

# Prospective supervisor's form

Name of the supervisor: Ewa Augustin

Academic title: PhD, DSc

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Gdańsk University of Technology Faculty of Chemistry

Department of Pharmaceutical Technology and Biochemistry

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Personal web page: <https://pg.edu.pl/>

Discipline: chemical sciences [NCh] none

Optional

Key words (obligatory four key words describing research interests / expertise):

# anticancer drugs

# cancer therapy

# cytotoxicity and cellular response

# drug-nanoparticle conjugates

## Bibliometric indicators

1. Number of journal publications in WoS/ Scopus 26/28

2. Citations excluding self-citations WoS 371 Scopus 370

3. Hirsch index WoS 12 Scopus 13

1. The number of PhD students who have graduated under your supervision: 0

2. The number of PhD students currently supervised:

a. within the current doctoral school 1

b. within doctoral studies (previous system) 1

3. Are you currently accepting new PhD students:

a. Polish Yes/No Yes

b. Foreign Yes/No No

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Research interests or topics offered for PhD research (no more than 2000 characters)<sup>ii</sup>

Study of the mechanism of action of potent and novel anticancer agents on the cellular level.  
 The scope of the research will include:  
 - cytotoxicity of studied compounds against the set of human tumor cell lines and against normal cells;  
 - various mechanisms of the compound transport into normal cells and into the set of human tumor cells;  
 - analysis of various cellular response (apoptosis, necrosis, mitotic catastrophe, autophagy, cellular senescence) against the studied compounds in the case of normal and tumor cells;  
 -the induction of nuclear receptor activity, mainly PXR, CAR, in the relation to cellular response against the studied antitumor agents;

Funding or special equipment needed to carry out a PhD project <sup>iii</sup>:

1. Is funding available for experimental work: *Yes/No/not needed*

2. Is the equipment needed to complete a PhD project available in your lab/department: *Yes/No/not needed*

Most important publications – no more than 5 published after 1.01.2018

No	Authors/title/journal	Number of points according to the current list of the Ministry of Science and Higher Education	Publication year
1.	Mania S., Tylingo R., Augustin E., Gucwa K., Szwacki J., Staroszczyk H.: Investigation of an elutable N-propylphosphonic acidchitosan derivative composition with a chitosan matrixprepared from carbonic acid solution// CARBOHYDRATE POLYMERS. -Vol. 179, (2018), s.196-206	140	2018
2.	Matysiak-Brynda E., Bujak P., Augustin E., Kowalczyk A., Mazerska Z., Pron A., Nowicka a.: Stable nanoconjugates of transferrin with alloyed quaternary nanocrystals Ag–In–Zn–S as a biological entity for tumor recognition// NANOSCALE. -Vol. 10, iss. 3 (2018), s.1286-1296	140	2018

