: The potential toxicity of the ammonium chloride solution against human normal and malignant hematopoietic cells. *Acta Haematol. Pol.* 1998, 29, 461-468.
  55. Ratajczak M.Z., Majka M., Ratajczak J.: HIV infection and haematopoiesis. Clinical implications. *Acta Haematol. Pol.* 1999, 30 (suppl 1), 90-98.
  56. Honczarenko M., Machalinski B., Marlicz W., Majka M., Kijowski J., Paczkowski M., Ratajczak J., Ratajczak M.Z.: Ex vivo expansion of human megakaryocytic progenitors as a method for ameliorating chemotherapy or haematopoietic transplant related thrombocytopenias. *Onkologia Polska* 1998, 3-4, 117-123.
  57. Majka M., Honczarenko M., Kijowski J., Paczkowski M., Gontarewicz A., Paczkowska E., Ratajczak

- M.Z.: Protooncogene c-MYB regulates telomerase activity in the chronic myeloid leukemia cells. Preliminary report. *Onkologia Polska* 1998, 3-4, 111-115.
58. Czajka R, Szolomicka-Kurzawa P, Kurzawa R, Ratajczak MZ. The effect of umbilical cord blood cytokines on clonogenicity of hemopoietic cells isolated from umbilical cord blood. *Ginekol. Pol.* 1999, 70, 866-872.
  59. Kucia M, Majka M, Ratajczak M.Z. Phenomenon of the plasticity of the tissue committed stem cells. *Post. Biol. Kom.* 2003, 30, 3-15.
  60. Majka M, Michalowska A, Kucia M, Ratajczak M.Z. Isolation of human skeletal muscle stem cells. *Post. Biol. Kom.* 2003, 30, 17-24.
  61. Drukala J, Majka M, Ratajczak M.Z. Advances in methods of isolation and expansion of human epidermal stem cells. *Post. Biol. Kom.* 2003, 30, 37-48.
  62. Drabko K, Choma M, Zaucha-Prazmo A, Wojcik B, Gorczynska E, Kalwak K, Turkiewicz D, Slociak M, Ussowicz M, Dyla A, Chybicka A, Styczynski J, Debski R, Wysocki M, Gozdzik J, Ratajczak M, Kowalczyk JR. Megachemotherapy and autologous hematopoietic stem cell transplantation in children with solid tumours excluding neuroblastoma - experience of polish paediatric centres. *Med Wieku Rozwoj.* 2006;10:785-792.
  63. Zaucha-Prazmo A, Drabko K, Wojcik B, Choma M, Kalwak K, Gorczynska E, Turkiewicz D, Slociak M, Ussowicz M, Dyla A, Chybicka A, Gozdzik J, Ratajczak M, Styczynski J, Debski R, Wysocki M, Kowalczyk J. High-dose therapy followed by auto HSCT in children - with advanced neuroblastoma in four transplant centres in Poland. *Med Wieku Rozwoj.* 2006;10:775-784.
  64. Zuba-Surma EK, Kucia M, Ratajczak MZ. Image stream technology – a step forward than flow cytometry. *Post. Biol. Kom.* 2007, 34, 361-375.
  65. Ratajczak MZ, Popiela T. Will regenerative medicine become an alternative to resective surgery in gastroenterology. "Editorial" *Gastroenterol. Pol.* 2009, 16, 351-359.
  66. Klich I, Walat S, Ratajczak J, Kucia M, Ratajczak MZ. Very small embryonic like stem cells (VSELs) isolated from adult tissues – an update. *Post. Biol. Kom.* 2010, 37, 63-87.
  67. Ratajczak MZ, Machalinski B, Czajka R, Zuba-Surma E, Poziomkowska I, Slowik D. Physiological and pathological consequences of a presence of germ line stem cells in adult tissues. *Ginekol. Pol.* 2009, 80, 935-941.
  68. Krasowska-Kwiecień A, Kijowski J, Łukasiewicz E, Sacha T, Foryciarz K, Majka M, Ratajczak MZ, Skotnicki AB. Angiogenesis in different clinical phases of chronic myeloid leukemia. *Przegl. Lek.* 2009, 66, 471-478.
  69. Poziomkowska I, Słowik-Żyłka D, Śluczanowska S, Grymuła K, Sroczyński T, Staniszevska M, Banach B, Ratajczak MZ. CXCR7 a new receptor for stromal derived factor-1 (SDF-1). *Post. Biol. Kom.* 2010 (in press).
  70. Piotrowska K, Śluczanowska-Glabkowska S, Ratajczak MZ. Potential application of germ line stem cells in regenerative medicine. *Post. Biol. Kom.* 2010, 37, 765-781.
  71. Ratajczak MZ, Suszynska M. Quo Vadis medycyna regeneracyjna? *Acta Haematol. Pol.* 2013, 44, 161-170.
  72. Tarnowski M, Grymuła K, Tkacz M, Czerewaty M, Poniewierska-Baran A, Ratajczak MZ. Molecular mechanisms regulating metastasis of cancer cells with special emphasis on rhabdomyosarcoma. *Postepy Hig Med Dosw.* 2014, 68, 258-70.

#### PUBLISHED ABSTRACTS (Selected)

More than 400 papers presented at national and international congresses and symposia. The abstracts were printed in Abstract Books and some of them in journals such as: *Blood*, *Experimental Hematology*, *Blut*, *International Journal of Radiation Biology*, *Clinical Research*, *International Journal of Cell Cloning*.

Selected Abstracts from the last 15 years:

#### AAP/ASCI/AFCR Annual Meeting 1991, Seattle

1. Ratajczak M.Z., Shen, Y.M., Gewirtz A.M.: Role of c-kit protooncogene in human in vitro hematopoiesis. *Clin.Res.* 1991, 39, 190.

#### Molecular Biology of Hematopoiesis 1991, Innsbruck

2. Ratajczak M.Z., Gewirtz A.M.: Role of c-kit protooncogene in normal and malignant human hematopoiesis. *Int. J. Cell Clon.* 1991, 9, 335.

American Society of Hematology, 33rd Annual Meeting, 1991, Denver

3. Ratajczak M.Z., Gewirtz A.M.: Regulation and function of the c-kit protooncogene in normal human hematopoiesis. *Blood* 1991, 78, Suppl 1, 161 a.
4. Luger S.M., Ratajczak M.Z., Abraham J., Gewirtz A.M.: Role of the c-kit protooncogene in malignant human hematopoiesis. *Blood* 1991, 78 Suppl, 1, 270 a.
5. Hijiya N., Ikegaki U., Ratajczak M.Z., DeRiel K., Gewirtz A.M.: Malignant melanoma and neuroblastoma cell lines growth is inhibited by c-myc antisense oligodeoxynucleotides. *Blood* 1991, 78 Suppl 1, 334 a.
6. Parker R.I., Siegel R.S., Ratajczak M.Z., Gewirtz A.M.: Deficient in vitro megakaryocytopoiesis and decreased in vivo platelet turnover in chronic thrombocytopenia. *Blood* 1991, 78 Suppl 1, 131 a.

Jahrestagung der Deutschen Gesellschaft fuer Haematologie und Onkologie  
Berlin 1992:

7. Ratajczak M.Z., Gewirtz A.M.: Antisense oligodeoxynucleotides as probes for studying human hematopoiesis (Plenary Lecture). *Annals of Hematology* 1992, 65 Suppl 1, A 107.

International Conference on Gene Therapy of Cancer. San Diego 1992, California.

8. Luger S., Ratajczak M.Z., Abrams E., Stadtmayer E., Gewirtz A.: Targeted disruption of the c-kit protooncogene with antisense oligodeoxynucleotides: biologic consequences and potential therapeutic applications. *Human Gene Therapy* 1992, 5, 613.

American Society of Hematology, 34th Annual Meeting, 1992, Anaheim, CA.

9. Ratajczak M.Z., Kant J.A., Luger S.M., Hijiya N., Zhang J., Zon G., Gewirtz A.M.: In vivo treatment of human leukemia in a SCID mouse model with c-myc antisense oligodeoxynucleotides. *Blood* 1992, 80, Suppl 1, 156 a.
10. Ratajczak M.Z., Kuczyński W.I., Moore J., Ratajczak J., Gewirtz A.M.: A reappraisal of the function of insulin like growth factor -1 (IGF - 1) in the regulation of normal human erythropoiesis. *Blood* 1992, 80, Suppl 1, 151 a.
11. Luger S.M., Ratajczak M.Z., Abrams J., Stadtmayer E., Gewirtz A.M.: In vitro sensitivity of myeloproliferative disorder colony forming units to c-myc and c-kit antisense DNA: a two year cumulative experience. *Blood* 1992, 80, Suppl 1, 156 a.
12. Skorski T., Nieborowska - Skorska M., Ratajczak M.Z., Barletta C., Szczylik C., Lange B., Gewirtz A.M., Calabretta B.: Highly efficient purging of Philadelphia leukemic cells from bone marrow cells by exposure to bcr-abl antisense oligodeoxynucleotides combined with mafosfamide. *Blood* 1992, 80, Suppl 1, 199 a.
13. Takeshita K., Bollekens J.A., Hijiya N., Ratajczak M., Gewirtz A.M., Ruddle F.H.: Homeobox gene Hox 3 C is required for erythropoiesis. *Blood* 1992, 80, Suppl 1, 346 a.

American Association of Cancer Research, Orlando, Florida, 1993.

14. DiPaola R.S., Onodera K., Kuczyński W., Ratajczak M.Z., Hijiya N., Gewirtz A.: Growth inhibition of non-small cell lung cancer with c-kit antisense oligodeoxynucleotides. *Proceedings Am. Assoc. Canc. Res.* 1993, 2319.
15. Hijiya N., Zhang J., Ratajczak M.Z., Herlyn M., Gewirtz A.M.: C-myc antisense oligodeoxynucleotides inhibit human melanoma growth in vitro and in vivo. *Proceedings Am. Assoc. Canc. Res.* 1993, 2318.

American Association of Clinical Investigation, Washington DC, 1993.

16. Ratajczak M.Z., Ratajczak J., Kuczyński W., Light B., Gewirtz A.M.: In vitro sensitivity of human hemopoietic progenitor cells to 4-Hydroperoxycyclophosphamide. *Clin. Res.* 1993, 41, 308 A.

Symposium to memory of Rudolf Virchow, Szczecin, Poland, 1993.

17. Ratajczak M.Z., Gewirtz A.M.: Antisense strategy. The perspectives of therapeutic use of antisense oligomers in the treatment of human leukemias. (Plenary lecture).

V Annual Conference on Cell Biology, 1993, Wrocław, Poland.

18. Ratajczak M.Z.: The role of receptors with intrinsic tyrosine kinase activity in regulation of normal human haematopoiesis. (Plenary lecture).

American Society of Hematology, 35th Annual Meeting, December 1993 St. Louis, Missouri, USA.:

19. Ratajczak M.Z., Gewirtz A.M.: The human c-kit gene 5' region: sequence analysis and functional characterization. Blood 1993, 82 suppl 1, 229 a.
20. Ratajczak M.Z., Kuczynski W.I., Ratajczak J., Light B., Luger S.M., Gewirtz A.M.: A simple, efficient method for cryopreserving bone marrow cells in a -80°C mechanical freezer. Blood 1993, 82 suppl 1, 652 a.
21. Kuczynski W.I., Ratajczak M.Z., Gewirtz A.M.: Stem cell kinase-1 (STK-1), human homologue of the murine FLT3/CLK2 tyrosinase kinase receptor gene, is expressed on a wide variety of non-hematopoietic tumor cell types. Blood 1993, 82 suppl 1, 486 a.
22. Luger S.M., Ratajczak M.Z., DiPaola R., Gewirtz A.M.: Functional requirement for the vav protooncogene product, p95<sup>vav</sup> in the human hematopoiesis. Blood 1993, 82 suppl 1, 107 a.
23. Small D., Levenstein M., Kim E., Carow C.E., Amin S., Ratajczak M.Z., Gewirtz A.M., Civin C.I.: STK-1, a human homologue of FLK2/FLT3, is aberrantly expressed in human leukemias and may be involved in the growth and/or differentiation of hematopoietic stem/progenitor cells. Blood 1993, 82 suppl 1, 325 a.

