

## List of potential promoters for the BioMedChem Doctoral School

Name of academic staff member	Area of scientific and research interests / <u>Proposed topics for the doctoral thesis</u>
<p><b>Dr hab. Agnieszka B. Olejniczak, prof. IMB PAS</b></p> <p>✉ <a href="mailto:aolejniczak@cbm.pan.pl">aolejniczak@cbm.pan.pl</a> IMB PAS, Lodz ☎ + 48 42 272 36 37 ORCID 0000-0003-4628-9017</p> <p><i>Leading discipline – medical science chemical science</i></p>	<p>Organic Chemistry, bioorganic chemistry, medical chemistry, compounds with antibacterial and antiviral activity, boron clusters in medical chemistry.</p> <p><u>Proposed topics for the doctoral thesis</u></p> <p>Application of boron clusters for the modification of biomolecules. Study of physicochemical and biological properties. The use of boron clusters as redox markers of biomolecules.</p>
<p><b>Prof. dr hab. Arkadiusz Chworos</b></p> <p>✉ <a href="mailto:arkadiusz.chworos@cbmm.lodz.pl">arkadiusz.chworos@cbmm.lodz.pl</a> CBMM PAS, Lodz ☎ + 48 42 680 32 20 ORCID <a href="https://orcid.org/0000-0001-9924-0503">orcid.org/0000-0001-9924-0503</a> <i>Leading discipline – chemical science</i></p>	<p>Structural nucleic acids (DNA, RNA), bionanomaterials, RNA modifications, RNA-protein and protein-ligand interactions in theoretical and experimental studies, fluorescent markers and fluorescent membrane staining.</p>
<p><b>Dr hab. Marta Dudek, prof. CBMM</b></p> <p>✉ <a href="mailto:marta.dudek@cbmm.lodz.pl">marta.dudek@cbmm.lodz.pl</a> CBMM PAS, Lodz ☎ + 48 42 680 32 39 ORCID <a href="https://orcid.org/0000-0003-3412-0177">orcid.org/0000-0003-3412-0177</a> <i>Leading discipline – chemical science</i></p>	<p>Solid-state NMR, crystallization processes, polymorphism, solvates and hydrates formation, design and synthesis of cocrystals, crystal structure prediction calculations, DFT calculations.</p>

<p><b>Prof. dr hab. Andrzej Gałęski</b></p> <p>✉ <a href="mailto:andrzej.galeski@cbmm.lodz.pl">andrzej.galeski@cbmm.lodz.pl</a> CBMM PAS, Lodz ☎ + 48 42 680 32 50 ORCID <a href="https://orcid.org/0000-0003-3058-1312">orcid.org/0000-0003-3058-1312</a> <i>Leading discipline – chemical science</i></p>	<p>Physical chemistry of polymers, polymer nanomaterials.</p>
<p><b>Dr hab. Agnieszka Krakowiak, prof. CBMM</b></p> <p>✉ <a href="mailto:agnieszka.krakowiak@cbmm.lodz.pl">agnieszka.krakowiak@cbmm.lodz.pl</a> CBMM PAS, Lodz ☎ + 48 42 680 32 72 ORCID <a href="https://orcid.org/0000-0002-0273-2972">orcid.org/0000-0002-0273-2972</a> <i>Leading discipline – chemical science</i></p>	<p>Biochemistry of modified nucleic acids, enzymology, including properties of selected nucleic acid-specific nucleases, enzyme kinetics; in particular:</p> <ol style="list-style-type: none"><li>1. study of the properties of HIT family proteins:<ul style="list-style-type: none"><li>- Hint3: expression, enzymatic activity and binding affinity towards different substrates.</li><li>- Study of the autoproteolytic activity of the Hint2 protein.</li></ul></li><li>2. nucleoside selenophosphates in reduction stress studies and their effect on cellular redox balance.</li><li>3. study of targeted transport into cancer cells - use of nanoparticles and exosomes.</li></ol>
<p><b>Prof. dr hab. Barbara Nawrot</b></p> <p>✉ <a href="mailto:barbara.nawrot@cbmm.lodz.pl">barbara.nawrot@cbmm.lodz.pl</a> CBMM PAS, Lodz ☎ + 48 42 680 32 48 ORCID <a href="https://orcid.org/0000-0002-4084-4334">orcid.org/0000-0002-4084-4334</a> <i>Leading discipline – chemical science</i></p>	<p>Therapeutic nucleic acids; tRNA epitranscriptomics; proteins involved in tRNA maturation; structure of nucleic acids and their complexes with proteins; chemistry of modified nucleosides; search for effective anticancer drugs.</p>

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**IMB PAS** - Institute of Medical Biology of Polish Academy of Sciences in Lodz

**CBMM PAS** – Centre of Molecular and Macromolecular Studies Polish Academy of Sciences in Lodz