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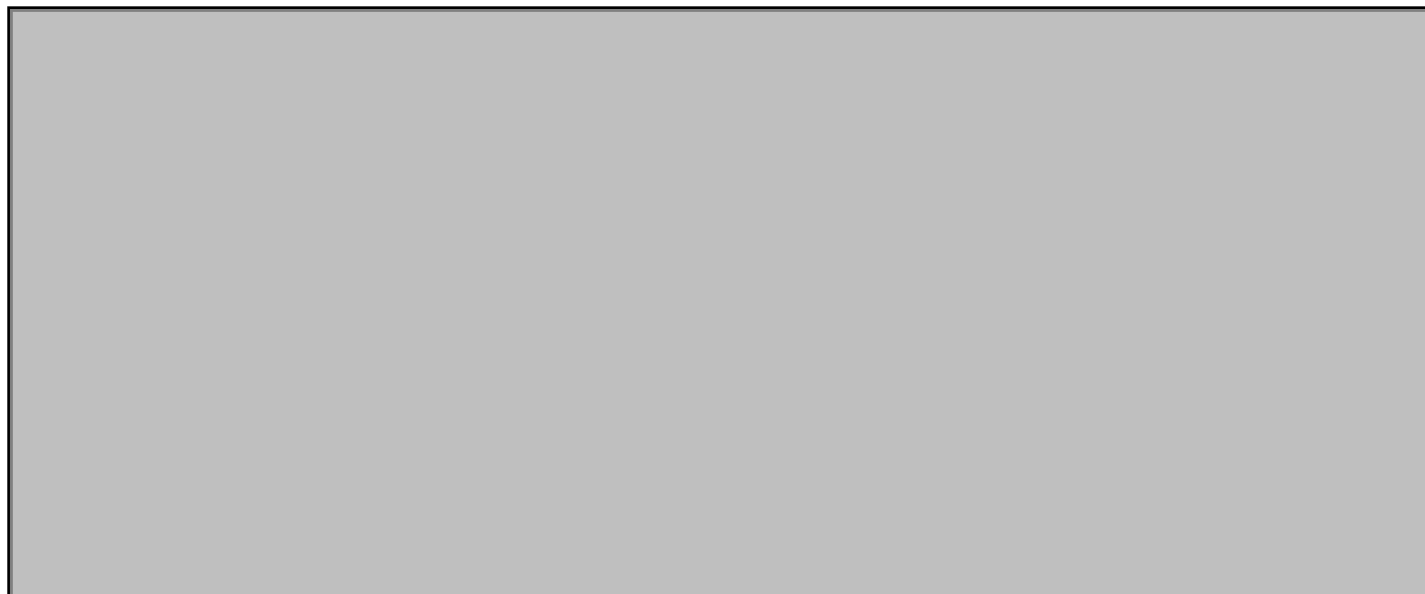
3.	Mania S., Partyka K., Pilch J., Augustin E., Cieřlik M., Ryl J., Jinn J., Wang Y., Michałowska A., Tylingo R.: Obtaining and Characterization of the PLA/Chitosan Foams with Antimicrobial Properties Achieved by the Emulsification Combined with the Dissolution of Chitosan by CO2 Saturation// MOLECULES -Vol. 24,iss. 24 (2019), s.1-17	100	2019
4.	Pilch J., Matysiak-Brynda E., Kowalczyk A., Bujak P., Mazerska Z., Nowicka A., Augustin E.: New Unsymmetrical Bisacridine Derivatives Noncovalently Attached to Quaternary Quantum Dots Improve Cancer Therapy by Enhancing Cytotoxicity toward Cancer Cells and Protecting Normal Cells// ACS Applied Materials & Interfaces -Vol.	200	2020
5.			

### Most recent externally funded projects you were involved in – no more than 3

No	Project title, the name of the Principal Investigator (PI) and the institution the project was carried out	Years	Role in the project <sup>i</sup>
1.	Specific interactions of new antitumor unsymmetrical bisacridines, UAs, with DNA and ABC proteins and their potential to modulate the enzymatic activity and transcription of nuclear receptors as the elements of their molecular mechanism of action. Zofia Mazerska, PI, NCN, OPUS	2019-2022	Co-I
2.	Biological response induced by high antitumor active unsymmetrical bisacridines against human colon and lung cancers and improved by nanoparticles drug delivery. Ewa Augustin, PI, NCN, OPUS	2017-2020	PI
3.	Impact of P450 and UGT on cellular response induced by antitumor acridinone derivatives. The role of increased metabolite concentrations or the contribution of PXR and/or CAR nuclear receptors to these processes? Zofia Mazerska, PI, NCN, OPUS	2014-2017	Co-I

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Additional relevant information (no more than 1600 characters)<sup>v</sup>



- <sup>i</sup> You may select up to two disciplines out of 12 disciplines represented in the Doctoral School
- <sup>ii</sup> Observe the limit of not more than 2000 characters
- <sup>iii</sup> Leave only one answer
- <sup>iv</sup> Select the role in the project: PI stands for principal investigator (refers to the holder of an independent grant and the lead researcher for the grant project), Co-I for co-investigator (Co-I assists the principal investigator in the management and leadership of the research project), R for researcher
- <sup>v</sup> Add any other relevant information e.g. awards for PhD students whom you supervised (no more than 1600 characters)