Conference of the Polish Society of Haematology and Transfusiology, Wrocław 1994.

24. Ratajczak M.Z.: Molecular mechanisms of the regulation of the human erythropoiesis. Clinical implications (Plenary Lecture). Acta Haematol. Pol. 1994, 25 suppl 1, 41-49.
25. Ratajczak M.Z., D.A. Kregenow, A.M. Gewirtz. The human c-kit gene 5' region: sequence analysis and functional characterization. Acta Haematol. Pol 1994, 25 suppl 1.
26. Ratajczak M.Z., J. Ratajczak, W. Kuczynski, A. Gewirtz: The cryopreservation of bone marrow CD34+ cells in a mechanical freezer at -80°C. Evaluation of the freezing, storage and thawing procedures. Acta Haematol. Pol 1994, 25 suppl 1.
27. Ratajczak J., D. Kregenow, W.I. Kuczynski and M.Z. Ratajczak: Anemia of chronic disease. The influence of TNF-α and TNF-β on human hematopoiesis in vitro. Acta Haematol. Pol 1994, 25 suppl 1.
28. Ratajczak M.Z., J. Ratajczak, W. Kuczynski, A. Gewirtz: Stimulation of the human bone marrow CD34+ cells with KL, IL-3 and IL-1β prior to freezing enhances their survival and post-thawing proliferative potential. Acta Haematol. Pol 1994, 25 suppl 1.
29. J. Ratajczak and M.Z. Ratajczak. Anemia of chronic disease. The influence of IL-8 on human hematopoiesis in vitro. Acta Haematol. Pol 1994, 25 suppl 1.
30. J. Ratajczak and M.Z. Ratajczak: Anemia of chronic disease. The influence of IL-6 on human hematopoiesis in vitro. Acta Haematol. Pol 1994, 25 suppl 1.
31. W. Kuczynski, J. Ratajczak and M.Z. Ratajczak: Short-term storage of the human bone marrow cells in refrigerator at 4°C. Optimization of the procedure. Acta Haematol. Pol 1994, 25 suppl 1.
32. J. Ratajczak, W. Kuczynski, M.Z. Ratajczak: Anemia of chronic disease. The influence of IL-1 on human hematopoiesis in vitro. Acta Haematol. Pol 1994, 25 suppl 1.

First Berlin Symposium on "The application of molecular biology to cancer patients". Berlin 1994.

33. M.Z. Ratajczak, Gewirtz A.M.: Oligodeoxynucleotide-based therapeutics of human leukemias. (Plenary lecture).

Conference on Bone Marrow Transplantation in Poland, Warsaw 1994.

34. Ratajczak M.Z.: Isolation, storage and expansion of CD34<sup>+</sup> bone marrow cells. Transplantological implications. (Plenary lecture).
35. Jedrzejczak W.W., Szczylik C., Ratajczak M.Z., Pojda Z., Szwach P.: Evaluation of late complications of the allogeneic bone marrow transplantations. (Plenary lecture).

36th Annual Meeting of the American Society of Hematology, Nashville, December 1994:

36. M.Z. Ratajczak, W.I. Kuczynski, J. Moore, A.M. Gewirtz.: Facs sorted human CD34+ bone marrow cells coexpress c-kit ligand (KL) and stem cell tyrosine kinase-1 receptor ligand (STK-1L). Blood 1994, 84, Suppl 1, 370a.

37. M.Z. Ratajczak, M.T. Mitjavilla, J. Ratajczak, W. Kuczynski, D. Kregenow, A.M. Gewirtz.: Human erythropoiesis in a serum free culture system: a reappraisal of the role of insulin. *Blood* 1994, 84, Suppl 1, 281a.
38. Luger S.M., Ratajczak M.Z., Stadtmauer E.A., Mangan P., Magee D., Silberstein L., Edelstein M., Nowell P., Gewirtz A.M.: Autografting for chronic myelogenous leukemia (CML) with c-myb antisense oligodeoxynucleotide purged bone marrow: a preliminary report. *Blood* 1994, 84, Suppl 1, 151a.

Antisense Therapy - International IBC Conference. Charing Cross Medical School, London 1995.

39. Ratajczak M.Z., Gewirtz A.M. Oligonucleotide therapeutics for human leukemias (Plenary lecture).

The Treatment of Cancer: Beyond Chemotherapy. IBC International Conference, London 1995.

40. Ratajczak M.Z., Gewirtz A.M. Oligonucleotide therapeutics for human leukemias (Plenary lecture).

XVI Meeting of Polish Society of Haematology and Transfusiology. Warsaw, 1995.

41. Ratajczak M.Z.: Molecular mechanisms regulating the proliferation of the earliest human hematopoietic cells. (Plenary Lecture).
42. Kuczynski WI, Ratajczak M.Z.: Influence of interferon- $\gamma$  on c-kit R expression.
43. Kuczynski WI, Ratajczak M.Z.: The role of EpO in human megakaryopoiesis.

Annual Scientific Meeting of the British Society for Haematology. Brighton 1995.

44. O'Brien S.G., Rule S., Ratajczak M.Z., Luger S.M., Goldman J.M., Gewirtz A.M.: Autografting for CML using bone marrow purged with myb antisense oligonucleotide. *Brit. J. Haematol.* 1995, 89, (Suppl 1), 12.

XXIV th Annual Meeting of the International Society for Experimental Hematology. Dusseldorf 1995.

45. O'Brien S.G., Gewirtz A.M., Rule S.A., Hawkins T.E., Ratajczak M.Z., Savage D., Luger S.M., Goldman J.M.: Autografting for CML using bone marrow purged with myb antisense oligonucleotide. *Exp. Hematol.* 1995, 22, 804.

3th Annual Meeting of The Polish Section of the European Cell and Tissue Culture Society. October, Krakow 1995.

46. Ratajczak M.Z.: Contemporary methods of investigation of the molecular mechanisms regulating the proliferation and differentiation of human hemopoietic stem and progenitor cells. (Plenary lecture).

37th Annual Meeting of the American Society of Hematology, Seattle, December 1995:

47. Luger S.M., Ratajczak J., Ratajczak M.Z., DiPaola R., Clevenger R., Gewirtz A.M.: Role of the p95<sup>va</sup> protooncogene in normal and malignant human hematopoiesis. *Blood* 1995, 86 suppl 1, 146a.
48. Ratajczak M.Z., Ratajczak J., Marlicz W., Ford J., Kregenow D., Gewirtz A.M.: Stem cell tyrosine kinase-1 ligand (STK-1L) does not stimulate human megakaryocytopoiesis in vitro. *Blood* 1995, 86 suppl 1, 907a.
49. Ratajczak J., Ratajczak M.Z., Gewirtz A.M.: Ex vivo expansion of human megakaryocyte progenitor cells in vitro. *Blood* 1995, 86 suppl 1, 363a.
50. Ratajczak M.Z., Ratajczak J., Marlicz W., Moore J., Gewirtz A.M.: A kinetic and functional analysis of receptors with intrinsic tyrosinase activity in normal human hematopoietic progenitor cells. *Blood* 1995, 86 suppl 1, 259a.

Annual Conference on Bone Marrow Transplantation. Poznan, June 1996.

50. Ratajczak M.Z.: The biology of human hematopoietic stem cells. Transplantological implications. (Plenary Lecture).
51. Marlicz W., Machalinski B., Gewirtz A.M., Ratajczak M.Z.: Serum free system for expanding ex vivo human hematopoietic cells.
52. Marlicz W., Machalinski B., Gewirtz A.M., Ratajczak M.Z.: Long term storage of human CD34+ cells in -80°C mechanical freezer.
53. Marlicz W., Ratajczak M.Z.: Toxicity of the different nonviral transfection methods against human CD34+ progenitor cells.

54. Marlicz W., Ratajczak M.Z.: Effectivity of different methods for isolating human CD34+ cells.

Conference on Cellular Interactions. Poznan, September 1996.

55. Ratajczak M.Z.: The role of receptors possessing intrinsic tyrosine kinase activity in regulating of the human earliest hematopoietic cells. (Plenary Lecture).  
56. Ratajczak M.Z.: Pathogenesis of the anemia of chronic disorders. (Plenary Lecture).  
57. Ratajczak M.Z., Pletcher Ch., Marlicz W., Wasik M., Machalinski B., Ratajczak J., Moore J., Gewirtz A.M.: A rapid method for isolating human hematopoietic stem cells. Abstracts.

38th Annual Meeting of the American Society of Hematology, Orlando, December 1996:

58. Ratajczak M.Z., Pletcher Ch., Marlicz W., Wasik M., Machalinski B., Ratajczak J., Moore J., Gewirtz A.M.: A rapid method for isolating human hematopoietic stem cells (HHSC). Blood 1996, 88 Suppl 1, 109a.  
59. Gewirtz A.M., Luger S., Sokol D., Gowdin B., Stadtmauer E., Reccio A., Ratajczak M.Z.: Oligodeoxynucleotide therapeutics for human myelogenous leukemia. Blood 1996, 88 Suppl 1, 270a.  
60. Ratajczak M.Z., Machalinski B., Ratajczak J., Skorski T., Marlicz W., Gewirtz A.M.: In vitro and in vivo evidence that ex vivo cytokine priming of transplanted marrow cells may ameliorate post-transplant thrombocytopenia. Blood 1996, 88 Suppl 1, 299a.  
61. Ratajczak M.Z., Marlicz W., Ratajczak J., Machalinski B., Wasik M., Gewirtz A.M.: Role of c-met receptor (MET-R)/hepatocyte growth factor (HGF) axis in human hematopoiesis. Blood 1996, 88 Suppl 1, 538a.

2nd Symposium of Tissue Cultures of Central European Countries. Krakow, Poland June 1997:

62. Ratajczak M.Z. The biology of human hematopoietic stem and progenitor cells (Plenary lecture). Folia Histochem. et Cytobiol. 1997, 35 suppl.2, 7.  
63. Ratajczak M.Z. A new trends for isolating, ex vivo expanding, and cloning of human early hematopoietic cells (Plenary lecture). Folia Histochem. et Cytobiol. 1997, 35 suppl.2, 23.

XVII th Congress of the Polish Society of Haematology and Transfusiology, Krakow, Poland, September 1997.

64. Ratajczak M.Z. A new strategies for isolating and ex vivo expanding of human early hematopoietic cells. Clinical implications. (Plenary lecture). Acta Haematol. Pol. 1997, 28 suppl 2, 132-137.

Annual Symposium on Advances of Cytometry in Clinical Medicine, Poznan, Poland, September 1997.

65. Ratajczak M.Z. The application of FACS for studying the expression of the intracellular proteins. (Plenary lecture).  
66. Ratajczak M.Z. The application of FACS for isolating human earliest hematopoietic cells. (Plenary lecture).

