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CURRENT POSITIONS

Visiting Postdoctoral Fellow,
Laboratory of Cell and Tissue Morphodynamics,
Cell and Developmental Biology Center,
National Heart, Lung, and Blood Institute
National Institutes of Health, Bethesda, MD. USA

EDUCATION

2023	Quantitative Imaging: From Acquisition to Analysis, Cold Spring Harbor Laboratory, Laurel Hollow, NY, US
2021	**PhD in Physics**. Jagiellonian University, Krakow, Poland. Thesis: Interplay between talin and β1-integrin in cancer cells motility. Advisor: Zenon Rajfur
2019-2020	Jagiellonian Interdisciplinary PhD Programme. Jagiellonian University, Krakow, Poland
2014	**BSc in Biochemistry**. Jagiellonian University, Krakow, Poland. Thesis: Physicochemical properties of the recombinant human transcription factor Yin Yang 1 with a deletion of C-terminal zinc finger. Advisor: Andrzej Gorecki
2013	**MScEng in Medical Physics** with specialization in Dosimetry and Electronics in Medicine. AGH University of Science and Technology, Krakow, Poland. Thesis: The identification and the elimination of clashes in the structure of an Early-Stage intermediate in the protein folding process. Advisor: Irena Roterman-Konieczna
2012	**BScEng in Medical Physics**. AGH University of Science and Technology, Krakow, Poland. Thesis: The construction of the 3D protein structure on the basis of given Phi, Psi angles. Advisor: Irena Roterman-Konieczna

RESEARCH EXPERIENCE

2021-present	Visiting Postdoctoral Fellow under Clare Waterman, Laboratory of Cell and Tissue Morphodynamics, National Heart Lung and Blood Institute, National Institutes of Health, Bethesda, MD, USA.
2020 (6 mths)	Special Volunteer under Clare Waterman, Laboratory of Cell and Tissue Morphodynamics, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, MD, USA.
2019 (3 mths)	Visiting Research Fellow under Vinay Swaminathan, Oncology and Pathology - Kamprad Lab, Faculty of Medicine, Lund University, Lund, Sweden.
2018 (10 mths)	Visiting Scholar under Cai Huang, Markey Cancer Center, College of Medicine, University of Kentucky, Lexington, KY, USA.
2017 (1 mth)	Visiting Research Fellow under Louis Hodgson, Albert Einstein College of Medicine, Bronx, NY, USA.
2016 (1 mth)	Visiting Research Fellow under Francesco Difato, Istituto Italiano di Tecnologia, Genoa, Italy.
2014-2021	PhD candidate under Zenon Rajfur, Department of Molecular and Interfacial Biophysics, Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Krakow, Poland.
2013-2014	BSc candidate under Andrzej Gorecki, Department of Physical Biochemistry, Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Krakow, Poland.

2012-2013 MScEng candidate under Irena Roterman-Konieczna, Department of Bioinformatics and Telemedicine, Jagiellonian University Medical College, Krakow, Poland.
2012 Summer Student Intern, Adamed Pharma, Czosnow, Poland.
2011-2012 BScEng candidate under Irena Roterman-Konieczna, Department of Bioinformatics and Telemedicine, Jagiellonian University Medical College, Krakow, Poland.
2011 Summer Student Intern, Holy Cross Cancer Center, Kielce, Poland.
2010 Summer Student Intern, Regional Blood Donation Centre, Krakow, Poland.

HONORS and AWARDS

2023 Jerzy Konorski Award 2023 Honorable Mention for the best Polish original publication in the field of neurobiology, Neurobiology Committee of the Polish Academy of Sciences, Poland.
2023 BINA Professional Development Award, BioImaging North America (BINA) Program funded by the Chan Zuckerberg Initiative (CZI), USA.
2023 CSHL Regeneron Scholars Program, Cold Spring Harbor Laboratories & Regeneron Pharmaceuticals Inc, USA. (declined)
2021 **Award for the high quality of the research done during the PhD studies**, Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Krakow, Poland.
2019 American Society for Cell Biology Travel Award, USA.
2019 Erasmus+ Internship Programme traineeship.
2x 2018, 2020 Pro-quality award for highly influential publications, Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Krakow, Poland.
2017-2020 Pro-quality scholarship for the best PhD students, Jagiellonian University, Krakow, Poland.
2017-2018, 2019-2020 Dean's scholarship for the best PhD students, Jagiellonian University, Krakow, Poland.
2017 Best Presentation Award at [VI Molecular Biology Conference], Lodz, Poland.
2015 Poster Award at [III Polish Conference of Medical Physics Students "*Physics for Medics*"], Krakow, Poland.
2012-2013 Scholarship for the best students of Polish Ministry of Science and Higher Education's subsidized major: graduate studies in Medical Physics, Faculty of Physics and Applied Computer Science, AGH University of Science and Technology, Krakow, Poland.
209-2012 Dean's scholarship for the best students, AGH University of Science and Technology, Krakow, Poland.

