

## Anna Karnkowska, PhD

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### EDUCATION

- 2021                    **Habilitation**  
University of Warsaw, Poland
- 2011                    **PhD in Molecular Evolution and Taxonomy**  
Faculty of Biology, University of Warsaw, Poland  
Thesis: *Phylogeny and taxonomy of autotrophic euglenids (Euglenea) based on molecular and morphological data*  
Supervisor: Prof. Bożena Zakryś
- 2006                    **MSc (Hons) in Biology of the cell and organism**  
Faculty of Biology, University of Warsaw, Poland
- 2004                    **BSc (Hons) in Biology of the cell and organism**  
Faculty of Biology, University of Warsaw, Poland

### CURRENT POSITION

- 2017-present        **Assistant Professor**  
Institute of Evolutionary Biology, University of Warsaw, Poland

### PROFESSIONAL EXPERIENCE

- 2022-2023            **Visiting researcher**  
Institute of Evolutionary Biology, CSIC-UPF, Barcelona, Spain (6 months)
- 2021                    **Visiting researcher**  
Roscoff Marine Station, Sorbonne University, France (1 month)
- 2016                    **Postdoctoral research fellow**  
Botany Department, University of British Columbia, Vancouver, Canada  
Supervisor: Prof. Patrick Keeling
- 2013–2015            **Postdoctoral research fellow**  
Parasitology Department, Charles University in Prague, Czech Republic  
Supervisor: Prof. Vladimír Hampl
- 2014                    **Visiting researcher**  
Department of Cell Biology, University of Alberta, Canada (6 months)  
Supervisor: Prof. Joel B. Dacks
- 2014                    **Visiting researcher**  
Dept. of Biochemistry & Molecular Biology, Dalhousie University, Canada (2 weeks), Supervisor: Prof. Andrew J. Roger
- 2009                    **Visiting researcher**  
Ehrenberg collection, Museum für Naturkunde, Germany (2 weeks)
- 2006                    **Visiting researcher**  
Dept. of Plant Biology, Michigan State University, USA (2 months)  
Supervisor: Prof. Richard E. Triemer
- 2004                    **Student volunteer**  
Laboratory of Bioinformatics and Protein Engineering, International Institute of Molecular and Cell Biology, Poland (3 months)

## **RESEARCH GRANTS**

### AS A PRINCIPAL INVESTIGATOR

- 2022-2026 *Photosymbiosis in freshwater ciliates: elucidating its diversity, functioning and evolution with single-cell sequencing*, Preludium BIS grant, Polish National Science Center
- 2021-2025 *Freshwater microbial communities in the eutrophication gradient: diversity and interactions of protists and bacteria (MicroDivEr)*, OPUS grant, Polish National Science Center
- 2021 Inverted light microscope for the single-cell isolation of microbial eukaryotes EMBO Small Grant
- 2020 *Establishing protocols for the long-read sequencing of microbial eukaryotes* EMBO Small Grant
- 2019 -2023 *Evolution of phototrophy in eukaryotes* EMBO Installation Grant
- 2017-2020 *Plastid evolution and functions of colourless algae within the Euglenophytes and Dictyochophyceae*, SONATA grant, Polish National Science Center
- 2012-2013 *Occurrence and distribution of conventional and non-conventional introns in tubB gene of heterotrophic euglenids*, University of Warsaw intramural grant
- 2009 *Taxonomy of green euglenids - insight into the Ehrenberg Collection*, UE grant in Synthesys program, Museum für Naturkunde, Berlin
- 2009-2010 *Origin of the chloroplast of green euglenids based on the phylogeny of psbO gene*, University of Warsaw intramural grant
- 2008-2009 *Evolution of gapC gene in Euglenida*, University of Warsaw intramural grant
- 2007-2008 *Analysis of value of cox1 sequence in taxonomy and phylogeny of euglenids*, University of Warsaw intramural grant

### AS A TEAM MEMBER OR CO-PI

- 2022-2025 *Structure and evolution of mitochondrial genomes in Euglenids*, PRELUDIUM grant, Polish National Science Center, supervisor
- 2019-2022 *Evolution and function of inverted repeats (IR) in the plastid genomes of Euglenophyta*, Preludium Grant, Polish National Science Center, supervisor
- 2017-2022 *Life without mitochondrion*, ERC Consolidator grant (Co-PI). Vladimír Hampl, Charles University in Prague, Czech Republic.
- 2013-2015 *Genome sequencing of oxymonad and Trimastix*. PI: Dr Vladimír Hampl, Charles University in Prague, Czech Republic
- 2011-2014 *Distribution of conventional and non-conventional introns in nuclear genes of photosynthetic euglenids*, Polish National Science Center grant. PI: Dr Rafał Milanowski, University of Warsaw, Poland
- 2011-2014 *Molecular identification of green euglenids and taxonomic verification of cryptic species*, Ministry of Science and Higher Education grant. PI: Prof. Bożena Zakryś, University of Warsaw, Poland
- 2011-2013 *The potential and realized toxicity of cyanobacteria in the waters of the Great Mazurian Lakes on the basis of molecular markers analysis, concentrations of*

*toxins and environmental analysis*, Polish Ministry of Science and Higher Education grant.