39th Annual Meeting of the American Society of Hematology, San Diego, December 1997:

67. Ratajczak M.Z., Lee B., Ratajczak J., Doms R., Gewirtz A.M.: Characterization and biologic consequence of chemokine (CXCR4, CCR5 and CCR3) receptor and CD4 antigen expression on normal and malignant human hematopoietic cells. Blood 1997, 90 suppl 1, 476a.  
68. Ratajczak J., Lee B., Gewirtz A.M., Ratajczak M.Z.: In vitro studies on the pathogenesis of AIDS related anemia. Blood 1997, 90 suppl 1, 18b.  
69. Machalinski B., Pluciennik E., Samuel A.A., Francois H., Czajka R., Gewirtz A.M., Ratajczak M.Z.: A convenient and economical method for long distance shipment of non frozen human mononuclear cord blood cells. Blood 1997, 90 suppl 1, 330b.  
70. Ratajczak J., Ratajczak M.Z., Mick R., Vaughn D., Gewirtz A.M.: Paclitaxel/carboplatin chemotherapy: examining its platelet sparing mechanism. Blood 1997, 90 suppl 1, 205b.  
71. Hung H.L., Song F., Davis M., Ratajczak M.Z., Gewirtz A.M.: Thrombopoietin upregulates Set and eIF-5A mRNA transcripts in later megakaryocyte progenitor. Blood 1997, 90 suppl 1, 46a.  
72. Gewirtz A.M., Ratajczak M., Vilaire G., Bennet J.: Effect of integrin mediated signaling on c-myc expression in human hematopoietic cells. Blood 1997, 90 suppl 1, 484a.  
73. Ratajczak M.Z., Ratajczak J., Machalinski B., Pietrzkowski Z., Sokol D., Carter A., Gewirtz A.M. Role of vascular endothelial growth factor (VEGF), placenta derived growth factor (PlGF)/FLK-1/KDR, and FLT-1 receptor axes in human fetal and adult hematopoiesis. Blood 1997, 90 suppl 1, 572a.



74. Kowalska A., Ratajczak MZ, Ratajczak J, Hoxie J, Brass L., Vilaire G., Bennet J., Gewirtz AM. Megakaryocytes and platelets express the HIV co-receptor Fusin (CXCR4) on their surface. *Blood* 1997, 90 suppl 1, 283a.
75. Zhang Q., Wang ZY, Sun X, Ratajczak MZ, Wasik M. Constitutive phosphorylation of receptor for IGF-I (IGF-IR) in malignant T-cell lymphoma cells. *Blood* 1997, 90 suppl 1, 74a-75a.
76. Wlodarski P., Wasik M., Ratajczak M.Z., Seignani C., Hoser G., Kawiak J., Gewirtz A.M., Calabretta B., Skorski T. Role of p53 in hematopoietic recovery after cytostatic treatment. *Blood* 1997, 90 suppl 1, 479a.
77. Sesok-Pizzini D., Ratajczak MZ, Moore J, Jefferies L., Wilson R. Kell protein expression during fetal erythropoiesis. *Blood* 1997, 90 suppl 1, 472a.

40 th Annual Meeting of the American Society of Hematology, Miami, December 1998:

78. Lee B., Sharron M., Tsang M., Majka M.M., Ratajczak M.Z., Montaner L.J., Weissman D., Doms R.W. Quantification of CD4, CCR5, CXCR4, and STRL33 levels on differentially conditioned monocyte-derived macrophages, various subsets of peripheral blood leukocytes and CD34+ bone marrow progenitor cells. *Blood* 1998, 92 suppl 1, 663a.
79. Majka M., Lee B., Ratajczak J., Pertusini E., Honczarenko M., Kowalska M.A., Wasik M.A., Gewirtz A.M., Ratajczak M.Z. Expression and function of HIV-1 co-receptors on human hematopoietic cell lines. *Blood* 1998, 92 suppl 1, 671a.
80. Majka M., Honczarenko M., Ratajczak J., Lee B., Kowalska M.A., Douglas R., Poncz M., Silberstein L., Gewirtz A.M., Ratajczak M.Z. The expression of chemokine receptors during erythroid differentiation of human CD34+ cells. The role of chemokines on calcium flux, chemotaxis and proliferation. *Blood* 1998, 92 suppl 1, 1508a.
81. Pertusini E., Ratajczak J., Majka M., Ratajczak M.Z., Vaughn D., Gewirtz A. Elucidation of the platelet sparing mechanism of paclitaxel/carboplatin chemotherapy. *Blood* 1998, 92 suppl 1, 1598a.
82. Ratajczak J., Majka M., Pletcher Ch., Moore J., Ratajczak M.Z. Evidence that human hematopoietic stem cells (HSC) do not reside within the CD34+, KIT- cell population. *Blood* 1998, 92 suppl 1, 1823a.
83. Ratajczak J., Gewirtz A.M., Ratajczak M.Z. Role of c-KIT and c-MYB in inhibiting apoptosis and regulating telomerase activity in early human erythroid progenitors. *Blood* 1998, 92 suppl 1, 2083a.
84. Majka M., Ratajczak J., Pizzini D., Gewirtz A.M., Ratajczak M.Z. Expression, regulation, and function of AC133, a putative cell surface determinant of primitive human hematopoietic cells. *Blood* 1998, 92 suppl 2, 3601a.
85. Machalinski B., Rozewicka L., Ratajczak M.Z. In vitro and in vivo studies on the potential toxicity of the metabolical fluorochromes-Rhodamine 123 (Rh123), Pyronin Y (PyY) and Hoechst 33342 (Hoe342). Practical implications for stem cell isolation. *Blood* 1998, 92 suppl 1, 4301a.
86. Marlicz W., Kijowski J., Machalinski B., Paczkowski M., Gontarewicz A., Paczkowska E., Ostrowski M., Gewirtz A.M., Ratajczak M.Z. Heparinized cadaveric multiple organ donors (HCMOD) a forgotten source of hematopoietic cells for transplantation – a time to create a universal stem cell bank for needs of the XXI century. *Blood* 1998, 92 suppl 1, 4303a.
87. Majka M., Pertusini E., Ratajczak J., Pletcher Ch., Pizzini D., Ratajczak M.Z. Removing nucleated erythroblasts (NEB) from cord blood mononuclear cell preparations: practical implications for the preparation of cord blood samples for high speed sorting. *Blood* 1998, 92 suppl 1, 4348a.

XVIII th Congress of the Polish Society of Haematology and Transfusiology, Lodz, Poland, June 1999.

88. Ratajczak MZ, Majka M, Ratajczak J.: "Influence of HIV infection on human hematopoiesis. Clinical implications". (Plenary Lecture). *Acta Haematol. Pol.* 1999,
89. Machalinski B, Marlicz W, Majka M, Ratajczak J, Ratajczak MZ.: The role of neo-angiogenesis in the pathogenesis of CML. *Acta Haematol. Pol.* 1999,
90. Machalinski B, Marchlewicz M, Dziedziczko V, Wiszniewska B, Machoy Z, Wenda-Rozewicka L, Ratajczak MZ. The influence of sodium fluoride (NaF) on hematopoiesis. Studies in vitro and in vivo. *Acta Haematol. Pol.* 1999,
91. Ratajczak J, Majka M, Ratajczak M.Z.: The role of kit ligand – kit receptor – c-myc protooncogene axis in inhibiting apoptosis and regulating telomerase activity in human erythroid progenitor cells. *Acta Haematol. Pol.* 1999,
92. Kijowski J, Marlicz W, machalinski B, Paczkowski M, Gontarewicz A, Turkiewicz W, Ostrowski M, Zukowski M, Bohatyrewicz Z, Wlodarczyk K, Ratajczak M.Z.: Heparinized cadaveric multiple organ

- donors (HCMOD) a forgotten source of hematopoietic stem cells. Potential clinical implications. *Acta. Haematol. Pol.* 1999,
93. Marlicz W, Ratajczak MZ.: The comparison of the various physico-chemical methods for introducing antisense oligomers and plasmid DNA into the hematopoietic cells. *Acta. Haematol. Pol.* 1999,
  94. Majka M, Machalinski B, Ratajczak M.Z.: Expression, regulation, and function of AC133, a putative cell surface marker of primitive human haematopoietic cells. *Acta. Haematol. Pol.* 1999,
  95. Marlicz W, Machalinski B, Majka M, Honczarenko M, Kijowski J, Paczkowski M, Ratajczak J, Ratajczak M.Z.: Ex vivo expansion of human megakaryoblasts and megakaryocytic progenitors as a strategy to ameliorate posttransplant related thrombocytopenia. *Acta. Haematol. Pol.* 1999,
  96. Machalinski B, Ratajczak M.Z.: The toxicity of metabolic fluorochromes: rhodamine 123, Hoechst 33342 and pyronin Y against human hematopoietic progenitor cells. Clinical implications. *Acta. Haematol. Pol.* 1999,
  97. Marlicz W, Ratajczak M.Z.: Toxicity of various physico-chemical methods of transfection against human hematopoietic cells. *Acta. Haematol. Pol.* 1999,
  98. Majka M, Machalinski B, Ratajczak M.Z.: Removing nucleated erythroblasts (NEB) from cord blood mononuclear cell preparations: practical implications for the preparation of cord blood samples for high speed sorting. *Acta. Haematol. Pol.* 1999,
- 41st Annual Meeting of the American Society of Hematology, New Orleans, December 1999.
99. Majka M, Rozmyslowicz T, Lee B, Honczarenko M, Pietrkowski Z, Gaulton GN, Silberstein L, Ratajczak M.Z.: Bone marrow CD34<sup>+</sup> cells and megakaryoblasts secrete b-chemokines. Implications for infectability by M-tropic Human Immunodeficiency Virus (R5 HIV). *Blood* 1999, 94 suppl 1, 435a.
  100. Majka M, Hershock D, Ratajczak J, Gontarewicz A, Gewirtz AM, Ratajczak M.Z.: Differentiating normal human megakaryoblasts express APO-Fas (CD95), TNF-RII, secrete several megakaryopoietic inhibitors and undergo apoptosis; An important role of thrombopoietin (TPO), MYB and PI3K-AKT-BAD axis in inhibiting apoptosis in normal megakaryocytic precursors. *Blood* 1999, 94 suppl 1, 482a.
  101. Majka M, Ratajczak J, Pizzini D, Wasik MA, Gewirtz AM, Ratajczak M.Z.: Expression, regulation, and function of AC133, a putative cell surface marker of primitive human hematopoietic cells. *Blood* 1999, 94 suppl 1, 559a.
  102. Majka M, Ratajczak J, Vilaire G, Kowalska MA, Ratajczak M.Z.: Binding of stromal derived factor-1a (SDF-1a) to CXCR4 chemokine receptor in normal human megakaryoblasts but not in platelets phosphorylates mitogen-activated protein kinase p42/44 (ERK-1, ERK-2) and p38, serin/threonine kinase AKT, STAT3 and ELK-1 transcription factor. *Blood* 1999, 94 suppl 1, 217a.
  103. Silberstein LE, Honczarenko M, Mathias C, Majka M, Pietrkowski Z, Ratajczak M.Z.: MIP-1b induced heterologous desensitization of CXCR-4 mediated signaling on early lineage B cells in human bone marrow. *Blood* 1999, 94 suppl 1, 5a.
  104. Kowalska MA, Majka M, Ratajczak M.Z., Brass LF, Poncz M.: Stromal-derived factors 1 (SDF-1) and macrophage-derived chemokine (MDC): complementary chemokines involved in platelet activation. *Blood* 1999, 94 suppl 1, 217a.
  105. Giannola DM, Shlomchik D, Ratajczak MZ, Danet G, Liebowitz DN, Emerson SG.: Activation of the human HOXB4 promoter in CD34<sup>+</sup> cells is induced during cytokine stimulation favoring self-renewal, via the bHLH-ZIP transcription factor USF-1. *Blood* 1999, 94 suppl 1, 469a.
  106. Majka M, Rozmyslowicz T, Honczarenko M, Lee B, Ratajczak J, Wasik M, Gaulton GN, Gewirtz AM, Silberstein LE, Ratajczak M.Z.: Biological significance of the expression of HIV related chemokine coreceptors (CCR5 and CXCR4) and endogenous secretion of chemokines by human hematopoietic cell lines. *Blood* 1999, 94 suppl 1, 618a.
  107. Machalinski B, Marlicz W, Paczkowski M, Kijowski J, Gontarewicz A, Ostrowski M, Ratajczak M.Z.: Heparinized cadaveric organ donors (HCOD) – a potential source of cells for hematopoietic transplants and gene therapy. *Blood* 1999, 94 suppl 2, 322b.
  108. Majka M, Ratajczak J, Ehrenman K, Pietrkowski Z, Emerson SG, Ratajczak M.Z.: Normal human CD34<sup>+</sup> cells and ex vivo expanded myeloblasts, megakaryoblasts and erythroblasts secrete various growth factors, cytokines and chemokines: biological significance of endogenous secretion. *Blood* 1999, 94 suppl 1, 465a.
  109. Majka M, Ratajczak J, Poncz M, Gewirtz AM, Kowalska MA, Ratajczak M.Z.: Similar but distinct effects of thrombopoietin (TPO) and stromal derived factor-1 (SDF-1) on megakaryopoiesis. *Blood* 1999, 94 suppl 1, 267a.
  110. Majka M, Kowalczyk D, Gee M, Wertheim J, Marquez LA, Pear W, Gewirtz AM, Janowska-

Wieczorek A, Emerson SG, Ratajczak M.Z.: Evidence that both human and murine bcr-abl+ cells stimulate vasculogenesis in vivo in matrigel implants: potential therapeutic implications. *Blood* 1999, 94 suppl 1, 100a.

