

Pranathi Prasad *(she/her)*

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Education

UNIVERSITY OF CAMBRIDGE | PhD in Clinical Neuroscience 2021 - present

- Fully funded PhD in Dr Stefano Pluchino's lab investigating novel disease mechanisms in Multiple Sclerosis (MS)
- Awarded a UK Medical Research Council (MRC-DTP) Studentship and a Cambridge Trust International Scholarship
- Co-authored publications in *Nature* and *Cell Stem Cell*, on abnormal mitochondrial metabolism in brain cells during MS
- First-author paper currently in preparation for submission to a leading journal; findings presented at 'Glia 2023' in Berlin
- Published a second-author insight article in the *Journal of Experimental Medicine*, and a first-author book chapter in the *Encyclopaedia of Cell Biology 2nd Edition*

JACOBS UNIVERSITY BREMEN (GERMANY) | BSc Biochemistry & Cell Biology 2018 - 2021

- Awarded a full merit-based scholarship, Director's Honour Roll, 4.0/4.0 GPA, graduated top 1% of the class
- Direct BSc to PhD: accepted for a PhD position at University of Cambridge after 3-year bachelor's program
- Undergraduate thesis work contributed to a publication in *Protein Science*

INTERNATIONAL SCHOOL OF TRIESTE (ITALY) | High School Diploma 2014 - 2018

- Valedictorian (top of class), 4.0 GPA, 1500/1600 SAT score - 98th Percentile
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Research Positions

ASTRAZENECA | *Bio-spark Fellow / Research Intern* Nov 2024 – May 2025

- Selected by AstraZeneca to aid their business development team research emerging biotech companies for partnerships
- Determined key advances in antibody-drug conjugate technology and identified the companies driving their innovation

CENTRE FOR SCIENCE AND POLICY (CSaP) | *Science Policy Research Assistant* Sep 2023 – Dec 2023

- Designed and led a study identifying key factors determining early career researchers' willingness to engage with policy
- Delivered 5 key recommendations for a university-wide initiative to boost policy engagement of Cambridge researchers

CHARITÉ (Berlin, Germany) | *Research Intern* June 2020 – Oct 2020

- Undergraduate research project in Dr Christoph Klose's lab in Charité's Institute of Infectious Diseases and Immunology
- Investigated neuro-immune interactions involving Schwann Cells in the peripheral nervous system via in-vitro cultures and human post-mortem tissue

SAN RAFFAELE RESEARCH INSTITUTE (UniSR, Milan, Italy) | *Research Intern* July 2019 – Aug 2019

- Summer research project in Dr Maurizio D'Antonio's lab in the Biology of the Myelin Unit
- Investigated factors influencing peripheral myelination in a mouse model of Charcot-Marie-Tooth Disease

INTERNATIONAL CENTER FOR GENETIC ENGINEERING & BIOTECH (ICGEB) | *Research Intern* June – July 2019

- Summer research project in Molecular Cardiology under the guidance of Dr Chiara Collesi at ICGEB headquarters
 - Investigated key drivers of cardiomyocyte proliferation in-vitro and via a mouse model of myocardial infarction
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Placements & Work Experience

OPEN INNOVATION TEAM | *Policy Advisor / Intern within the UK Government* Oct 2023 – Dec 2023

- Consulted with the Department of Education on addressing a shortage of >150,000 social workers; developed a funding strategy enabling a 43% increase in the cohort size for training programs
- Designed a UN, UNICEF, and World Economic Forum-backed framework for the safe use of generative AI in schools
- Collaborated with senior representatives from Department of Education, Alan Turing Institute and >15 local authorities
- Developed client recommendations by consolidating data from central and local government, academia and private sector

SENSE ABOUT SCIENCE | *Volunteer for science advocacy charity* Oct 2022 – Nov 2022

- Aided in recruiting Members of Parliament (MPs) for a charity event at Westminster advocating for evidence-based policymaking; attended by scientists from >30 institutions and >50 MPs
- Recruited MPs by targeting their policy priorities, spanning areas such as green infrastructure and healthy aging

JACOBS UNIVERSITY BREMEN | *Teaching Assistant* Jan 2020 – Nov 2020

- Won university-wide challenge (€50,000 award) for designing a problem-based learning approach to teach biochemistry
- Led a team of 4 teaching assistants and collaborated with the Department Head to pilot the course with 32 students

