Gabriela Schneider, Ph.D.

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EDUCATION

10/1998 - 6/2003	M.Sc. in Biotechnology, Agriculture University in Szczecin (now: West Pomeranian University of Technology), Szczecin, Poland
	Final year research thesis (with <i>viva voce</i> examination): "Development of selected components of humoral immunity in calves from different farms, up to 12 months of age"
10/2004 - 09/2009	Ph.D.in Biology: "CacyBP/SIP involvement in reorganization of cytoskeleton through interaction with new ligands: tubulin and actin" (Thesis Advisor: Professor A. Filipek) Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland

ACADEMIC APPOINTMENTS

3/2004 – 9/2004	Research Assistant, Laboratory of Calcium Binding Proteins, Department of Molecular and Cellular Neurobiology, Nencki Institute of Experimental Biology , Polish Academy of Sciences, Warsaw, Poland
10/2009 – 5/2010	Research Associate Laboratory of Calcium Binding Proteins, Department of Molecular and Cellular Neurobiology, Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland
6/2010 – 1/2017	Postdoctoral Scholar Stem Cell Institute, James Graham Brown Cancer Center, Department of Medicine, University of Louisville, Louisville, KY, USA
9/2017 – present	Instructor of Medicine James Graham Brown Cancer Center, Department of Medicine, University of Louisville, Louisville, KY, USA

CERTIFICATION AND LICENSURE

- 10/2001 6/2003Teaching license, Teacher Training College at Agriculture University in Szczecin (now: West
Pomeranian University of Technology) Szczecin, Poland
- 09/2018 present Certificate in Biostatistics, University of Louisville

PROFESSIONAL MEMBERSHIPS AND ACTIVITIES

- 2006 2010 *Member*, Polish Biochemical Society
- 2007 2010 *Member*, Polish Neuroscience Society

Member, American Association of Cancer Research
Judge, Research! Louisville 2017, University of Louisville
<i>Member,</i> Kentucky Academy of Sciences
Judge, Graduate Student Regional Research Conference, Louisville 2018, University of Louisville
Judge, Research! Louisville 2018, University of Louisville

HONORS AND AWARDS

2001	3 rd place in Student's Scientific Clubs Contest at the Agriculture University in Szczecin, Poland
2002	2 nd place in the International Student's Scientific Clubs Contest, Wroclaw, Poland,
2002/2003	Scholarship from the Ministry of Education and Sport, Warsaw, Poland
2004 – 2007	Scholarship from the President of the Polish Academy of Sciences, Poland
2007	W. Mozolowski Award of Distinction from the Polish Biochemical Society
2008	Best PhD student presentation award from the Department of Molecular and Cellular Neurobiology, Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland
2009	Mazovia Ph.D scholarship, Warsaw, Poland
2010	Prime Minister (of Poland) Award for PhD thesis, Warsaw, Poland
2011	American Society of Hematology Abstract Achievement Award
2012	American Society of Hematology Abstract Achievement Award
2014	Co-author of paper awarded with the prize for best neuroscience publication in 2013 by Konorski Awards Committee, appointed by the Committee of Polish Academy of Neurobiology and the Polish Neuroscience Society
2014	Ralph Scott Fellow Basic Research Prize 3 rd place during Annual James Graham Brow Cancer Center Retreat
2015	American Association for Cancer Research, AACR-Aflac, Inc. Scholar-in-Training Award

EDUCATIONAL ACTIVITIES

Research Project Mentoring:

2007 – 2009	Agnieszka Graczyk, M.Sc. student, Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland
Summer 2010	Nag Alluri, High school student, James Graham Brown Cancer Center Summer Research Internship, University of Louisville
2010-2011	Adya Jain, High school student, The James Graham Brown Cancer Center Summer Research Internship Program
2012-2013	Feifei Song, PhD Program in Microbiology and Immunology, Department of Medicine, University of Louisville
2013-2017	Zachariah Payne Sellers, PhD Program in Microbiology and Immunology, Department of Medicine, University of Louisville
Spring 2015	Daria Salata, Visiting scholar, Stem Cell Institute, James Graham Brown Cancer Center, University of Louisville

