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## Education

- 2019–2024 **DPhil (PhD) in Clinical Neurosciences**, *University of Oxford*, Oxford, United Kingdom.  
Supervisors: Dr. Amy F.D. Howard, Prof. Karla L. Miller, & Prof. Saad Jbabdi  
Thesis: Quantitative methods for MRI-microscopy comparisons  
<https://tinyurl.com/dkorthesis>
- 2014–2018 **B.ASc. in Engineering Physics (With Distinction)**, *University of British Columbia*, Vancouver, Canada.

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## Experience

### Research

- 2019–2024 **Graduate Researcher**, *Wellcome Centre for Integrative Neuroimaging*, Oxford, United Kingdom.  
Supervisors: Dr. Amy F.D. Howard, Prof. Karla L. Miller, & Prof. Saad Jbabdi
- 2017–2018 **Undergraduate Researcher**, *University of British Columbia*, Vancouver, Canada.  
Supervisor: Prof. Alexander Rauscher  
Project: Modelling the role of myelin and iron in MRI signal measured from the brain white matter
- 2016 **Undergraduate Researcher**, *Canadian Hydrogen Mapping Experiment*, Vancouver, Canada.  
Supervisor: Prof. Mark Halpern  
Project: Modelling the contributions of temperature to signals measured from a radio telescope

### Teaching

- 2022–2024 **MRI Graduate Course Tutor**, *Wellcome Centre for Integrative Neuroimaging*, Oxford, United Kingdom.  
<https://www.ndcn.ox.ac.uk/study-with-us/graduate-students/fmrib-graduate-programme/>
- 2017–2018 **Teaching Assistant**, *University of British Columbia*, Vancouver, Canada.  
Applied Science 100/101 - Introduction to Engineering I and II

### Science Communication and Outreach

- 2022–2023 **Public Engagement Ambassador**, *Wellcome Centre for Integrative Neuroimaging*, Oxford, United Kingdom.  
<https://www.win.ox.ac.uk/about/engaging-for-impact/public-engagement/public-engagement-ambassadors/>

- 2022–2023 **Performer**, *Your Amazing Brain*, Wellcome Centre for Integrative Neuroimaging, Oxford, United Kingdom.  
Vice-Chancellor Award nominee
- 2021–2023 **Graduate Student Ambassador**, *St. Peter's College, University of Oxford*, Oxford, United Kingdom.  
<https://www.spc.ox.ac.uk/study-here/increasing-access/outreach-in-schools>  
[Volunteering](#)
- 2022–2023 **Hospital Ward Volunteer**, *Oxford University Hospital*, Oxford, United Kingdom.  
Served meals, ensured patient well-being, and provided companionship.
- 2021–2023 **Science Tutor**, *Oxford Hub*, Oxford, United Kingdom.  
Tutored a student with dyscalculia in GCSE maths
- 2020 **Patrol Volunteer**, *Turl Street Homeless Action*, Oxford, United Kingdom.  
Brought hot drinks and food to those sleeping rough in central Oxford
- 2017–2018 **Multiple Sclerosis Research Consenting**, *UBC Djavad Mowafaghian Centre For Brain Health*, Vancouver, Canada.  
Consented patients for enrollment into MS/MRI research
- 2017–2018 **Engineering Physics Mentor**, *University of British Columbia*, Vancouver, Canada.  
Mentored five junior Engineering Physics students
- 2014–2018 **Laboratory Assistant and Volunteer**, *UBC Engineering Physics Project Laboratory*, Vancouver, Canada.  
Engaged university first-year and high school students for STEM outreach

