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**Anna Nowicka** [anowicka@biogeo.uw.edu.pl](mailto:anowicka@biogeo.uw.edu.pl)

## Education

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- 2014 – present** Ph.D. Studies at the Faculty of Physics, University of Warsaw
- 2014** **M.Sc., Molecular Biophysics**, Faculty of Physics
- *Development of fluorescent methods for evaluation of nucleotide inhibitors of cap dependent processes*; supervised by dr hab. Jacek Jemielity
- 2012** **B.Sc., Molecular Biophysics**, Faculty of Physics
- *Analogs of 7-methylguanosine diphosphate modified at the bridging position of pyrophosphate moiety as inhibitors of DcpS enzyme*; supervised by dr hab. Jacek Jemielity
- 2009-present** Studies at the Faculty of Physics (2009-2014) and studies at the Faculty of Chemistry (2012-present)

## Research Interests

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- Characterization of highly potent inhibitors of cap-dependent processes
- High-throughput screening methods for searching pyrophosphatases inhibitors
- Application of fluorescence-based techniques for protein – ligand interaction analysis

## Publications and Patents

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- Kowalska J., Jemielity J., Baranowski M.R., **Nowicka A.**, Kasprzyk R., Fluorophosphate analogs of mRNA 5' end (cap), their preparation and applications - Polish patent application, 28.01.2014, Nr P 406893
- Kowalska J., Baranowski M.R., **Nowicka A.**, Kasprzyk R., Zuberek J., Wojcik J., Jemielity J. Synthesis and properties of nucleotides containing a fluorophosphate moiety, Collection Symposium Series, Volume 14, 2014, Chemistry of nucleic acid components, ISBN 978-80-86241-50-0
- Walczak S., Wanat P., **Nowicka A.**, Zuberek J., Kowalska J., Jemielity J. Synthesis and properties of dinucleotide cap analogs containing a triazole ring within the oligophosphate bridge, Collection Symposium Series, Volume 14, 2014, Chemistry of nucleic acid components, ISBN 978-80-86241-50-0
- Ziemniak, M., Szabelski M., Lukaszewicz M., **Nowicka A.**, Darzynkiewicz E., Wieczorek Z., Rhoads R. E., Jemielity J., Synthesis and evaluation of fluorescent cap analogues for mRNA labelling, *RSC Advances* (2013) 3, 20943 – 20958

## Distinctions and Awards

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- Scholarship of Janina Opieńska-Blauth for students attending in annual Meeting of the Polish Biochemical Society (PTBioch), 2012.
- Scholarship of Polish Ministry of Science and Higher Education for superior achievements (2012-2013)
- Scholarship of Rector of University of Warsaw for the Best Students (2010-2011, 2011-2012)

## Conference Communications

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- **Nowicka A.**, Baranowski M.R., Kowalska J., Jemielity J., *Opracowanie nowej metody poszukiwania inhibitorów enzymu DcpS.*, 57. Zjazd PTChem I STPChem, Częstochowa, Poland, 14-18.09.2014.
- **Nowicka A.**, Baranowski M., Ziemniak M., Jemielity J., Kowalska J., *Fluorescence-based techniques for exploring exploring inhibitors of cap-dependent processes and drug discovery*, XXI Round Table on Nucleosides, Nucleotides and nucleic acids, Poznań, Poland, 24-28.08.2014.
- Wnek K., **Nowicka A.**, Kopcial M., Kowalska J., Ziemniak M., Wypijewska A., Darzynkiewicz Z., Darzynkiewicz E., Jemielity J., *Mononucleotide cap analogs modified within the phosphate chain are effective inhibitors of DcpS (Decapping Scavenger) enzyme*, 14th Tetrahedron Symposium, Vienna, Austria, 25-28.06.2013.
- **Nowicka A.**, Wnek K., Kowalska J., Ziemniak M., Wypijewska A., Darzynkiewicz Z. M., Jemielity J., *Modified cap analogs are efficient inhibitors of DcpS enzyme*, II International Conference of Biophysics Students, Cracow, Poland, 24-26.05.2013.
- Wnek K., **Nowicka A.**, Kowalska J., Wypijewska A., Darzynkiewicz Z., Darzynkiewicz E., Jemielity J., *Analogi difosforanu 7-metyloguanozyny jako inhibitory enzymu DcpS*, 55. Zjazd PTChem I SITPChem, Białystok, Poland, 16-20.09.2012.
- **Nowicka A.**, Wnek K., Kowalska J., Ziemniak M., Strenkowska M., Darzynkiewicz Z., Darzynkiewicz E., Jemielity J., *7-methyl guanosine 5'-diphosphates modified in bridging and non-bridging position as inhibitors of Decapping Scavenger enzyme (DcpS)*, Polish-German Biochemical Societies Joint Meeting Biochemistry for Health and Environment, Poznań, Poland, 11-14.09.2012.
- Wypijewska A., **Nowicka A.**, Wnek K., Kowalska J., Kulis M., Bojarska E., Lukaszewicz M., Jemielity J., Darzynkiewicz E., *Searching for DcpS Enzyme Inhibitors Among Cap Analogs Modified In The Phosphate Chain*, Workshop on Biomolecules and Nanostructures – Będlewo 3, Będlewo, Poland, 4-8.09.2011.
- Wypijewska A., Wnek K., **Nowicka A.**, Kowalska J., Bojarska E., Darzynkiewicz E., Jemielity J., *Podatność boranofosforanowych analogów kapu na hydrolizę enzymatyczną katalizowaną przez C. elegans DcpS*, 54. Zjazd PTChem i SITPChem, Lublin, Poland, 18-22.09.2011.
- Wypijewska A., Wnek K., **Nowicka A.**, Kulis M., Rydzik A. M., Lukaszewicz M., Bojarska E., Jemielity J., Darzynkiewicz E., *Inhibitors of enhanced binding affinity based on chemically modified m<sup>7</sup>GpppG by NH group*, Multi-Pole Approach to Structural Biology, Warsaw, Poland, 16-19.09.2011.
- Wypijewska A., **Nowicka A.**, Wnek K., Kowalska J., Ziemniak M., Lukaszewicz M., Bojarska E., Jemielity J., Darzynkiewicz E., *Selective inactivation of Decapping Scavenger (DcpS) enzyme by the diastereoisomeric cap analog with a sulphur atom*, Multi-Pole Approach to Structural Biology, Warsaw, Poland, 16-19.09.2011.