CURRICULUM VITAE

BIOGRAPHICAL

Name: Robert Bucki **Birth Date:** July 5, 1968

Home Address: Ul. Laskowa 44, Kostomłoty Drugie, 26-085 Miedziana Góra, Poland
836 S 51st , Philadelphia, PA 19143, USA.

Citizenship: Polish, USA green card holder

E-mail Address: buckirobert@gmail.com;

Cell Phone: 48 602-32-5151; 001-215-888-8851

PRESENT APPOINTMENT: Department of Microbiological and Nanobiomedical Engineering, Medical University of Bialystok, Poland. Department of Physiology and Pathophysiology, Jan Kochanowski University in Kielce, Poland.

EDUCATION and TRAINING:

Nov., 2011	**Professorship Title in Medical Science.** Nomination by President of the Republic of Poland.
Dec., 2006	**Habilitation Degree in Medical Science**, Medical University of Bialystok, Poland.
Dec., 2005	**Wharton Management Program, University of Pennsylvania**, 2 year program for working professionals.
Oct., 1996	**First degree of specialization in internal illness**. Department of Medicine and Gastroenterology J. Sniadecki's Hospital, Bialystok, Poland.
Oct., 1996	**Ph.D. in Medical Science**, Medical University of Bialystok, Poland.
Jun., 1992	**M.D.**, Medical University of Bialystok, Poland.

WORK EXPERIENCE:

2013- **Department of Microbiological and Nanobiomedical Engineering, Medical University of Bialystok, Poland**. Visiting Professor

2013- **Department of Physiology and Pathophysiology, Jan Kochanowski's Unuversity in Kielce. Poland.** Head of Department.

2012- **School of Engineering at the University of Pennsylvania,** Laboratory Instructor for Summer Academy in Applied Science and Technology Biotechnology course

2012-2013 **University of Pennsylvania, USA.** Senior Research Investigator in the Department of Physiology, University of Pennsylvania.

2006-2012 **University of Pennsylvania, USA.** Senior Research Investigator and Manager of the Institute for Medicine and Engineering.
Researcher in Cellular Biology: Antibacterial and immunomodulatory activity of host antibacterial peptides and their mimics. Involvement of PIP2 in regulation of reversible formation and actin networks. Developed and revised lab protocols. Supervised and taught fellow workers and students various laboratory techniques involved in cell signaling, polyelectrolyte networks and the activity of cationic peptide studies. Actively participated in writing of grant proposals. Performed reviewer duties, including: external grant reviewer for the Italian Cystic Fibrosis Research Foundation, Canadian Cystic Fibrosis Foundation, Israel Science Foundation, and the Health Research Board in Ireland. Also served as a reviewer on multiple scientific journals including, but not limited to, the Journal of Antimicrobial Chemotherapy, Journal of Medical Microbiology, Food Research, and Vascular Pharmacology.
As a manager of the Institute for Medicine and Engineering: Supervising of common IME budget, handling of major equipment ordering and maintenance contracts and repair, safety training, and oversight of proper University policy implementation.

2001-2006 **University of Pennsylvania, USA.** Research Associate - Institute for Medicine and Engineering. Studies concerning the interaction of plasma gelsolin with various bioactive lipids such as bacterial endotoxin, lipoteichoic acid and sphingosine-1-phosphate. During this appointment, was a visiting scientist at University Paris XI, France (6 month fellowship from CNRS)

1999-2001 **University of Pennsylvania, USA**. Postdoctoral Researcher - Department of Physiology. *Interaction of PBP10 peptide with biological membranes.*

1996-1999 **University Paris XI Orsay, France**. Postdoctoral Researcher - Laboratoire des Biomembranes et Messagers Cellulaires CNRS UMR 5619. *Ca^{2+}-induced phospholipid redistribution and Ca^{2+} -induced microvesiculation are*

independent processes - fellowship proposal accepted by Fondation pour la Recherche Médicale.

1992-2002 **Medical University of Bialystok, Poland,** Assistant-researcher and teacher of Human Physiology to 2nd year Medical students - Department of Human Physiology.

1990-1991 **Clinique Du Sidobre, Castres, France.** Nurse, full-time summer job.

1989-1990 **Stade Municipale Castres, France.** Part-time summer job.

AREA OF EXPERTISE:

- microbiology (development of new antibacterial molecules)
- cell biology systems (procoagulant activity of platelets, inflammatory response)
- biochemistry of membrane phospholipids

AWARDS:

2004 CNRS, France (6 month) as a visiting scientist

2003 University of Pennsylvania, IME pilot grant (1 year)

2001 Post-doctoral fellowship from the Cystic Fibrosis Foundation (1 year)

2000 Research fellowship with NATO (6 months)

2000 The Bialystok Medical Academy Rector's Team Award of Second Degree for achievements in the studies of fatty acids metabolism

1999 Team award of the Minister of health and Social Welfare for a series of publications in research on metabolism of unaffected tissue and in some chronic diseases

1998 Team award of the Minister of health and Social Welfare for a series of publications on research into long-chain fatty acid metabolism

1997 Team award of the Minister of health and Social Welfare for a series of publications in research on energetic substrate metabolism control in tissue

