

CV for Mike B Barnkob

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POSITIONS CURRENTLY HELD

- 2018-2025: **Doctor, specialty registrar** in clinical immunology, at Department of Clinical Immunology, Odense University Hospital, Denmark.
- 2022-2025: **Post.doc fellow, Lundbeck Foundation Early-Career Clinician Scientist**
- 2023-2024: **Doctor, speciality registrar** in clinical immunology, Vævstypelaboratoriet, Rigshospitalet, Denmark.

EDUCATION

- 2018-2025: **Speciality training** as clinical immunologist at Odense University Hospital and Rigshospitalet, Denmark.
- 2014-2019: **DPhil (Ph.D.):** Radcliffe Department of Medicine, University of Oxford.
Thesis: The Role of Neuropilin-1 in CD8+ T cells. January 2019.
- 2007-2013: **Cand.med:** Faculty of Health Sciences, University of Southern Denmark.
Permission to practise independently as a physician (M.D.), September 2014.

EXPERIENCE

Laboratory experience

- 2022-2023: **Kennedy Institute of Rheumatology, University of Oxford, UK.**
Supervisor: Professor Marco Fritzsche.
- 2018- : **Centre for Cellular Immunotherapy of Haematological Cancer Odense (CITCO), Odense University Hospital, Denmark.** Supervisor: Professor Torben Barington.
- 2014-2018: **Weatherall Institute for Molecular Medicine, University of Oxford, UK.**
Supervisor: Professor Vincenzo Cerundolo.
- 2011-2012: **Koch Institute for Integrative Cancer Research, Massachusetts Institute of Technology, USA.** Supervisor: Professor Jianzhu Chen.

2010-2011: **Center for Fundamental Living Technology, University of Southern Denmark**, Danmark. Supervisor: Professor Martin Hanczyc.

2008: **Department of Food Science and Human Nutrition, University of Illinois at Champaign – Urbana**, USA. Supervisor: Professor Kelly Tappenden.

Teaching experience

2024: **Gene Therapy**, during Diagnostic Immunology Course (HU kursus) for Danish doctors specializing in clinical immunology, Danish Health Authority.

2024: **The Life and Function of T cells**, during Theoretical Immunology course (HU kursus) for Danish doctors specializing in clinical immunology, Danish Health Authority.

2022-: **CAR T cell Therapy**, during BMB844, Precision Medicine, a MSc course at University of Southern Denmark.

2022: **What is CAR-T cell Therapy?**, during Personalised medicine, a postgraduate course for health-care professionals, University of Copenhagen.

2021-: **Data Mangement Course**, a course for medical students at University of Southern Denmark.

2019-2021: **Inflammation**, during SU810, a MSc course at University of Southern Denmark.

INVITED AND SELECTED ORAL PRESENTATIONS

2023: Selected speaker, Danish Cancer Days 2023, Odense, August 2023.

2022: Selected speaker, 1st Danish CAR-T Symposium, Technical University of Denmark, Lyngby, Denmark, May 2022.

2022: Invited speaker at Danish Society of Hematology Annunal meeting, Hindsgavl, Denmark, Marts 2022.

2021: Invited speaker at Danish Society of Clinical Immunologist yearly meeting, Kolding, Denmark, September 2021.

2021: Invited speaker at Danish Society of Clinical Rheumatologist yearly meeting, Kolding, Denmark, December 2021.

- 2019: Invited speaker at EMBO Workshop on Neural Guidance Molecules in Development and Disease, Baveno, Italy, May 2019.
- 2018: Invited speaker at Molecular Immunology Symposium, Wolfson College, University of Oxford, Oxford, United Kingdom, July 2018.
- 2018: Selected speaker (for best submitted abstract) and chairman, Oxford Immunology Symposium 2018, Oxford, United Kingdom, April 2018.
- 2018: Selected speaker (for best submitted abstract), RDM Day 2018, Radcliffe Department of Medicine, University of Oxford, March 2018.
- 2017: Selected speaker, British Society of Immunology Annual Conference, Brighton, United Kingdom, December 2017.
- 2017: Invited speaker, Annual MRC Human Immunology Unit meeting, University of Oxford, United Kingdom October 2017.
- 2017: Invited speaker, Danish Haematological Research Educational Network, Annual PhD Course: "Immunotherapy in Haematology", Hindsø Slot, Denmark March 2017.

