

Award

PhD in Chemistry

Project Title

Artificial Intelligence for Early Detection of Cancers from Spectroscopic Liquid Biopsies

Project Details

We are recruiting for a 3.5 year PhD project on “Artificial Intelligence for Early Detection of Cancers from Spectroscopic Liquid Biopsies”. The project is part-funded by Dxcover Ltd (www.dcover.com) and will be based in the newly formed Strathclyde Centre for Doctoral Training in Artificial Intelligence for Molecular Exploration, Discovery and Development (AIMED²) at the University of Strathclyde.

Working in close collaboration with experimental and computational scientists at Dxcover Ltd, you will develop new computational methods for the early detection of cancers. The PhD will provide training in artificial intelligence, cancer diagnostics, chemometrics/data science, and modelling of vibrational spectroscopy data.

Dxcover’s mission is to be a world leader in liquid biopsy using multi-omic spectral analysis for early detection of cancer, to improve survival and quality of life. The company has published compelling data on methods for brain tumour detection (*Neuro-Oncol. Adv.*, 2022, 4, vdac024; *Nat. Commun.*, 2019, 10, 4501), multi-cancer early detection (*Br. J. Cancer*, 2023, 129, 1658–1666), and other applications.

The studentship will be supervised by Dr David Palmer in the Department of Pure and Applied Chemistry at the University of Strathclyde. It will be based in the Strathclyde Computational and Theoretical Chemistry Hub (SCoTCH), a centre for excellence in computational molecular science. The centre occupies modern computational laboratories with access to high-performance computing facilities including graphic processing units (GPUs).

We are committed to inclusion across race, gender, age, religion, identity, and experience, and believe that diversity makes us stronger by bringing in new ideas and perspectives. The Department of Pure and Applied Chemistry holds an Athena Swan Silver Award for Equality, Diversity and Inclusion

The University of Strathclyde was established in 1796 as 'the place of useful learning' and this remains at the forefront of our vision today for Strathclyde to be a leading international technological university that makes a positive difference to the lives of its students, to society and to the world. Strathclyde was the first institute to win the coveted Times Higher Education “University of the Year” award twice, in 2012 and 2019, and has since been voted the Scottish University of the Year in 2020. The University occupies a central position in Glasgow, only short journeys from Edinburgh and the Scottish Highlands and Islands.

This is a fully funded position open to Home (Scottish) and UK students. It offers a stipend at the UKRI standard rate.

How to Apply

Please send your application letter, CV, and University transcripts to Dr David Palmer (david.palmer@strath.ac.uk).

Informal enquiries are also welcome.

Deadline

Open until filled

Funding Details

Funding includes full tuition fees at the home fee rate plus an annual stipend at the UKRI standard rate.

Full funding is only available for Home (Scottish) and UK students, but self-funded international students are welcome to apply.

Eligibility

A first class or upper second-class UK Honours degree or overseas equivalent in Chemistry, Physics, Computer Science or a related subject. If English is not your first language, you must have an IELTS score of at least 6.5 with no component below 5.5.

Primary Supervisor

Dr David Palmer