



# BU STUDENTSHIPS 2021

## PROJECT DESCRIPTION

### PROJECT DETAILS

#### PROJECT TITLE

Physiological responses and adaptation to environmental and exercise stressors in female populations

#### PROJECT SUMMARY

The Department of Rehabilitation and Sport Sciences at Bournemouth University are seeking applications from highly motivated candidates to undertake a PhD in the field of exercise physiology. The Studentship is for 4 years, which will begin in September 2021 or January 2021. You will be supported by an annual £15,450.

Project details: The project will be co- developed between the student and the supervisory team; however, the overarching aim of the project will be to further our understanding of the physiological responses and adaptations to environmental and exercise stressors in females. Currently, aspects of established physiological responses and adaptations have concentrated on male populations. The female population experiences many additional stressors that require further investigation. In addition to supporting the paucity of research on female physiological norms during rest and exercise, the student may wish to consider the physiological responses and adaptations to stressors during oral contraception usage, pregnancy or menopause, or in special clinical female populations.

#### ACADEMIC IMPACT

The academic sphere of healthy living and physical activity is vital, however there is a vast underrepresentation of females in research; female participants were included in 11.6-17.8% of exercise thermoregulation research between 2010 and 2019, for example (Hutchins et al., 2021). In addition, important aspects of female physiology such as menstrual orientation and phase are included in less than one quarter of research. This project has the capacity to focus on addressing the missing data and importantly, purposefully expand on the physiological challenges for special populations of women experiencing regularly occurring exercise and environmental stressors.

#### SOCIETAL IMPACT

This project aims to purposefully interact with key stakeholders within society throughout the duration of the project to create meaningful impact in the real world and address challenges and meet societal needs affecting a large proportion of society; the female population. Historically, key regularly occurring scenarios affecting the female population such as the use of oral contraception, pregnancy and menopause have been avoided during research, meaning current advice associated with exercise for females is irrelevant or inaccurate and is overdue specific focus, which this research seeks to begin to address.

#### DEVELOPMENT OPPORTUNITIES

The successful candidate will be expected to provide technical support for staff and students in the Sport and Exercise Science Human Performance Laboratory using specialist exercise physiology software and experimental equipment. The time will be split 0.6 FTE researching for the doctorate and 0.4 FTE providing technical support.

#### SUPERVISORY TEAM

<b>First Supervisor</b>	Dr Malika Felton
<b>Additional Supervisors</b>	Dr Rebecca Rendell (Neal) Dr Susan Dewhurst
<b>Recent publications by supervisors relevant to this project</b>	<p><u>Felton, M.</u>, <u>Hundley, V.A.</u>, Grigsby, S. and McConnell, A.K., 2021. Effects of slow and deep breathing on reducing obstetric intervention in women with pregnancy-induced hypertension: a feasibility study protocol. <i>Hypertension in Pregnancy</i>, 40 (1), 81-87.</p> <p>Corbett, J., Massey, H.C., Costello, J.T., Tipton, M.J. and <u>Neal, R.A.</u>, 2021. The effect of medium-term heat acclimation on endurance performance in a temperate environment. <i>European Journal of Sport Science</i>.</p> <p>Thomas, N.M., Donovan, T., <u>Dewhurst, S.</u> and Bampouras, T.M., 2018. Visually fixating or tracking another person decreases balance control in young and older females walking in a real-world scenario. <i>Neuroscience Letters</i>, 677, 78-83.</p> <p>Costello, J.T., <u>Rendell, R.A.</u>, Furber, M., Massey, H.C., Tipton, M.J., Young, J.S. and Corbett, J., 2018. Effects of acute or chronic heat exposure, exercise and dehydration on plasma cortisol, IL-6 and CRP levels in trained males. <i>Cytokine</i>, 110, 277-283.</p> <p>Corbett, J., <u>Rendell, R.A.</u>, Massey, H.C., Costello, J.T. and Tipton, M.J., 2018. Inter-individual variation in the adaptive response to heat acclimation. <i>Journal of Thermal Biology</i>, 74, 29-36.</p> <p><u>Rendell, R.A.</u>, Prout, J., Costello, J.T., Massey, H.C., Tipton, M.J., Young, J.S. and Corbett, J., 2017. Effects of 10 days of separate heat and hypoxic exposure on heat acclimation and temperate exercise performance. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i>, 313 (3), R191-R201.</p>

#### INFORMAL ENQUIRIES

Please contact the lead supervisor on the following email for informal enquiries: [mfelton@bournemouth.ac.uk](mailto:mfelton@bournemouth.ac.uk)

#### ELIGIBILITY CRITERIA

The BU PhD and MRes Studentships are open to UK, EU and International students.

Candidates for a PhD Studentship should demonstrate outstanding qualities and be motivated to complete a PhD in 4 years and must demonstrate:

- outstanding academic potential as measured normally by either a 1st class honours degree (or equivalent Grade Point Average (GPA) or a Master's degree with distinction or equivalent
- an IELTS (Academic) score of 6.5 minimum (with a minimum 6.0 in each component, or equivalent) for candidates for whom English is not their first language and this must be evidenced at point of application.

#### **ADDITIONAL ELIGIBILITY CRITERIA**

In addition to satisfying minimum entry criteria, BU will look closely at the qualities, skills and background of each candidate and what they can bring to their chosen research project in order to ensure successful completion.

#### **HOW TO APPLY**

Please complete the online application form by **15<sup>th</sup> August 2021**.

Further information on the application process can be found at: [www.bournemouth.ac.uk/studentships](http://www.bournemouth.ac.uk/studentships)