



Job Description

Position #SWBXXRIA

Job Title: Postdoctoral Fellow – Science Without Borders

Department: Research – Antibody Discovery and Protein Engineering

Site: MedImmune, Gaithersburg, MD, USA

Duration: 2 years

We are seeking a highly motivated postdoctoral fellow with a background in Organic Chemistry/Chemical Biology to join the department to lead an independent research project to investigate generation of Antibody Drug Conjugates using genetically encoded non-natural amino-acids (nnAAs). The research will be conducted in MedImmune's state-of-the-art laboratories and will contribute to the advancement of science and a better understanding of the mechanisms that underlie disease for the development of innovative new medicines. The successful candidate will benefit from daily interaction with highly accomplished scientists and postdocs in a collaborative environment. The position offers a unique opportunity for a talented scientist to work in a dynamic and innovative environment and to develop their career at the interface of basic research and drug discovery.

Major Duties and Responsibilities:

Candidates will conduct experiments that will lead to the synthesis of novel pyrrolysine analogs that display diverse chemical functionality that can be incorporated into proteins by PylRS or engineered PylRS mutants. Additionally the candidate will explore reactivity of the new functionality of nnAAs once incorporated into antibodies primarily aimed at the generation of novel antibody drug conjugates. The candidate will independently design and execute experiments, summarize data and prepare publications.

Requirements/Qualifications:

Nationality: Brazilian citizenship or permanent residency

Education: PhD in Organic Chemistry, or related discipline

Experience: Doctoral and/or Post-Doctoral research

Special Skills/Abilities (Narrative or Bullet Points):

Strong background in both Organic Synthesis and Physical Organic Chemistry as relates to the design of new synthetic routes and of new amino acids with appropriate properties and functionality. Must be motivated and capable of working independently and collaboratively. All applicants must have strong written and verbal communication skills with publication(s) in the field of Organic Chemical Synthesis. Demonstrated ability to conduct a complex research project and pursue multiple lines of investigation at the same time.

Project Summary:

The incorporation of unnatural amino acids is of great interest for the incorporation of chemical/functional groups to facilitate the modification or regulation of protein activities and has been

explored for site-specific ADCs, bispecific antibodies, protein engineering, half-life extension of therapeutic proteins, etc. Unlike most aminoacyl-tRNA synthetases, PylRS displays high substrate side chain promiscuity with low selectivity toward its substrate. In addition, PylRS engineering allows genetic incorporation of more than 100 non-canonical amino acids (NCAAs) into proteins at amber stop codon. This proposal seeks to explore the applications of non-natural amino acid derivatives in antibody drug conjugates and bispecific antibodies. Candidates must be motivated and capable of working independently as well as collaboratively. All applicants must have strong written and verbal communication skills with publication(s) in the field of organic synthesis of challenging targets. Demonstrated ability to conduct a complex research project and pursue multiple lines of investigation at the same time

Application Instructions:

1. Submit a Cover Letter and your Resume (or C.V.) in English, specifying the project(s) and/or therapeutic area(s) of greatest interest and send to curriculos.posdoc@astrazeneca.com.
2. Please note that this job is advertised under an AZ/MedImmune partnership with Brazilian Science without Borders (SWB). Once the MedImmune review process is complete, the candidate will need to apply formally for fellowship through SWB website. To apply, [click here](#).