Janina Ratajczak MD, Ph.D.
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EDUCATION

1975 - 1982	MD., Pomeranian School of Medicine, Szczecin, Poland
1990	Board in Internal Medicine
1996	Ph.D. (cum laude) "*Influence of proinflammatory cytokines and chemokines on human erythropoiesis. Implications for pathogenesis of anemia of chronic disorders*". Center for Clinical Education, Warsaw, Poland

ACADEMIC APPOINTMENTS

1982 - 1983	Internship
1983 - 1990	Assistant in Department of Rheumatology Regional Hospital Szczecin, Poland
1991 - 1998	Postdoctoral Fellow Department of Pathology University of Pennsylvania Philadelphia, PA
1998 – 2001	Research Specialist Department of Medicine Division Hematology/Oncology University of Pennsylvania Philadelphia, PA
2002 – 2003	Research Associate Stem Cell Biology Program JGB Cancer Center University of Louisville Louisville, KY
2003 - Current	Assistant Professor Department of Medicine University of Louisville Louisville, KY

PROFESSIONAL SOCIETIES

American Society of Hematology
International Society of Experimental Hematology

HONORS AND AWARDS

2005	Roger Herzig Jr. Faculty Research Prize James Graham Brown Cancer Center University of Louisville
2007	Roger Herzig Jr. Faculty Research Prize James Graham Brown Cancer Center University of Louisville
2008	Special Award for Scientists American Cancer Society
2010	Roger Herzig Jr. Faculty Research Prize James Graham Brown Cancer Center University of Louisville

ACTIVE GRANTS

1. *Novel hematopoietic effects of C5 cleavage fragment*
   NIH, R01:DK074720-06, OGMB121093
   $360,000/year
   Co-Investigator, (Principal Investigator: Ratajczak MZ), 20% effort
   Period: 03/01/2013 - 02/28/2017

2. *Development of Human, Autologous, Pluripotent Very Small Embryonic Like (VSELs) Stem Cells as a Countermeasure to Radiation Threat.*
   NeoStem, Inc., 1R43AI098325-01, OICB111135
   $289,618/year
   Co-Investigator, (Principal Investigator: Rodgerson, D, Principal Investigator- U of L: Ratajczak), 20% effort
   Period: 11/01/2012-2/28/2015

3. *Bioactive lipids in stem cell homing and mobilization.*
   NIH, R01:HL112788-01A1, OGMB121403
   $360,000/year
   Co-Investigator, (Principal Investigator: Ratajczak MZ), 20% effort
   Period: 06/01/2013 - 03/31/2017

PAST GRANTS

1. *Novel hematopoietic effects of C3 cleavage fragment*
   NIH, R01:DK07420A, OGMB061018
   $360,000/year
   Co-Investigator, (Principal Investigator: Ratajczak MZ), 20% effort
   Period: 03/01/2007 - 02/28/2013

2. *Establish optimal methods for purification of human VSELs (defined as live, nucleated, Lin-CD45- cells that express CD34 or CD133) from umbilical cord blood.*
   NeoStem, Inc., OICB130064
   $166,587/year
   Co-Investigator, (Principal Investigator: Ratajczak MZ), 20% effort
   Period: 11/01/2012-10/31/2013

3. *The CXCR4-SDF-1 Axis in Metastatic Rhabdomyosarcoma*
   NIH, 1 R01: CA106281
   $200,000/year
   Co-PI, (Principal Investigator: Ratajczak MZ), 50% effort
   Period: 10/01/05-09/30/10

4. *Hematopoietic Differentiation of VSEL Stem Cells*
   KSEF, R&D Excellence
   $20,000
   PI
   Period: 10/1/07 – 9/30/08

5. *PAX gene regulation of CXCR4 promoter*
   James Graham Brown Cancer Center P20 – pilot grant
   $30,000
   PI
   Period: 9/1/05 – 31/8/06