42nd Annual Meeting of the American Society of Hematology, San Francisco, December 2000.

- 111.M. Majka, T. Rozmyslowicz, G. Gaulton, A. Janowska-Wieczorek, Ratajczak M.Z Normal CD34+ cell secrete interleukin-16 and HH related b-chemokines which contribute to the resistance of CD34+ cells to infection by Human Immunodeficiency virus (R5 and X4 HIV)..*Blood* 2000, 96 suppl 1.
- 112.J. Kijowski M. Baj, R. Reca M. Majka, Ratajczak M.Z. SDF-1 stimulation of the X4 HIV-related CXCR4 coreceptor activates the MAPK p42/44 and PI-3K-AKT axes in normal and malignant human hematopoietic cells but does not affect cell proliferation and apoptosis*Blood* 2000, 96 suppl 1.
- 113.M. Majka, A. Janowska- Wieczorek, J. Ratajczak, M.A. Kowalska, G. Vילהire, M. Poncz, Ratajczak M.Z.Stromal derived factor-1 (SDF-1) and Thrombopoietin (TPO) regulate distinct aspects of human megakaryopoiesis. *Blood* 2000, 96 suppl 1.
- 114.M. Honczarenko, M. Majka, L. Silberstein, Ratajczak M.Z An evidence that CD4 antigen is not expressed on human bone marrow derived CD34+ stem/progenitor cells.. *Blood* 2000, 96 suppl 1.
- 115.J. Ratajczak, M. Majka, C. Mathias, A. Janowska-Wieczorek, Ratajczak M.Z. EPO, KL, IGF-1 and TPO regulate proliferation and apoptosis of normal human CD34+ and early erythroid cells by activating overlapping but distinct signaling pathways. *Blood* 2000, 96 suppl 1.
- 116.A. Janowska-Wieczorek, M. Majka, W. Pear, A.M. Gewirtz, Ratajczak M.Z. Chronic myelogenous leukemia (CML) cells stimulate angiogenesis. *Blood* 2000, 96 suppl 1.
- 117.A. Janowska-Wieczorek, L.A. Marquez, A. Dobrowsky, A.R.Turner, M. Z. Ratajczak.Inhibition of MMP-2 and MMP-9 activation in Dexter-type LTMC by hydrocortisone is essential for maintaining stromal cell layer integrity and long-term hematopoiesis. *Blood* 2000, 96 suppl 1.
- 118.M. Majka, J. Ratajczak, C. Mathias, M.A. Kowalska, Ratajczak M.Z.An evidence that both erythropoietin (EpO) and thrombopoietin (TpO) activate several signal transduction pathways in normal human CD34+ cells, megakaryoblasts and erythroblasts. *Blood* 2000, 96 suppl 1.
- 119.Ratajczak J, Pertussini E, Majka M, Vaughan D, Ratajczak MZ, Gewirtz AM. Investigating of the platelet sparing mechanism of the paclitaxel and carboplatin combination chemotherapy. *Blood* 2000, 96 suppl 1,

Annual Meeting of the American Society of Hematology, Orlando 2001, FL

- 120.Reca R, Majka M, Mastellos D, Ratajczak M. New unexpected stimulatory effects of complement proteins on human hematopoiesis: Evidence for crosstalk between G-protein-coupled C3a complement receptor (C3aR) and alpha-chemokine SDF-1 receptor (CXCR4). *Blood* 98 (11): 260 Part 1, 2001.
- 121.Ratajczak J, Majka M, Janowska-Wieczorek A, Ratajczak M. Evidence that the PI-3K-AKT axis, STAT proteins and MAPK p42/44 are activated in normal human erythroblasts by several "erythropoietic inhibitory cytokines". *Blood* 98 (11): 938 Part 1 NOV 16 2001
- 123.Libura J, Majka M, Janowska-Wieczorek A, Ratajczak M. The CXCR4-SDF-1 axis is involved in metastasis of rhabdomyosarcomas and neuroblastomas to bone marrow and lymph nodes. *Blood* 98 (11): 1240 Part 1 NOV 16 2001
- 124.Janowska-Wieczorek A, Majka M, Kijowski J, Ratajczak M. Platelet-derived microparticles bind to hematopoietic stem/progenitor cells and enhance their engraftment after transplantation. *Blood* 98 (11): 2706 Part 1 NOV 16 2001
- 125.Rozmyslowicz T, Majka M, Kijowski J, Ratajczak M. A new role of platelet- and megakaryocyte-derived microparticles (MP) in HIV infection. *Blood* 98 (11): 3267 Part 1 NOV 16 2001
- 126.Kijowski J, Majka M, Reca R, Ratajczak M. The role of newly-identified heterologous crosstalk between G-protein coupled chemokine and complement seven transmembrane span receptors in human thymopoiesis. *Blood* 98 (11): 3412 Part 1 NOV 16 2001
- 127.Baj M, Majka M, Kijowski J, Ratajczak M. A new unexpected role for platelet-derived microparticles in regulating proliferation, survival, adhesion and chemotaxis of human normal and malignant hemato/lymphopoietic cells. *Blood* 98 (11): 3775 Part 2 NOV 16 2001
- 128.Janowska-Wieczorek A, Majka M, Kijowski J, Ratajczak M. New-found regulators of angiogenesis: Platelet- and tumor-cell-derived microparticles. *Blood* 98 (11): 3830 Part 2 NOV 16 2001
- 129.Majka M, Villaire G, Szurpita M, Ratajczak M. Thrombopoietin activates MAPK p42/44, AKT and STAT proteins in normal human CD34(+) cells, megakaryocytes and platelets but gp130 protein-coupled receptor-binding cytokines do not. *Blood* 98 (11): 4202 Part 2 NOV 16 2001

Annual Meeting of the International Society of Hematology, Montreal 2002, Canada

130. Reca R., Majka M., Janowska-Wieczorek A., Lambiris J., Ratajczak M.Z. A new unexpected role of the third complement component (C3a)-C3a receptor (C3aR) axis in regulating human hematopoiesis. *Exp. Hematol.* 30 (6): 92, suppl.1, 2002.
131. Majka M., Kijowski J., Janowska-Wieczorek A., Ratajczak M.Z. Platelet- and tumor-cell-derived microparticles as new-identified regulators of tumor angiogenesis. *Exp. Hematol.* 30 (6): 155, suppl.1, 2002.
132. Majka M., Ratajczak J., Janowska-Wieczorek A., Ratajczak M.Z. Thrombin, but not cytokines bonding to pg130 protein-coupled receptors, activates MAPKp42/44, AKT and STAT proteins in normal human CD34+ cells, megakaryocytes and platelets. *Exp. Hematol.* 30 (6): 185, suppl.1, 2002.
133. Libura J., Drukala J., Janowska-Wieczorek A., Barr F., Ratajczak M.Z. CXCR4SDF-1 signaling is active in rhabdomyosarcoma cells and regulates locomotion, chemotaxis and adhesion. The role of PAX3-FKHR in expression of CXCR4. *Exp. Hematol.* 30 (6): 189, suppl.1, 2002.
134. Rozmyslowicz T., Majka M., Kijowski J., Ratajczak M.Z. Platelet- and megakaryocytes-derived particles transfer CXCR4 receptor to CXCR4-null cells and make them susceptible to infection by X4-HIV. *Exp. Hematol.* 30 (6): 92, suppl.1, 2002.

Annual Meeting of the American Society of Hematology, Philadelphia 2002, PA

135. Ratajczak J., Majka M., Ratajczak MZ. Membrane Vesicles Derived from Proliferating Murine Embryonic Stem Cells: A New Tool To Expand More Efficient Murine Hematopoietic Stem Cells ex vivo. *Blood* 2002 100, 172a
136. Rozmyslowicz T., Reca R., Murphy SL, Conover DO, Gaulton GN, Ratajczak MZ. The Active Fragment of C3 Complement Protein – Anaphylatoxin C3a Inhibits the Infection of T-Lymphocytes by X4 HIV-A Possible Role of C3a in Cell Auto-Protection from HIV- Infection. *Blood* 2002, 100, 188a
137. Ratajczak J., Kijowski J., Janowska-Wieczorek A., Ratajczak MZ. The Unexpected Anti-Apoptotic Effect of TNFs and INFs on Quiescent but Not Epo + KL Stimulated CD 34+ Cells Can Be Explained by the Differential Expression of FLIP: Implications for Anemia of Chronic Disorders. *Blood* 2002, 100, 234a
138. Majka M., Pituch Noworolska A., Drukala J., Baj- Krzyworzeka M., Malec E., Peiper S., Ratajczak MZ. Evidence That Muscle Stem /Satellite Cells Express CXCR4 and May Compete with Circulating Hematopoietic Stem Cells for SDF-1 Positive Stem Cell Niches in Heart and Skeletal Muscles. *Blood* 2002, 100, 515a
139. Jankowski K., Libura J., Majka M., Kucia M., Patocka C., Peiper S., Janowska-Wieczorek A., Ratajczak MZ. Crosstalk between G-Protein Coupled CXCR4 and Tyrosine Kinase C-Met Receptor Regulates the Metastatic Behavior of Human Rhabdomyosarcomas. *Blood* 2002, 100, 728a
140. Reca R., Majka M., Ratajczak J., Janowska-Wieczorek A., Ratajczak MZ. TPO in Combination with IL-3 but Not FLT3, KL or GM-CSF Is Critical for Clinical-Scale Expansion of Megakaryocytic Cells. *Blood* 2002, 100, 834a.

