Postdoctoral Research Scientist Position at the Hauptman-Woodward Med. Res. Institute

Development and synthesis of photocaged GPCR ligands for time-resolved structural biology

The Hauptman-Woodward Institute seeks a postdoctoral research scientist in the field of synthetic organic chemistry. The successful candidate will work within the National Science Foundation's BioXFEL Science and Technology center (www.bioxfel.org), a consortium of 13 research labs across the USA dedicated to the study of protein dynamics by time-resolved structural biology. Specifically, the work will comprise the design, synthesis and characterization of novel ligands of G-protein coupled receptors bearing photocleavable groups to be used for rapid and efficient protein function activation in crystals and solutions. The project is highly synergistic with other areas of research beyond synthetic chemistry, including biochemistry, protein crystallography, cryo-EM and pump-probe spectroscopy. Time-resolved structural biology has provided the first "stop-motion movies" of proteins at work at atomic resolution. The ability to observe the structural intermediates explored by molecular machines yields unprecedented insight into their dynamics and plasticity. This information is invaluable for the understanding of both global and local structure-activity relationships and can be used to guide the design of novel drugs or the engineering of proteins with optimized properties. With current high-brilliant X-ray sources available, and extensive advances in sample production, delivery and data collection techniques, the main hurdle is the protein activation step. Photocaging strategies fill this gap and are in high demand by the structural biology community.

We are looking for a highly motivated synthetic chemist with an interest in Chemical Biology to join our interdisciplinary team. The position will be based at the Hauptman-Woodward Medical Research Institute in Buffalo, NY (www.hwi.buffalo.edu) and is a collaboration with the Liu, Fromme and Ros groups at the Biodesign Institute, Arizona State University. The candidate must hold a doctorate or equivalent in organic chemistry or related discipline by the time of appointment. Previous experience in designing and modifying synthetic routes is highly desirable. Prior knowledge about protein structure, medicinal chemistry or biochemistry would be highly advantageous.

Benefits:
The Institute's benefits package includes very generous health insurance, life insurance and parking. In addition we offer affordable vision and dental plans as well as Flexible spending and dependent care accounts. The Institute provides a retirement plan which consists of a 6% employer contribution after one year of service.

Initial application deadline: May 14th 2020 To apply, please send a cover letter and a CV containing a list of publications list to Dr. Diana Monteiro (dmonteiro@hwi.buffalo.edu).

EEO Statement
The Hauptman-Woodward Medical Research Institute, Inc. (HWI) as an equal opportunity employer, extends employment opportunities to qualified applicants and employees on a non-discriminatory basis without regard to race, color, sex, creed, age, religion, national origin, marital status, veteran status, sexual orientation, genetic predisposition, carrier status, or disability that would prevent the performance of the essential requirements of the job with or without a reasonable accommodation in compliance with the appropriate New York State and Federal laws, or any other legally protected characteristics. This policy applies to all conditions and terms of employment.