## Publications

1. Kor, D. Z. L., Jbabdi, S., Huszar, I. N., Mollink, J., Tendler, B. C., Foxley, S., Wang, C., Scott, C., Smart, A., Ansorge, O., Pallegage-Gamarallage, M., Miller, K. L. & Howard, A. F. D. An automated pipeline for extracting histological stain area fraction for voxelwise quantitative MRI-histology comparisons. en. *NeuroImage* **264**, 119726 (Dec. 2022).
2. Kor, D., Birkel, C., Ropele, S., Doucette, J., Xu, T., Wiggermann, V., Hernández-Torres, E., Hametner, S. & Rauscher, A. The role of iron and myelin in orientation dependent R2\* of white matter. eng. *NMR in biomedicine* **32**, e4092 (July 2019).
3. Huszar, I. N., Pallegage-Gamarallage, M., Bangerter-Christensen, S., Brooks, H., Fitzgibbon, S., Foxley, S., Hiemstra, M., Howard, A. F. D., Jbabdi, S., Kor, D. Z. L., Leonte, A., Mollink, J., Smart, A., Tendler, B. C., Turner, M. R., Ansorge, O., Miller, K. L. & Jenkinson, M. Tensor image registration library: Deformable registration of stand-alone histology images to whole-brain post-mortem MRI data. *NeuroImage* **265**, 119792 (Jan. 2023).
4. Tendler, B. C., Welland, M., Miller, K. L. & The WIN Handbook Team. Why every lab needs a handbook. *eLife* **12**. Publisher: eLife Sciences Publications, Ltd, e88853 (July 2023).

5. Smart, A., Tisca, C., Huszar, I. N., Kor, D., Ansorge, O., Tachrount, M., Smart, S., Lerch, J. P., Miller, K. L. & Martins-Bach, A. B. Protocol for tissue processing and paraffin embedding of mouse brains following ex vivo MRI. *STAR Protocols* **4**, 102681 (Dec. 2023).

\* Authors contributed equally.

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## Invited Talks

### 2024 **Understanding the histological basis of MRI.**

Imaging Seminar Series with the Center for Alzheimer Research  
Karolinska Institute, Stockholm, Sweden

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## Conference Presentations

### Poster Presentations

### 2023 **Parameter inference using continuous change in degenerate biophysical diffusion models.**

**Kor DZL**, Rafipoor H, Cottar M, Miller KL\*, Howard AFD\*

Conference: Annual Meeting of the International Society for Magnetic Resonance in Medicine.

Location: Toronto, Canada

### 2023 **Whole-brain characterisation of microscopy-derived microstructure in the BigMac dataset.**

Howard AFD, Huszar IN, Zhu S, **Kor DZL**, Roumazeilles L, Jbabdi S\*, Miller KL\*

Conference: Annual Meeting of the Organisation for Human Brain Mapping.

Location: Montreal, Canada

### 2023 **Linking MRI to histology in the mouse brain: A framework for data acquisition and pre-processing.**

Tisca C, Tachrount M, Smart A, Lange F, Howard AFD, Wang C, Qiu L, Tendler BC, Bratley C, **Kor DZL**, Huszar IN, Ballarobre-Barreiro J, Fava M, Mayr M, Lerch J, Martins-Bach A, Miller KL

Conference: Annual Meeting of the Organisation for Human Brain Mapping.

Location: Montreal, Canada

### 2023 **Towards whole-brain, quantitative characterisation of microscopy-derived microstructure in the BigMac dataset.**

Howard AFD, Huszar IN, Zhu S, **Kor DZL**, Roumazeilles L, Jbabdi S\*, Miller KL\*

Conference: Annual Meeting of the International Society for Magnetic Resonance in Medicine.

Location: Toronto, Canada

### 2022 **Disentangling the contributions of myelin, neurofilament & microglia to MR contrast: an automated pipeline for voxelwise MR-histology analysis.**

**Kor DZL**, Jbabdi S, Huszar IN, Mollink J, Tendler BC, Foxley S, Wang C, Connor S, Smart A, Ansorge O, Pallegage-Gamarallage M, Miller KL\*, Howard AFD\*

Conference: Annual Meeting of the International Society for Magnetic Resonance in Medicine.