6. *Cellular & molecular basis of HIV-related thrombocytopenia*
   National Institutes of Health, 1 R01 (HL067196-01)
   Co-PI, (PI: Ratajczak, MZ)
   Period: 09/01/98-08/31/04

7. *Ex vivo cytokine priming of donor cells may ameliorate post-transplant thrombocytopenia.*
   Leukemia and Lymphoma Society, Translational Grant (6497-00)
   Co-PI, (PI: Ratajczak, MZ)
   Period: 07/01/99-06/30/02

8. *The role of micro particles in lung cancer progression, angiogenesis and metastasis.*
   Kentucky Lung Cancer Research Fund
   $100,000/year

Co-PI, (PI: Ratajczak MZ)
Period: 01/01/03-01/01/06

ABSTRACTS AND PRESENTATIONS

Papers presented on domestic and international congresses and symposia. The abstracts were printed in: *Blood, Experimental Hematology etc.*

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

1. Ratajczak M.Z., Kuczynski W.I., Moore J., **Ratajczak J**., Gewirtz A.M.: A reapraisal of the function of insuline like growth factor -1 (IGF - 1) in the regulation of normal human erythropoiesis. Blood 1992, 80, Suppl 1, 151 a.

American Association of Clinical Investigation, Washington DC, 1993

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

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

3. 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^{O}C mechanical freezer. Blood 1993, 82 suppl 1, 652 a.

Conference of the Polish Society of Haematology and Transfusiology. Wroclaw 1994

4. Ratajczak M.Z**., J. Ratajczak**, W. Kuczynski, A. Gewirtz: The cryopreservation of bone marrow CD34+ cells in a mechanical freezer at -80oC. Evaluation of the freezing, storage and thawing procedures. Acta Haematol. Pol 1994, 25 suppl 1.
5. **Ratajczak J**., D. Kregenow, W.I. Kuczynski and M.Z. Ratajczak: Anemia of chronic disease. The influence of TNF-a and TNF-b on human hematopoiesis in vitro. Acta Haematol. Pol 1994, 25 suppl 1.
6. Ratajczak M.Z**., J. Ratajczak**, W. Kuczynski, A. Gewirtz: Stimulation of the human bone marrow CD34+ cells with KL, IL-3 and IL-1b prior to freezing enhances their survival and post- thawing proliferative potential. Acta Haematol. Pol 1994, 25 suppl 1.
7. **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.
8. **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.
9. W. Kuczynski, **J. Ratajczak** and M.Z. Ratajczak: Short - term storage of the human bone marrow cells in refrigerator at 4^{O}C. Optimalization of the procedure. Acta Haematol. Pol 1944, 25 suppl 1.

10. **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.

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

11. 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.

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

12. Luger S.M., **Ratajczak J**., Ratajczak M.Z., DiPaola R., Clevenger R., Gewirtz A.M.: Role of the $p95^{vav}$ protooncogene in normal and malignant human hematopoiesis. Blood 1995, 86 suppl 1, 146a.
13. 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.
14. **Ratajczak J.,** Ratajczak M.Z., Gewirtz A.M.: Ex vivo expansion of human megakaryocyte progenitor cells in vitro. Blood 1995, 86 suppl 1, 363a.
15. 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.

Conference on Cellular Interactions. Poznan, September 1996

16. 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.

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

17. 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.
18. 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.
19. 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.

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

20. 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.
21. **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.

22. **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.
23. 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.
24. Kowalska A., Ratajczak MZ, **Ratajczak J**, Hoxie J, Brass L., Vilaire G., Bennet J., Gewirtz AM. Megakryocytes and platelets express the HIV co-receptor Fusin (CXCR4) on their surface. Blood 1997, 90 suppl 1, 283a.