1997 Fondation pour la Recherche Médicale (1.5 year research fellowship)

1996 French Embassy in Warsaw (6 month research fellowship)

INTERNATIONAL COLLABORATIONS:

Professor Paul B. Savage - Department of Chemistry and Biochemistry, Brigham Young University, USA.
Professor Scott Diamond - Department of Chemical and Biomolecular Engineering, University of Pennsylvania, USA.
Professor Luis Montaner - The Wistar Institute, USA
Professor Susan Margulies - Department of Bioengineering, University of Pennsylvania, USA.
Professor James Weisshaar - Department of Chemistry University of Wisconsin, USA
Professor Robert Bittman - University of New York, USA
Mark J, DiNubile MD/PhD - Department of Medical Communication, Merck Research Laboratories, USA.
David Fein, PhD - Senior Process Engineer at Merck, USA.
Françoise Giraud Ph, D and Jean-Claude Sulpice Dr Hab., CNRS, University Paris XI, France.
Professor Richard Chaby - Equip "Endotoxines" CNRS, University Paris XI, France.
Christilla Bachelot-Loza PhD, -Université Paris Descartes, Sorbonne Paris Cité, Paris INSERM UMR S 765, Faculté de Pharmacie, Paris, France
Professor Makoto Funaki - University of Tokushima, Japan.
Professor Tomas Hartung - Department of Biochemical Pharmacology, University of Konstanz, Germany.
Professor Roland Vegners - Peptide Synthesis Laboratory, Organiskas Sintezes Instituts, Riga, Republic of Latvia.
Professor Jan Górski and Professor Zbigniew Namiot - Department of Physiology Medical University of Bialystok, Poland.
Professor Wiesław Drozdowski - Department of Neurology, Medical University of Bialystok, Poland.

PROJECTS:

NCN, 2012/07/B/NZ6/03504, Principal investigator 10/13-10/16

Antibacterial and immunomodulatory activities of novel ceragenins and their potential in treatment of local infections

NIH R01 DK083592 co-investigator, Case Western, PI R. Tyler 9/10-6/14

Biophysical properties of normal and diseased glomeruli

NIH R01 GM083272-01 co-investigator, 6/08-5/12

Mechanical control of cell growth and differentiation.

Genentech, Sponsor Research Agreement, co-PI 12/11-12/12

Improving the effectiveness of pulmozyme at sites of infection by combining multivalent anions and actin depolymerizing factors.

CFF co-investigator, PI: P. Janmey 4/08 – 3/10

Novel antibacterial steroids for the treatment of CF lund infection

Critical Biologics Corp., Sponsor Research Agreement, co-investigator 10/08-9/11

Evaluation of plasma gelsolin concentration.

NIH R01 AR38910 co-investigator, PI: Janmey 7/02 – 6/08

Effects of phosphoinositides on cytoskeletal structure

NIH R01 HL67286 co-investigator, PI: Janmey 6/01 – 5/07

Dissolution of polyelectrolyte bundles in airway fluids

Sea Run Holdings, Inc. co-investigato, PI: Janmey 5/01– 4/07
2 R44 NSO48734-02

Salmon fibrin gels for surgical applications.

Medical Academy of Białystok, statutory project; PI 10/97-10/98

Effect of hormones on incorporation of long chain fatty acids in the rat liver nuclei

KBN, supervisor's research grant (PhD supporting grant) 10/93-10/95

Incorporation of free fatty acids in the rat liver nuclei

PH.D. THESIS ADVISER:

Wojciech Sokołowski; *Activity of antibacterial peptides in human body fluids*. (in progress – being written)

Michał Marzec; *Cell signaling pathways, role of NPM1/ALK protein in cancer*

development. Thesis defense: 01/06/2011.

Wojciech Dworakowski; *Expression of cytochrome P450 isoforms in liver cells as an example of sexual dimorphism*. Thesis defense: 09/04/2008.

SKILLS:

Polish: native language, **France**: Fluent, **English:** Fluent, **Russian**: Good
Software: Microsoft Word, Excel, PowerPoint, KaleidaGraph, Chart program (version 3.2), FilmWare 2.2, ImageQuant 1.1, Photoshop, EndNote.

MEMBERSHIPS:

Member of American Society for Cell Biology
American Society for Microbiology
Polish Physiology Society
Editorial board of: Journal of Microbial & Biochemical Technology, Journal of Immune Research,
Member of Grant Review Board and Referee Panel for Health and Medical Research Fund (HMRF), Hong Kong.
External Reviewer Foundation for Polish Science
External Reviewer Canadian Cystic Fibrosis Foundation
External Reviewer Italian Cystic Fibrosis Foundation

PATENTS AND PATENT APPLICATIONS:

1. Fein DE**, Bucki R,** Janmey PA, Diamond SL**.** Antimicrobial Cationic Steroids and Methods of Use. **Patent** Number(s): 046483-5174-P1-US
2. **Bucki R,** Janmey PA. Diagnosing neurological disorder e.g. multiple sclerosis involves obtaining cerebrospinal fluid sample from subject; determining expression level of gelsolin in sample; and comparing the gelsolin expression level to standard. Patent Number(s): WO2009124226-A2; WO2009124226-A3. Assignee: UNIV. PENNSYLVANIA
3. Janmey PA, **Bucki R.** Blocking or ameliorating bacterial lipoteichoic acid-induced disruption of mammalian cellular responses or formation of toxicity in vitro or in vivo by increasing gelsolin concentration in blood or extracellular fluid of a patient. Patent Number(s): US2007238668-A1. Assignee: UNIV. PENNSYLVANIA
4. **Bucki R,** Chaby R, Janmey PA. Preventing, neutralizing or reducing endotoxemia or endotoxin induced septic shock comprises administering gelsolin or a functionally equivalent peptide fragment. Patent Number(s): WO2005046454-A2; EP1694342-A2; AU2004289335-A1. Assignee: UNIV. PENNSYLVANIA.

SCIENTIFIC PUBLICATIONS:

IF = 185; H – index = 19

1. Niemirowicz K, Swiecicka I, Wilczewska AZ, Misztalewska I, Kalska-Szostko B, Bienias K, Bucki R, Car H. Gold-functionalized magnetic nanoparticles restrict growth of Pseudomonas aeruginosa. Int J Nanomedicine. 2014 May 8;9:2217-24.
2. Yu CC, Zendzian-Piotrowska M, Charmas M, Długołęcka B, Baranowski M, Górski J, Bucki R. Change in blood gelsolin concentration in response to physical exercise. Biol Sport. 2013 Sep;30(3):169-72.
3. Chopra A, Murray ME, Byfield FJ, Mendez MG, Halleluyan R, Restle DJ, Raz-Ben Aroush D, Galie PA, Pogoda K, **Bucki R**, Marcinkiewicz C, Prestwich GD, Zarembinski TI, Chen CS, Puré E, Kresh JY, Janmey PA. Augmentation of integrin-mediated mechanotransduction by hyaluronic acid. **Biomaterials.** 2014 Jan;35(1):71-82.
4. Smith JR, Syre PP, Oake SA, Nicholson KJ, Weisshaar CL, Cruz K, **Bucki R**, Baumann BC, Janmey PA, Winkelstein BA. Salmon and Human Thrombin Differentially Regulate Radicular Pain, Glial-Induced Inflammation and Spinal Neuronal Excitability through Protease-Activated Receptor-1. **PLoS One.** 2013 Nov 20;8(11):e80006.
5. Leszczynska K, Namiot D, Byfield FJ, Cruz K, Zendzian-Piotrowska M, Fein DE, Savage PB, Diamond S, McCulloch CA, Janmey PA, Bucki R. Antibacterial activity of the human host defence peptide LL-37 and selected synthetic cationic lipids against bacteria associated with oral and upper respiratory tract infections. J Antimicrob Chemother. 68(3):610-8, 2013.
4. Byfield FJ, Kowalski M, Cruz K, Leszczynska K, Namiot A, Savage PB, **Bucki R**, Janmey PA. Cathelicidin LL-37 Increases Lung Epithelial Cell Stiffness, Decreases Transepithelial Permeability, and Prevents Epithelial Invasion by Pseudomonas aeruginosa. **J Immunol.** 187(12):6402-9. 2011.
5. Sochacki KA, Barns KJ, **Bucki R**, Weisshaar JC. Real-time attack on single Escherichia coli cells by the human antimicrobial peptide LL-37. **Proc Natl Acad Sci U S A.** 108(16): E77-81. 2011.
6. Cohen TS, **Bucki R**, Byfield FJ, Ciccarelli NJ, Rosenberg B, DiNubile MJ, Janmey PA, Margulies SS. Therapeutic potential of plasma gelsolin administration in a rat model of sepsis. **Cytokine**. 54(3):235-8. 2011.
7. Byfield FJ, Wen Q, Leszczynska K, Kulakowska A, Namiot Z, Janmey PA, **Bucki R.** Cathelicidin LL-37 peptide regulates endothelial cell stiffness and endothelial barrier permeability. **Am J Physiol Cell Physiol.** 300(1):C105-12. 2011.
8. Kułakowska A, Zajkowska JM, Ciccarelli NJ, Mroczko B, Drozdowski W, **Bucki R.** Depletion of plasma gelsolin in patients with tick-borne encephalitis and Lyme neuroborreliosis. **Neurodegener Dis.** 8(5):375-80. 2011.
9. Leszczyńska K, Namiot A, Cruz K, Byfield FJ, Won E, Mendez G, Sokołowski W, Savage PB, **Bucki R**, Janmey PA. Potential of ceragenin CSA-13 and its mixture with pluronic F-127 as treatment of topical bacterial infections. **J Appl Microbiol.** 110(1):229-38. 2011.

