

Martyna Maszota-Zieleniak

Research experience and academic degrees:

From 10.2019: Postdoctoral researcher at Faculty of Chemistry, University of Gdańsk, Poland
NCN Sonata BIS 8 project: Modeling of glycosaminoglycan-induced formation of protein structure and enhancement of biologically relevant protein-ligand interactions.

02.2011 - 05.2011: Research internship in the LLP-Erasmus program at the National Institute of Chemistry, Slovenian NMR Centre, Ljubljana, Slovenia

10.2008 - 12.2017: PhD in Chemistry, Faculty of Chemistry, University of Gdańsk, Poland

06.2008: Master Degree in Environmental Science, Faculty of Chemistry, University of Gdańsk, Poland

Grants and Awards:

1. Head in PRELUDIUM 2 grant from National Science Center (Poland). Project: Solution NMR investigations of human cystatin C - structure, dynamics and protein-ligand interactions.
2. Employee in SONATA BIS 1 grant from National Science Center (Poland). Project: Molecular characteristics of the human cystatin C complex with natural auto-antibodies.
3. Employee in Polish-Swiss Research Programme. Project: Design of BTLA protein inhibitors as new anti-melanoma drugs.
4. Scholarship financed by the European Social Fund, "We educate the best - a comprehensive development program of doctoral students, young doctors and academic teaching staff of the University of Gdańsk" (01/02/2013 - 31/01/2014)

Publications:

1. Zsila, F., Samsonov, S. A., & Maszota-Zieleniak, M. (2020). Mind your dye: the amyloid sensor thioflavin T interacts with sulfated glycosaminoglycans used to induce cross- β -sheet motifs. *The Journal of Physical Chemistry B*, 124(51), 11625-11633.
2. Kogut, M. M., Maszota-Zieleniak, M., Marcisz, M., & Samsonov, S. A. (2021). Computational insights into the role of calcium ions in protein-glycosaminoglycan systems. *Physical Chemistry Chemical Physics*, 23(5), 3519-3530.
3. de Carvalho Bertozo, L., Maszota-Zieleniak, M., Bolean, M., Ciancaglini, P., Samsonov, S. A., & Ximenes, V. F. (2021). Binding of fluorescent dansyl amino acids in albumin: When access to the protein cavity is more important than the strength of binding. *Dyes and Pigments*, 188, 109195.
4. Samsonov, S. A., Zsila, F., & Maszota-Zieleniak, M. (2021). Acute phase α 1-acid glycoprotein as a siderophore-capturing component of the human plasma: A molecular modeling study. *Journal of Molecular Graphics and Modelling*, 105, 107861.

5. Maszota-Zieleniak, M., Marcisz, M., Kogut, M. M., Siebenmorgen, T., Zacharias, M., & Samsonov, S. A. (2021). Evaluation of replica exchange with repulsive scaling approach for docking glycosaminoglycans. *Journal of Computational Chemistry*, 42(15), 1040-1053.
6. Maszota-Zieleniak, M., Zsila, F., & Samsonov, S. A. (2021). Computational insights into heparin-small molecule interactions: Evaluation of the balance between stacking and non-stacking binding modes. *Carbohydrate Research*, 507, 108390.
7. Maszota-Zieleniak, M., Danielsson, A., & Samsonov, S. A. (2021). The potential role of glycosaminoglycans in serum amyloid A fibril formation by in silico approaches. *Matrix biology plus*, 12, 100080.
8. Antoniak, A., Biskupek, I., Bojarski, K. K., Czaplewski, C., Giełdoń, A., Kogut, M., ... & Zięba, K. (2021). Modeling protein structures with the coarse-grained UNRES force field in the CASP14 experiment. *Journal of Molecular Graphics and Modelling*, 108008.
9. Lensink, M. F., Brysbaert, G., Mauri, T., Nadzirin, N., Velankar, S., Chaleil, R. A., ... & Wodak, S. J. (2021). Prediction of protein assemblies, the next frontier: The CASP14-CAPRI experiment. *Proteins: Structure, Function, and Bioinformatics*.
10. M. Spodzieja, K. Kuncewicz, A. Sieradzan, A. Karczyńska, J. Iwaszkiewicz, V. Cesson, K. Węgrzyn, I. Zhukov, M. Maszota-Zieleniak, O. Michielin, D.E. Speiser, V. Zoete, L. Derré, S. Rodziewicz-Motowidło, Disulfide-Linked Peptides for Blocking BTLA/HVEM Binding. *Int. J. Mol. Sci.* 2020, 21, 636.
11. M. Maszota-Zieleniak, P. Jurcak, M. Orlikowska, I. Zhukov, D. Borek, Z. Otwinowski, P. Skowron, Z. Pietralik, M. Kozak, A. Szymańska, S. Rodziewicz-Motowidło „NMR and crystallographic structural studies of extremely stable monomeric variant of human cystatin C with single amino acid substitution, *The FEBS Journal* 287.2 (2020): 361-376.
12. M. Chrabąszczewska, M. Maszota-Zieleniak, Z. Pietralik, M. Taube, S. Rodziewicz-Motowidło, A. Szymańska, K. Szutkowski, D. Clemens, A. Grubb, M. Kozak „Cyclic trimer of human cystatin C, an amyloidogenic protein – molecular dynamics and experimental studies”, *Journal of Applied Physic*, 2018, 123:17
13. M. Spodzieja, K. Kalejta, AS. Kołodziejczyk, M. Maszota-Zieleniak, S. Rodziewicz-Motowidło, W. Żmudzińska, P. Czaplewska, ‘Characteristics of C-terminal, β -amyloid peptide binding fragment of neuroprotective protease inhibitor, cystatin C’, *Journal of Molecular Recognition* vol. 30, pp. 2581, 2017
14. M. Maszota N. Karska, M. Spodzieja, J. Ciarkowski, A. Kołodziejczyk, S. Rodziewicz-Motowidło, P. Czaplewska: „Structural studies of the C-terminal 19-peptide of serum amyloid A and its Pro->Ala variants interacting with human cystatin C”, *Journal of Molecular Recognition*, 2015, 28:413-426

15. P. Jurczak, M. Maszota-Zieleniak: „NMR studies of human cystatin C : stable isotope labeling of human cystatin C”, TASK Quarterly, 2014, 18:327-330

16. M. Spodzieja, A. Szymańska, A. Kołodziejczyk, M. Prądyńska, M. Maszota, P. Stefanowicz, Z. Szewczuk, A. Grubb, P. Czaplewska: „Interaction of serum amyloid A with human cystatin C-identification of binding sites”, Journal of Molecular Recognition, 2012, 10:513-524

Languages:

Polish (native), English (fluent)