Spring 2015	Marta Budkowska, Stem Cell Institute, James Graham Brown Cancer Center, University of Louisville
Sprin 2015	Andrzej Ciechanowicz, Stem Cell Institute, James Graham Brown Cancer Center, University of Louisville
Summer 2016	Paula Stepp, Undergraduate student, NCI (R25) Cancer Education Program, University of Louisville, Louisville, KY
Spring 2017	Oceane Bouvet, International undergraduate student, Université d'Auvergne, Clermont-Ferrand, France

COMMITTEES / DEPARTMENT SERVICE

06/2004	Volunteer at 29 th The Federation of European Biochemical Societies Congress, Warsaw, Poland
2007 - 2008	Member of PhD Students' Council, Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland
05/2011	Volunteer for James Graham Brown Cancer Center cancer survivor celebration day, University of Louisville
05/2012	Volunteer for James Graham Brown Cancer Center cancer survivor celebration day, University of Louisville
05/2013	Volunteer for James Graham Brown Cancer Center cancer survivor celebration day, University of Louisville
05/2014	Volunteer for James Graham Brown Cancer Center cancer survivor celebration day, University of Louisville
05/2015	Volunteer for James Graham Brown Cancer Center cancer survivor celebration day, University of Louisville
05/2018	Volunteer for James Graham Brown Cancer Center cancer survivor celebration day, University of Louisville

CLINICAL ACTIVITIES

Not Applicable

GRANTS AND CONTRACTS

CURRENT

University of Louisville School of Medicine Basic Grant (Schneider, PI) Title: Identification of intracellular binding partner(s) of DLK1 that modulate pluripotency and renewal of cancer stem cells Project period: 06/29/2018 - 5/28/2019 Award: \$25,000 total Role: Principal Investigator

EDITORIAL WORK

Ad hoc reviewer for Cancer Research, Experimental Cell Research, Leukemia, Stem Cell Reviews and Reports.

ABSTRACTS AND PRESENTATIONS

Oral Presentations: National/International Meetings

 Annual Meeting of the American Society of Hematology in San Diego, California, USA, 2011. "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.
American Society of Hematology Abstract Achievement Award

Oral Presentations: Local/Regional Meetings

- Molecular and Cellular Neurobiology Department PhD Students Reports, Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland, 2005. "The influence of CacyBP/SIP on β-catenin degradation"
- 2. Meeting of PhD Students, recipients of Scholarship from the President of the Polish Academy of Sciences, Madralin, Poland, 2005. "The effect of calcium-binding proteins on the CacyBP/SIP function in the newly discovered ubiquitinating complex".
- 3. Molecular and Cellular Neurobiology Department Seminar, Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland, 2006. "Study of the effect of CacyBP/SIP on beta-catenin level".
- Molecular and Cellular Neurobiology Department PhD Students Reports, Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland, 2006. "The influence of CacyBP/SIP on β-catenin degradation"
- 5. Meeting of PhD Students, recipients of Scholarship from the President of the Polish Academy of Sciences, Madralin, Poland, 2006. "The effect of calcium-binding proteins on the CacyBP/SIP function in the newly discovered ubiquitinating complex - update".
- 6. Molecular and Cellular Neurobiology Department Seminar, Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland, 2007. "The influence of CacyBP/SIP on β-catenin degradation"
- 7. Molecular and Cellular Neurobiology Department Seminar, Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland, 2007. "The role of CacyBP/SIP in different cellular processes"
- 8. Meeting of PhD Students, recipients of Scholarship from the President of the Polish Academy of Sciences, Madralin, Poland, 2007. "The effect of various protein ligands on the cellular functions of CacyBP/SIP protein".
- 9. PhD Students Meeting Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland, 2007. "European Spring Event on Neuroethics".
- 10. Molecular and Cellular Neurobiology Department Seminar, Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland, 2008. "Possible role of CacyBP/SIP in mammalian brain".
- 11. 90th Anniversary of the Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland 2008. "Possible role of the CacyBP/SIP protein in cytoskeletal rearrangement".
- 12. James Graham Brown Cancer Center Seminar, University of Louisville, 2016. "Chemotactic activity of diluted plasma may explain why cancer cells metastasize to lymphatic and body cavities".