Awards & Achievements

- **Cambridge Society for Applied Research Award 2025** *Finalist – awaiting final decision*
 - **UK Medical Research Council (MRC-DTP) Studentship 2021-2025** *UK Research and Innovation*
 - **Cambridge Trust International Scholarship 2021-2025** *University of Cambridge*
 - **Merit-Based Scholarship 2018-2021** *Jacobs University Bremen, Germany*
 - **Director's Honour Roll 2019, 2020 & 2021** *Jacobs University Bremen, Germany*
 - **Innovative Ideas in Higher Education Prize 2020** *Jacobs University Bremen, Germany*
 - **Best Delegate, Model United Nations 2017 & 2018** *Trieste, Italy*
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Publications

Published

- Ionescu, R.-B., Nicaise, A. M., Reisz, J. A., Williams, E. C., **Prasad, P.**, Willis, C. M., Simões-Abade, M. B. C., Sbarro, L., Dzieciatkowska, M., Stephenson, D., Suarez Cubero, M., Rizzi, S., Pirvan, L., Peruzzotti-Jametti, L., Fossati, V., Edenhofer, F., Leonardi, T., Frezza, C., Mohorianu, I., ... Pluchino, S. (2024). Increased cholesterol synthesis drives neurotoxicity in patient stem cell-derived model of multiple sclerosis. *Cell Stem Cell*, 31(11), 1574-1590.e11.
- Peruzzotti-Jametti, L., Willis, C. M., Krzak, G., Hamel, R., Pirvan, L., Ionescu, R.-B., Reisz, J. A., Prag, H. A., Garcia-Segura, M. E., Wu, V., Xiang, Y., Barlas, B., Casey, A. M., van den Bosch, A. M. R., Nicaise, A. M., Roth, L., Bates, G. R., Huang, H., **Prasad, P.**, ... Pluchino, S. (2024). Mitochondrial complex I activity in microglia sustains neuroinflammation. *Nature*, 628(8006), 195–203.
- Pluchino, S., & **Prasad, P.** (2023). Oligodendroglia-to-neuron material transfer lights up the mouse CNS. *Journal of Experimental Medicine*, 220(7).
- Prasad, P.**, Roth, L., Ionescu, R.-B., Willis, C., Nicaise, A., Krzak, G., Peruzzotti-Jametti, L., & Pluchino, S. (2023). Neuroinflammation in Multiple Sclerosis. In *Encyclopaedia of Cell Biology* (pp. 666–686). Elsevier.
- Saikia, A., Hadelar, A., **Prasad, P.**, Zacharias, M., & Springer, S. (2022). Fast peptide exchange on major histocompatibility complex class I molecules by acidic stabilization of a peptide-empty intermediate. *Protein Science*, 31(12).

Pre-prints

- Park, B., Nicaise, A. M., Tsitsipatis, D., Pirvan, L., **Prasad, P.**, Larraz Lopez De Novales, M., Whitten, J., Culig, L., Llewellyn, J., Ionescu, R.-B., Willis, C. M., Krzak, G., Fan, J., De, S., Suarez Cubero, M., Spathopoulou, A., Peruzzotti-Jametti, L., Leonardi, T., Edenhofer, F., ... Beerman, I. (2024). Integrative single-cell analysis of neural stem/progenitor cells reveals epigenetically dysregulated interferon response in progressive multiple sclerosis. *BioRxiv*.

Manuscripts in preparation

- Prasad, P.** et al. "Cytosolic nucleic acids elicit antiviral innate immune responses, driving inflammation and cellular senescence in a human in-vitro model of Progressive MS" *BioRxiv*
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Skills & Interests

- **Student Government:** elected Welfare Officer (2022-23, 2023-24) for the Queens' College Postgraduate Committee; organised >25 mental wellbeing and community-building events, made free sexual health products and anti-spiking kits available for >500 postgraduates
 - **Running for Charity:** ran the 'Town & Gown' 10K in 2023, now training for 2025 Cambridge Half Marathon and fundraising on behalf of Alzheimer's Research UK - succeeded in raising 132% of the funding goal
 - **Science Communication:** delivered a brain anatomy workshop for >100 attendees at Cambridge Science Week 2022
 - **Science Advocacy:** active 'Voice of Young Science' member for the UK charity 'Sense about Science'
 - **Public Health:** first-aid volunteer at an NGO-run clinic 'Institute for Indian Mother & Child' in rural Calcutta 2018
 - **Bass Guitar:** self-taught, formed a novice 4-piece band, funded by the Queens' College Friends of Music Fund
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Languages

English (native) | **Kannada** (native) | **Italian** (proficient) | **Hindi** (conversational) | **French** (B2)