Location: London, United Kingdom

- 2022 **Visualising and interacting with diffusion MRI microstructural models using FSL-DIVE.**  
Cottaar M, Eichert N, Rafipoor H, Howard AFD, **Kor DZL**, Kang J, Chaggar P, Zheng YQ, Fitzgibbon S, Jbabdi S  
Conference: Annual Meeting of the International Society for Magnetic Resonance in Medicine.  
Location: London, United Kingdom
- 2022 **Extracting histology stain area fraction for quantitative comparisons with multimodal MRI.**  
**Kor DZL**, Jbabdi S, Huszar IN, Mollink J, Tendler BC, Foxley S, Wang C, Connor S, Smart A, Ansorge O, Pallegage-Gamarallage M, Miller KL\*, Howard AFD\*  
Conference: Post Graduate Meeting of the British and Irish Chapter of the ISMRM Hybrid Symposium.  
Location: London, United Kingdom
- 2021 **Automatic extraction of reproducible semi-quantitative histological metrics for MRI-histology correlations.**  
**Kor DZL**, Jbabdi S, Huszar IN, Mollink J, Connor S, Smart A, Ansorge O, Pallegage-Gamarallage M, Miller KL\*, Howard AFD\*  
Conference: Annual Meeting of the International Society for Magnetic Resonance in Medicine.  
Location: Online
- 2021 **An automated pipeline for extracting semi-quantitative estimates from immunohistochemistry images.**  
**Kor DZL**, Jbabdi S, Mollink J, Huszar IN, Pallegage-Gamarallage M, Smart A, Connor S, Ansorge O, Howard AFD\*, Miller KL\*  
Conference: Post Graduate Virtual Meeting of the British, Irish, Iberian Chapter of the ISMRM  
Location: Online
- 2020 **Development of an automated processing pipeline for brain MRI-histology correlations.**  
**Kor DZL**, Mollink J, Huszar IN, Howard AFD, Foxley S, Pallegage-Gamarallage M, Smart A, Ansorge O, Jbabdi S, Miller KL  
Conference: Annual Meeting of the Organisation for Human Brain Mapping.  
Location: Online
- 2018 **The role of ferritin and myelin in orientation dependent  $R2^*$  measured from susceptibility-weighted MR signal in white matter.**  
**Kor DZL**, Doucette J, Xu T, Rauscher A.  
Conference: Annual Meeting of the International Society for Magnetic Resonance in Medicine.  
Location: Paris, France
- [Oral Presentations](#)
- 2024 **An optimised framework for relating microstructural MRI to multi-stain histology metrics in the mouse brain.**  
Tisca C, Tachrount M, Smart A, Lange FJ, Howard AFD, Wang C, Tendler BC, Qiu L, Bratley C, **Kor DZL**, Huszar IN, Ballarobre-Barreiro J, Myer M, Lerch J, Martins-Bach AB, Miller KL  
Conference: Annual Meeting of the International Society for Magnetic Resonance in Medicine.  
Location: Singapore, Singapore

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## Awards

- 2022 **Magnetic Moments Winner \$500**, *International Society for Magnetic Resonance in Medicine*.
- 2022 **Goodger and Schorstein Research Scholarship in Medical Sciences £2,700**, *University of Oxford*, Oxford, United Kingdom.
- 2019 **3 Minutes of Science Winner**, *University of Oxford*, Oxford, United Kingdom.
- 2019 **The Hrothgar Singaporean Clarendon Scholarship £51,000**, *University of Oxford*, Oxford, United Kingdom.
- 2019 **Clarendon Fund £24,600**, *University of Oxford*, Oxford, United Kingdom.
- 2019 **Department of Clinical Neurosciences Studentship £45,000**, *University of Oxford*, Oxford, United Kingdom.
- 2018, 2021, 2022 **ISMIRM Trainee Stipend Award**, *International Society for Magnetic Resonance in Medicine*.  
Awarded for the Annual Meeting
- 2016, 2017, 2018 **NSERC Undergraduate Student Research Award \$4,300**, *Natural Sciences and Engineering Research Council of Canada*.  
Awarded to fund undergraduate research
- 2017 **UBC Dean's Award for Design and Innovation \$500**, *University of British Columbia*, Vancouver, Canada.
- 2016 **Coordinated International Exchange Award**, *University of British Columbia*, Vancouver, Canada.  
Awarded to fund international exchange at ETH Zurich
- 2014 **UBC Chancellor's Scholar Award**, *University of British Columbia*, Vancouver, Canada.
- 2012 **John Helm Memorial Scholarship \$5,000**, *Columbia College*, Vancouver, Canada.
- 2011 **Columbia College Academic Scholarship \$2,500**, *Columbia College*, Vancouver, Canada.