

# Mikolaj Kocikowski, PhD

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## BIOINFORMATICS & BIOTECH

### Objective

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PhD in Cancer Immunology and Bioinformatics with extensive experience in antibody science and NGS. Proficient in research, communication, and mentoring across diverse environments, including remote, international, and interdisciplinary teams. From lecturing immunology in a Scottish prison to pioneering canine cancer models, my experience showcases versatility and innovation. Eager to leverage my R&D expertise, I am seeking a dynamic role that fosters continuous learning and advancement.

### Experience

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#### University of Edinburgh & University of Gdansk | PhD Researcher 2017-2023

- Conducted research at the Roslin Institute, Edinburgh Cancer Research Centre, and International Centre for Cancer Vaccine Science utilizing state-of-the-art facilities
- Managed multiple interdisciplinary projects, demonstrating a strong ability to integrate computational, medical, engineering and wet-lab research domains
- Conducted RNA sequencing analysis in R to profile immune checkpoints in cancers, utilizing High-Performance Computing (Slurm, Linux, bash)
- Extracted immunoglobulin repertoires from bulk, targeted and PacBio sequencing with MiXCR, IMGT High-V-Quest, SnapGene and other software
- Developed computational antibody engineering techniques for the canine model, utilizing PyMol, Schrödinger Bioluminate and proprietary pipelines
- Performed wet-lab characterization of monoclonal antibodies, integrated with molecular modeling techniques

#### Polpharma Biologics | Junior QC Specialist 2017-2017

- Wrote and translated technical documentation (PL/EN)
- Described & validated analytical methods in GMP/GLP/GDP environment
- Designed and equipped GMP laboratories for bioassays and cell culture

#### Polpharma Biologics | R&D Associate 2016-2017

- Took part in a successful development of a therapeutic antibody
- Developed qPCR methods and automated data analysis
- Coordinated technology trainings

#### Pomeranian Science and Technology Park | Scientist 2011-2012

- Developed a genetic diagnostics tool for a leading Polish company

## Education

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University of Gdansk & Medical University in Gdansk, **MSc Medical Biotechnology** **2015**

- Graduated with honours, Dean's, Rector's, and Province Marshal's awards
- Thesis prepared during an exchange at Marche Polytechnic University, Italy
- MSc project on the endocrine disrupting properties of plastic additives

University of Gdansk & Medical University in Gdansk, **BSc Biotechnology** **2013**

- Vice-president of BIO-MED students association: science outreach, research
- Internship at the Biological Threats Identification and Countermeasure Centre, Poland
- BSc project on reducing the genotoxicity of chemotherapy

## Skills

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- English (fluent)
- Polish (native)
- Professional writing and proofreading
- Presenting and data visualization
- Programming (R, Bash)
- Next-Generation Sequencing (NGS) analysis
- Bioinformatics
- Project management
- Attention to detail
- Mentoring

## Chosen training

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- Winter school in Advanced Methods for Scientific Reproducibility (Windsor, 2020)
- Mass Spectrometry Summer School (Dubrovnik, 2019)
- Project Management and Entrepreneurship (U. of Edinburgh 2018-2020)
- Bioinformatics for Genomics (Edinburgh Genomics, 2019),
- Scientific Writing (University of Stanford, Nature Masterclass)

## Supervision and teaching

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- Serving as a Mentor in Polonium Foundation (2022-2024)
- Co-mentored MSc, PhD students and veterinary doctors at the Roslin Institute (2018-2020)
- Delivered lectures on cancer immunology for the inmates of a Scottish top security prison (2019)
- Taught a laboratory techniques course for International Health students at the Royal (Dick) School of Veterinary Science, Edinburgh (2019)

## Interests

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- Wildlife photography, mountain biking, Bachata, books, travel, psychology.

## Grants

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- *Molecular modeling techniques for computational screening of canine anti-cancer antibody candidates*, British Society for Immunology, Career Enhancing Grant (2021).
- *The Role of Non-Coding RNA in Chromatine Methylation and Prostate Cancer Metastasis*, Polish Ministry of Science, Generation of the Future (2013)

## Conference talks

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- Kocikowski, M., (2022). "Of dogs and men. How canines can help cure human cancers"; Science – Polish Perspectives, University of Oxford, Oxford UK