10. Janmey PA, **Bucki R.** Lung infection: shifting the equlibrium towards the free and active form of human LL-37 and design of alternative antibacterial agents. In: **Antibacterial Peptides: Discovery, Design and Novel Therapeutic Strategies.** Chapter 10 pp 169-180 (ed. G. Wang). CAB International, 2011.
11. Leszczyńska K, Namiot A, Janmey PA and **Bucki R.** Modulation of exogenous antibiotic activity by host cathelicidin LL-37. **APMIS.** 118(11):830-6. 2010.
12. Kulakowska A, Ciccarelli NJ, Wen Q, Mroczko B, Drozdowski W, Szmitkowski M, Janmey PA and **Bucki R.** Hypogelsolinemia, a disorder of the extracellular actin scavenger system, in patients with multiple sclerosis. **BMC Neurology,** 1;10(1):107. 2010.
13. **Bucki R**, Kulakowska A, Byfield FJ, Zendzian-Piotrowska M, Baranowski M, Marzec M, Winer JP, Ciccarelli NJ, Gorski J, Drozdowski W, Bittman R, Janmey PA. Plasma gelsolin modulates cellular response to sphingosine 1-phosphate**. Am J Physiol Cell Physiol.** 299(6):C1516-23. 2010.
14. Leszczyńska K, Namiot A, Namiot Z, Leszczyńska JK, Jakoniuk P, Chilewicz M, Namiot DB, Kemona A, Milewski R, **Bucki R**. Patient factors affecting culture of Helicobacter pylori isolated from gastric mucosal specimens. **Adv Med Sci.**16: 1-6, 2010.
15. Fein DE, **Bucki R,** Byfield F, Leszczynska K, Janmey PA, Diamond SL. Novel cationic lipids with enhanced gene delivery and antimicrobial activity. **Mol Pharmacol**. 78(3): 402-10, 2010.
16. Kułakowska A, Zendzian-Piotrowska M, Baranowski M, Konończuk T, Drozdowski W, Górski J, **Bucki R**. Intrathecal increase of sphingosine 1-phosphate at early stage multiple sclerosis. **Neurosci Lett.** 477(3): 149-52, 2010.
17. **Bucki R,** Leszczynska K, Byfield FJ, Fein DE, Won E, Cruz K, Namiot A, Kulakowska A, Namiot Z, Savage PB, Diamond SL, Janmey PA. Combined antibacterial and anti-inflammatory activity of a cationic disubstituted dexamethasone-spermine conjugate. **Antimicrob Agents Chemother.** 54(6): 2525-33, 2010
18. **Bucki R,** Leszczyńska K, Namiot A, Sokołowski W. Cathelicidin LL-37: a multitask antimicrobial peptide. **Arch Immunol Ther Exp (Warsz).** 58(1): 15-25, 2010.
19. Leszczyńska K, Namiot A, Fein DE, Wen Q, Namiot Z, Savage PB, Diamond S, Janmey PA, **Bucki R.** Bactericidal activities of the cationic steroid CSA-13 and the cathelicidin peptide LL-37 against Helicobacter pylori in simulated gastric juice. **BMC Microbiol.** 9: 187, 2009.
20. Randazzo RA, **Bucki R,** Janmey PA, Diamond SL. A series of cationic sterol lipids with gene transfer and bactericidal activity. **Bioorg Med Chem.** 17(9): 3257-65, 2009.
21. Janmey PA, **Bucki R**, Yin HL, Phosphoinositoide and actin cytoskeletal rearrangement. **Handbook of Cell Signaling 2nd edition,** pp 1141-1150, Elsevier Science USA, 2009.
22. Namiot DB, Namiot Z, Markowski AR, Leszczyńska K, **Bucki R**, Kemona A, Gołebiewska M. Association of erosive esophagitis with Helicobacter pylori eradication: a role of salivary bicarbonate and glycoprotein secretion. **Dis. Esophagus.** 22(4): 368-73, 2009.
23. Papasavvas E, Pistilli M, Reynolds G, **Bucki R,** Azzoni L, Chehimi J, Janmey PA, DiNubile MJ, Ondercin J, Kostman JR, Mounzer KC, Montaner LJ. Delayed loss of control of plasma lipopolysaccharide levels after therapy interruption in chronically HIV-1-infected patients, **AIDS.** 23(3): 369-75, 2009.