PI: Dr Iwona Jasser, University of Warsaw, Poland

2007-2010 *Phylogeny and taxonomy of euglenids (Euglenaceae) based on molecular and morphological data*, Ministry of Science and Higher Education grant.

PI: Prof. Bożena Zakryś, University of Warsaw, Poland

### **AWARDS AND FELLOWSHIPS**

|           |                                                                                                                                                                     |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2021      | The Bekker Programme scholarship, Polish National Agency for Academic Exchange                                                                                      |
| 2021      | L'Oréal-UNESCO For Women in Science Award                                                                                                                           |
| 2020      | Professor Stefan Pieńkowski Award                                                                                                                                   |
| 2020      | University of Warsaw Rector Individual Award for Research Achievement                                                                                               |
| 2020      | University of Warsaw Rector Team Award for Research Achievement                                                                                                     |
| 2019      | University of Warsaw Rector Individual Award for Research Achievement                                                                                               |
| 2018-2020 | Ministry of Science Scholarship for outstanding young scientists                                                                                                    |
| 2017      | University of Warsaw Rector Individual Award for Research Achievement                                                                                               |
| 2017      | Prize of Bedřich Hrozný for a major scientific achievement, Charles University in Prague                                                                            |
| 2016      | University of Warsaw Rector Team Award for Research Achievement                                                                                                     |
| 2016      | Postdoctoral Research Fellowship of Centre for Microbial Diversity and Evolution                                                                                    |
| 2015      | Phylogenetically informed curation of Eukaryotic 18S rDNA (EukRef) workshop fellowship (Vancouver, Canada).                                                         |
| 2015      | Holz-Conner Travel Award from ISOP for ISOP Conference (Sevilla, Spain)                                                                                             |
| 2015      | FEMS Young Scientists Meeting Grant for European Phycological Congress (London, United Kingdom)                                                                     |
| 2013      | Eukaryotic Cell Journal Outstanding Young Investigator Award at the EMBO Comparative Genomics of Eukaryotic Microorganisms conference (San Feliu de Guixols, Spain) |
| 2013-2015 | Postdoctoral Research Fellowship funded by European Social Fund and the state budget of the Czech Republic                                                          |
| 2013-2014 | Young Scientist Award of the Foundation for Polish Science                                                                                                          |
| 2012-2013 | Award for the best young PhDs of the University of Warsaw                                                                                                           |
| 2012-2013 | Polish Prime Minister Award for the doctoral thesis                                                                                                                 |
| 2012      | Holz-Conner Travel Award from ISOP for Protist2012 Conference (Oslo, Norway)                                                                                        |
| 2011      | University of Warsaw Rector Award for the doctoral thesis                                                                                                           |
| 2011      | Foundation for Polish Science Travel Award for VI European Congress of Protistology (Berlin, Germany)                                                               |
| 2009      | University of Warsaw Rector Award for Research Achievement                                                                                                          |
| 2009      | Travel Award from 9th International Phycological Congress organizers (Tokyo, Japan)                                                                                 |
| 2006-2010 | PhD scholarship funded by Faculty of Biology, University of Warsaw                                                                                                  |

