**Project Proposal guidelines**

The post holder will be part of a team conducting a longitudinal study examining sex differences in interoception and the influence of the menstrual cycle.

Many common mental health conditions (e.g. anxiety and depression) are more common in women than men and when women experience mental illness it often presents differently to men. However, what underlies sex differences in mental illness is unclear. Recent research suggests that the ability to perceive the internal state of your body (e.g. feeling your heartbeat; ‘interoception’) might be important for mental health and key abilities (e.g. emotion processing). Importantly, sex differences in interoception are well documented; compared to men, women are less accurate at perceiving interoceptive signals and yet report more attention to interoceptive signals. Given known links between interoception and mental health, questions remain regarding the extent to which sex differences in interoception relate to sex differences in mental health and why men and women differ with respect to interoception. In women, periods of physical and hormonal change (e.g. the menstrual cycle, pregnancy, menopause) are often associated with changes in mood and mental health. However, whether physical and hormonal change (e.g. during the menstrual cycle) disrupts interoception is not yet known.

In your proposal, briefly describe how you might choose to empirically investigate this hypothesis to examine whether there is a causal relationship between these factors.

Your proposal should be a maximum of 2 pages. In this proposal, please include a brief background to justify your hypotheses and a detailed plan for the first study you would like to conduct, including proposed analyses, and 2 future research questions.

Relevant papers:

* Brewer, R., **Murphy, J.,** & Bird, G. (2021). Atypical interoception as a common risk factor for psychopathology: A review. Neuroscience and Biobehavioural Reviews, 130, 470-508.
* **Murphy, J.,** Viding, E & Bird, G., (2019). Does atypical interoception following physical change contribute to sex differences in mental illness? Psychological Review, 126(5), 787–789.
* Prentice, F., & **Murphy, J.,** Sex differences in interoceptive accuracy: A meta-analysis (2022). Neuroscience and Biobehavioural Reviews, 132, 497-518.
* Prentice, F., Spooner, R., Hobson, H., **Murphy, J.,** (2022; in press). Sex differences in interoceptive accuracy and emotional ability: an explanation for incompatible findings. Neuroscience and Bioebehavioural Reviews, 104808.

**Guidance on the personal statement**

A **personal statement**completed by you (maximum 500 words): This should include information on your reasons for applying for your PhD, for our programme, and to carry out this project. Outline why you should be awarded a place on our PhD programme (and for the funding if applying for a studentship), what your career goals are, what has prepared you to undertake the PhD and proposed work, and what skill set and knowledge you have that will allow to succeed and make an impact (please highlight relevant achievements supporting why you would be a strong candidate).

**Guidance on submitting your application**

Your application must be submitted through the College [online application](https://www.royalholloway.ac.uk/studying-here/applying/postgraduate/how-to-apply/) system, for which you need to register at the outset of the process. You will need to nominate two referees (neither of which should be your proposed supervisor) on this online form. They will be contacted by the College directly, but it is always a good idea for you to contact referees before you submit your application to make them aware of your plans, and so they can respond to the College request swiftly.