Posters: National/International Meetings (Presenter underlined)

- <u>Schneider G</u>, Nawrot B, Sipa K, Kuznicki J, Filipek A. Studies of CacyBP/SIP function using small interfering RNA. The FEBS Journal, vol. 272, suppl. 1, abst. no. B2-039P. 30th FEBS Congress and 9th IUBMB Conference. The Protein World, Budapest, Hungary, 2005
- 2. <u>Filipek A</u>, **Schneider G**, Nieznanski K, Kilanczyk E, P. Bieganowski (2007) The role of CacyBP/SIP and its protein ligands in cell differentiation. European Life Scientist Organization (ELSO) Conference, Dresden, Germany, 2007

3. <u>Schneider G</u>, Nieznanski K, Kilanczyk E, Kuznicki J, Filipek A. Changes in cellular localization of CacyBP/SIP during differentiation of NB-2a cells. Acta Bioch. Polon., Vol. 54, suppl. 4/2007, abst. no. P14.1542 XLII Congress of Polish Biochemical Society, Szczecin, Poland, 2007

Award: W. Mozolowski Award of Distinction from the Polish Biochemical Society

- 4. <u>Filipek A</u>, **Schneider G**, Mietelska A, Figiel I, Niewiadomska G Age-dependent changes in neuronal distribution of the CacyBP/SIP protein. 6th Forum of European Neuroscience, Geneva, Switzerland, 2008
- 5. <u>Schneider G</u>, Filipek A, Mietelska A, Figiel I, Niewiadomska G. Redistribution of CacyBP/SIP from neuronal processes to somata during normal aging in rats. Folia Histochem. Cytobiol., vol. 46, suppl. 2, 2008, abst. no. P3.33 International Congress of Histochemistry and Cytochemistry, Gdańsk, Poland, 2008
- 6. <u>Schneider G</u>, Nieznanski K, Kilanczyk E, Bieganowski P, Mietelska A, Niewiadomska G, Kuznicki J, Filipek A. Function of CacyBP/SIP-tubulin interaction in neuronal cells. Abst. no. B.19 X European Symphosium on Calcium Binding Proteins in Normal and Transformed Cells. Leuven, Belgium, 2008
- 7. <u>Schneider G</u>, Mietelska-Porowska A, Filipek A, Niewiadomska G. Involvement of the CacyBP/SIP protein in tauopathy. Abst no TVI.02. 9th International Congress of the Polish Neuroscience Society, Warsaw, Poland, 2009
- 8. <u>Mazurkiewicz M</u>, Nikolajew J, Mietelska-Porowska A, **Schneider G**, Theuring F, Riedel G, Wischik C, Niewiadomska G. Tau phosphorylation and miccrotubule deterioration associated with only subtle memory impairment in a transgenic tau mouse. Abstract no 211, p.78, Alzheimer's Disease Beyond Ab, Keystone Symposia on Molecular and Cellular Biology, Copper Mountain, USA, 2010
- 9. Schneider G, Kim C, Ratajczak J, Ratajczak MZ. A Novel Perspective On Hematopoietic Stem/Progenitor Cell Migration and homing—evidence That Cationic Antimicrobial Peptides (C3a, LL-37, and β2-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. 54th American Society of Hematology Annual Meeting and Exposition, Atlanta, GA, USA, 2012
- 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. 54th American Society of Hematology Annual Meeting and Exposition, Atlanta, GA, USA, 2012 American Society of Hematology Abstract Achievement Award
- 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. 54th American Society of Hematology Annual Meeting and Exposition, Atlanta, GA, USA, 2012
- 12. <u>Mierzejewska K</u>, Abdel-Latif K, 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. 55th American Society of Hematology Annual Meeting and Exposition, New Orleans, LA, USA, 2012
- 13. <u>Serwin K</u>, **Schneider G**, Bryndza E, Kucia M, Ratajczak J, Dolegowska B, Ratajczak M. Initial identification of presence of a potent chemoattractant in diluted plasma fractions J Physiol Pharmacol, 2014: 65(1) p. 41. 26th Congress of the Polish Physiological Society, Szczecin, Poland, 2014.
- 14. <u>Borkowska S</u>, Poniewierska-Baran A, Schneider G, Pedziwiatr D, Suszynska M, Ratajczak J, Kucia M, Ratajczak M. 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 (PLCbeta2). Blood, Dec 2014; 124(21): 2448. 56th American Society of Hematology Annual Meeting and Exposition, San Francisco, CA, USA, 2014
- 15. <u>Poniewierska-Baran A</u>, **Schneider G**, Ratajczak J, Kucia M, Ratajczak M. 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. Blood, Dec 2014; 124(21): 4019. 56th American Society of Hematology Annual Meeting and Exposition, San Francisco, CA, USA, 2014