## **LIST OF PUBLICATIONS**

1. Maciszewski K, Fells A, **Karnkowska A** (2022) **Challenging the importance of plastid genome structure conservation: new insights from euglenophytes**. *Molecular Biology and Evolution*, 39(12): msac255.
2. Ebenezer TE, Low RS, O'Neill EC, Huang I, DeSimone A, Farrow SC, Field RA, Ginger ML, Guerrero SA, Hammond M, Hampl V, Horst G, Ishikawa T, **Karnkowska A**, Linton EW, Myler P, Nakazawa N, Cardol P, Sánchez-Thomas R, Saville BJ, Shah MR, Simpson AGB, Sur A, Suzuki K, Tyler KM, Zimba PV, Hall N, Field MC (2022) **Euglena International Network (EIN): Driving euglenoid biotechnology for the benefit of a challenged world**. *Biology Open*, 11 (11): bio059561.
3. Rackevei AS, **Karnkowska A**, Wolf M (2022) **18S rDNA sequence-structure phylogeny of the Euglenophyceae (Euglenozoa, Euglenida)**. *Journal of Eukaryotic Microbiology*, e12959
4. Hałakuc P, **Karnkowska A**, Milanowski R (2022) **Typical structure of rRNA coding genes in diplomids points to two independent origins of the bizarre rDNA structures of euglenozoans**. *BMC Ecology and Evolution*, 22 (1): 59.
5. Kaszecki E, Kennedy V, Shah M, Maciszewski K, **Karnkowska A**, Linton, E. Ginger M L, Farrow S, Ebenezer, TE (2022). **Meeting report: Euglenids in the age of symbiogenesis: Origins, innovations, and prospects, November 8–11, 2021**. *Protist*, 173(4): 125894
6. Cho A, Tikhonenkov DV, Hehenberger E, **Karnkowska A**, Mylnikov AP, Keeling PJ (2022). **Monophyly of diverse bigyromonadea and their impact on phylogenomic relationships within stramenopiles**. *Molecular Phylogenetics and Evolution*, 171: 107468.
7. Maciszewski K, Dabbagh N, Preisfeld A, **Karnkowska A** (2022). **Matuzyosha: A maturase inside a maturase, and other peculiarities of the novel chloroplast genomes of marine euglenophytes**. *Molecular Phylogenetics and Evolution*, 170: 107441.
8. Karlicki M, Antonowicz S, **Karnkowska A** (2022) **Tiara: deep learning-based classification system for eukaryotic sequences**. *Bioinformatics*, 38: 344-350.
9. Treitli SC, Pena-Diaz P, Hałakuc P, **Karnkowska A**, Hampl V (2021). **High quality genome assembly of the amitochondriate eukaryote *Monocercomonoides exilis***. *Microbial Genomics*, 7(12): 000745
10. Soukal P, Hrdá Š, **Karnkowska A**, Milanowski R, Szabová J, Hradilová M, Strnad H, Vlcek C, Cepicka I, Hampl V. (2021). **Heterotrophic euglenid rhabdomonas costata resembles its phototrophic relatives in many aspects of molecular and cell biology**. *Sci Report*, 11, 13070
11. Singh R, Boscaro V, James ER, **Karnkowska A**, Kolisko M, Gavelis GS, Okamoto N, Del Campo J, Fiorito R, Hehenberger E, Irwin NAT, Mathur V, Scheffrahn RH, Keeling PJ (2021) **Characterization of new cristamonad species from kalotermitid termites including a novel genus, *Runanympa***. *Sci Report* 11, 7270.
12. Kostygov AY, **Karnkowska A**, Votýpka J, Tashyreva D, Maciszewski K, Yurchenko V, Lukeš J (2021) **Euglenozoa: taxonomy, diversity and ecology, symbioses and viruses**. *Open Biol.* 11, 200407.
13. Lax G, Kolisko M, Eglit Y, Lee WJ, Yubuki N, **Karnkowska A**, Leander BS, Burger G, Keeling PJ, Simpson AGB (2021) **Multigene phylogenetics of euglenids based on single-cell transcriptomics of diverse phagotrophs**, *Molecular Phylogenetics and Evolution*, 159:107088.
14. Kayama M, Maciszewski K, Yabuki A, Miyashita H, **Karnkowska A**, Kamikawa R (2020). **Highly reduced plastid genomes of the non-photosynthetic dictyochophyceans *Pteridomonas* spp. (Ochrophyta, SAR) are retained for tRNA-Glu-based organellar heme biosynthesis**. *Front Plant Sci*, doi: 10.3389/fpls.2020.602455.
15. Kolisko M, Flegontova O, **Karnkowska A**, Lax G, Maritz JM, Pánek T, Táborský P, Carlton JM, Čepička I, Horák A, Lukeš J, Simpson AGB, Tai V (2020) **EukRef-Excavates: Seven curated SSU ribosomal RNA gene databases**. *DATABASE*: baaa080
16. Bakula Z, Gromadka R, Gawor J, Siedlecki P, Pomorski J, Maciszewski K, Gromadka A, **Karnkowska A**, Jagielski T (2020) **Sequencing and analysis of the complete organellar genomes of *Prototheca wickerhamii***. *Frontiers in Plant Science*: doi: 10.3389/fpls.2020.01296