EDITORIAL FUNCTIONS

2023-present Review Editor, Editorial Board of Cell Adhesion and Migration, *Frontiers in Cell and Developmental Biology*, Frontiers.

REVIEW FUNCTIONS

Manuscripts (for the following journals):

Journal of Visualized Experiments, Computer Methods and Programs in Biomedicine, Coatings, International Journal of Environmental Research and Public Health, Symmetry, Information, Journal of Clinical Medicine, Acta Biochimica Polonica.

PROFESSIONAL SERVICE

Service/Training

2022-present Co-chair, CDBC Invited Seminar Series Committee, Cell and Developmental Biology Center, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, MD, USA.
2021-present Member, CDBC Invited Seminar Series Committee, Cell and Developmental Biology Center, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, MD, USA.
2023 Judge: Poster Session: NHLBI Research Retreat, Bethesda, MD, USA.
2023 Judge: Poster Session: 19th Annual NIH Graduate Student Research Symposium, National institutes of Health, Bethesda, MD, USA.
2022 Judge: Poster Session: American Society for Cell Biology 2022 Annual Meeting's Minorities Affairs Committee and Education Committee Poster Session, Washington, DC, USA.

2022 Judge: Poster Session: NIH Postbac Poster Day, National Institutes of Health, Bethesda, MD
2022 Judge: Poster Session: 18th Annual NIH Graduate Student Research Symposium, National Institutes of Health, Bethesda, MD, USA.
2016-2018 PhD Student Association representative in the Jagiellonian University Faculty of Physics, Astronomy and Applied Computer Science Council, Krakow Poland.
2016-2018 PhD Student Association representative in the Jagiellonian University Institute of Physics Council, Krakow Poland.
2015-2021 Web-page administrator, Department of Molecular and Interfacial Biophysics, Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Krakow, Poland
2010-2011 President of KERMA the Medical Physics Students' Scientific Group, Faculty of Physics and Applied Computer Science, AGH University of Science and Technology, Krakow, Poland.
2009-2010 Vice-president of KERMA the Medical Physics Students' Scientific Group, Faculty of Physics and Applied Computer Science, AGH University of Science and Technology, Krakow, Poland.

GRANT SUPPORT FOR RESEARCH

2020-2021 Faculty of Physics, Astronomy and Applied Computer Science research grant for young scientist MNS 2020, PI: Zbigniew Baster. Jagiellonian University, Krakow, Poland. "[Increasing the accuracy of FRET-biosensors-based protein activity measurements]". Total Direct Costs: ~$6,250.
2019-2021 Preludium 16 2018/31/N/NZ3/02031 PI: Zbigniew Baster. National Science Center, Poland. "Influence of culture substrate elasticity on talin recruitment to focal adhesion". Total Direct Costs: ~$12,535.
2019-2020 Etiuda 7 2019/32/T/NZ3/00444 PI: Zbigniew Baster. National Science Center, Poland. "[Activity of migration-related proteins in cells]". Total Direct Costs: ~$33,338.
2019-2020 Faculty of Physics, Astronomy and Applied Computer Science research grant for young scientist MNS 2019, PI: Zbigniew Baster. Jagiellonian University, Krakow, Poland. "[Influence of culture substrate elasticity on ITGB1 recruitment to focal adhesion]". Total Direct Costs: ~$1,750.
2018-2019 Faculty of Physics, Astronomy and Applied Computer Science research grant for young scientist DSC 2018, PI: Zbigniew Baster. Jagiellonian University, Krakow, Poland. "[Influence of culture substrate elasticity on activation of Rac1 protein]". Total Direct Costs: ~$3,125.
2017-2018 Faculty of Physics, Astronomy and Applied Computer Science research grant for young scientist DSC 2017, PI: Zbigniew Baster. Jagiellonian University, Krakow, Poland. "[Dynamics of small G proteins in cell migration]". Total Direct Costs: ~$5,625.
2015-2016 Faculty of Physics, Astronomy and Applied Computer Science research grant for young scientist DSC 2015, PI: Zbigniew Baster. Jagiellonian University, Krakow, Poland. "[Eukaryotic cells behavior on elastic substrates]". Total Direct Costs: ~$4,750.