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

25. Majka M., Lee B., **Ratjczak** 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.
26. 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 reseptors during erythroid differentiation oh human CD34+ cells. The role of chemokines on calcium flux, chemotaxis and proliferation. Blood 1998, 92 suppl 1, 1508a.
27. Pertusini E., **Ratajczak J**., Majka M., Ratajczak M.Z., Vaughn D., Gewirtz A. Elucidation of the platelet sparing mechanism of paclitaxel/carboplatin chemotherapi. Blood 1998, 92 suppl 1, 1598a.
28. **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.
29. **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.
30. 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.
31. Majka M., Pertussini 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, June1999

32. Ratajczak MZ, Majka M, **Ratajczak J**.: "Influence of HIV infection on human hematopoiesis. Clinical implications". (Plenary Lecture). Acta. Haematol. Pol. 1999,
33. Machalinski B, Marlicz W, Majka M, **Ratajczak J**, Ratajczak MZ.: The role of neo-angiogenesis in the pathogenesis of CML. Acta Haematol. Pol. 1999,
34. **Ratajczak J**, Majka M, Ratajczak M.Z.: The role of kit ligand – kit receptor – cymb protoncogene axis in inhibiting apoptosis and regulating telomerase activity in human erythroid progenitor cells. Acta Haematol. Pol. 1999,
35. 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,

41st Annual Meeting of the American Society of Hematology, New Orleans, December 1999

36. 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.
37. 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.
38. Majka M**, Ratajczak J**, Vilaire G, Kowalska MA, Ratajczak M.Z.: Binging 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.
39. 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.
40. Majka M, **Ratajczak J**, Ehrenman K, Pietrzkowski Z, Emerson SG, Ratajczak M.Z.: Normal human CD34+ 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.
41. 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.

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

42. Majka M, Janowska- Wieczorek, **A. Ratajczak J**, M.A. Kowalska, G. Vilaire, 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,
43. 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, megekaryoblasts and erythroblasts. Blood 2000, 96 suppl 1,
44. **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.

43th Annual Meeting of the American Society of Hematology, Orlando 2001, FL

45. **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

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

46. 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.

44th Annual Meeting of the American Society of Hematology, Philadelphia 2002, PA

47. **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 100,172 a
48. **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
49. 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

45th Annual Meeting of the American Society of Hematology, San Diego 2003

50. 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: abstract # 121.
51. **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, 2003, 102: abstract # 387.
52. Reca R, Kucia M, Wysoczynski M, **Ratajczak J**, Sirvaikar N, Janowska-Wieczorek A, Ratajczak MZ. Becouse 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, 2003, 102: abstract # 392.
53. Majka M, Reca R, Kucia M**, Ratajczak** J, Ratajczak MZ. Newly identified crosstalk between the thrombin-PAR-1 and SDF-1-CXCR4 axes regulates trafficing of megakaryocytic cells and pro-platelet formation. Blood, 2003, 102: abstract # 1270.
54. 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, 2003, 102: abstract # 3124.

46th Annual Meeting of the American Society of Hematology,San Diego,(2004)

55. Kucia M, Reca R, Wysoczynski M, Gozdzik J, **Ratajczak J**, Janowska-Wieczorek A, 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), abstract # 151: oral presentation.
56. **Ratajczak J**, Miekus K, Kucia M, Dvorak P, Ratajczak MZ. A new mechanism of communication between stem cells involving vertical transfer of mRNA by its intracellular delivery within membrane-derived microvesicles. Blood, 104 (11), abstract # 460: oral presentation.
57. Wysoczynski M, Jankowski K, Miekus K, Kucia M, Janowksa-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), abstract # 1278: poster.
58. Kucia M, Zhang PY, **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), abstract # 2698: poster.
59. Wysoczysnki M, Reca R, Kucia M**, Ratajczak J**, Ratajczak MZ. The novel role of the third complement component (C3) in megakaryopoiesis: implication for pathogenesis of reactive thrombocytosis. Blood, 104 (11), abstract # 2906: poster.