17. Lukesova S, Karlicki M, Hadariova L, Szabova J, **Karnkowska A**, Hampl V (2019). [Analyses of SSU rRNAs and two regions of chloroplast genomes revealed unexpected diversity of photosynthetic euglenids in marine environments](#). *Environ Microbiol Rep*, 12(1):78-91.
18. Jagielski T, Bakula Z, Gawor J, Maciszewski K, Kusber W-H, Dylag M, Nowakowska J, Gromadka R, **Karnkowska A** (2019) [Prototheca \(Trebouxiophyceae, Chlorophyta\) revisited: Implications from molecular taxonomic studies](#). *Algal Res*, 43: 101639.
19. Maciszewski K, **Karnkowska A** (2019) [Should I stay or should I go? Retention and loss of components in vestigial endosymbiotic organelles](#). *Curr Opin Genet Dev*, 58-59: 33-39.
20. Han KY, Maciszewski K, Graf L, Yang JH, Andersen AA, **Karnkowska A**, Yoon HS (2019) [Dictyochophyceae plastid genomes reveal unusual variability of their organization](#). *J Phycol*, 55: 1166-1180.
21. **Karnkowska A**, Treitli SC, Brzoň O, Novák L, Vacek V, Soukal P, Barlow LD, Herman EK, Pipaliya SV, Pánek T, Žihala D, Petrželková R, Butenko A, Eme L, Stairs CW, Roger AJ, Eliáš M, Dacks JB, Hampl V. (2019) [The oxymonad genome displays canonical eukaryotic complexity in the absence of a mitochondrion](#). *Mol Biol Evol*, 36(10): 2292-2312.
22. Adl, S.M., Bass, D., Lane, C.E., Lukeš, J., Schoch, C.L., Smirnov, A., Agatha, S., Berney, C., Brown, M.W., Burki, F., Cárdenas, P., Čepička, I., Chistyakova, L., Del Campo, J., Dunthorn, M., Edvardsen, B., Eglit, Y., Guillou, L., Hampl, V., Heiss, A.A., Hoppenrath, M., James, T.Y., **Karnkowska, A.**, Karpov, S., Kim, E., Kolisko, M., Kudryavtsev, A., Lahr, D.J.G., Lara, E., Le Gall, L., Lynn, D.H., Mann, D.G., Massana, R., Mitchell, E.A.D., Morrow, C., Park, J.S., Pawlowski, J.W., Powell, M.J., Richter, D.J., Rueckert, S., Shadwick, L., Shimano, S., Spiegel, F.W., Torruella, G., Youssef, N., Zlatogursky, V., Zhang, Q. (2019) [Revisions to the Classification, Nomenclature, and Diversity of Eukaryotes](#). *J Eukaryot Microbiol*, 66: 4–119.
23. **Karnkowska A**, Bennett MS, Trimer RE (2018) [Dynamic evolution of inverted repeats in Euglenophyta plastid genomes](#). *Sci Reports*, 8:16071.
24. Jagielski T, Gawor J, Bakula Z, Decewicz P, Maciszewski K, **Karnkowska A** (2018) [cytb as a new genetic marker for differentiation of Prototheca species](#). *J Clin Microbiol*, 56(10):e00584-18.
25. Leander BS, Lax G, **Karnkowska A**, Simpson AGB. [Euglenida](#). Handbook of the Protists, J.M. Archibald et al. (Eds.), Springer-Verlag, Wien. 2017, 1047-1088.
26. Zakryś B, Milanowski R, **Karnkowska A** (2017) [Evolutionary origin of Euglena](#). Euglena: Biochemistry, Cell and Molecular Biology. Schwartzbach, S. Shigeoka (Eds.) *Advances in Experimental Medicine and Biology* 979 p. 3-17.
27. Strassert JFH, **Karnkowska A**, Hehenberger E, del Campo J, Kolisko M, Okamoto N, Burki F, Janouškovec J, Poirier C, Leonard G, Hallam SJ, Richards TA, Worden AZ, Santoro AE, Keeling PJ. (2018) [Single cell genomics shows uncultured Marine Alveolates \(MALVs\) represent multiple independent lineages in early dinoflagellate evolution](#). *ISME Journal*, 12: 304–308.
28. del Campo J, James ER, Hirakawa Y, Fiorito R, Kolisko M, Irwin NAT, Mathur V, Boscaro V, Hehenberger E, **Karnkowska A**, Scheffrahn RH, Keeling PJ (2017) [Pseudotriconympha leei, Pseudotriconympha lifsoni, and Pseudotriconympha pearti, new species of parabasal flagellates and the description of a novel rotating organelle](#). *Sci Reports*, 7: 16349.
29. Boscaro V, James ER, Fiorito R, Hehenberger E, **Karnkowska A**, del Campo J, Kolisko M, Irwin NAT, Mathur V, Scheffrahn RH & Keeling PJ (2017) [Molecular characterization and phylogeny of four new Triconympha \(Parabasalia, Triconymphaea\) species from lower termite hindguts](#). *Int J Syst Evol Micr*, 67: 3570-3575.
30. Klinger CM, **Karnkowska A**, Herman EK, Hampl V, Dacks JB. [Phylogeny and Evolution](#). Molecular Parasitology – Protozoan Parasites and their Molecules. Julia Walochnik J and Michael Duchêne (Eds). Springer-Verlag, Wien. 2016, 383-408.
31. Novak L, Zubáčová Z, **Karnkowska A**, Kolisko M, Hroudová M, Stairs CW, Simpson AGB, Keeling PJ, Roger AJ, Čepička I, Hampl V (2016) [Arginine deiminase pathway enzymes: evolutionary history in metamonads and other eukaryotes](#). *BMC Evol Biol*, 16:197.
32. **Karnkowska A**, Hampl V (2016) [The curious case of vanishing mitochondria](#). *Microbial Cell*,