Annual Meeting of the American Society of Hematology, San Diego, 2003, CA

141. Kucia M., Reca R., Wysoczynski M., Majka M., Janowska-Wieczorek A., Ratajczak J., Ratajczak MZ. Stem cell plasticity revisited: CXCR4-positive cells expressing mRNA for early muscle, liver and neural cells "hide out" in the bone marrow and could be mobilized into peripheral blood. *Blood* 2003 102 (11): 153B-153B 4322,
142. Janowska-Wieczorek A., Kijowski J., Marquez LA, Ratajczak J., Ratajczak MZ. Microvesicles derived from activated platelets: An under-appreciated modulator of the metastatic potential of tumor cells. *Blood* 102 (11): 73B-73B 3998,
143. Reca R., Ratajczak J., Baran J., Allendorf D., Wysoczynski M., Janowska-Wieczorek A., Ross GD, Ratajczak MZ. Transplantation studies in C3-deficient animals reveal a novel role of third complement component (C3) in engraftment/regeneration of bone marrow. *Blood* 102 (11): 940A-940A 3501
144. Jankowski K., Kucia M., Wysoczynski M., Trzyna E., Ratajczak J., Janowska-Wieczorek A., Ratajczak MZ. Both HGF and SDF-1 regulate the metastatic behavior of human rhabdomyosarcoma cells, but only HGF enhances their resistance to radio-chemotherapy. *Blood* 102 (11): 841A-841A 3124
145. Honczarenko M., Swierkowski M., Le Y., Glodek AM, Ratajczak MZ, Nicholson-Weller A, Silbertsein LE. C3a primes B cell responses to SDF-1/CXCL12 by increasing its binding affinity to the CXCR4 chemokine receptor. *Blood* 102 (11): 823A-823A 3047

146. Janowska-Wieczorek A, Chow L, Shirvaikar N, Reca R, Ratajczak J, Turner AR, Ratajczak MZ Expansion and marrow homing-related potential of umbilical cord blood CFU-Meg: Clinical implications. *Blood* 102 (11): 694A-694A 2569
147. Kowalska MA, Gewirtz JE, Ratajczak J, Ratajczak MZ, Poncz M Platelet factor 4 has an important in vivo effect on megakaryopoiesis, and thrombopoiesis: Clinical implications. *Blood* 102 (11): 351A-351A 1272
148. Majka M, Reca R, Kucia M, Ratajczak J, Ratajczak MZ Newly identified crosstalk between the thrombin-PAR-1 and SDF-1-CXCR4 axes regulates trafficking of megakaryocytic cells and pro-platelet formation. *Blood* 102 (11): 351A-351A 1270
149. Majka M, Zupanska B, Ratajczak MZ Evidence that platelet-derived microvesicles transfer HPA1a antigen to the surface of both endothelial cells and CD34(+) hematopoietic stem/progenitor cells: A new perspective on the pathogenesis of immune thrombocytopenia. *Blood* 102 (11): 294A-294A 1051
150. Rozmyslowicz T, Murphy SL, Conover DO, Wroblewski K, Ratajczak MZ, Gaulton GN The role of microparticles in HIV-1 infection. *Blood* 102 (11): 278A-278A 987 Part 1, NOV 16 2003
151. Zhang J, Ratajczak MZ, Ratajczak J A novel strategy to improve ex vivo expansion and maintenance of hematopoietic stem cells using membrane-derived microvesicles from embryonic stem cells. *Blood* 102 (11): 237A-238A 834
152. Reca R, Kucia M, Wysoczynski M, Ratajczak J, Shirvaikar N, Janowska-Wieczorek A, Ratajczak MZ Because mobilized peripheral blood stem/progenitor cells are primed by various inflammatory molecules present in supernatants from leukapheresis products for their chemotactic responses to SDF-1 they engraft faster than bone marrow cells after transplantation. *Blood* 102 (11): 115A-115A 392
153. Ratajczak J, Reca R, Kucia M, Majka M, Allendorf DJ, Baran J, Wetsel RA, Janowska-Wieczorek A, Ross GD, Ratajczak MZ Mobilization studies in mice deficient in either C3 or C3a receptor (C3aR) reveal a novel role for complement in retention of hematopoietic stem/progenitor cells in bone marrow: Implications for the use of the C3aR antagonist as a new mobilization-facilitating agent. *Blood* 102 (11): 114A-114A 387
154. Ratajczak MZ, Reca R, Wysoczynski M, Kucia M, Turner RA, Janowska-Wieczorek A, Ratajczak J Priming/increasing responsiveness of hematopoietic stem/progenitor cells (HSPC) to an SDF-1 gradient as a new strategy to improve their engraftment after transplantation. *Blood* 102 (11): 38A-38A 121

Annual Meeting of the American Society of Hematology, San Diego, 2004, CA

155. Ratajczak MZ, Reca R, Wysoczynski M, Kucia M, Turner RA, Janowska-Wieczorek A, Ratajczak J Priming/increasing responsiveness of hematopoietic stem/progenitor cells (HSPC) to an SDF-1 gradient as a new strategy to improve their engraftment after transplantation. *Blood* 102 (11): 38A-38A 121
156. Reca R, Jankowski K, Przybylski G, Wieczorek AJ, Ratajczak MZ CXCR4 is a PAX family transcription factor regulated gene. *Blood* 104 (11): 137B-137B 4205
157. Kucia M, Wysoczynski M, Reca R, Majka M, Ratajczak J, Ratajczak MZ More evidence that the phenomenon of "plasticity" of hematopoietic stem cells (HSC) and potential involvement of BM-derived cells in organ regeneration could be explained by the presence of a heterogeneous population of tissue committed stem cells (TCSC) residing/hiding out in bone marrow. *Blood* 104 (11): 130B-130B 4173
158. Marquez-Curtis LA, Wysoczynski M, Ratajczak MZ, Wieczorek AJ Microvesicles derived from activated platelets enhance the invasive potential of breast cancer cells. *Blood* 104 (11): 62B-63B 3904
159. Wysoczynski M, Reca R, Kucia M, Ratajczak J, Ratajczak MZ The novel role of the third complement component (C3) in megakaryopoiesis: Implications for pathogenesis of reactive thrombocytosis. *Blood* 104 (11): 794A-794A 2906
160. Shirvaikar N, Montano J, Turner AR, Ratajczak MZ, Janowska-Wieczorek A Upregulation of MT1-MMP expression by hyaluronic acid enhances homing-related responses of hematopoietic CD34(+) cells to an SDF-1 gradient. *Blood* 104 (11): 790A-790A 2889
161. Kucia M, Ping ZY, Ratajczak J, Ildstad ST, Shields C, Ratajczak MZ Evidence that CXCR4(+) neural tissue-committed stem cells (TCSC) reside/hide out in the bone marrow and are mobilized into the peripheral blood during stroke. *Blood* 104 (11): 737A-737A 2698
162. Son BR, Zhao DL, Marquez-Curtis LA, Shirvaikar N, Ratajczak MZ, Janowska-Wieczorek A SDF-1-CXCR4 and HGF-c-met axes regulate mobilization/recruitment to injured tissue of human mesenchymal stem cells. *Blood* 104 (11): 642A-642A 2331

163. Rezzoug F, Huang YM, Tanner MK, Wysoczynski M, Shannie CL, Ratajczak MZ, Fugier-Vivier IJ, Ildstad ST TNF alpha mediated facilitating cell enhancement of hematopoietic stem cell function in vivo and in vitro involves Bcl-3. *Blood* 104 (11): 597A-598A 2174
164. Kucia M, Dawn B, Guo YR, Hunt G, Wysoczynski M, Majka M, Zuba E, Rezzoug F, Ildstad ST, Bolli R, Ratajczak MZ CXCR4(+) CD45(-) tissue-committed stem cells (TCSC) for myocardium reside in the bone marrow, are mobilized into the peripheral blood during myocardial infarction, and "home" to infarcted myocardium in CXCR4-SDF-1 and HGF/SF-c-Met dependent manner. *Blood* 104 (11): 586A-586A 2131
165. Huang YM, Kucia M, Rezzoug F, Ratajczak MZ, Tanner M, Schanie C, Xu H, Fugier I, Ildstad ST Promotion of chimerism and tolerance by Flt3 ligand-mobilized facilitating cells is associated with upregulation of CXCR4 and SDF-1. *Blood* 104 (11): 363A-363A 1286
166. Wysoczynski M, Jankowski K, Miekus K, Kucia M, Janowska-Wieczorek A, Ratajczak J, Ratajczak MZ Leukemia Inhibitory Factor: A newly identified chemoattractant and regulator of metastasis of rhabdomyosarcomas and neuroblastomas to bone marrow. *Blood* 104 (11): 361A-361A 1278
167. Kucia M, Reca R, Wysoczynski M, Gozdzik J, Ratajczak J, Janowska-Wieczorek AJ, Ratajczak MZ A potential new application of mobilization/leukapheresis for enrichment of peripheral blood in circulating non-hematopoietic CXCR4(+)CD45(-) tissue-committed stem cells (TCSC) for organ/tissue regeneration. *Blood* 104 (11): 46A-47A 151.

Annual Meeting of the American Society of Hematology, Atlanta, 2005, GA

168. Kucia M, Paczkowska E, Majka M, Machaliński B, Ratajczak MZ, Evidence that Functional Neural Tissue-Committed stem Cells (NTCSC) reside in the Human Bone Marrow and are mobilized into Peripheral Blood in a Patients after stroke. *Blood* 106 (11): 118a, 392
169. Wysoczyński M, Hayek F, Ratajczak J, Janowska-Wieczorek A, Ratajczak MZ, Membrane Derived Microvesicles – underappreciated components of the Tumor Microenvironment that modulate Tumor Growth, Vascularization and Metastasis. *Blood* 106 (11): 142a, 473
170. Kucia M, Oldak K, Ratajczak MZ, Ratajczak J, Pojda Z, Percoll gradient separation of Cord Blood Mononuclear cells reveals the presence of a novel population of CXCR4<sup>+</sup> Oct-4<sup>+</sup> small Embryonic-Like Stem Cells. *Blood* 106 (11): 311a, 1069
171. Reca R, Kucia M, Baran J, Ratajczak J, Ratajczak MZ, Defective engraftment of HSPC from C3aR<sup>-/-</sup> mice reveals an underappreciated role of C3a-C3aR axis in Stem Cell homing to Bone Marrow. *Blood* 106 (11): 366a, 1259
172. Ildstad ST, Rezzoug F, Huang Y, Wysoczyński M, Schanie CL, Ratajczak MZ, Fugier-Vivier IJ, CD8<sup>+</sup>/TCR<sup>-</sup> graft facilitating cells enhance HSC engraftment and survival via TNF- $\alpha$  mediated prevention of apoptosis. *Blood* 106 (11): 392a, 1352
173. Marquez-Curtis LA, Shirvaikar N, Larratt LM, Turner AR, Ratajczak MZ, Janowska-Wieczorek A, Stem Cell mobilization and egress of AML blasts from the Bone Marrow are both regulated by MT-MMP-Mediated activation of MMP-2. *Blood* 106 (11): 396a, 1368
174. Majka M, Jarocha D, Wysoczyński M, Sag D, Zuba-Surma E, Kijowski J, Goździk J, Ratajczak MZ, Unexpected evidence that Dimethylsulphoxide (DMSO) upregulates expression of CXCR4 on Hematopoietic Stem/Progenitor Cells (HSPC), increases their responsiveness to an SDF-1 gradient and enhances homing to Bone Marrow. *Blood* 106(11): 559a, 1973
175. Reca R, Wysoczyński M, Hansen R, Kucia M, Janowska-Wieczorek A, Ratajczak J, Ratajczak MZ, Immunodeficient mice are poor mobilizers – novel evidence that demonstrates a pivotal role of complement in triggering mobilization of HSPC. *Blood* 106 (11): 560a, 1976
176. Wysoczyński M, Reca R, Kucia M, Ratajczak J, Ratajczak MZ, Novel evidence that Statin-Mediated perturbation of Lipid Raft Formation ameliorates bleeding – related Thrombocytosis. *Blood* 106 (11): 611a, 2164
177. Miękus K, Wysoczyński M, Reca R, Goździk J, Salvatore BJ, Janowska-Wieczorek A, Ratajczak MZ, LIF-LIF-R and SDF-1-CXCR4 Axes regulate overlapping and complementary steps of Metastasis of Rhabdomyosarcoma – implication for developing better antimetastatic therapies. *Blood* 106 (11): 646a, 2296
178. Majka M, Jurczyszyn A, Zebzda A, Czogała W, Leśko E, Rudzki Z, Goździk J, Wolska-Smolon T, Skotnicki AB, Ratajczak MZ, C-met Receptor as a potential target for the treatment of patients with Multiple Myeloma. *Blood* 106 (11): 948a, 3395
179. Kucia M, Reca R, Ratajczak J, Ratajczak MZ, A population of small CXCR4<sup>+</sup> SSEA-1<sup>+</sup> Oct-4<sup>+</sup> Embryonic-Like Stem Cells identified in adult bone marrow. *Blood* 106 (11): 1009a, 3623

