

BBSRC DPhil Studentship in characterisation of adenovirus vector vaccine particles for improved antigen delivery

Pandemic Sciences Institute, Nuffield Department of Medicine, University of Oxford in collaboration with Oxford Biomedica

Application Deadline: Friday 1st December 2023 (12:00 midday GMT)

Project Start Date: 13th October 2024

Supervisors

Primary Supervisor: Professor Dame Sarah Gilbert

Secondary Supervisors: Dr Susan Morris

About the Project

The Pandemic Sciences Institute (PSI) at the University of Oxford, was established in 2021 as a multi-disciplinary, University-wide initiative focused on finding solutions to counteract future pandemic threats through science, innovation and building systems of global preparedness. The research group of Professor Dame Sarah Gilbert utilises Adenovirus vector platform technology to develop vaccines against emerging pathogens that have been identified as such threats. In addition to developing new vaccines, Prof. Gilbert's group also focuses on improving vaccine manufacturing, developing novel delivery mechanisms for these vaccines and understanding the interactions of vaccine vectors with host cells. These additional goals are the major focus of this PhD project. The project aims to study the physical characteristics of adenovirus vector virus particles and virus particle/cellular interactions to improve the collective understanding of the molecular pathways involved in vector production and utilise this information to improve the scale-up and production of adenoviral vectors for vaccination and therapeutic applications. It is hoped that this work can lead to the development of more easily manufactured, cost-effective and immunogenic vaccines in the future, vital for the Institute's goal of developing interventions that can be accessed globally and equitably.

About the BBSRC Collaborative Training Partnership in Advanced Bioscience of Viral Products (ABViP)

This PhD studentship is part of the Biotechnology and Biological Sciences Research Council (BBSRC) Collaborative Training Partnership (CTP) in Advanced Bioscience of Viral Products (ABViP). The ABViP-CTP is a comprehensive, multidisciplinary training programme designed to deliver the next generation of bioscience leaders who will advance research on the underpinning bioscience of viral products for future gene therapies and vaccines. Led by Oxford Biomedica (OXB) and involving both UCL and the University of Oxford, CTP students will have access to a wide-ranging portfolio of training opportunities at the Partner sites including taught courses and case studies designed to complement the doctoral research. Students trained through the ABViP CTP will gain a holistic insight into the research and development activities required to develop the medicines of the future, with the ability to see the world of medicines development through both an academic and industrial lens. For more information about the ABViP CTP, please click on the following [link](#).

A webinar will be held on Thursday 9th November 2023 18.30 – 18.30 (GMT) which will introduce the ABViP Programme, and each of the projects and provides an opportunity to have your questions answered. To register for this webinar, please [click here](#).

About the Department

The Pandemic Sciences Institute (PSI) brings together a wealth of knowledge and expertise in infectious disease, immunology, vaccinology, and global health. As a multi-disciplinary collaborative centre, it works with global partners to confront the challenge of epidemic and pandemic infectious diseases. The PSI played pivotal roles during the COVID-19 pandemic including in the development of the Oxford/AstraZeneca vaccine and continues to lead on vaccine development and testing for many emerging pathogens including Sudan Ebola virus, Marburg virus, Crimean-Congo haemorrhagic fever virus, Lassa fever virus and Middle East Respiratory Syndrome Coronavirus.

The PSI is part of the Nuffield Department of Medicine (NDM). NDM is a thriving and successful department of clinical medicine with clinical activity at the core of its success and is made up of 24 institutes, centres and units based in Oxford and overseas. NDM aims to improve healthcare internationally through its research and teaching and is renowned for excellence in many clinical disciplines including tropical medicine, infectious disease, cancer, immunology, gastroenterology and vaccinology.

About Oxford Biomedica

Oxford Biomedica (OXB) is a pioneer of gene and cell therapy with a leading position in viral vector research and bioprocessing. Our mission is to deliver life-changing gene therapies to patients. OXB is an innovation and science-focused company that has developed a leading platform of novel technologies and capabilities. The OXB team provide design, development, bioprocessing and analytical development for gene-based medicines based on viral vectors, both for in-house products and for those developed with partner organisations. OXB has contract development and manufacturing organisation (CDMO) capabilities that support the development of novel gene-based medicines through all phases of clinical development to commercial manufacture. At Oxford Biomedica, we drive credible science to realise incredible results.

Entry requirements

As a minimum, applicants should hold or be predicted to achieve the following UK qualifications or their equivalent: a first-class or strong upper second-class undergraduate degree with honours in a relevant discipline such as biology, biochemistry, or medicine, although those who have not achieved this level of qualification will be considered if they show strong performance in a master's course. A previous master's degree is not required.

We particularly welcome applicants from disadvantaged backgrounds, or via an unconventional career path. If you're unclear as to whether you are eligible, we would encourage you to apply regardless. You can also contact the project supervisor (see details below). To learn more about the policies in relation to diversity and inclusion at the University of Oxford, please [click here](#) for further information.

Informal enquiries should be addressed to Professor Dame Sarah Gilbert (E-mail: Sarah.gilbert@ndm.ox.ac.uk).

Funding

This BBSRC CTP ABViP Studentship is available to UK and Overseas (including EU) students. Full maintenance (stipend & fees) is available to the UK and Overseas students for the duration of the four-year PhD. Note that up to a maximum of one fully funded studentship allocation is available for Overseas students across the Department. The annual tax-free stipend for the PhD studentship is £20,622 (estimated), which includes a top-up from Oxford Biomedica.

English language requirements

If your education has not been conducted in the English language, you will be expected to demonstrate evidence of an adequate level of English proficiency. The English language level for this programme is: **Standard**

Deadline and Application Process

The deadline for submission is 12:00 midday on Friday 1st December 2023.

To apply for this PhD studentship, you must submit a formal application to the DPhil in Advanced Bioscience of Viral Products course (Course code RD_NG1) through the UOXFs application portal by the above deadline. More information about the course and application process is available here:

<https://www.ox.ac.uk/admissions/graduate/courses/dphil-advanced-bioscience-of-viral-products>