3(10):361-364.

33. Łukomska-Kowalczyk M\*, **Karnkowska A\***, Krupska M, Milanowski R, Zakryś B (2016) **DNA Barcoding In Autotrophic Euglenids: Evaluation of COI and 18S rDNA**. *J Phycol*, 52: 951-60.  
\*both authors contributed equally
34. **Karnkowska A**, Vacek V., Zubacova Z., Treitli SC., Petrzalkova R., Eme L., Novak L., Zarsky V., Barlow LD., Herman EK., Soukal P., Hroudova M., Dolezal P., Stairs CW., Roger AJ., Elias M, Dacks JB., Vlcek C. and Hampl V. (2016) **A Eukaryote without a Mitochondrial Organelle**. *Curr Biol*, 26: 1274–1284.
35. Milanowski R, Gumińska N, **Karnkowska A**, Ishikawa T, Zakryś B (2016) **Intermediate introns in nuclear genes of euglenids - are they a distinct type?** *BMC Evol Biol*, 16:49.
36. Łukomska-Kowalczyk M, **Karnkowska A**, Milanowski R, Łach Ł, Zakryś B (2015). **Delimiting species in the *Phacus longicauda* complex (Euglenida) through morphological and molecular analyses**. *J Phycol*, 51: 1147-57.
37. **Karnkowska A**, Bennett MS, Watza D, Kim JI, Zakryś B, Triemer RE. (2015) **Phylogenetic relationships and morphological character evolution of photosynthetic euglenids (Excavata) inferred from taxon-rich analyses of five genes**. *J Euk Microbiol*, 62: 362-73.
38. Bukowska A, Bielczyńska A, **Karnkowska A**, Chróst RJ, Jasser I (2014) **Calibration of the analyses of taxonomic composition of potentially toxic cyanobacteria in freshwater lakes using a molecular approach based on DGGE and classical microscopic observations**. *Aquatic Biosystems*, 10: 2.
39. Milanowski R, **Karnkowska A**, Ishikawa T, Zakryś B (2014) **Distribution of conventional and non-conventional introns in *tubA* and *tubB* genes of euglenids**. *Mol Biol Evol* 31: 584-93. (IF: 10,353.
40. Zakryś B, **Karnkowska-Ishikawa A**, Łukomska-Kowalczyk M, Milanowski R (2013) **New photosynthetic euglenoid isolated in Poland: *Euglenaria clepsydroides* sp. nova (Euglenea)**. *Eur J Phycol*, 48: 260-7.
41. Jasser I, **Karnkowska-Ishikawa A**, Chróst RJ (2013) **Do acid-tolerant picocyanobacteria exist? A study of two strains isolated from humic lakes in Poland**. *Hydrobiologia*, 707: 209-18.
42. **Karnkowska-Ishikawa A**, Milanowski R, Triemer RE, Zakryś B. (2013) **A redescription of morphologically similar species from the genus *Euglena*: *E. laciniata*, *E. sanguinea*, *E. sociabilis* and *E. splendens***. *J Phycol*, 49: 616-26.
43. **Karnkowska-Ishikawa A**, Milanowski R, Triemer RE & Zakryś B (2012) **Taxonomic revisions of morphologically similar species from two genera: *Euglena* (*E. granulata* and *E. velata*) and *Euglenaria* (*Eu. anabaena*, *Eu. caudata*, *Eu. clavata*)**. *J Phycol*, 48: 729-39.
44. **Karnkowska-Ishikawa A**, Milanowski R, Zakryś B (2011) **The species *Euglena deses* (Euglenaceae) revisited: new morphological and molecular data**. *J Phycol*, 47: 653-61.
45. Jasser I, Królicka A, **Karnkowska-Ishikawa A** (2011) **A novel phylogenetic clade of picocyanobacteria from the Mazurian lakes (Poland) reflects the early ontogeny of glacial lakes**. *FEMS Microbiology Ecology*, 75(1):89-98.
46. Linton EW, **Karnkowska-Ishikawa A**, Kim JI, Ciugulea I, Shin W, Bennett M, Kwiatowski J, Zakryś B, Triemer RE (2010) **Reconstructing euglenoid evolutionary relationships using three genes: nuclear SSU and LSU, and chloroplast 16S rDNA sequences and the description of *Euglenaria* gen. nov. (Euglenophyta)**. *Protist*, 161:603-19.
47. Jasser I, **Karnkowska-Ishikawa A**, Kozłowska E, Królicka A, Łukomska-Kowalczyk M. (2010) **Composition of picocyanobacteria community in The Great Mazurian Lakes: isolation of phycoerythrin-rich and phycocyanin-rich ecotypes from the system - comparison of two methods**. *Pol J Microbiol*, 59 (1):21-31.
48. **Karnkowska-Ishikawa A**, Milanowski R, Kwiatowski J, Zakryś B. (2010) **Taxonomy of the *Phacus oscillans* and its close relatives - balancing morphological and molecular features**. *J Phycol*, 46:172-82.
49. Kosmala S, **Karnkowska-Ishikawa A**, Milanowski R, Kwiatowski J, Zakryś B (2009) **Phylogeny and systematics of *Euglena* (Euglenaceae) species with axial, stellate chloroplasts based on**