TEACHING AND MANAGEMENT EXPERIENCE

2021 Microscopy Instructor: "Wide-field and confocal fluorescence microscopy, and optical tweezers techniques in cellular, biophysical and life sciences", Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Krakow, Poland.
2014-2021 Laser scanning confocal fluorescence – fluorescence lifetime imaging microscope – optical tweezers combi system instructor and caretaker, Zenon Rajfur lab, Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Krakow, Poland.
2015-2021 Acting lab manager, Zenon Rajfur lab, Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Krakow, Poland.
2014-2018 Graduate teaching assistant, courses: "Physics": laboratory and auditorium classes; "Optics and Electromagnetism": lectures assistant; "Contemporary optical microscopy": seminars; "Laboratory of Molecular Biophysics: Fluorescence Confocal Microscopy": laboratory classes. Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Krakow, Poland.
2011 Presenter of an outdoor science exhibition, Stanislaw Lem Science Garden, Museum of Municipal Engineering, Krakow, Poland.

Teaching and Mentoring Training

2023 Workplace Dynamics workshop Series (I – V), Resiliency for Scientists, Diversity and Inclusion Series; Office of Intramural Training and Education, NIH, Bethesda, MD, USA. Topics covered: Self-Awareness, Conflict & Feedback, Team skills, Diversity in a Multicultural Society.

2022 Scientists Teaching Science 9-week Pedagogy Course, Office of Intramural Training & Education, National Institutes of Health, Bethesda, MD, USA

2019 Jagiellonian Interdisciplinary PhD Programme Course: Academic Teaching. Methodology of teaching and assessment, Jagiellonian University, Krakow, Poland.

2016 Jagiellonian University Ars Docendi Course: The alchemy of a successful thesis, Jagiellonian University, Krakow, Poland.

2015 Jagiellonian University Ars Docendi Course: The art of communication, Jagiellonian University, Krakow, Poland.

2015 Jagiellonian University Ars Docendi Course: The art of test writing, Jagiellonian University, Krakow, Poland.

2015 Jagiellonian University Ars Docendi Course: Ars Docendi Basic course, Jagiellonian University, Krakow, Poland.

2014 Jagiellonian University Ars Docendi Course: Master-Disciple relationship: mentoring-coaching-tutoring, Jagiellonian University, Krakow, Poland.

SCIENTIFIC SUPERVISORY AND MENTORING

2022-2023 Lindsay Russell, Undergraduate Program, Barnard College of Columbia University, New York, NY, USA. Supervision over the preparation of a review manuscript. Carrer advisory.

PhD assistant advisor

2021-present Joanna Hajduk, MSc, PhD student, Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Krakow, Poland. Main advisor: Zenon Rajfur

PhD student lab supervisor

2020-2021 Armin Ebrahimi, MSc, PhD student, Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Krakow, Poland. PhD advisors: Zenon Rajfur, Adam Wojciechowski

Undergraduate-project advisor

2016-2018 Aleksandra Pochwała, BSc, Undergraduate student, Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Krakow, Poland. Thesis advisor: Zenon Rajfur

2016-2017 Katarzyna Tora, BSc, Undergraduate student, Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Krakow, Poland. Thesis advisor: Zenon Rajfur

2016-2017 Amanda Wojtal, BSc, Undergraduate student, Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Krakow, Poland. Thesis advisor: Zenon Rajfur

Project supervisor

2020-2021 Maximilian Szczypior, BSc, Undergraduate student, Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Krakow, Poland. Project: *Paired-image database between two microscopes - a novel approach to Deep Learning Microscopy.*