- 16. <u>Suszynska M,</u> Gunjal P, Poniewierska-Baran A, Borkowska S, Mierzejewska K, Schneider G, Ratajczak J, Kucia M, Ratajczak M. Novel evidence that murine and human mesenchymal stromal cells express fuctional gonadotropic hormone receptors, demonstrating the involvement of the pituitary gonatropin bone marrow axis in hematopoiesis. Blood, Dec 2014; 124(21): 1588. 56th American Society of Hematology Annual Meeting and Exposition, San Francisco, CA, USA, 2014
- Suszynska M, Mierzejewska K, Poniewierska-Baran A, Ismail A, <u>Schneider G</u>, Gunjal P, Ratajczak J, Kakar S, Kucia M, Ratajczak M. Embryonic rest hypothesis of cancer development revisited: functional gonadotropic hormone receptors are expressed by normal and malignant hematopoietic cells and functional erythropoietin receptor is expressed by germline-derived tumors. American Association for Cancer Research Annual Meeting 20015, Philadelphia, PA, 2015
- 18. <u>Schneider G</u>, Glaser T, Ismail A, Ulrich H, Ratajczak M. Extracellular nucleotides and purinergic signaling as novel, underappreciated, pro-metastatic factors for human lung cancer cells. American Association for Cancer Research Annual Meeting 20015, Philadelphia, PA, 2015

American Association for Cancer Research, AACR-Aflac, Inc. Scholar-in-Training Award

- Adamiak M, Poniewierska-Baran A, Schneider G, Abdelbaset-Ismail A, Suszynska M, Abdel-Latif A, Kucia M, Ratajczak J, Ratajczak MZ. Novel 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. 57th American Society of Hematology Annual Meeting and Exposition, Orlando, FL, USA, 2015
- 20. Schneider G, Garbett NC, Bryndza E, Poniewierska-Baran A, Merchant ML, Serwin K, Sellers ZP, Dolegowska B, Ratajczak MZ. Novel evidence that blood plasma vitronectin is a major chemoattractant for cancer cells and its pro-migratory activity is suppressed/chaperoned after binding to fibrinogen. American Association for Cancer Research Annual Meeting 20016, New Orleans, LA, 2016
- 21. <u>Ratajczak J</u>, Schneider G, Kim CH, Adamiak M, Ratajczak MZ. A novel perspective on hematopoietic stem/progenitor cell migration and homing—evidence that cationic antimicrobial peptides (C3a, LL-37, and β-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. 6th Brazilian Purine Club Meeting, João Pessoa Paraíba, Brazil, 2016.