**morphological and molecular data - new taxa, emended diagnoses and epityfication.** *J Phycol*, 45:464-81.

50. Kosmala S, **Karnkowska A**, Milanowski R, Kwiatowski J, Zakryś B (2005) **The phylogenetic and taxonomic position of *Lepocinclis fusca* comb. nova (=Euglena fusca) (Euglenaceae). Morphological and molecular justification.** *J Phycol*, 41:1258-67.

#### **CONFERENCES AND WORKSHOPS ORGANIZER**

- |      |                                                                                                                                         |
|------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 2022 | EMBO Young Investigator Network on computational methods in ecology and evolutionary biology of microbes Symposium, Chęciny, Poland     |
| 2021 | EMBO Young Scientists' Forum 2021, Warsaw, Poland                                                                                       |
| 2020 | 4th Polish EMBO workshop on computational and structural biology and chemistry, Waplewo, Poland                                         |
| 2019 | Workshop on Phylogenomics, Cesky Krumlov, Czechia                                                                                       |
| 2018 | 6 <sup>th</sup> Polish Evolutionary Conference, Warsaw, Poland                                                                          |
| 2015 | Phylogenomics: new approaches to solving old problems in algal evolution Symposium, 6th European Phycological Congress, London, England |
| 2014 | Protist 2014, Banff, Canada                                                                                                             |
| 2011 | 54th Workshop: Evolutionary Biology and Related Topics                                                                                  |
| 2010 | 16th European Meeting of PhD Students in Evolutionary Biology                                                                           |

#### **INVITED PRESENTATIONS**

- |         |                                                                                                                                        |
|---------|----------------------------------------------------------------------------------------------------------------------------------------|
| 09/2022 | EMBO Conference: Comparatives genomics of unicellular eukaryotes: Interactions and symbioses, Saint Feliu de Guilox, Spain             |
| 12/2022 | EMBO Sectorial meeting Microbiology, Bordeaux, France                                                                                  |
| 06/2022 | EMBO Annual Young Investigators Meeting, Heidelberg, Germany                                                                           |
| 07/2021 | International Society of Protistology virtual conference                                                                               |
| 04/2019 | 49th Jírovec's Protozoological Days, Kostelec nad Černými lesy, Czechia                                                                |
| 03/2019 | Seminar speaker, Center for New Technologies, University of Warsaw                                                                     |
| 11/2017 | The Company of Biologists Workshop: Symbiosis in the microbial world: from ecology to genome evolution, England                        |
| 10/2017 | EMBO Conference: Comparative genomics of eukaryotic microbes: Dissecting sources of evolutionary diversity, Spain                      |
| 05/2017 | Ecology and Evolution seminars at University of Warsaw                                                                                 |
| 03/2017 | 115th International Titisee Conference on Evolutionary mitochondrial biology: molecular, biochemical, and metabolic diversity, Germany |
| 11/2016 | Centre for Microbial Diversity and Evolution annual meeting, Canada                                                                    |
| 11/2015 | Seminar speaker, Life Science Research Centre, University of Ostrava                                                                   |
| 09/2014 | Seminar speaker, Department of Cell Biology Seminar, University of Alberta, Canada                                                     |
| 09/2012 | 53th meeting of the Czech Phycological Society, Ostrava, Czechia                                                                       |
| 02/2012 | Kužela seminar speaker, Comenius University in Bratislava, Slovakia                                                                    |
| 09/2011 | 52th meeting of the Czech Phycological Society, Prague, Czechia                                                                        |