180. Shirvaikar N, Montano J, Turner AR, Ratajczak MZ, Janowska-Wieczorek A, Upregulation of MT1-MMP by Molecules present in Leukaphereis products primers CD34<sup>+</sup> Cell Homing. *Blood* 106 (11): 402b, 5273

Annual Meeting of the American Society of Hematology, Orlando, FL, 2006

181. Fanning LR, Finney MR, Pompili VJ, Greco NJ, Lazarus HM, Kozik M, Meyerson, Nair R, Maciejewski J, Tary-Lehmann M, Ratajczak MZ, Laughlin MJ, Umbilical Cord Blood Derived CD133<sup>+</sup> Hematopoietic Stem Cells Are Defective Antigen Presenting Cells (APC), Lack Expression of Co-Stimulatory Receptors, and generate TH<sub>2</sub> T-lymphocyte Responses *In Vitro*. *Blood* 2006, 108 (11): 489a, 1723
182. Hegerfeldt Y, Fanning LR, Fu P, Lazarus HM, Cooper B, Tse W, Meyerson H, Gerson SL, Jarscak J, Fox R, Creger R, Maciejewski J, Tary-Lehmann, Ratajczak M, Stevens C, Rubinsetin P, Hoffman MA, Laughlin MJ, Umbilical cord Blood (UCB) Graft T-Cells Correlate with Myeloid Recovery in Adults with Hematologic Malignancies Treated with Reduced Intensity Conditioning (RIC) and Single Unit Infusion. *Blood* 2006, 108 (11): 893a
183. Marquez-Curtis LA, Montano J, Quinn D, Larratt LM, Turner AR, Ratajczak M, Janowska-Wieczorek A, In Vitro Chemotactic Index and Response to CXCR4 Antagonist AMD3100 Correlate with CD34<sup>+</sup> Cell Yield from Leukapheresis Products: Implications for Poor Mobilizers. *Blood* 2006, 108 (11): 218a
184. Wagner S, Cramer D, Hansen R, Reca R, Ratajczak M, Li B, Beta Glucan Enhances Hematopoietic Stem Cell Mobilization. *Blood* 2006, 108 (11): 394a
185. Kucia M, Zuba-Surma E, Reca R, Ratajczak J, Ratajczak M, An Evidence That Murine Marrow-Derived CXCR4<sup>+</sup> SSEA-1<sup>+</sup> Oct-4<sup>+</sup> Very Small Embryonic-Like (VSEL) Stem Cells Are Pluripotent and Express Several Primordial Germ Cell (PGC) Markers – Hypothesis for Developmental Deposition of PGC in Various Organs. *Blood* 2006, 108 (11): 478a
186. Ratajczak J, Kucia M, Zuba-Surma E, Reca R, Ratajczak M, The CD45<sup>-</sup> LIN<sup>-</sup> Adult Marrow-Derived CXCR4<sup>+</sup> SSEA-1<sup>+</sup> Oct-4<sup>+</sup> Very Small Embryonic-Like (VSEL) Stem Cells Form In Vitro Spheres Which May Differentiate into CD45<sup>+</sup> Hematopoietic Cells. *Blood* 2006, 108 (11): 86a
187. Reca R, Wysoczynski M, Ratajczak J, Ratajczak M, Impaired Engraftment of Hematopoietic Stem/Progenitor Cells (HSPC) in Immunodeficient Mice Supports an Important Role of Complement System for Optimal Homing. *Blood* 2006, 108 (11): 105a
188. Ratajczak J, Reca R, Machalinski B, Maciejewski, Laughlin M, Ratajczak M, The Unexpected Role of C3a-C3aR Axis in Maturation of Erythroid Cells-Implications for Pathogenesis of Hypoxia-Related Polycythemia. *Blood* 2006, 108 (11): 196a
189. Wysoczynski M, Miekus, Marcinkowska A, Janowska-Wieczorek A, Ratajczak M, An In Vitro and In Vivo Evidence That Downregulation of Leukemia Inhibitory Factor (LIF) Receptor (LIF-R) Decreases the Metastatic Potential of Human Rhabdomyosarcoma (RMS) Cells. *Blood* 2006, 108 (11): 724a
190. Jarocho D, Lesko E, Ratajczak M, Majka M, Comparison of Different Strategies of MSC Isolation Reveals Advantage To Expand MSC Directly from Purified CD105<sup>+</sup> and CD271<sup>+</sup> Cells. *Blood* 2006, 108 (11): 725a
191. Shirvaikar N, Turner R, Ratajczak M, Janowska-Wieczorek A, Fibrinogen Enhances Homing-Related Responses of CD34<sup>+</sup> by Incorporating Membrane Type1-Matrix Metalloproteinase into Membrane Lipid Rafts. *Blood* 2006, 108 (11): 910a
192. Kucia M, Halasa M, Wysoczynski M, Baskiewicz-Masiuk M, Zuba-Surma E, Machalinski B, Ratajczak M, A Novel Population of Oct-4<sup>+</sup> SSEA-1<sup>+</sup> CXCR4<sup>+</sup> CD34<sup>+</sup> CD133<sup>+</sup> Lin<sup>-</sup> CD45<sup>-</sup> Very Small Embryonic-Like (VSEL) Stem Cells Identified in Human Cord Blood. *Blood* 2006, 108 (11): 912a
193. Shirvaikar N, Jalili A, Ratajczak M, Janowska-Wieczorek A, A Novel Role for Thrombin in Hematopoietic Stem/Progenitor Cell Homing. *Blood* 2006, 108 (11): 963a
194. Reca R, Wysoczynski M, Kucia M, Janowska-Wieczorek A, Ratajczak J, Ratajczak M, Mobilization Studies in Immunodeficient Mice Support a Role of Complement in Modulating the Trafficking of Hematopoietic Stem Cells (HSC) – A Pivotal Role of C3 Cleavage Fragments in Retention and C5 Fragments in Mobilization/Egress of HSc. *Blood* 2006, 108 (11): 963a

Annual Meeting of the American Society of Hematology, Atlanta, GA, 2007

195. Wysoczynski M, Kucia M, Zuba-Surma E, Wu W, Ratajczak M, Ratajczak J. An In Vivo Evidence that the CD45<sup>-</sup> Adult Marrow-Derived CXCR4<sup>+</sup> SSEA-1<sup>+</sup> OCT-4<sup>+</sup> Very Small Embryonic-Like (VSEL) Stem Cells May Differentiate into CD45<sup>+</sup> Long Term Repopulating Hematopoietic Stem

- Cells. *Blood* 2007, 110 (11): 505.
196. Wysoczynski M, Reza R, Wu W, Kucia M, Botto M, Ratajczak J, Ratajczak M. The Studies in Various Murine Strains with Defects in Activation of Complement Cascade (CC) Reveal Both Pivotal and Pleiotropic Role of CC in Mobilization of Hematopoietic Stem/Progenitor Cells. *Blood* 2007, 110 (11): 774.
  197. Kucia M, Wysoczynski M, Wu W, Ratajczak M. Novel Direct Evidence That Adult Bone Marrow-Derived Very Small Embryonic Like (VSEL) Stem Cells are Mobilized into Peripheral Blood – Leukopheresis as a Potential Tool to Isolate Pluripotent Stem Cells for Therapeutic Purposes. *Blood* 2007, 110 (11): 1205.
  198. Jalili A, Shirvaikar N, Ratajczak M, Janowska-Wieczorek A. C1q Complement Cascade Protein as a Novel Modulator of the SDF-1-CXCR4 Axis and Hematopoietic Stem/Progenitor Cell Trafficking. *Blood* 2007, 110 (11): 1212.
  199. Wang Z, Junghun J, Kucia M, Junhui S, Shiozawa Y, Ratajczak M, Krebsbach P, Taichman R. Prospective in vivo Identification of Osteogenic Stem/Progenitor Cells from Bone Marrow-Derived Lin<sup>-</sup>/Sca-1<sup>+</sup>/CD45<sup>-</sup> Cells. *Blood* 2007, 110 (11): 1409.
  200. Jalili A, Shirvaikar N, Ilnitsky S, Turner A, Ratajczak M, Janowska-Wieczorek. G-CSF Induces Expression of Both Hepatocyte Growth Factor (HGF) and Its Receptor (c-Met) in Human Hematopoietic Stem/Progenitor Cells and Mature Myeloid Cells – Novel Evidence that during Mobilization the HGF-c-Met Axis Counterbalances G-CSF-Induced Attenuation of the SDF-1-CXCR4 Axis. *Blood* 110 (11): 2203.
  201. Ratajczak J, Wysoczynski M, Bogdan M, Janowska-Wieczorek A, Ratajczak M. Complement Cascade (CC) Cleavage Fragments – C3a and C5a Anaphylatoxins – As New Unexpected Hypoxia-Related Stimulators of Erythropoiesis. *Blood* 2007, 110 (11): 2220.
  202. Zuba-Surma E, Kucia M, Yiru G, Dawn B, Bolli R, Ratajczak M. An In Vivo Evidence that Murine Very Small Embryonic Like (VSEL) Stem Cells are Mobilized into Peripheral Blood after Acute Myocardial Regeneration. *Blood* 2007, 110 (11): 3694.
  203. Kucia M, Zuba E, Wu W, Boguslaw M, Wojtek W, Ratajczak M. Pluripotent SSEA-1<sup>+</sup> OCT-4<sup>+</sup> CXCR4<sup>+</sup> Sca-1<sup>+</sup> lin<sup>-</sup> CD45<sup>-</sup> Very Small Embryonic Like (VSEL) Stem Cells Reside in Multiple Murine Organs – Are VSEL Epiblast-Derived Functional Pluripotent Precursors for Tissue-Committed Stem Cells or Merely Quiescent Remnants from Embryonic Development? *Blood* 2007, 110 (11): 3698.
  204. Kucia M, Paczkowska E, Koziarska D, Halasa M, Safranow K, Karbicka A, Nowik M, Nowacki P, Ratajczak M, Machalinski B. Clinical Evidence that Very Small Embryonic Like (VSEL) Stem Cells are Mobilized into Peripheral Blood in Patients after Stroke. *Blood* 2007, 110 (11) 3705.

50 th Annual Meeting of the American Society of Hematology, San Francisco, December 2008:

205. Wu W, Lee H, Wysoczynski M, Kucia M, Ratajczak J, Ratajczak M. Novel Observation That Mice Lacking the Fifth Complement Cascade Protein Component (C5) Are Very Poor Stem Cell Mobilizers Explained by Defective Egress of Granulocytes: A Novel Role for Bone Marrow Granulocytes to Act as "Ice Breaker" Cells in Facilitating Egress of Hematopoietic Stem/Progenitor Cells. *Blood* 2008, 112 (11) 67.
206. Shin DM, Zuba-Surma E, Ratajczak M, Kucia M. The Unique Pattern of Somatic Imprint in Oct-4<sup>+</sup> Very Small Embryonic Like (VSEL) Stem Cells Isolated from Adult Tissues Further Supports Both Their Epiblast/Germ Line Origin and Explains Quiescent Status: Potential Modification of Somatic Imprint as a Key to Longevity. *Blood* 2008, 112 (11) 385.
207. Wysoczynski M, Ratajczak M. Novel Pleiotropic Effects of Thrombin in Regulation of The Metastatic Potential of Human Rhabdomyosarcoma (RMS) Cells. *Blood* 2008, 112 (11) 2270.
208. Zuba-Surma E, Kucia M, Klich I, Greco N, Laughlin M, Paul P, Ratajczak M, Ratajczak J. Optimization of Isolation and Further Molecular and Functional Characterization of SSEA-4<sup>+</sup>/Oct-4<sup>+</sup>/CD133<sup>+</sup>/CXCR4<sup>+</sup>/Lin<sup>-</sup>/CD45<sup>-</sup> Very Small Embryonic-Like (VSEL) Stem Cells Isolated from Umbilical Cord Blood. *Blood* 2008 112 (11) 2316.
209. Zuba-Surma E, Kucia M, Liu R, Ratajczak M, Ratajczak J. CD45<sup>-</sup>/ALDH<sup>low</sup>/SSEA-4<sup>+</sup>/Oct-4<sup>+</sup>/CD133<sup>+</sup>/CXCR4<sup>+</sup>/Lin<sup>-</sup> Very Small Embryonic-Like (VSEL) Stem Cells Isolated from Umbilical Cord Blood as Potential Long Term Repopulating Hematopoietic Stem Cells. *Blood* 2008 112 (11) 2444.
210. Wojakowski W, Tendera M, Kucia M, Zuba-Surma E, Paczkowska E, Ciosek J, Halasa M, Krol M, Kazmierski M, Ochala A, Ratajczak M, Ratajczak J. Clinical Evidence That Oct-4<sup>+</sup> ssea-4<sup>+</sup> Very



Small Embryonic Like Stem Cells (VSEL) Are Mobilized Into Peripheral Blood in Patients with Acute Myocardial Infarction (AMI): A Novel Prognostic Indicator. Blood 2008 112 (11) 2894.