2020-2021 Joanna Sorysz, MScEng, Undergraduate student Faculty of Mechanical Engineering and Robotics, AGH University of Science and Technology, Krakow, Poland. Project: *Paired-image database between two microscopes - a novel approach to Deep Learning Microscopy.*

PROFESSIONAL AFFILIATIONS

2023-present Member, BioImaging North America

2023-present Member, National Postdoc Association

2018-present Member, Société de Biologie Cellulaire de France

2018-2022 Member, American Society for Cell Biology

2017-2022 Member, Biophysical Society

2009-2013 Member, KERMA the Medical Physics Students' Scientific Group, Faculty of Physics and Applied Computer Science, AGH University of Science and Technology, Krakow, Poland.

INVITED PRESENTATIONS

2023 National Heart and Lung Institute, Imperial College London, England, UK, (online).
2023 Light Microscopy Core Facility, Johannes Gutenberg University Mainz, Germany, (online).
2023 CDBC Trainee Seminar Series, Cell and Developmental Biology Center, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, MD, USA.
2021 CDBC Trainee Seminar Series, Cell and Developmental Biology Center, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, MD, USA, (online).
2021 Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Krakow, Poland.
2019 6th International Congress on Microscopy and Spectroscopy (INTERM), Oludeniz, Turkey.
2017 [VI Molecular Biology Conference], Lodz, Poland.
2017 [V Polish Conference of Medical Physics Students: "*Physics for Medics*"], Krakow, Poland.
2015 [VI Student conference: „Modern experimental methods in physics, chemistry and engineering"], Lublin, Poland.
2015 IV International Conference of Biophysics Students, Krakow, Poland.
2011 KERMA the Medical Physics Students' Scientific Group Seminar Series, Faculty of Physics and Applied Computer Science, AGH University of Science and Technology, Krakow, Poland.
2010 [XLVII Student Scientific Groups Session], AGH University of Science and Technology, Krakow, Poland.

POSTER PRESENTATIONS

2023 NHLBI Research Retreat, Bethesda, MD, USA.
2022 2x Cell Bio 2022-An ASCB|EMBO Meeting, Washington, DC, USA.
2022 Signaling by Adhesion Receptors Gordon Research Seminar and Conference, Manchester, NH, USA.
2020 64th Annual Meeting of Biophysical Society, San Diego, CA, USA.
2019 2019 ASCB | EMBO Annual Meeting, Washington, DC, USA.
2018 2018 ASCB | EMBO Annual Meeting, San Diego, CA, USA.
2018 62nd Annual Meeting of Biophysical Society, San Francisco, CA, USA.
2017 1st International Workshop on PET and MR Imaging, Krakow, Poland.
2017 III International Conference of Cell Biology, Krakow, Poland.
2017 61st Annual Meeting of Biophysical Society, New Orleans, LA, USA.
2016 European Summer School 2016 "Physics of Living Matter", Strasbourg, France.
2016 11th Workshop and Conference on Advanced Multiphoton and Fluorescence Lifetime Imaging Techniques, Vestec, Czechia.
2015 [Numbers Computers Life Conference], Krakow, Poland.
2015 [III Polish Conference of Medical Physics Students "*Physics for Medics*"], Krakow, Poland.

TECHNICAL SKILLS TRAINING

2019 [XIII Confocall Microscopy Users Meeting], Goczalkowice-Zdroj, Poland.
2017 Single-Molecule Workshop Amsterdam, Netherlands.
2016 European Summer School 2016 "Physics of Living Matter", Strasbourg, France.
2016 11th Workshop and Conference on Advanced Multiphoton and Fluorescence Lifetime Imaging Techniques, Vestec, Czechia.
2015 Seminar workshops „Andor Academy", Warsaw, Poland.

3D PRINTING PORTFOLIO

https://www.printables.com/@Zbysio_171460

OTHER WORK EXPERIENCE

2009-2010 Fire Juggling Prop Workshop Specialist, Fire Factory, Krakow, Poland.