24. **Bucki R**, Levental I, Kulakowska A, Janmey PA. Plasma gelsolin: function, prognostic value, and potential therapeutic use. **Curr Protein Pept Sci**. 9(6): 541-51, 2008.
25. **Bucki R**, Byfield FJ, Kulakowska A, McCormick ME, Drozdowski W, Namiot Z, Hartung T, Janmey PA. Extracellular gelsolin binds lipoteichoic acid and modulates cellular response to proinflammatory bacterial wall components. **J Immunol.** 181(7): 4936-44, 2008.
26. Lai XZ, Feng Y, Pollard J, Chin JN, Rybak MJ**, Bucki R**, Epand RF, Epand RM, Savage PB. Ceragenins: cholic acid-based mimics of antimicrobial peptides. **Acc Chem Res.** 41(10): 1233-40, 2008.
27. Kulakowska A, Drozdowski W, Sadzynski A, **Bucki R,** Janmey PA. Gelsolin concentration in cerebrospinal fluid from patients with multiple sclerosis and other neurological disorders. **Eur J Neurol.**15(6): 584-8, 2008.
28. **Bucki R,** Namiot DB, Namiot Z, Savage PB, Janmey PA. Salivary mucins inhibit antibacterial activity of the cathelicidin-derived LL-37 peptide but not the cationic steroid CSA-13. **J Antimicrob Chemother.** 62(2): 329-35, 2008.
29. Namiot DB, Namiot Z, Kemona A, **Bucki R,** Gotebiewska M. Oral Health Status and Oral Hygiene Practices of Patients with Peptic Ulcer and How These Affect Helicobacter pylori Eradication from the Stomac. **Helicobacter** 12(1):63-7, 2007.
30. **Bucki R**, Sostarecz AG, Byfield FJ, Savage PB, Janmey PA. Resistance of the antibacterial agent ceragenin CSA-13 to inactivation by DNA or F-actin and its activity in cystic fibrosis sputum. **J Antimicrob Chemother.** 60(3): 535-45, 2007.
31. Marzec M, Kasprzycka M, Liu X, El-Salem M, Halasa K, Raghunath PN**, Bucki R,** Wlodarski P, Wasik MA. Oncogenic tyrosine kinase NPM/ALK induces activation of the rapamycin-sensitive mTOR signaling pathway **Oncogene.** 26(38): 5606-14, 2007.
32. **Bucki R,** Byfield FJ, Janmey PA. Release of the antimicrobial LL37 peptide from DNA/F-actin bundles in CF sputum. **Eur Respir J**. 29(4): 624-32, 2007.
33. **Bucki R**, Levental I, Janmey PA. Antibacterial Peptides - A Bright Future or a False Hope. **Anti-Infective Agents in Med. Chem.** 6 (3): 175-184, 2007.
34. **Bucki R,** Pastore JJ. Bacterial endotoxin as inhibitor of the enzymatic activity of human thrombin. **Eur J Haematol.** 76(6):510-5, 2006.
35. **Bucki R,** Pastore JJ, Giraud F, Janmey PA, Sulpice JC. Involvement of the Na+/H+ exchanger in membrane phosphatidylserine exposure during human platelet activation. **Biochim Biophys Acta.** 1761(2):195-204, 2006.
36. **Bucki R,** Janmey PA . Interaction of the gelsolin-derived antibacterial PBP 10 peptide with lipid bilayers and cell membranes. **Antimicrob Agents Chemother,** 50(9): 2932-40, 2006.
37. **Bucki R,** Georges PC, Espinassous Q, Funaki M, Pastore JJ, Chaby R, Janmey PA. Inactivation of Endotoxin by Human Plasma Gelsolin. **Biochemistry**, 44(28): 9590-9597, 2005.
38. Tang JX, Wen Q, Bennett A, Kim B, Sheils CA, **Bucki R,** Janmey P. Anionic polyaminoacids dissolve F-actin and DNA bundles, enhance DNase activity, and reduce the viscosity of cystic fibrosis sputum. **Am J Physiol Lung Cell Mol Physiol**. 289(4): L599-605, 2005.
39. Namiot Z, Stasiewicz J, Jaroszewicz W, Namiot DB, **Bucki R**, Kemona A. Duodenal ulcer recurrence one year after Helicobacter pylori eradication. **Gastroenterologia Polsa**, 12 (6): 495-498, 2005.

40. Jennifer J. Pastore, Makoto Funaki, Paul A. Janmey and **Bucki R.** Flavonoid-mediated inhibition of actin polymerization in cold-activated platelet. **Platelets**, 16(6): 362-367, 2005

41. **Bucki R**, Pastore JJ, Randhawa P, Vegners R, Weiner DJ, Janmey PA. Antibacterial activities of rhodamine B-conjugated gelsolin-derived peptides compared to those of the antimicrobial peptides cathelicidin LL37, magainin II, and melittin. **Antimicrob Agents Chemother.** 48(5):1526-33, 2004.

42. Janmey PA, **Bucki R**, Yin HL, Phosphoinositoide and actin cytoskeletal rearrangement. **Handbook of Cell Signaling,** Vol. 2: 209-215, Elsevier Science USA, 2003.

43. **Bucki R**, Pastore JJ, Giraud F, Sulpice JC, Janmey PA. Flavonoid inhibition of platelet procoagulant activity and phosphoinositide synthesis. **J Thromb Haemost.** 1(8):1820-8, 2003.

44. Weiner DJ, **Bucki R**, Janmey PA. The antimicrobial activity of the cathelicidin LL37 is inhibited by F-actin bundles and restored by gelsolin. **Am J Respir Cell Mol Biol.** 28(6):738-45 2003.

45. Michaud SE, Wang LZ, Korde N, **Bucki R**, Randhawa PK, Pastore JJ, Falet H, Hoffmeister K, Kuuse R, Uibo R, Herod J, Sawyer E, Janmey PA. Purification of salmon thrombin and its potential as an alternative to mammalian thrombins in fibrin sealants. **Thromb Res**. 107 : 245-54, 2002.

46. Górska M, Dobrzyn A, Zendzian-Piotrowska M, **Bucki R**. Free ceramids in plasma of diabetes mellitus type 2. **Medycyna Metaboliczna,** 6 : 25-29, 2002.