51st Annual Meeting of the American Society of Hematology, New Orleans, Louisiana, December 2009:

211. Lee H, Wysoczynski M, Wu W, Liu R, Kucia MJ, Janowska-Wieczorek A, Ratajczak J, Ratajczak MZ. Novel Mechanistic Insight Into Mobilization of Hematopoietic Stem/Progenitor Cells (HSPCs): Complement Cascade and Membrane Attack Complex Activated in Bone Marrow Sinusoids During Mobilization Release From Erythrocytes Sphingosine-1 Phosphate – An Underappreciated Chemoattractant Executing Egress of HSPCs. Blood 2009, 114, (22) 31.
212. Zuba-Surma E, Klich I, Wysoczynski M, Greco NJ, Laughlin MJ, Ratajczak MZ, Ratajczak J. In Vitro and In Vivo Evidence That Umbilical Cord Blood (UCB)-Derived CD45-/SSEA-4+/OCT-4+/CD133+/CXCR4+/Lin- Very Small Embryonic/Epiblast Like Stem Cells (VSELs) Do Not Contain Clonogenic Hematopoietic Progenitors but Are Highly Enriched in More Primitive Stem Cells - Novel View On Hierarchy of UCB Stem Cell Compartment. Blood 2009, 114, (22) 35.
213. Wysoczynski M, Liu R, Ratajczak MZ. Novel Pleiotropic Effects of Thrombin in Regulation of Metastatic Potential of Human Rhabdomyosarcoma (RMS) Cells – Identification of Negative PAR1 and PAR3 Receptor Crosstalk. Blood 2009, 114, (22) 336.
214. Wysoczynski M, Lee H, Liu R, Wu W, Ratajczak J, Ratajczak MZ. Mobilization Studies in Complement-Deficient Mice Reveal That AMD3100 Mobilization Depends On Complement Cascade Activation and Suggest Involvement of “Membrane Attack Complex - MAC” in Egress of Hematopoietic Stem/Progenitor Cells. Blood 2009, 114, (22) 367.
215. Lee H, Wu W, Wysoczynski M, Kucia MJ, Laughlin MJ, Ratajczak J, Ratajczak MZ. Granulocyte-Derived Cationic Peptides (GDCPs) Present in Leucopheresis Products Enhance Homing of Hematopoietic Stem Cells (HSCs) to SDF-1 Gradient; Potential Implications for Accelerated Recovery of Hematopoiesis After Transplantation of Mobilized Peripheral Blood Stem Cells (PBSC). Blood 2009, 114, (22) 371.
216. Medicetty S, Ratajczak MZ, Kucia MJ, Zuba-Surma E, Klich I, Marasco WA, Rodgers DO. Evidence That Human Very Small Embryonic-Like Stem Cells (VSELs) Are Mobilized by G-CSF Into Peripheral Blood: A Novel Strategy to Obtain Human Pluripotent Stem Cells for Regenerative Medicine. Blood 2009, 114, (22) 1474.
217. Ratajczak MZ, Shin DM, Zuba-Surma E, Liu R, Yoshimoto M, Yoder MC, Kucia MJ. Very Small Embryonic/Epiblast-Like Stem Cells (VSELs) – Novel Supporting Evidence for An Existence of Developmentally Distinct Mobile Pool of Oct-4+ Pluripotent Stem Cells in Embryonic and Adult Tissues: Emerging Concept for a Potential 4th Migratory Germ Layer? Blood 2009, 114, (22) 1480.
218. Klich I, Tarnowski M, Shin DM, Ratajczak J, Kucia MJ, Ratajczak MZ. Quiescent Status of Very Small Embryonic Like Stem Cells (VSELs) Points to Pivotal Role of Autocrine Role of Insulin-Like Growth Factor-2 (Igf2) – Ras-Activating Guanine Nucleotide Exchange Factor (Rasgrf1) Axis in Regulating Proliferation of Embryonic Stem Cells. Blood 2009, 114, (22) 1484.
219. Shin DM, Zuba-Surma E, Liu R, Ratajczak MZ, Kucia MJ. Genetic and Epigenetic Studies Reveal That Murine Oct-4+ Very Small Embryonic/Epiblast-Like Stem Cells (VSELs) Present in Adult Tissues Share Several Similarities/Markers with Epiblast-Derived Migratory Primordial Germ Cells (PGCs). Blood 2009, 114, (22) 2521.

52<sup>nd</sup> Annual Meeting of the American Society of Hematology, Orlando, FL, 2010

220. Kim CH, Wu W, Abdel-Latif A, Wysoczynski M, Kucia M, Ratajczak J, Ratajczak MZ. Evidence That a Bioactive Lipid, Ceramide-1 Phosphate (C1P), Is Upregulated In Bone Marrow Microenvironment After Myeloablative Therapy and Is a Potential Novel Homing Factor for Hematopoietic Stem Cells Kim. Blood 2010, 116 (21), 179.
221. Kim CH, Wu W, Liu R, Kucia M, Laughlin MJ, Ratajczak J, Ratajczak MZ. A Novel Paradigm In Stem Cell Trafficking: The Ratio of Peripheral Blood Sphingosine-1 Phosphate (S1P) to Bone Marrow Ceramide-1 Phosphate (C1P) Regulates Mobilization and Homing of Hematopoietic Stem Cells. Blood 2010, 116, (21), 246.
222. Kim CH, Wu W, Liu R, Kucia M, Ratajczak J, Ratajczak MZ. An Unexpected Role for the Complement C5b-C9 Membrane Attack Complex (MAC) In Trafficking of Hematopoietic Stem/Progenitor Cells - a Novel Unexpected Link Between Innate Immunity and Hematopoiesis. Blood 2010, 116, (21), 246.
223. Greco NJ, Lesnewski M, Wendling A, Kalipraveena I, Ratajczak J, Ratajczak, Laughlin MJ. Negative

- influence of IL8 and RANTES Cytokines on cord blood CD133+ cell SDF-1-CXCR4 Function. *Blood* 2010, 116, (21), 505.
224. Ratajczak J, Wu W, Liu R, Shin DM, Kucia M, Bartke A, Ratajczak MZ. Unexpected Evidence That Chronic IGF-1 Deficiency In Laron Dwarf Mice Maintains High Levels of Hematopoietic Stem Cells (HSCs) In BM - Are HSCs Gradually Depleted From BM with Age In An IGF-1-dependent Manner? Implications for the Novel Effect of Caloric Restriction on the Hematopoietic Stem Cell Compartment and Longevity. *Blood* 2010, 116, (21), 659.
  225. Tarnowski M, Liu R, Tarnowska J, Ratajczak J, Mitchell R, Ratajczak MZ, Kucia M. Novel Evidence That the Small Chemokine Macrophage Migration Inhibitory Factor (MIF) Is Highly Secreted by Human Rhabdomyosarcomas, Activates Both SDF-1-binding Receptors, CXCR4 and CXCR7, and Unexpectedly Inhibits Recruitment of Stromal Cells to the Growing Tumor. *Blood* 2010, 116, (21), 1575.
- 53<sup>rd</sup> Annual Meeting of the American Society of Hematology, San Diego, CA, 2011
226. Wen Y, Elliot M, Huang Y, Corbin D, Fukui Y, Ratajczak M. Critical Role for DOCK2 in CD8+/TCR- Graft Facilitating Cells Enhancing Engraftment of Hematopoietic Stem Cells. *Blood* 2011, 118 (21), 68.
  227. Wysoczynski M, Ratajczak J, Rokosh G, Bolli R, Ratajczak M. A Novel Observation That Heme Oxygenase-1 (HO-1) Deficient Mice Are Easy Mobilizers and That HO-1 Plays An Important Role in Maintaining Expression of SDF-1 in Bone Marrow (BM) Stroma and Promotes Retention of Hematopoietic Stem/Progenitor Cells (HSPCs) in the Bone Marrow Microenvironment. *Blood* 2011, 118 (21), 147.
  228. Schneider G, Bryndza E, Kim C, Ratajczak J, Kucia M, Ratajczak M. Novel View on Unwanted Side Effects of Radio-Chemotherapy on Bone Marrow (BM) Microenvironment - Radio-Chemotherapy Upregulates BM-Level of Bioactive Lipids, Sphingosine-1- Phosphate (S1P) and Ceramide-1-Phosphate (C1P), That Chemoattract Metastasizing Cancer Cells. *Blood* 2011, 118 (21), 329.
  229. Ratajczak J, Liu R, Natarajan N, Maciejewski J, Sharma V, Ratajczak M. A Novel View of Paroxysmal Nocturnal Hemoglobinuria (PNH) Pathogenesis: Do Pathologic PNH Hematopoietic Stem/Progenitor Cells (HSPCs) Displace Normal HSPCs From Their Niches in Bone Marrow Because They Are More Motile Due to Defective Adhesion and Enhanced Migratory Properties? *Blood* 2011, 118 (21), 332.
  230. Kucia M, Liu R, Mierzejewska K, Wu W, Ratajczak J, Shin D, Ratajczak M. Single Cell Level Genome-Wide Gene Expression Analysis of Bone Marrow-Derived Oct-4+ very Small Embryonic-Like Stem Cells (VSELs) Revealed That a Polycomb Group Protein Ezh2 Regulates VSELs Pluripotency by Maintaining Bivalent Domains At Promoters of Important Homeodomain-Containing Developmental Transcription Factors. *Blood* 2011, 118 (21), 1014.
  231. Kim C, Liu R, Kucia M, Ratajczak M. New Evidence That the Bioactive Lipid Ceramide-1-Phosphate (C1P) Is a Potent Chemoattractant for Mesenchymal Stromal Cells (MSC), Endothelial Progenitor Cells (EPCs) and Very Small Embryonic-Like Stem Cells (VSELs), Demonstrating Its Potential Involvement in Tissue/Organ Repair and Angiogenesis. . *Blood* 2011, 118 (21), 1028.
  232. Kim C, Wu W, Greco N, Kucia M, Ratajczak J, Laughlin M, Ratajczak M. A Novel Perspective on Stem Cell Homing – Emerging Interplay Between Bioactive Lipids As Potent Chemoattractants and Cationic Peptides As Underappreciated Modulators of Responsiveness to SDF-1 Gradients. *Blood* 2011, 118 (21), 1276.
  233. Abdel-Latif A, Karapetyan A, Kim C, Ratajczak M. Differential Responsiveness of HSPCs Harvested From Bone Marrow (BM), Mobilized Peripheral Blood (mPB) and Umbilical Cord Blood (UCB) to the BM Homing Factors Stromal-Derived Factor-1 (SDF-1), Sphingosine-1 Phosphate (S1P) and Ceramide-1 Phosphate (C1P) Is Related to the Desensitization of mPB and UCB HSPCs by S1P and C1P Present in mPB and UCB Plasma. *Blood* 2011, 118 (21), 1276.
  234. Farmer J, Wendling A, Lynch K, Tomsig J, Ratajczak M, Lu H, Salhtra A, Yang S, Huang X, Masri H, Laughlin M. Cord Blood Plasma Enhances Migration of Hematopoietic Stem and Progenitor Cells (HSPC). *Blood* 2011, 118 (21), 1277.
  235. Ratajczak J, Liu R, Kucia M, Bartke A, Ratajczak M. Long-Term In Vivo Studies in Mice Unexpectedly Reveal That Prolonged Growth Hormone (GH) and Insulin/Insulin-Like Growth Factor-1 (IGF-1) Signaling Have a Negative Effect on Normal Bone Marrow Hematopoiesis – Implications for GH-Based “rejuvenation” Therapies. *Blood* 2011, 118 (21), 1463.