PUBLICATIONS

Google Scholar report: 585 total citations on 37 publications, h index= 10, (**†corresponding author**)

1. Hajduk J., P. Twardawa, M. Targosz-Korecka, **Z. Baster†**, Z. Rajfur. (2023) ECM stiffness regulates talin1 distribution, adhesion formation and colocalization with tensin3, ***In prep.***
2. Azzollini V., N. Fragapane, **Z. Baster**, S. Carozzo, S. Dalise, C. Chisari. (2023) Focal Muscle Vibration and Action Observation: a novel approach for muscle strengthening, ***In rev.***
3. **Baster Z.†**, Z. Rajfur. (2023) Fluorescence microscopy in biological studies, ***In prep.***
4. Wang X., **Z. Baster**, L. Li, Z. Rajfur, C. Huang. (2023) Talin2 binds to non-muscle myosin IIa and regulates cell attachment and fibronectin secretion, ***In rev.***
5. **Baster Z.†**, L. Russell, Z. Rajfur. (2023) Review on molecular mechanism of talin- and integrin-dependent cancer invasion, ***OSF Preprints.*** doi:10.31219/osf.io/5zktm
6. Haberkiewicz O., P. Lipiński, R.R. Starzyński, A. Jończy, P. Kurowska, M. Ogórek, A. Bednarz, S. Herman, D. Hatala, P. Grzmil, Z. Rajfur, **Z. Baster**, M. Lenartowicz. (2022) Decreased Expression of the *Slc31a1* Gene and Cytoplasmic Relocalization of Membrane CTR1 Protein in Renal Epithelial Cells: A Potent Protective Mechanism against Copper Nephrotoxicity in a Mouse Model of Menkes Disease. ***Int. J. Mol. Sci.*** 23(19): 11441. doi:10.3390/ijms231911441
7. Damulewicz M., B. Doktór, **Z. Baster**, E. Pyza. (2022) The role of glia in the regulation of sleep in *Drosophila melanogaster*. ***J. Neurosci. Res.*** 42 (36): 6848-6860; doi:10.1523/JNEUROSCI.2340-21
8. Szafranska K., T. Neuman, **Z. Baster**, Z. Rajfur, O. Szelest, C. Holte, A. Kubisiak, E. Kus, D. Wolfson, S. Chlopicki, B. S. Ahluwalia, M. Lekka, M. Szymonski, P. McCourt, B. Zapotoczny. (2022) From fixed-dried to wet-fixed to live – comparative super-resolution microscopy of liver sinusoidal endothelial cell fenestrations. ***Nanophotonics*** 11: 2253-70. doi:10.1515/nanoph-2021-0818
9. Adamczyk O., **Z. Baster**, M. Szczypior, Z. Rajfur. (2021) Substrate Stiffness Mediates Formation of Novel Cytoskeletal Structures in Fibroblasts during Cell–Microspheres Interaction. ***Int. J. Mol. Sci.*** 22: 960. doi:10.3390/ijms22020960