## **TEACHING EXPERIENCE**

|              |                                                                                                                                   |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 2020-present | Teacher at Modern biology course for the third year of Bsc in Biology, University of Warsaw                                       |
| 2020-present | Teacher at Publication strategy in a discipline (scientist's workshop) for PhD students, University of Warsaw                     |
| 2020-present | Teacher and coordinator of Applied bioinformatics for the third year of Bsc in Biotechnology, University of Warsaw                |
| 2018-2021    | Teacher at Biodiversity course for the first year of Bsc in Biotechnology, University of Warsaw                                   |
| 2017- 2021   | Teacher at Evolutionary biology course for the third year of Bioinformatics and Systems Biology, University of Warsaw             |
| 2017         | Teaching assistant at the Workshop on Genomics, Cesky Krumlov, Czechia                                                            |
| 2014         | Guest lecturer on Molecular taxonomy course, Charles University in Prague                                                         |
| 2013-present | Teacher and coordinator of Biology of microbial eukaryotes course for the first year of Msc in Microbiology, University of Warsaw |
| 2006-2019    | Teacher at Botany course for the first year of Bsc, University of Warsaw                                                          |
| 2006-2012    | Teacher at Flora of Poland field course for first year of Bsc, University of Warsaw                                               |

## **SUPERVISION OF PhD STUDENTS**

|                |                                                                                               |
|----------------|-----------------------------------------------------------------------------------------------|
| 2022 – present | Małgorzata Chwalińska                                                                         |
| 2021-present   | Valentina Smacchia                                                                            |
| 2020-present   | Marta Sałek                                                                                   |
| 2018-present   | Paweł Hałakuc, co-supervisor                                                                  |
| 2018-present   | Michał Karlicki                                                                               |
| 2017-2022      | Kacper Maciszewski<br><i>Evolution of genome structure and function in secondary plastids</i> |

## **SUPERVISION OF STUDENTS**

|              |                                                                                                                                                                        |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2022         | Master student at Biophysics, Małgorzata Malczewska                                                                                                                    |
| 2022         | Master student at Biotechnology, Metody Hollender                                                                                                                      |
| 2021-present | Master student at Biotechnology, Weronika Popławska                                                                                                                    |
| 2021-2022    | Master student at Bioinformatics and Systems Biology, Julia Gołębiowska<br><i>Predicting absorption wavelengths of rhodopsins using machine learning-based methods</i> |
| 2021-2022    | Bachelor student at Biotechnology, Metody Hollender<br><i>Identification and metabolism analysis of chosen protists symbionts from single-cell data</i>                |
| 2020-2022    | Master student at Biology, Małgorzata Chwalińska<br><i>Comparing short vs long 18S rDNA gene amplicons for elucidating freshwater protists diversity</i>               |
| 2020-2021    | Bachelor student at Biotechnology, Weronika Popławska                                                                                                                  |



|           |                                                                                                                                                                                                                                                     |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | <i>Analysis of occurrence and diversity of Archaea in the pelagic zone of selected Mazurian lakes based on molecular data</i>                                                                                                                       |
| 2019-2022 | Master student at Bioinformatics and Systems Biology, Stanisław Antonowicz<br><i>Workflow for microbial interaction network inference using high-throughput sequencing data</i>                                                                     |
| 2019-2021 | Master student at MiSMAP, Julia Gołębiowska<br><i>Analysis of the microbial rhodopsins occurrence and diversity in the Lake Roś based on the metatranscriptomic and amplicon data</i>                                                               |
| 2019-2021 | Master student at Biotechnology, Gabriela Wilga<br><i>Evolution of plastid genomes in the secondarily non-photosynthetic genus Prototheca</i>                                                                                                       |
| 2019-2020 | Bachelor student at Bioinformatics and Systems Biology, Julia Różycka<br><i>Prediction and analysis of spliceosomal and nonconventional introns in the genomes of non-model eukaryotes</i>                                                          |
| 2019-2020 | Bachelor student at Biology, Małgorzata Chwalińska<br><i>18S rDNA amplicon-based analysis of diversity of microbial eukaryotes' communities in the salinity gradient of Świna river estuary</i>                                                     |
| 2019-2020 | Bachelor student at Bioinformatics and Systems Biology, Julia Rymuza<br><i>Metagenomic data utilization for phylogenomic analyzes: evaluation of existing approaches and development of a pipeline</i>                                              |
| 2018-2019 | Bachelor student at Bioinformatics and Systems Biology, Stanisław Antonowicz<br><i>Evaluation of the machine learning-based data representation and classification methods on the example of function assignment in a particular protein family</i> |
| 2017-2018 | Master student at Bioinformatics and Systems Biology, Michał Karlicki<br><i>Mining metagenomic data for organellar genomes of microbial eukaryotes</i>                                                                                              |
| 2011-2012 | Bachelor student at Biology, Magdalena Jabłońska<br><i>Cyanotoxins - effects on organisms and their occurrence in Polish surface waters</i>                                                                                                         |
| 2011-2013 | Master student at Biotechnology, Małgorzata Korzeniecka<br><i>Assessment of two molecular markers (cox1 and 18S rDNA) as potential DNA barcodes for autotrophic euglenids (Euglenea)</i>                                                            |