54<sup>th</sup> Annual Meeting of the American Society of Hematology, Atlanta, GA 2012

236. Mierzejewska K, Rodriguez C, Sharma V, Kucia M, Maciejewski J, Ratajczak J, Ratajczak M. Novel Evidence That PNH Affected Cells Residing in Bone Marrow (BM) Due to Impaired Incorporation of CXCR4 and VLA-4 Into Membrane Lipid Rafts Show Defective SDF-1- and VCAM-1-Mediated Retention in BM What Leads to Their Increased Motility and Impaired Interaction with the BM Stem Cell Niches. *Blood*, Nov 2012; 120: 1256.
237. Schneider G, ChiHwa K, Abdel-Latif A, Janowska-Wieczorek A, Ratajczak J, Ratajczak M. A Novel Perspective on Hematopoietic Stem/Progenitor Cell Homing - an Expanding Family of Bone Marrow Homing Factors That Can Support SDF-1-Mediated Homing or Even Replace SDF-1. *Blood*, Nov 2012; 120: 1247.
238. Janowska-Wieczorek A, Marquez-Curtis A, Leontyev D, Branch D, Ratajczak J, Ratajczak M. Studies in C4b-Deficient Mice Provide Further Evidence That Complement Cascade Orchestrates the Mobilization of Hematopoietic Stem/Progenitor Cells. *Blood*, Nov 2012; 120: 2316.
239. Schneider G, Serwin K, Bryndza E, Kucia M, Ratajczak J, Ratajczak M. Studies with Diluted Plasma Reveal the Presence of a Remarkably Potent Factor That Enhances the Motility of Cancer Cells and Is Quenched by Fibrinogen - a Novel View of Cancer Metastasis. *Blood*, Nov 2012; 120: 3431.
240. Wysoczynski M, Ratajczak J, Rokosh G, Bolli R, Ratajczak M. Further Evidence That HO-1 Regulates SDF-1 Expression in the Bone Marrow Microenvironment and That HO-1-Deficient Mice Show a Defect in the SDF-1–CXCR4 Retention Axis of Hematopoietic Stem/Progenitor Cells in Bone Marrow and Thus Are Easy Mobilizers - Studies in HO-1 Mutant Mice, Irradiation Chimeras, and the Effect of in Vivo Pharmacological Inhibition of HO-1. *Blood*, Nov 2012; 120: 344.
241. Ratajczak M, Mierzejewska K, Ratajczak J, Kucia M. Novel Evidence That a Quiescent Murine Population of Bone Marrow (BM)-Residing, Developmentally Early, Very Small Sca-1+Lin–CD45– Cells Is Highly Responsive to Prolonged Bleeding by in Vivo Proliferation and Differentiation Into CD45+ Hematopoietic Stem/Progenitor Cells (HSPCs). *Blood*, Nov 2012; 120: 1249.
242. Schneider G, Kim C, Ratajczak J, Ratajczak M. A Novel Perspective On Hematopoietic Stem/Progenitor Cell Migration and homing—evidence That Cationic Antimicrobial Peptides (C3a, LL-37, and  $\beta$ 2-defensin) Prime (enhance) the Responsiveness of These Cells to a Low SDF-1 Gradient by Promoting Secretion of ATP, Indicating the Involvement of an Autocrine Purinergic Loop in Their Migration. *Blood*, Nov 2012; 120: 2989.
243. Mierzejewska K, Kucia M, Ratajczak J, Ratajczak M. Novel Evidence That Hematopoietic Stem/Progenitor Cells (HSPCs) Are Mobilized During Hemolysis in an Erythrocyte Lysis-Derived, Sphingosine-1-Phosphate (S1P)-Dependent manner—the Crucial Involvement of Complement Cascade (CC) Activation and Attenuation of CXCR4 Retention Signaling. *Blood*, Nov 2012; 120: 3189.
244. Grymula K, Tarnowski M, Suszynska M, Piotrowska K, Borkowska S, Mierzejewska K, Kucia M, Ratajczak M. A Novel View of Bone Marrow As a “stem Cell sensor” of Tissue/Organ Damage - Evidence That in Vivo Exposure to the Neurotoxin Kainic Acid (KA) Induces Proliferation and Neural Specification of Developmentally Early Stem Cells Directly in Bone Marrow before They Are Mobilized into Peripheral Blood. *Blood*, Nov 2012; 120: 1192.
245. Abdel Latif A, Karapetyan A, Klyachkin Y, Sunkara M, Smyth S, Ratajczak M, Morris A. Novel Role for Bioactive Lipids in Mobilization of Bone Marrow Stem Cells during Myocardial Ischemia: Sphingosine-1 Phosphate (S1P) As Potential Therapeutic Target. *Blood*, Nov 2012; 120: 1911.
246. Tarnowski M, Piotrowska K, Grymula K, Suszynska M, Poniewierska A, Ratajczak M. Prolonged Strenuous Exercise Expands the Population of Developmentally Early Stem Cells in Bone Marrow (BM) and Mobilizes Them Into Peripheral Blood - Novel Evidence That Strongly Supports a Positive Effect of Physical Activity On Extension of Life Span At the Level of Stem Cells. *Blood*, Nov 2012; 120: 584.
247. Mierzejewska K, Kucia M, Ratajczak J, Ratajczak M. Novel Evidence for the Presence of Potent, Paracrine, Pro-Angiopoietic Effects of Purified Human Umbilical Cord Blood-Derived CD133+ Cells - Implications for Adult Stem Cell Therapies in Regenerative Medicine. *Blood*, Nov 2012; 120: 4740.
248. Kucia M, Mierzejewska K, Shin D, Ma Y, Ratajczak M. Most Primitive Murine Bone Marrow Hematopoietic Stem Cells Express Several Primordial Germline Cells (PGCs) Markers, Including SALL4 - a Proposed Developmental Link Between Hematopoietic and Primordial Germ Cell Lineages. *Blood*, Nov 2012; 120: 4745.

American Society of Hematology, 55th Annual Meeting, New Orleans, USA, 2013

249. Kucia M, Maj M, Mierzejewska K, Shin DM, Ratajczak J, Ratajczak MZ. Challenging Dogmas - Or How Much Evidence Is Necessary To Claim That There Is a Direct Developmental and Functional Link Between The Primordial Germ Cell (PGC) Lineage and Hematopoiesis? *Blood* 2013 122:1215.
250. Mierzejewska K, Abdel-Latif A, Schneider G, Ratajczak J, Kucia M, Ratajczak MZ. Novel Evidence That Sphingosine-1-Phosphate-Mediated Mobilization Of Hematopoietic Stem/Progenitor Cells (HSPCs) During Intravascular Hemolysis Requires Attenuation Of The SDF-1–CXCR4 Retention Axis Of HSPCs In Bone Marrow Niches – Implications For Paroxysmal Nocturnal Hemoglobinuria-Induced Mobilization of HSPCs. *Blood* 2013 122:2477.
251. Heo J, Shin DM, Mierzejewska K, Suszynska M, Ratajczak M, Kucia M, Ratajczak MZ. New Molecular Evidence That Oct-4 Is Truly Expressed In a Rare Population Of Developmental Early Stem Cells In Human Umbilical Cord Blood (UCB) and That Epigenetic Modification Of Imprinting At Igf2-H19 Locus Regulates Their Quiescent State – Potential Implications For Regenerative Medicine. *Blood* 2013 122:2393.
252. Mierzejewska K, Suszynska E, Borkowska S, Suszynska M, Maj M, Ratajczak J, Kucia M, Ratajczak MZ. Novel In Vivo Evidence That Not Only Androgens But Also Pituitary Gonadotropins and Prolactin Directly Stimulate Murine Bone Marrow Stem Cells – Implications For Potential Treatment Strategies In Aplastic Anemias. *Blood* 2013 122:2476.
253. Borkowska S, Suszynska M, Mierzejewska K, Budkowska M, Salata D, Dolegowska B, Ratajczak J, Kucia M, Ratajczak MZ. Novel Evidence That Crosstalk Between Three Evolutionarily Ancient Proteolytic Enzyme Cascades (coagulation, fibrinolysis, and complement) Plays An Important Role In Mobilization Of Hematopoietic Stem/Progenitor Cells (HSPCs). *Blood* 2013 122:903.
254. Ratajczak J, Mierzejewska K, Borkowska S, Kucia M, Ratajczak MZ. Novel Evidence That Human Umbilical Cord Blood-Purified CD133+ cells Secrete Several Soluble Factors and Microvesicles/Exosomes That Mediate Paracrine, Pro-Angiopoietic Effects Of These Cells – Implications For and Important Role Of Paracrine Effects in stem Cell Therapies In Regenerative Medicine. *Blood* 2013 122:1216.

American Society of Hematology, 56th Annual Meeting, San Francisco, USA, 2014

255. Suszynska M, Gunjal P, Poniewierska-Baran A, Borkowska S, Mierzejewska K, Schneider G, Ratajczak J, Kucia M, Ratajczak MZ. Novel Evidence That Murine and Human Mesenchymal Stromal Cells Express Functional Gonadotropic Hormone Receptors, Demonstrating the Involvement of the Pituitary gonadotropin–bone Marrow Axis in Hematopoiesis. Abstract # 1588.
256. Borkowska S, Poniewierska-Baran A, Schneider G, Pedziwiatr D, Suszynska M, Ratajczak J, Kucia M, Ratajczak MZ. Novel Evidence That, in Addition to Proteolytic Enzymes, Lipolytic Enzymes Are Involved in Mobilization of Hematopoietic Stem/Progenitor Cells (HSPCs) - an Important Pro-Mobilizing Role Identified for Hematopoietic-Specific Phospholipase C (PLC $\beta$ 2). Abstract # 2448.
257. Ismail A, Mierzejewska K, Janowska-Wieczorek A, Turner RA, Ratajczak MZ, Kucia M. Novel Evidence That Pituitary Gonadotropins Directly Stimulate Human Leukemic cells—studies on Myeloid Cell Lines and Primary Patient AML and CML Cells. Abstract # 2204.
258. Gunjal P, Schneider G, Kakar S, Kucia M, Ratajczak MZ. Evidence for Induction of a Tumor-Metastasis-Receptive Microenvironment in Bone Marrow and Other Organs As an Unwanted and Underestimated Side Effect of Chemotherapy/Radiotherapy. Abstract # 2925.
259. Poniewierska-Baran A, Schneider G, Ratajczak J, Kucia M, Ratajczak MZ. Novel Evidence That Neuroblastoma and Rhabdomyosarcoma, Two Types of Small Round Blue Cell Tumors, Frequently Infiltrate Bone Marrow and Express Functional Erythropoietin Receptor (EpoR)—therapeutic Implications. Abstract # 4019.