



PhD Studentship: The development of new peptide and peptoid based treatments for Neglected Tropical Diseases (NTDs)

Durham University, UK

Department of Chemistry

Duration: 39 months

Stipend: £14,777 per annum

Hours: Full time

Applications welcome from: UK and International students

Starting: October 2019

Closing date: Applications will remain open until a suitable candidate is appointed

Project Supervisor: Associate Professor Steven Cobb

Project Description

Neglected tropical diseases (NTDs) are a significant global health burden, affecting approximately one-sixth of the world's population. The illnesses classified as NTDs by the World Health Organization (WHO) include conditions that have historically been overlooked by international public health efforts, leading to insufficient prevention and treatment options. These diseases are typically endemic in resource-poor, developing countries where populations have limited access to healthcare, and a lack of resources to tackle the disease. NTDs such as leishmaniasis and Chagas disease are infections caused by insect vector-borne protozoan parasites. Combined, these vector-borne diseases affect some of the world's poorest communities, particularly in tropical and sub-tropical regions. In addition to the mortality of these diseases, they can cause severe disfigurement or long-term disability leading to significant social and economic consequences.

The PhD project will build on our previous work in the area of leishmaniasis [see Cobb, *et al.* *J Pept Sci* 2011; 17: 75; *Molecules*, 2015, 20, 2775; *Chem Med Chem* 2015; 10: 233 and *Med Chem Comm* 2016; 7: 799] and will also involve a new collaboration with Professor Ariel Silber (expert in Chagas disease, University of São Paulo, Brazil). The project will adopt both chemical and biological tools to elucidate the mode of action by which previously identified peptides and peptoids function with the view to validating new drug targets for the treatment of both leishmaniasis and Chagas disease. The successful candidate will receive training in a range of both chemical and biological techniques and whilst the project will be based in Durham, aspects of the work will be carried out via a secondment in the Silber laboratory in Brazil.

Keywords – organic synthesis, peptide chemistry, chemical-biology, neglected tropical diseases

Eligibility

Applicants require an undergraduate degree at a 2:1 honours level or above (or equivalent) in a discipline directly relevant to the research areas of chemistry and biology. The position is open to both UK and International students.

Applications

Interested applicants should send a CV (no longer than 2 pages, and should include the contact details of 2 references) and a short cover letter to Steven Cobb (Email - s.l.cobb@durham.ac.uk)