AWARDS AND FELLOWSHIPS

Fellowships:

- 2022-2025: **Lundbeck Foundation Early-Career Clinician Scientist fellowship**, 2,600,000 DKK.
- 2014-2018: **Clarendon Scholarship**, a highly competitive (<1% acceptance rate) fully paid scholarship for doctoral work at University of Oxford. Approximately 120,000 GBP.
- 2011-2012: **Michelsen Fonden Pregraduate Scholarship**, 135,000 DKK.

Scientific awards and honours

- 2023: **Exceptional Young Scientist Abstract**, Danish Cancer Days 2023, Odense, August 2023.
- 2021: **Best speaker award**, Danish Immunology Society yearly meeting, Odense, Denmark, August 2021.

- 2018: **Moorbath Domus Research Prize** at Linacre College, University of Oxford, June 2018.
- 2018: **Early Career Researcher Award** for outstanding scientific presentation at the Oxford Immunology Symposium, Oxford, April 2018.
- 2017: **Best oral presentation** at MRC Human Immunology Day, University of Oxford, UK, October 2017.
- 2017: **Ralph Steinman Memorial Outstanding Poster Award** at European School of Immunology, May 2017.
- 2017: **Ita Askonas Medal** for best oral student presentation at Weatherall Institute of Molecular Medicine symposium, University of Oxford, UK, March 2017.

PUBLICATIONS AND OUTREACH

* = Denotes first or co-first author, † = Denotes corresponding author.

Scientific articles

Preprints:

19. Lars R Olsen, Alfredo Benso, Gianfranco Politano, Mike B Barnkob†. *Spectracular: minimizing spectral overlap in multicolor flow cytometry experiments*. In review at Nature Computational Science.

Publications:

2024:

18. Mike B Barnkob*,†, Yale S Michaels, Violaine André, Philip S Macklin, Uzi Gileadi, Salvatore Valvo, Margarida Rei, Corinna Kulicke, Ji-Li Chen, Vitul Jain, Victoria Woodcock, Huw Colin-York, Andreas V Hadjinicolaou, Youxin Kong, Viveka Mayya, Joshua A Bull, Pramila Rijal, Christopher W Pugh, Alain R Townsend, Lars Olsen, Marco Fritzsche, Tudor Fulga, Michael L Dustin, E Yvonne Jones, Vincenzo Cerundolo. *Semaphorin 3A causes immune suppression by inducing cytoskeletal paralysis in tumour-specific CD8+ T cells*.

Nature Communications.

17. Anders Asmussen, Leticia Quintanilla-Martinez, Martin Larsen, Christina Fagerberg, Marie Bækvad-Hansen, Maja Bech Juul, Kate Rewers, Klas Raaschou-Jensen, Mike Bogetofte Barnkob, Michael Boe Møller, Kristian Assing. *Severe lympho-depletion, abrogated*

*thymopoiesis and systemic EBV positive T-cell lymphoma of childhood, a case. **Leukemia & Lymphoma**, January 2024.*

2023:

16. Helle Bogetofte, Brent J Ryan, Pia Jensen, Sissel I Schmidt, Dana LE Vergoossen, Mike B Barnkob, Lisa N Kiani, Uroosa Chughtai, Rachel Heon-Roberts, Maria Claudia Caiazza, William McGuinness, Ricardo Márquez-Gómez, Jane Vowles, Fiona S Bunn, Janine Brandes, Peter Kilfeather, Jack P Connor, Hugo JR Fernandes, Tara M Caffrey, Morten Meyer, Sally A Cowley, Martin R Larsen, Richard Wade-Martins. Post-translational proteomics platform identifies neurite outgrowth impairments in Parkinson's disease GBA-N370S dopamine neurons. **Cell Reports**, February, 2023.