American Association for Cancer Research 2004; 95th Annual Meeting

60. Kucia M, **Ratajczak J**, Reca R, Janowska-Wieczorek A, Ratajczak MZ. Questioning the concept of stem cell plasticity: tissue-committed early muscle, liver and neural cells reside in the bone marrow and can be isolated by chemotactic gradients to SDF-1, HGF or LIF and mobilized into peripheral blood during tissue/organ injury. Abstract # 2789.
61. Wysoczynski M, Reca R, Kucia M,**Ratajczak J**, Janowska-Wieczorek A, Ratajczak MZ. Mobilized peripheral blood stem cells are primed by infammatory molecules for chemotactic response to SDF-1: significance for accelerated bone marrow/cord blood engraftment. Abstract # 2791.
62. **Ratajczak J**, Kucia M, Ratajczak MZ. Membrane-derived microvesicles from embryonic stem cells as a new tool to improve ex vivo expansion and maintenance of hematopoietic stem cells. Abstract # 2792.

Keystone Symposia: Stem cells (2004)

63. Janowska-Wieczorek A, Reca R, Kucia M, **Ratajczak J**, Shirvaikar N, Ratajczak MZ. Mobilized peripheral blood stem/progenitor cells primed by various molecules for their chemotactic responses to SDF-1 engraft faster than bone marrow cells after transplantation. Abstract # 232.
64. **Ratajczak J**, Kucia M, Zhang J, Ratajczak MZ. A novel strategy to improve ex vivo expansion and maintenance of hematopoietic stem cells using membrane-derived microvesicles from embryonic stem cells. Abstract # 353.
65. Kucia M, Reca R, Janowska-Wieczorek A, **Ratajczak J**, Ratajczak MZ. Stem cell plasticity revised: CXCR4-positive cells expressing mRNA for early skeletal muscle, heart muscle, liver and neural cells „hide out" in the bone marrow and could be mobilized into peripheral blood. Abstract # 354.

47th Annual Meeting of the American Society of Hematology (2005)

66. Kucia M, Reca R, **Ratajczak J**, Ratajczak MZ. A Population of Small CXCR4+ SSEA-1+ Oct-4+ Embryonic-Like Stem Cells Identified in Adult Bone Marrow. Abstract # 3623: poster.
67. 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+ Oct-4+ Small Embryonic-Like Stem Cells. Abstract # 1069: poster.
68. Reca R, Kucia M, Baran J**, Ratajczak J**, Ratajczak MZ. Defective Engraftment of HSPC from C3aR-/- Mice Reveals an Underappreciated Role of C3a-C3aR Axis in Stem Cell Homing to Bone Marrow. Abstract # 1259: poster.
69. Reca R, Wysoczynski 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. Abstract # 1976: poster.
70. Wysoczynski M, Reca R, Kucia M, **Ratajczak J**, Ratajczak MZ. Novel Evidence That Statin-Mediated Perturbation of Lipid Raft Formation Ameliorates Bleeding- Related Thrombocytosis. Abstract # 2164: poster.

48th Annual Meeting of the American Society of Hematology, Orlando, 2006, FL

71. Kucia M, Zuba-Surma E, Reca R, **Ratajczak J**, Ratajczak M, An Evidence That Murine Marrow-Derived CXCR4+ SSEA-1+ Oct-4+ 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 108 (11): 478a.
72. **Ratajczak J**, Kucia M, Zuba-Surma E, Reca R, Ratajczak M, The CD45-LIN- Adult Marrow-Derived CXCR4+ SSEA-1+ Oct-4+ Very Small Embryonic-Like (VSEL) Stem Cells Form In Vitro Spheres Which May Differentiate into CD45+ Hematopoietic Cells. Blood 108 (11): 86.
73. 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 108 (11): 105a.
74. **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 Polycythemias. Blood 108 (11): 196a.
75. 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 108 (11): 963a

49th Annual Meeting of the American Society of Hematology, Atlanta, GA, 2007

76. Wysoczynski M, Kucia M, Zuba-Surma E, Wu W, Ratajczak M, **Ratajczak J**. An In Vivo Evidence that the CD45- Adult Marrow-Derived CXCR4+ SSEA-1+ OCT-4+ Very Small Embryonic-Like (VSEL) Stem Cells May Differentiate into CD45+ Long Term Repopulating Hematopoietic Stem Cells. Blood 2007, 110 (11): 505.
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50th Annual Meeting of the American Society of Hematology, San Francisco, Ca, 2008