## **INTERNS**

Mgr Josiah Grzywacz - Fulbright U.S. Student Researcher (2022/2023)

Mgr Dominika Vešelényiová - Erasmus PhD student (2019)

Mgr Martina Kešľáková - Erasmus PhD student (2019)

## **EDITORIAL BOARDS**

- Frontiers in Plant Science
- European Journal of Protistology

## **REVIEWING ACTIVITIES**

|        |                                                                                 |
|--------|---------------------------------------------------------------------------------|
| 2022   | Evaluating committee member of PhD school, Jagiellonian University, PL          |
| 2022   | Evaluating committee member of PhD school, University of Wrocław, PL            |
| 2022   | PhD Thesis Aleksandra Krocak, University of Wrocław, PL                         |
| 2020   | Grant reviewer, Czech Science Foundation, CZ                                    |
| 2019   | Research proposals' reviewer, Polish Ministry of Higher Education, CZ           |
| 2020 - | Editorial Board, European Journal of Protistology                               |
| 2019-  | Review Editor, Frontiers in Plant Sciences section Marine and Freshwater Plants |
| 2017   | PhD Thesis, Tomáš Skalický, University of South Bohemia, CZ                     |
| 2016   | PhD Thesis, Kristína Záhonová, University of Ostrava, CZ                        |

## **MANUSCRIPT REVIEWER (50)**

eLife (1); Nature Microbiology (1); Nature communications (2), Molecular Biology and Evolution (1), BioEssays (2), Scientific Reports (2), Plos Biology (1), BMC Biology (2), BMC Ecology and Evolution (1), Biological Reviews (1), Bioinformatics (1), Philosophical Transactions of the Royal Society B (1), Environmental Microbiology (1), Open Biology (1), Genome Biology and Evolution (1); Journal of Eukaryotic Microbiology (4), Journal of Phycology (3), European Journal of Protistology (3), Polish Journal of Microbiology (1), Journal of Molecular Sciences (1); *G3: Genes, Genomes, Genetics* (1), Nova Hedwigia (1), Frontiers in Ecology and Evolution (1), Frontiers Plant Science (4), Current Genetics (1), Protist (4), PeerJ (1), Diversity (1), Mitochondrial DNA Part B: Resources (1), Acta Societatis Botanicorum Poloniae (1), Kosmos (2)

## **SCIENTIFIC SOCIETY MEMBERSHIPS**

|      |                                                                                                                                  |
|------|----------------------------------------------------------------------------------------------------------------------------------|
| 2021 | Member of Scientific Committee of the Euglena International Network (EIN)                                                        |
| 2018 | Member of the EMBO Young Investigator Network                                                                                    |
| 2010 | International Society for Evolutionary Protistology (ISEP); European Councillor (2014-2016)                                      |
| 2006 | International Society for Protistology (ISOP), Nominating Committee member (2015), Vice-President (2017), President-elect (2022) |

## **UNIVERSITY SERVICE**

|              |                                                                                                |
|--------------|------------------------------------------------------------------------------------------------|
| 2022-present | Doctoral Thesis Advisory Committee at Institute of Molecular Mechanisms and Machines           |
| 2021-present | Chairwoman of Scientific Council of Institute of Evolutionary Biology                          |
| 2020-present | Member of the Committee for student and teaching affairs at Bioinformatics and Systems Biology |
| 2020-2021    | Member of the Biology Discipline Board                                                         |
| 2017-2020    | Member of the University Centre for Environmental Studies and Sustainable Development Board    |
| 2008-2013    | Member of the Faculty of Biology Board                                                         |
| 2007-2011    | Member of the Senate Committee for student and teaching affairs                                |
| 2008-2011    | PhD student member of the Institute of Botany board, Faculty of Biology                        |
| 2008-2011    | Head of PhD Students Council at Faculty of Biology                                             |
| 2008-2011    | Vice-president of PhD Students Council at University of Warsaw                                 |