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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 characterize the neural mechanisms of musical memory. We will scan participants in an initial session while they listen to 16 unfamiliar music stimuli. Participants will train on half of the stimuli over the course of 2-3 weeks. We will then scan participants in a final session while they listen to all 16 music stimuli again, half familia r and half unfamiliar. ISS analysis and BOLD contrasts will be done to explore differences in familiar and unfamiliar music processing. To our knowledge, this is the first music familiarity study to control for the musical features, and actually manipulate familiarity levels. The results of this study will determine the neural correlates of music familiarity in healthy participants. Once established, these neural correlates could be explored in patients with Alzheimer's disease (AD). Memory for music is relatively spared in AD and understanding how the brain encodes musical memory in healthy participants may give us insight into why this phenomenon occurs in AD, as well as how memory for music differs from memory for other types of material.  This project aligns with the strategic priorities of BrainsCAN. It involves the use of imaging to evaluate memory in healthy participants to better understand memory deficitis in AD. This project will involve colaboration between labs within the Brain and Mind institute to ensure the most effective measures and protocols are used.  The reduced rate will allow us to gather data from more participants than we would otherwise be able to which will improve the strength of our findings. | |

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| Contact Information: | |
| Principal Investigator: Dr. Jessica Grahn | email: jgrahn@uwo.ca |
| Department: Psychology | Campus Extension: x84084 |
| Date: May 1, 2017 | |

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| |  | | --- | | Please also indicate the following: |  |  | | --- | | Project Name (short title): Neural Correlates of Music Familiarity | | PI Details (include information regarding prior MRI experience, estimated annual hours needed, expected publications resulting from this project):  PI has 19 years of MRI experience. This project will use ~60 hours upon full enrolment. 2 papers are anticipated from this research once sufficient data is collected. |  |  | | --- | | 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: Lucy McGarry (PDF, 1 prior MRI study), Avital Sternin (PhD Student, no prior MRI experience) | | If this project has a collaborative component, please list collaborating researchers (including their prior level of MRI experience) and affiliations: | | UWO HSREB or AUS approval number: 100606 | | UWO Speedcode: PKZU | |

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: |