## Publications (as of mid-2024)

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- Kocikowski, M.**, Mayordomo, M., Alfaro, J., Parys, M.; *Barking Up the Right Tree: Immune Checkpoint Signatures of Human and Dog Cancers*. bioRxiv 2024.06.26.600825; doi: <https://doi.org/10.1101/2024.06.26.600825>
- **Kocikowski M**, Dziubek K, Węgrzyn K, Hrabal V, Zavadil-Kokas F, Vojtesek B, Alfaro JA, Hupp T, Parys M. *Comparative characterization of two monoclonal antibodies targeting canine PD-1*. Front Immunol. 2024 May 8;15:1382576. [doi.org/10.3389/fimmu.2024.1382576](https://doi.org/10.3389/fimmu.2024.1382576)
  - O'Neill JR, Yébenes Mayordomo M, Mitulović G, Al Shboul S, Bedran G, Faktor J, Hernychova L, Uhrík L, Gómez-Herranz M, **Kocikowski M**, Save V, Vojtěšek B, Arends MJ; OCCAMS Consortium; Hupp T, Alfaro JA. *Multi-Omic Analysis of Esophageal Adenocarcinoma Uncovers Candidate Therapeutic Targets and Cancer-Selective Posttranscriptional Regulation*. Mol Cell Proteomics. 2024 Jun;23(6):100764. [doi.org/10.1016/j.mcpro.2024.100764](https://doi.org/10.1016/j.mcpro.2024.100764).
  - Minoli L\*, Licenziato L, **Kocikowski M\***, Cino M, Dziubek K, Iussich S, Fanelli A, Morello E, Martano M, Hupp T, Vojtesek B, Parys M, Aresu L. *Development of Monoclonal Antibodies Targeting Canine PD-L1 and PD-1 and Their Clinical Relevance in Canine Apocrine Gland Anal Sac Adenocarcinoma*. Cancers (Basel). 2022 Dec 14;14(24):6188. [doi.org/10.3390/cancers14246188](https://doi.org/10.3390/cancers14246188), \*These authors contributed equally to this work.
  - Bojko M, Węgrzyn K, Sikorska E, **Kocikowski M**, Parys M, Battin C, Steinberger P, Kogut MM, Winnicki M, Sieradzan AK, Spodzieja M, Rodziejewicz-Motowidło S. *Design, synthesis and biological evaluation of PD-1 derived peptides as inhibitors of PD-1/PD-L1 complex formation for cancer therapy*. Bioorg Chem. 2022 Nov;128:106047. [doi.org/10.1016/j.bioorg.2022.106047](https://doi.org/10.1016/j.bioorg.2022.106047)
  - Uhrík, L., Hernychova, L., Muller, P., Kalathiya, U., Lisowska, M. **M.**, **Kocikowski**, M., Parys, M., Faktor, J., Nekulova, M., Nortcliffe, C., Zatloukalova, P., Ruetgen, B., Fahraeus, R., Ball, K. L., Argyle, D. J., Vojtesek, B., & Hupp, T. R. (2021). *Hydrogen deuterium exchange mass spectrometry identifies the dominant paratope in CD20 antigen binding to the NCD1.2 monoclonal antibody*. Biochemical Journal, 478(1), 99–120. [doi.org/10.1042/BCJ20200674](https://doi.org/10.1042/BCJ20200674)
  - **Kocikowski, M.**, Dziubek, K., & Parys, M. (2020). *Hyperprogression Under Immune Checkpoint-Based Immunotherapy-Current Understanding, The Role of PD-1/PD-L1 Tumour-Intrinsic Signalling, Future Directions and a Potential Large Animal Model*. Cancers, 12(4), Article 4. [doi.org/10.3390/cancers12040804](https://doi.org/10.3390/cancers12040804)
  - Kote, S., Faktor, J., Dapic, I., Mayordomo, M. Y., **Kocikowski, M.**, Kagansky, A., Goodlett, D., Vojtesek, B., Hupp, T., Wilcockson, D., & Piper, R. (2019). *Analysis of venom sac constituents from the solitary, aculeate wasp *Cerceris rybyensis**. Toxicon, 169, 1–4. [doi.org/10.1016/j.toxicon.2019.07.012](https://doi.org/10.1016/j.toxicon.2019.07.012)

## Poster presentations

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- Kocikowski, M., Dziubek, K., Vojtesek, B., Argyle, D., Hupp, T., & Parys, M. (2020). Abstract 2234: *Development of caninized monoclonal antibodies against PD1*. Cancer Research, 80(16 Supplement), 2234–2234. doi.org/10.1158/1538-7445.AM2020-2234, AACR, virtual, USA.
- Dziubek, K., Kocikowski, M., Vojtesek, B., Argyle, D., Lisowska, M., Hupp, T., & Parys, M. (2020). Abstract 5637: *Investigating tumor intrinsic PD-1/PD-L1 signaling in canine osteosarcoma cell lines as a spontaneous model for human disease*. Cancer Research, 80(16 Supplement), 5637–5637. doi.org/10.1158/1538-7445.AM2020-5637, AACR, virtual, USA.
- Wang, Y.J., Pietrzak, K., Kocikowski, M., Argyle, D., Hupp, T., & Parys, M (2019). Abstract 3972: *Investigation of tumor intrinsic PD1/PD-L1 in canine urothelial carcinomas as a spontaneous translational model for human invasive bladder cancer*. Cancer Research, 79 (13\_Supplement): 3972. doi.org/10.1158/1538-7445.AM2019-3972, AACR, Atlanta, USA.
- Kocikowski, M.M., Hupp, T.R., Argyle, D.J. & Parys, M. (2019). *Dogizing Antibodies Against PD1 and CD20*. Mass Spectrometry School in Biotechnology and Medicine, Dubrovnik, Croatia.
- Kocikowski, M. (2023). Twins. *Immune checkpoint transcription patterns of dog and human brain cancers*. Canvas Spring School, Sobieszewo, Poland.

*I hereby give consent for my personal data included in the application to be processed for the purposes of future recruitment processes in accordance with Art. 6 paragraph 1 letter a of the Regulation of the European Parliament and of the Council (EU) 2016/679 of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).*