Posters: Local/Regional Meetings (Presenter underlined)

- 1. Jain A, **Schneider** G, Ratajczak J. Sphingosine-1-phosphate regulates metastasis of rhabdomyosarcoma. James Graham Brown Cancer Center 10_{th} Annual Retreat, Louisville, KY, 2012
- Schneider G, Kim C, Ratajczak J and Ratajczak MZ. Novel perspective on hematopoietic Stem/Progenitor Cell migration and homing – evidence that cationic antimicrobial peptides (C3a, LL-37, and β-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. James Graham Brown Cancer Center 11th Annual Retreat, Louisville, KY, 2012
- Schneider G, Serwin K, Bryndza E, Kucia M, Ratajczak J and Ratajczak MZ. Studies with diuted 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. James Graham Brown Cancer Center 12th Annual Retreat, Louisville, KY, 2013
- 4. <u>Gunjal P</u>, **Schneider G**, Kakar SS, Kucia M and Ratajczak MZ. Evidence for induction of a tumor-metastasisreceptive microenviroment in bone marrow and other organs as an unwanted and underestimated side effect of chemotherapy/radiotherapy. James Graham Brown Cancer Center 14th Annual Retreat, Louisville, KY, 2014
- 5. <u>Poniewierska A</u>, **Schneider G**, Ratajczak J, Kucia M and 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 implication. James Graham Brown Cancer Center 14th Annual Retreat, Louisville, KY, 2014

 Schneider G, Ulrich H and Ratajczak MZ. Identification of the extracellular nucelotides ATP, AMP and UTP as a novel pro-metastatic and chemotactic factors for lung cancer cells. James Graham Brown Cancer Center 14th Annual Retreat, Louisville, KY, 2014

Award: 3rd place, Ralph Scott Fellow Basic Research Award

 <u>Nguyen TQ</u>, Kaliappan A, Allen N, Barousse Hall M, Schneider G, Chesney JA, Wilkey D, Kendrick, SK, Merchant ML, Brock GN and Garbett NC. Development of novel diagnostic methodologies for diagnosis and monitoring in melanoma. Research! Louisville 2017, University of Louisville, Louisville, KY, 2017 Award: 3rd place, Norbert J. Burzynski award professional student category

PUBLICATIONS

PEER-REVIEWED MANUSCRIPTS (* = corresponding author)

- 1. Schneider G, Nieznanski K, Kilanczyk E, Bieganowski P, Kuznicki J, Filipek A. CacyBP/SIP interacts with tubulin in neuroblastoma NB2a cells and induces formation of globular tubulin assemblies. BBA-Molecular Cell Research, 2007, 1773(11):1628-36.
- 2. Filipek A, **Schneider G**, Mietelska A, Figiel I, Niewiadomska G. Age-dependent changes in neuronal distribution of CacyBP/SIP comparision to tubulin and tau proteins. Journal of Neural Transmission, **2008**, 115(9):1257-64.
- 3. Lee YT, Dimitrova YN, **Schneider G**, Ridenour W, Bhattacharya S, Soss SE, Caprioli RM, Filipek A, and Chazin WJ. Structure of the S100A6 complex with a fragment from the C-terminal domain of Siah-1 interacting protein: A novel mode for S100 protein target recognition. Biochemistry, **2008**, 47(41):10921-32.
- 4. Osiecka KM, Nieznanska H, Skowronek KJ, Karolczak J, **Schneider G**, Nieznanski K. Prion protein region 23-32 interacts with tubulin and inhibits microtubule assembly Proteins, **2009**, 77(2):279-96.
- 5. Schneider G, Nieznanski K, Jozwiak K, Slomnicki LP, Redowicz MJ, Filipek A. Tubulin binding protein, CacyBP/SIP, induces actin polymerization and may link actin and tubulin cytoskeletons. BBA-Molecular Cell Reserch, 2010, 1803(11):1308-17.
- 6. Schneider G, Filipek A. S100A6 Binding Protein and Siah-1 Interacting Protein (CacyBP/SIP) spotlight on properties and cellular function. Amino Acids, **2011**, 41(4):773-80.
- 7. Ratajczak MZ, Kim CH, Abdel-Latif A, **Schneider G**, Kucia M, Morris AJ, Laughlin MJ, 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(1):63-72.
- 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 Oncol. 2012;41(3):995-1004.
- 9. 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;27:773-9.
- 10. Kim C, **Schneider G**, Abdel-Latif A, Mierzejewska K, Sunkara M, Borkowska S, Ratajczak J, Morris AJ, Kucia M, Ratajczak MZ. Ceramide-1-phosphate regulates migration of multipotent stromal cells and endothelial progenitor cells--implications for tissue regeneration. Stem Cells. **2013**;31(3):500-10.
- 11. 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(1):3-10.

