



Project Title

Supramolecular PET probes for multi-target imaging of cardiac collagen metabolism

A PhD studentship is available in the groups of Professor Paul Lusby and Professor Adriana Tavares, University of Edinburgh; School of Chemistry and Centre for Cardiovascular Science Centre.

<https://www.lusby.chem.ed.ac.uk/>

<https://www.research.ed.ac.uk/en/persons/adriana-tavares>

Project Summary

In this PhD, a novel supramolecular approach for ^{18}F radiolabelling and bio-conjugation will be developed and applied to image cardiovascular fibrosis. This builds on previous research from the Lusby group showing that non-covalent encapsulation of pertechnetate is a novel approach in nuclear medicine. In this project, we will prepare and evaluate supramolecular systems capable of binding ^{18}F , and their subsequent attachment to novel biomarkers for imaging collagen biosynthesis, deposition and degradation pathways.

The successful candidate will have experience in synthetic chemistry, ideally involving the preparation and analysis supramolecular systems. No prior experience of radiochemistry of PET imaging is required.

References

Visualizing Kinetically Robust CoIII4L6 Assemblies in Vivo: SPECT Imaging of the Encapsulated [99mTc]TcO₄⁻ Anion” B. P. Burke, W. Grantham, M. J. Burke, G. S. Nichol, D. Roberts, I. Renard, R. Hargreaves, C. Cawthorne, S. J. Archibald, P. J. Lusby, J. Am. Chem. Soc. 2018, 140, 16877-16881.

Funding Notes

The studentship is fully funded for 42 months by the University of Edinburgh and covers tuition fees and an annual stipend at the UKRI rate, for 2024-25 this is £19,237 per annum, for a candidate satisfying EPSRC residency criteria.

<https://www.ukri.org/wp-content/uploads/2024/04/UKRI-020424-TrainingGrantTermsConditionsApril2024.pdf>

How to apply

In the first instance, the initial application of cover letter and CV should be directed to Professor Paul Lusby, School of Chemistry, University of Edinburgh, David Brewster Road, Edinburgh EH9 3FJ, UK.

Email: Paul.Lusby@ed.ac.uk

The position will remain open until filled. A closing date may be added at a later date.

IMPORTANT

Before Submitting your cover letter and CV, please complete the online [School of Chemistry Equality, Diversity and Inclusion Form, entry 2025-26](#).

The form will automatically generate a unique ‘Response ID number’ that you must include in your cover letter.

Equality and Diversity

The School of Chemistry holds a Silver Athena SWAN award in recognition of our commitment to advance gender equality in higher education. The University is a member of the Race Equality Charter and is a Stonewall Scotland Diversity Champion, actively promoting LGBT equality.

The University has a range of initiatives to support a family friendly working environment.

For further information, please see our University Initiatives website:

<https://equality-diversity.ed.ac.uk/inclusion/family-and-carer>