47. **Bucki R,** Janmey P, Vegners R, Giraud F, Sulpice JC. Involvement of phosphatidylinositol 4,5-bisphosphate in phosphatidylserine exposure in platelets: use of a permeant phosphoinositide-binding peptid. **Biochemistry** 40 : 15752-15761, 2001.

48. Cunningham CC, Vegners R, **Bucki R**, Funaki M, Korde N, Hartwig JH, Stossel TP,Janmey P. Cell permeant polyphosphoinositide –binding peptides that block cell motility and actin assembly. **J. Biol. Chem.** 276: 43390-43399, 2001.

49. **Bucki R**, Gorski J. Recent views on Ca2+ function and regulation of its concentration in the cell nuclei. **Post. Hig. Med. Dosw.** 55 : 157-175, 2001.

50. **Bucki R**, Giraud F, Sulpice JC. Phosphatidylinositol 4,5-bisphosphate domain inducers promote phospholipid transverse redistribution in biological membranes. **Biochemistry** 39: 5838-44, 2000.

51. Zendzian-Piotrowska M, **Bucki R**, Gorska M, Gorski J. Diabetes affects phospholipid content in the nuclei of the rat liver. **Horm Metab Res.** 32: 386-9, 2000.

52. Namiot DB, Leszczyńska K, Namiot Z, Chilewicz M, **Bucki R**, Kemona A. The occurrence of Helicobacter pylori antigens in dental plaque; an association with oral health status and oral hygiene practices. **Adv Med Sci**. Oct 8:1-5. 2010.

53. Namiot Z, Namiot D, Kemona A, Golebiewska M, **Bucki R**. The influence of cigarette smoking and alcohol consumption on efficacy of Helicobacter pylori eradication. **Pol. Arch. Med. Wew.** CIV, 3 : 569-574, 2000.

54. **Bucki R**, Zendzian-Piotrowska M, Gorska M. The hormonal regulation of the free cholesterol content in the hepatocellular nuclei. **Medycyna Metaboliczna** 4: 23-26, 2000.

55. **Bucki R**, Gorska M, Zendzian-Piotrowska M, Gorski J. Effect of triiodothyronine on the content of phospholipids in the rat liver nuclei. **J Physiol Pharmacol.** 51: 535-40, 2000.

56. Namiot Z, Stasiewicz J, Kozuszynska-Topor M, Markowski A, Kemona A, **Bucki R.** Helicobacter pylori eradication and Gastric pH. Can antibacterial therapy be

postponed? **Gastroenterologia Polska**, 6: 107-110, 1999.

57. **Bucki R**, Bachelot-Loza Ch, Zachowski A, Giraud F, Sulpice J-C. Calcium induces phospholipid redistribution and microvesicle release in humane erythrocyte membranes by independent pathways. **Biochemistry** 37: 15383-91, 1998.

58. **Bucki R**, Zendzian-Piotrowska M, Nawrocki A, Gorski J. Effect of increased uptake of plasma FFA by the liver on lipid metabolism in the hepatocellular nuclei. **Prost. Leuc. and Essent.Fatty Acids** 57: 27-31, 1997.

59. **Bucki R**, Sulpice J-C, Giraud F, Gorski J. Various function of human erythrocyte membrane lipids. **Post. Hig. Med. Dosw**. 51: 637-650, 1997

60. **Bucki R**, Gorski J. Nuclear lipids. **Post. Hig. Med. Dosw.** 51: 319-328 1997

61. Gorski J, Elsing Ch, **Bucki R**, Zendzian-Piotrowska M, Stremmel W. The plasma borne free fatty acids rapidly enter hepatocellular nuclei. **Life Sciences** 59: 2209-2215, 1996.

SELECTED COMMUNICATION:

Katarzyna Niemirowicz, Urszula Surel, Agnieszka Z. Wilczewska, Halina Car, **Robert Bucki.** Antibacterial action of novel nanocomposite against clinical strain of Pseudomonas aeruginosa. American Society for Microbiology, 114th General Meeting; May 17-20 Boston MA, USA.

Bucki R, Katrina Cruz, and Paul A. Janmey Dissolution of DNA and F-actin bundles stabilized by polyelectrolyte effects. Biophysical Society 57th Annual Meeting, February 2-6, 2013. Philadelphia, USA.

T. Sehr, U. Hainke, M. Zendzian-Piotrowska, **R. Bucki**, K. Thomas, M. Marggraf, T. Ziemssen. Long-term immunological changes during fingolimod therapy in MS. 28TH Congress of the European Committee for Treatment and Research in Multiply Sclerosis. Lyon, France 2012.