- 12. Wasik U, **Schneider G**, Mietelska-Porowska A, Mazurkiewicz M, Fabczak H, Weis S, Zabke C, Harrington CR, Filipek A, Niewiadomska G. Calcyclin binding protein and Siah-1 interacting protein in Alzheimer's disease pathology: neuronal localization and possible function. Neurobiol Aging. **2013**;34(5):1380-8.
- Schneider G, Bryndza E, Abdel-Latif A, Ratajczak J, Maj M, Tarnowski M, Klyachkin Y, Houghton P, Morris AJ, Vater A, Klussmann S, Kucia M, Ratajczak MZ. Bioactive lipids S1P and C1P are pro-metastatic factors in human rhabdomyosarcoma cell lines, and their tissue level increases in response to radio/chemotherapy. Mol Cancer Res. 2013; 11(7):793-807

*Article brief description was included in "Highlights of This Issue" section.

- 14. 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(1):95
- 15. 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; 44(1):295-300.
- Ratajczak MZ, Suszynska M, Borkowska S, Ratajczak J, Schneider G. The role of sphingosine-1 phosphate and ceramide-1 phosphate in trafficking of normal stem cells and cancer cells. Expert Opin Ther Targets. 2014;18(1):95-107.
- Ratajczak MZ, Schneider G, Sellers ZP, Kucia M, Kakar SS. The Embryonic Rest Hypothesis of Cancer Development - An Old XIX Century Theory Revised. J of Cancer Stem Cell Res 2014, 2:e1001 DOI: 10.14343/JCSCR.2014.2e1001
- Schneider G, Sellers ZP, Abdel-Latif A, Morris AJ, Ratajczak MZ. Bioactive Lipids, LPC and LPA, Are Novel Prometastatic Factors and Their Tissue Levels Increase in Response to Radio/Chemotherapy. Mol Cancer Res. 2014;2(11):1560-73.
- 19. 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(1):20.
- 20. Maj M, **Schneider** G, Ratajczak J, Suszynska M, Kucia M, Ratajczak MZ. The cell cycle- and insulin-signalinginhibiting miRNA expression pattern of very small embryonic-like stem cells contributes to their quiescent state. Exp Biol Med (Maywood). **2015** Aug;240(8):1107-11. doi: 10.1177/1535370215584940
- 21. 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**;47(5):1989-97.
- 22. Schneider G, Glaser T, Lameu C, Abdelbaset-Ismail A, Sellers ZP, 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.
- 23. 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-β2-promotes mobilization of hematopoietic stem cells by decreasing their lipid raft-mediated bone marrow retention and increasing the promobilizing effects of granulocytes. Leukemia. 2016;30(4):919-28.
- 24. 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 Oncol. 2016;48(5):1815-24.
- 25. Abdelbaset-Ismail A, Pedziwiatr D, Suszyńska E, Sluczanowska-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**;9:26.
- 26. Schneider G, Sellers ZP, Ratajczak MZ. Parentally imprinted genes regulate hematopoiesis-new evidence from the Dlk1-Gtl2 locus. Stem Cell Investig. **2016**;3:29.

- 27. 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**;7(43):69829-69843.
- 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. J Cancer. 2016;7(14):1979-1983.
- 29. 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 the intracellular expression of heme oxygenase-1. Int J Oncol. **2017**;50(1):317-328.
- 30. 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**;8(35):58247-58263
- 31. Sellers ZP, **Schneider G**, Suszynska M, Bujko K, Pedziwiatr D. Do cancer cell lines have fixed or fluctuating stem cell phenotypes? studies with the NTera2 cell line. Stem Cell Rev. **2017**;13(5):603-610
- 32. 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. Oncol Rep. **2018**;39(2):851-859
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