2022:

15. Bibi Uhre Nielsen, Camilla Heldbjerg Drabe, Mike B Barnkob, Isik Somuncu Johansen, Anne Kronborg Hansen, Anne Christine Nilsson and Line Dahlerup Rasmussen. *Antibody Response Following the Third and Fourth SARS-CoV-2 Vaccine Dose in Individuals with Common Variable Immunodeficiency. **Frontiers in Immunology**, 2022.*

14. Christina Bligaard Pedersen, Søren Helweg Dam, Mike B Barnkob, Michael D Leipold, Noelia Purroy, Laura Z Rassenti, Thomas J Kipps, Jennifer Nguyen, James Arthur Lederer, Satyen Harish Gohil, Catherine J Wu, Lars Rønn Olsen. *cyCombine allows for robust integration of single-cell cytometry datasets within and across technologies. Nature Communications*, April 2022.

13. Mike B Barnkob*, Kristoffer Vitting-Seerup, Lars Rønn Olsen. *Target isoforms are an overlooked challenge and opportunity in chimeric antigen receptor cell therapy. **Immunotherapy Advances**, April 2022.*

2021:

12. Jakub Krejcik, Mike Bogetofte Barnkob, Charlotte Guldborg Nyvold, Thomas Stauffer Larsen, Torben Barington, Niels Abildgaard. *Harnessing the Immune System to Fight Multiple Myeloma. **Cancers**, September 2021.*

11. Nicholas T Crump, Andreas V Hadjinicolaou, Meng Xia, John Walsby-Tickle, Uzi Gileadi, Ji-Li Chen, Mashiko Setshedi, Lars R Olsen, I-Jun Lau, Laura Godfrey, Lynn Quek, Zhanru Yu, Erica Ballabio, Mike B Barnkob, Giorgio Napolitani, Mariolina Salio, Hashem Koohy,

Benedikt M Kessler, Stephen Taylor, Paresh Vyas, James SO McCullagh, Thomas A Milne, Vincenzo Cerundolo. *Chromatin accessibility governs the differential response of cancer and T cells to arginine starvation*. **Cell Reports**, April 2021.

2020:

10. Barnkob MB*, Pottegård A, Støvring H, Haunstrup TM, Homburg K, Larsen R, Hansen MB, Titlestad K, Aagaard B, Møller BK, Barington T. *Reduced Prevalence of SARS-CoV-2 Infection in ABO Blood Group O*. **Blood Advances**, August 2020.

9. Brandt LJB*, Barnkob MB*, Michaels YS, Heiselberg J, Barington T. *Emerging Approaches for Regulation and Control of CAR T Cells*. **Frontiers in Immunology**, February 2020.

2019:

8. Michaels YS, Barnkob MB, Barbosa H, Baeumler TA, Thompson MK, Andre V, Colin-York H, Fritzsche M, Gileadi U, Sheppard HM, Knapp DJHF, Milne TA, Cerundolo V, Fulga TA. *Precise tuning of gene expression levels in mammalian cells*. **Nature Communications**, February 2019.

7. Simon C, Davidsen K, Hansen C, Seymour E, Barnkob MB, Olsen LR. *BioReader: a text mining tool for performing classification of biomedical literature*. **BMC Bioinformatics**, February 2019.

2018:

6. Funck T, Barnkob MB, Holm N, Ohm-Laursen L, Mehlum CS, Möller S, Barington T. *Nucleotide Composition of Human Ig Nontemplated Regions Depends on Trimming of the Flanking Gene Segments, and Terminal Deoxynucleotidyl Transferase Favors Adding Cytosine, Not Guanosine, in Most VDJ Rearrangements*. **Journal of Immunology**, September 2018.

2014:

5. Olsen LR*, Campos B*, Barnkob MS*, Winther O, Brusica V, Andersen MH. *Bioinformatics for cancer immunotherapy target discovery*. **Cancer Immunology Immunotherapy**, December 2014.

4. Barnkob MS*, Simon C*, Olsen LR*. *Characterizing the human hematopoietic CDome*. **Frontiers in Genetics**, September 2014.

3. Simon C, Barnkob MS, Olsen LR. *Software-Supported Selection of Cell Surface Proteins for Cell Stratification and Chimeric Antigen Receptor-Based Therapies*. **Blood**, 2014.