Morris HS, Bautista T, **Bucki R,** Savage P, Janmey P, Sostarecz AG. Investigation of the mechanism of action of the synthetic antibiotic CSA-13 using Langmuir monolayers for application in cystic fibrosis treatment. ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY Volume: 241 Meeting Abstract: 179-CHED. Published: MAR 27 2011

Bucki R, Katarzyna Leszczyńska, Fitzroy J. Byfield, David E. Fein, Esther Won, Katrina Cruz, Andrzej Namiot, Alina Kułakowska, Zbigniew Namiot, Paul B. Savage, Scott Diamond and Paul A. Janmey. Novel mimics of antibacterial peptides for treatment of respiratory infections. Pulmonary Retreat Meeting. Philadelphia, USA, 2010

Leszczyńska K, A Namiot, Z. Namiot, JK. Leszczyńska, P. Jakoniuk, M Chilewicz, DB. Namiot, A. Kemona, R. Milewski, **R. Bucki.** Czynniki wpływające na wynik hodowli bakterii *Helicobacter pylori* z wycinków endoskopowych błony śluzowej żołądka. Gastroenterologia Polska 2010, abstr. no S7-5. XIV Kongres Polskiego Towarzystwa Gastroenterologii, Szczecin, 11-13 czerwca 2010.

Leszczyńska K, DB. Namiot, A. Namiot, M Chilewicz, JK. Leszczyńska, **R. Bucki**, A Kemona, Z. Namiot. Application of immunoassay for detection of H.pylori antigens in saliva. Helicobacter 2010, 15: 363, poster no.: P4.16. European Helicobacter Study Group, XXIII International Workshop on Helicobacter and Related Bacteria in

Chronic Digestive Inflammation and Gastric Cancer, Rotterdam, September 16-18, 2010.

Cohen TS, **Bucki R**, Rosenberg B, Ciccarelli N, Janmey PA and Margulies SS. Gelsolin Treatment Reduces R. Morbidity with Sepsis. 2009 annual American Thoracic Society Conference in San Diego, CA. Am J Respir Crit Care Med 179; 2009: A4693

Leszczyńska K, Dorota B. Namiot, Qi Wen, Zbigniew Namiot, Paul B. Savage, **R. Bucki** and Paul A. Janmey. Bactericidal activity of ceragenin CSA-13 against *Helicobacter pylori* as a function of preincubation in simulated gastric juice. IAAC/IDSA Annual Meeting. Washington, DC, 2008

Rogers PA, **Bucki R**, Savage PB, Janmey PA, and Audra G. Sostarecz. Langmuir monolayers for the investigation of the interaction of antibacterial molecules with the bacterial membrane in Cystic Fibrosis (CF) airway environment. Paper #1053541. ACS National Meeting, Chicago, IL, March 25-29, 2007.

Bucki R, Byfield J, Kulakowska A, Sadzynski A, Janmey AP. Modulation of cellular inflammatory responses induced with LPS or LTA by extracellular gelsolin. 13th Annual Respiratory Research Retreat S23, Philadelphia, PA USA, June 15, 2007.

Namiot, Z, Namiot DB, Markowski AR, Kemona A, **Bucki R**, Golebiewska M. The effect of Helicobacter Pylori eradication on salivary bicarbonate and glycoproteins secretion, in association with development of erosive oesophagitis. Paris 2007.

Bucki R, Jeff Byfield , Penelope C. Georges Paul A. Janmey. Inactivation of Bacterial Wall Components by Recombinant Plasma Gelsolin and Synthesized Peptide Based on the PIP_2 Binding Sequence of Gelsolin. IME 2006 Symposium, May 19, p. 19, BRB: 79, University of Pennsylvania Philadelphia, Philadelphia, USA, 2006

Bucki R, Audra Goach Sostarecz, Paul B Savage and Paul A. Janmey. Activity of Ceragenin CSA-13 in the Polyelectrolyte Environment of Cystic Fibrosis Airway Fluid Compared to Cathelicidin LL-37. F1- 1870. 46th ICAAC Meeting, San Francisco Sep 26-30, 2006.

Bucki R, Jeff Byfield, Paul A. Janmey. Recombinant Human Plasma Gelsolin Prevents Lipoteichoic Acid-induced Activation of Endothelial Cells, 06-LA-3071-ASCB. American Society for Cell Biology Annual Meeting. December 9-13, San Diego, CA, USA, 2006.

Audra G. Sostarecz, Ilya Levental, Agne Taraseviciute, H. Scott Rapoport, **R. Bucki**, Jelena Stewart, Maggie McCormick, Paul B. Savage, Ann R. Kennedy, Robert J. Levy, Peter L. Jones and Paul A. Janmey. Atomic Force Microscopy – A Qualitative and Quantitative Approach to the Analysis of Biological Samples. IME 2006 Symposium, May 19. p19, BRB: 79, University of Pennsylvania Philadelphia, Philadelphia, USA. 2006

Bucki R, Janmey, PA. Endotoxin and Lipotechoic Acid Inhibit Plasma Gelsolin Severing Activity. Presentation Number: 2179 American Society for Cell Biology Annual Meeting. December 10-14, San Francisco, CA, USA, 2005

Bucki R, Penelope C. Georges, Quentin Espinassous, Makoto Funaki, Jennifer J. Pastore, Richard Chaby, and Paul A. Janmey. Interaction of endotoxin with human plasma gelsolin. IMESymposium, BRB: 79, University of Pennsylvania Philadelphia, USA, 2004.