10. Krzeptowski W., L. Walkowicz, E. Krzeptowska, E. Motta, K. Witek, J. Szramel, T. Al Abaquita, **Z. Baster**, Z. Rajfur, E. Rosato, V. Stratoulias, T. I. Heino, E. M. Pyza. (2021) Mesencephalic Astrocyte-Derived Neurotrophic Factor Regulates Morphology of Pigment-Dispersing Factor-Positive Clock Neurons and Circadian Neuronal Plasticity in Drosophila melanogaster. ***Front. Physiol.*** 12: 705183. doi:10.3389/fphys.2021.705183
11. Witko T., **Z. Baster**, Z. Rajfur, K. Sofińska, J. Barbasz. (2021) Increasing AFM colloidal probe accuracy by optical tweezers. ***Sci. Rep.*** 11: doi:10.1038/S41598-020-79938-Z
12. **Baster Z.**, L. Li, S. Kukkurainen, J. Chen, O. Pentikäinen, B. Győrffy, V. P. Hytönen, H. Zhu, Z. Rajfur, C. Huang. (2020) Cyanidin-3-glucoside binds to talin and modulates colon cancer cell adhesions and 3D growth. ***FASEB J.*** 34: 2227–2237. doi:10.1096/fj.201900945R
13. **Baster Z.†**, L. Li, Z. Rajfur, C. Huang. (2020) Talin2 mediates secretion and trafficking of matrix metallopeptidase 9 during invadopodium formation. ***Biochim. Biophys. Acta - Mol. Cell Res.*** 1867: 118693. doi:10.1016/j.bbamcr.2020.118693
14. **Baster Z.†**, Z. Rajfur. (2020) BatchDeconvolution: a Fiji plugin for increasing deconvolution workflow. ***Bio-Algorithms and Med-Systems*** 16: doi:10.1515/bams-2020-0027
15. Bednarz A., P. Lipiński, R. R. Starzyński, M. Tomczyk, I. Kraszewska, S. Herman, K. Kowalski, E. Gruca, A. Jończy, R. Mazgaj, M. Szudzik, Z. Rajfur, **Z. Baster**, A. Józkowicz, M. Lenartowicz. (2020) Exacerbation of Neonatal Hemolysis and Impaired Renal Iron Handling in Heme Oxygenase 1-Deficient Mice. ***Int. J. Mol. Sci.*** 21: 1–19. doi:10.3390/IJMS21207754
16. Bartnicka D., J. Karkowska-Kuleta, M. Zawrotniak, D. Satała, K. Michalik, G. Zielinska, O. Bochenska, A. Kozik, I. Ciaston, J. Koziel, L. C. Dutton, A. H. Nobbs, B. Potempa, **Z. Baster**, Z. Rajfur, J. Potempa, M. Rapala-Kozik. (2019) Adhesive protein-mediated cross-talk between Candida albicans and Porphyromonas gingivalis in dual species biofilm protects the anaerobic bacterium in unfavorable oxic environment. ***Sci. Rep.*** 9: 4376. doi:10.1038/s41598-019-40771-8
17. Bednarz A., P. Lipiński, R. R. Starzyński, M. Tomczyk, W. Nowak, O. Mucha, M. Ogórek, O. Pierzchała, A. Jończy, R. Staroń, J. Śmierzchalska, Z. Rajfur, **Z. Baster**, A. Józkowicz, M. M. Lenartowicz, A. Jozkowicz, M. M. Lenartowicz. (2019) Role of the kidneys in the redistribution of heme-derived iron during neonatal hemolysis in mice. ***Sci. Rep.*** 9: 11102. doi:10.1038/s41598-019-47414-y