2013:

2. Bak SP*, Barnkob MS*, Wittrup KD, Chen J. *Immunoediting of Antigen Expressing Cells after Treatment with Prostate Tumor Specific T Cells*. **Cancer Immunology Research**, 2013.

2012:

1. Bak SP, Barnkob MS, Bai A, Higham EM, Wittrup KD, Chen J. *Differential Requirement for CD70 and CD80/CD86 in Dendritic Cell-Mediated Activation of Tumor-Tolerized CD8 T Cells*. **Journal of Immunology**, August 2012.

Opinion pieces and policy papers

2020: Barnkob, MB. *Så regeringen en sten eller en ulv, da coronapandemien ramte? (Did the government see a stone or a wolf when the coronapandemic hit?)*, Altinget, August 2020.

2015: Barnkob, MB and Winther KH. *Lad os lave medicinen selv (Let's make our own medicine)*. Ugeskrift of Læger, December 2015.

2011: Møller B, Christensen G, Hansen J-ES, Horst M, Rasmussen S, Holm S, Barnkob MS et al. *Syntesebiologi – Debatoplæg (Synthetic Biology – A Discussion Paper)*. Det Ethiske Råd (*Danish Ethical Council*) and Teknologirådet (*Technology Council*), May, 2011.

Books

2015: Consultant on "Histology – Tekst & Atlas", a book by Gude MF, Dall AM, Veedfald S, Brüggmann AH, FADLs Forlag, Copenhagen, 2015.

Patents

2017: Inventors: Fulga TA, Michaels YS, Milne T, Lau I, Barnkob M, Davies B, Cerundolo V & Vyas P. *A method for precisely controlling endogenous gene expression in response to effector miRNAs*. International Application Number: PCT/GB2017/052068. United Kingdom Patent Application No. 1612214.5.

Newspaper articles

Since 2020, I have been interviewed and quoted >30 times in Danish and international news media, including on international and national television channels (DR 2 Deadline and BBC World News), in international and national news papers (Politiken and Le Journal du Dimanche), in national radio (P1 Orientering). A full list is available at:

<https://portal.findresearcher.sdu.dk/en/persons/mike-bogetofte-barnkob-2/clippings/>

PROFESSIONAL EXPERIENCE & SERVICE

Organized scientific conferences

2022: 3rd SDU-OUH Cancer Symposium, main organizer. Attacted approximately 35,000 DKK in support from various sponsors.

Review of scientific articles

2017-: Ad hoc reviewer for Cancer Immunology, Immunotherapy; Cancer Research; Immunotherapy Advances; Briefings in Bioinformatics and Nature Communications.

Supervision of students

2022-2025: Emil Birch Christensen, Ph.D.-student, University of Southern Denmark. Co-supervisor.

2021-2024: Maya Graham Noer, Ph.D.-student, Aarhus University. Co-supervisor.

Previously: I have previously supervised and mentored two master students at University of Oxford, and three pre-graduate medical students at University of Southern Denmark.

RESEARCH FUNDING AWARDED

Research funding (besides fellowships awarded)

2020: Co-wrote application for CITCO elite research centre at Odense University Hospital, which was awarded 14,000,000 DKK.

2015: Won Innocentive / GlaxoSmithKlein challenge for designing bispecific antibodies with the project "Proteogenomic analyses for bi-specific antibody target selection", 25,000 GBP.

2014: Awarded funds from Velux Foundation, 1,450,000 DKK. for project “Development of Chimeric Antigen Receptor T cells Targeting the B-cell Receptor Signalling Pathway”, which was undertaken at Clinical Department of Immunology, Odense University Hospital, Denmark by Professor Torben Barington.

Personal Funding

2022: Odense University Hospital internationalization grant. 230,000.- DKK.

2019: EMBO travel grant to participate in EMBO Workshop on Neural guidance molecules in development and disease, May 2019. 500 EUR.

2010: Awarded funds from A.J. Hansen og Hustru Fonden, 20,000 DKK.

2009: LEGO Education Fund, 3 LEGO Mindstorm kits.