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| Application for CFREF (BrainsCAN) supported MRI Rates at the CFMM |

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| |  | | --- | | Using no more than the space remaining on this page (~300 words), please describe why your imaging project aligns with the themes and goals of BrainsCAN (see [BrainsCAN Research Alignment/Steering Document](http://cfmm.robarts.ca/wp-content/uploads/2017/02/BrainsCAN_Research_Alignment.docx)). Explain the benefits of the reduced rate to your research in terms of the additional scientific avenues you can pursue.  The purpose of this project is to explore how the medial temporal lobe, particularly perirhinal cortex (PrC), and the posterior parietal cortex (PPC) are involved in making different types of memory decisions. It is well documented that the PrC BOLD signal correlates with the mnemonic states of the stimuli. However, how this activity is related to the memory response produced by the participants is not well understood. Recently, several subregions within the PPC have been linked to making memory decisions. A question naturally following these discoveries is how the two regions cooperate to produce memory decision. Our project aims to compare the activity and characterize the interaction of PrC and PPC in a paradigm that is capable of distinguishing decision-relevant versus decision-irrelevant memory signals.  This project aligns with the strategic priorities of BrainsCAN. Specifically, we will use fMRI method to investigate the processes of making memory decisions that go beyond the medial temporal lobe. This will provide a better understanding of the link between various brain structures and behavioral measurements of memory. As PrC and PPC are both affected in Alzheimer's disease, this gain in basic knowledge can lead to discoveries of new neural markers of the memory deficits.  The reduced rate will allow us to recruit more participants which leads to increased statistical power, especially for the medial temporal lobe where the signal often suffers from susceptibility artifact. | |

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| Contact Information: | |
| Principal Investigator: Stefan Kohler | email: stefank@uwo.ca |
| Department: Psychology | Campus Extension: 86299 |
| Date: 2018-11-02 | |

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| |  | | --- | | Please also indicate the following: |  |  | | --- | | Project Name (short title): Role of perirhinal and parietal cortex in making memory decisions | | PI Details (include information regarding prior MRI experience, estimated annual hours needed, expected publications resulting from this project):  PI has 11 years of MRI experience. This project will require about 50 hours of scanning time this year. 1-2 publications are anticipated to result from this project. |  |  | | --- | | If this study has been peer reviewed by a funding agency, please indicate agency name: | | Was it funded? YES  NO  (Please include the reviews if the application was not funded in order to aid the User Committee in making decisions). |  |  | | --- | | If this project has a training component, list names of trainees (if applicable), type (ie. MSc student, PDF), their prior experience with MRI: Haopei Yang (PhD student, 0 year of MRI experience) | | If this project has a collaborative component, please list collaborating researchers (including their prior level of MRI experience) and affiliations:  Chris Martin (Post-doc, 6 years MRI experience, University of Toronto), Ali Khan (PI, 11 years MRI experience, Western University) | | UWO HSREB or AUS approval number: | | UWO Speedcode: | |

If awarded the CFREF reduced rate, researchers for each individual project are expected to acknowledge the “Canada First Research Excellence Fund to BrainsCAN” award in all presentations and publications, and to submit a brief report to the CFREF Administrative team ([brainscan@uwo.ca](mailto:brainscan@uwo.ca)) by the end of March in every calendar year ([Annual Report](http://cfmm.robarts.ca/wp-content/uploads/2017/02/CFREF_ReducedRate_AnnualReport.docx)) until the project and all outputs are complete/delivered.

***Methods sections in publications, abstracts and presentations must include a statement that scanning was performed at Western’s Centre for Functional and Metabolic Mapping. Publications neglecting to acknowledge the funding source or CFMM will be retrospectively assessed the standard rate of $450/hr.***

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| Internal Use Only  CFMM User Committee approval: YES  NO | Date: |