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51th Annual Meeting of the American Society of Hematology, New Orleans, 2009

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52nd Annual Meeting of the American Society of Hematology, Orlando, FL, 2010

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<u>53th Annual Meeting of the American Society of Hematology, San Diego, Ca, 2011</u>

90. 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.
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<u>ADAPT Conference, Washington, DC, Septyember, 21, 2012</u>

96. An emerging role of microvesicles and exosomes in regenerative medicine- invited speaker

54th Annual Meeting of the American Society of Hematology, Atlanta, GA 2012

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100. 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.
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102. 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 Quentched by Fibrinogen - a Novel View of Cancer Metastasis. Blood, Nov 2012; 120: 3431.
103. 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.
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105. 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.

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

106. Borkowska S, Suszynska M, Mierzejewska K, Budkowska M, Salata D, Dolegowska B, **Ratajczak J**, Kucia M , and 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)
107. Kucia M, Maj M, Mierzejewska K, Shin DM, **Ratajczak J**, and 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?
108. **Ratajczak J,** Mierzejewska K, Borkowska S, Kucia M, and 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
109. Heo J, Shin DM, Mierzejewska K, Suszynska M, **Ratajczak J,** Kucia M, and 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
110. Mierzejewska K, Suszynska E, Borkowska S, Suszynska M, Maj M, **Ratajczak J**, Kucia M, and 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
111. Mierzejewska K, Abdel-Latif A, Schneide Gr, **Ratajczak J**, Kucia M, and 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

<u>56th Annual Meeting of the American Society of Hematology, San Francisco, 2014</u>

112. *Yiming Huang, Mary J Elliott, Thomas O Miller, **Janina Ratajczak,** Larry D Bozulic, Yujie Wen, Hong Xu, Mariusz Z Ratajczak, and Suzanne T. Ildstad,* Human Facilitating Cells (FCs): Two Distinct, Complementary, and Synergistic CD56 Subpopulations That Uniquely Define FC Function
113. *Sylwia Borkowska, Malwina Suszynska, **Janina Ratajczak**, and Mariusz Z Ratajczak,* Mice Deficient in the Fifth Complement Cascade Protein (C5) Do Not Display Circadian Changes in the Number of Circulating Hematopoietic Stem/Progenitor Cells (HSPCs) in Peripheral Blood (PB)—evidence for the Pivotal Role of the Distal Part of the Complement Cascade in Inducing the Circadian Release of HSPCs into PB
114. *Malwina Suszynska**,** Pranesh Gunjal, Agata Poniewierska-Baran, Sylwia Borkowska, Kasia Mierzejewska, Gabriela Schneider, Janina Ratajczak, Magdalena Kucia, and Mariusz Z Ratajczak,* 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

115. *Sylwia Borkowska, Agata Poniewierska-Baran, Gabriela Schneider, Daniel Pedziwiatr, Malwina Suszynska,* ***Janina Ratajczak****, Magdalena Kucia, and Mariusz Z Ratajczak,* 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 (PLCβ2)

116. *Agata Poniewierska-Baran, Gabriela Schneider,* ***Janina Ratajczak,*** *Magdalena Kucia, and Mariusz Z Ratajczak,* 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

Novel Stem Cells and Vesicles Symposium- 2014 ,Providence,RI- invited speaker.

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3. Ratajczak M.Z., **Ratajczak J**., Kregenov D., Kuczynski W., Skorski T., Gewirtz A.M.: Cytokine stimulation of the CD34+ bone marrow cells prior to cryopreservation enhances their post-thawing proliferative potential. *Folia. Histochem. Cytobiol*. 1994, 32, 145 - 149. PMID: 7531164

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