18. Gadzała M., D. Dułak, B. Kalinowska, **Z. Baster**, M. Bryliński, L. Konieczny, M. Banach, I. Roterman. (2019) The aqueous environment as an active participant in the protein folding process. ***J. Mol. Graph. Model.*** 87: 227–239. doi:10.1016/j.jmgm.2018.12.008
19. Ogórek M., S. Herman, O. Pierzchała, A. Bednarz, Z. Rajfur, **Z. Baster**, P. Grzmil, R. R. Starzyński, M. Szudzik, A. Jończy, P. Lipiński, M. Lenartowicz. (2019) Molecular machinery providing copper bioavailability for spermatozoa along the epididymial tubule in mouse. ***Biol. Reprod.*** 100: 1505–1520. doi:10.1093/biolre/ioz028
20. Durak-Kozica M., Z. Baster, K. Kubat, E. Stępień. (2018) 3D visualization of extracellular vesicle uptake by endothelial cells. ***Cell. Mol. Biol. Lett.*** 23: 57. doi:10.1186/s11658-018-0123-z
21. Karkowska-Kuleta J., D. Bartnicka, M. Zawrotniak, G. Zielinska, A. Kierońska, O. Bochenska, I. Ciaston, J. Koziel, J. Potempa, **Z. Baster**, Z. Rajfur, M. Rapala-Kozik. (2018) The activity of bacterial peptidylarginine deiminase is important during formation of dual-species biofilm by periodontal pathogen Porphyromonas gingivalis and opportunistic fungus Candida albicans. ***Pathog. Dis.*** 76: fty033. doi:10.1093/femspd/fty033
22. Milewska A., P. Nowak, K. Owczarek, A. Szczepanski, M. Zarebski, A. Hoang, K. Berniak, J. Wojarski, S. Zeglen, **Z. Baster**, Z. Rajfur, K. Pyrc. (2018) Entry of Human Coronavirus NL63 into the Cell. ***J. Virol.*** 92: e01933-17. doi:10.1128/JVI.01933-17
23. Owczarek K., A. Szczepanski, A. Milewska, **Z. Baster**, Z. Rajfur, M. Sarna, K. Pyrc. (2018) Early events during human coronavirus OC43 entry to the cell. ***Sci. Rep.*** 8: 7124. doi:10.1038/s41598-018-25640-0
24. Szczepanski A., K. Owczarek, A. Milewska, **Z. Baster**, Z. Rajfur, J. A. Mitchell, K. Pyrc. (2018) Canine respiratory coronavirus employs caveolin-1-mediated pathway for internalization to HRT-18G cells. ***Vet. Res.*** 49: 55. doi:10.1186/s13567-018-0551-9
25. **Baster Z.**, S. Lasota, T. Witko, E. Zimoląg, J. Sroka, Z. Madeja, Z. Rajfur. (2017) Migration-related Protein Activity in Cell Electrotaxis. ***Acta Phys. Pol. B*** 48: 1727. doi:10.5506/APhysPolB.48.1727
26. Lasota S., **Z. Baster**, T. Witko, E. Zimoląg, J. Sroka, Z. Rajfur, Z. Madeja. (2017) [FRET-based biosensors in cell migration research]. ***Postepy Biochem.*** 63: 16–33. PMID:28409572
27. Lenartowicz M., R. R. Starzyński, A. Jończy, R. Staroń, J. Antoniuk, W. Krzeptowski, P. Grzmil, A. Bednarz, O. Pierzchała, M. Ogórek, Z. Rajfur, **Z. Baster**, P. Lipiński. (2017) Copper therapy reduces intravascular hemolysis and derepresses ferroportin in mice with mosaic mutation (Atp7a mo-ms): An implication for copper-mediated regulation of the Slc40a1 gene expression. ***Biochim. Biophys. Acta - Mol. Basis Dis.*** 1863: 1410–1421. doi:10.1016/j.bbadis.2017.02.020
28. Ogórek M., M. Lenartowicz, R. Starzyński, A. Jończy, R. Staroń, A. Doniec, W. Krzeptowski, A. Bednarz, O. Pierzchała, P. Lipiński, Z. Rajfur, **Z. Baster**, P. Gibas-Tybur, P. Grzmil. (2017) Atp7a and Atp7b regulate copper homeostasis in developing male germ cells in mice. ***Metallomics*** 9: 1288–1303. doi:10.1039/C7MT00134G
29. Roterman I., L. Konieczny, M. Banach, D. Marchewka, B. Kalinowska, Z. **Baster, M**. Tomanek, M. Piwowar. (Springer Berlin Heidelberg, 2014). *Computational Methods to Study the Structure and Dynamics of Biomolecules and Biomolecular Processes*. ***Comput. Methods to Study Struct. Dyn. Biomol. Biomol. Process.*** 1: doi:10.1007/978-3-642-28554-7
30. **Baster Z.** † (2013) The identification and the elimination of clashes in the structure of an early-stage intermediate in the protein folding process. ***Bio-Algorithms and Med-Systems*** 9: 199–207. doi:10.1515/bams-2013-0113
31. Kalinowska B., P. Alejster, K. Sałapa, **Z. Baster**, I. Roterman. (2013) Hypothetical in silico model of the early-stage intermediate in protein folding. ***J. Mol. Model.*** 19: 4259–4269. doi:10.1007/s00894-013-1909-6
32. Jurkowski W., **Z. Baster**, D. Dułak, I. Roterman-Konieczna. (Elsevier, 2012). in ***Protein Fold. Silico*** 1–20. doi:10.1533/9781908818256.1

PATENTS

33. Barbasz J., T. Witko, **Z. Baster**. (2022) [Method for determination of a force constant of a "colloidal probe" type lever for the atomic force microscope]. Polish Patent no. P.422059

REFERENCES

Clare M. Waterman, PhD
(Postdoctoral advisor)
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Director, Cell and Developmental Biology Center
National Institutes of Health
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Zenon Rajfur, PhD, DSc
(PhD Advisor)
Associate Professor
Faculty of Physics, Astronomy, and Applied Computer Science
Jagiellonian Center of Biomedical Imaging
Jagiellonian University
11 Lojasiewicza Street
30-348 Krakow, Poland
Phone: +48 12 664 46 88
E: zenon.rajfur@uj.edu.pl

Jennifer C. Waters, PhD
(Director of Quantitative Imaging course at CSHL)
Director of the Nikon Imaging Center
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