Bucki R, Janmey PA.: Effects of a gelsolin-derived phosphoinositide-binding peptide on lipid monolayers, large unilamellar vesicles and cell membrane phospholipid distribution. American Society for Cell Biology Annual Meeting. Washington Convention Center in Washington DC. December 4-8, 2004,

Levental I, **Bucki R**, Janmey PA. A FRET study of lateral heterogeneity in phospholipid

bilayers. BMES meting, Philadelphia,USA October 2004,

Bucki R, Janmey PA. Effects of a gelsolin-derived phosphoinositide-binding peptide on lipid monolayers, large unilamellar vesicles and cell membrane phospholipid distribution. American Society for Cell Biology Annual Meeting. December 4-8, 2004, Washington, USA MOLECULAR BIOLOGY OF THE CELL 15: 434A-434A 2405 Suppl. S, NOV 2004.

Funaki M., **Bucki R,** Janmey P.: Disrupotion of vesicle traffic by phosphoinositide-binding peptides. IME 2001 Symposium, BRB:31, University of Pennsylvania Philadelphia, USA, 2001.

Bucki R, Janmey P: Effect of gelsolin-derived phosphoinositide–binding peptides on lipid monolayers and human platelet aggregation. IBMM 200, International Bunsen Discussion Meeting, Martin-Luther University, Halle, Germany P 96, 2000.

Gorska M., Buslowska A., **Bucki R.,** Gorski J.: The plasma ceramides in patients with diabetes tII. 17th International Diabetes Federation Congress. Mexico City. Diabetes Resch. Clin. Pr. 50, Suppl 1:395, 2000.

Bucki R, Janmey P. : A cell permeat phosphoinositide- binding peptide induce phospatidylserine exposure in platelets without increasing intracellular calcium. IME 2000 Symposium, BRB :17, University of Pennsylvania Philadelphia, USA, 2000.

Bucki R., Zendzian-Piotrowska M., Gorska M., Chocian G., : Diabetes affects phospholipid metabolism in the nuclei of rat liver. Polish Physiol. Soc. XXI Congress, Poznan. J. Physiol. Pharmacol., 50 supp. 1: p.10, 1999.

Chocian G., **Bucki R.,** Buslowska A., Gorski J.: Effect of steptozotocin diabetes bezafibrate and high fat diet on ceramide metabolism in the hepatocellular nuclei. Polish Physiol. Soc. XXI Congress, Poznan. J. Physiol. Pharmacol., 50 supp. 1: p.10, 1999.

Zendzian-Piotrowska M., **Bucki R.,** Chocian G., Nawrocki A., Gorski J.: Effect of cholesterol-rich diet on metabolism of cholesterol in hepatocellular nuclei. 32nd ESCI Meeting. Krakow. Eur. J. Clin. Inv., 28, Suppl 1, 48, 1998.

Zendzian-Piotrowska M., **Bucki R.,** Gorska M., Gorski J.: Hormonal effects of phospholipid metabolism in the hepatocellular nuclei. XIII International Symposium on Drugs Affecting Lipid Metabolism. Florence, Italy, May 30-June3, Abstract Book s121, 1998.

Sulpice J-C, **Bucki R**, Moreaus C, Bachelot-Loza Ch, Devaux P.F, Zachowski A, Giraud F.: Role of phosphatidylinositol 4,5,-bisphosphate in the phospholipid redistribution in erythrocyte membranes. Conference Jacques Monod, Cell Lipids Aussion, France, 1997.

Gorska M., Zendzian-Piotrowska M., **Bucki R.,** Gorski J.: Lipid metabolisme in the hepatocellular nuclei of the diabetic rats. 16th International Diabetes Federation Congress. Helsinki, Diabetologia, 40, Suppl 1, A414. 1997.

Swiatecka J, Baranczuk E, **Bucki R**.,Gorski J :Effect of ovarian steroidson incorporation of 14-C-palmitic acid into different lipid fraction ot the uterus. Polish Physiol. Soc. XX Congress, Wroclaw. J. Physiol. Pharmacol., 47 supp. 2: 164, 1996.

Bucki R., Zendzian-Piotrowska M., Dworakowski W., Gorski J.: Incorporation of blood-borne long chain fatty acids into nuclear lipids of the liver Polish Physiol. Soc. XX Congress, Wroclaw. J. Physiol. Pharmacol., 47 supp. 2: 93, 1996.

Wojcik B, Nawrocki A, **Bucki R,** Swiatecka, : Effect of Tachycardia on the content and composition of long chain fatty acids of rat heart. Polish Physiol. Soc. XX Congress, Wroclaw. J. Physiol. Pharmacol., 47 supp. 2: 64, 1996.

Gorski J, Elsing Ch, **Bucki R,** Zendzian-Piotrowska M, Stremmel W.: The plasma borne

unesterified long-chain fatty acids enter rat liver nuclei. Pflugers Archiv. Suppl. to vol. 430: R 151, Maastricht, Holland 1995.

Swiatecka J, Gorski J, **Bucki R.**: Studies of glycogen content in the smooth muscles of different segments of the gastrointestinal tract. Polish Physiol. Soc. XIX Congress, Torun, Sep. 13-16; Abstract 488, 1993.