

**THE DEPARTMENT OF BIOCHEMISTRY, CHEMISTRY AND PHYSICS OF
FAIRLEIGH DICKINSON UNIVERSITY AND THE HUDSON-BERGEN
CHEMICAL SOCIETY**

Announce

The 27th ANNUAL STUDENT RESEARCH SYMPOSIUM AND AWARD NIGHT

May 1, 2026

This is a forum for students and their faculty mentors from colleges and universities that participate in the Hudson-Bergen Chemical Society activities to present the results of their research. Outstanding students, chemistry/biochemistry majors from the participating colleges, are also being recognized (they receive the HBCS Award consisting of a certificate and a gift certificate). All the presenters will receive certificates of participation. Students who wish to make presentations (~10 min each) must send an abstract via e-mail to mleonida@fdu.edu, by April 12, 2026. The abstract should be in MS Word (font Times New Roman 12) and must include the names and email addresses of the student(s) and their faculty adviser(s) in addition to the title of the abstract. The abstract should not exceed 200 words. The name of the student presenting the poster should be underlined. There is no registration fee.

This year's symposium also features the lecture:

**Computer-Aided Design and Optimization of Novel Inhibitors as
Therapeutic Candidates**

presented by



Junyong Choi, Ph.D.

Department of Chemistry and Biochemistry, Queens College - City University of New York

Abstract: Computer-aided molecular modeling is an efficient and cost-effective strategy for the discovery and development of small-molecule inhibitors in academic settings. This seminar highlights efforts to develop small-molecule inhibitors targeting *Trypanosoma brucei* Replication Protein A1 (TbRPA1) and Casein Kinase (CK1) for the treatment of infectious diseases and cancer, respectively. Specifically, this talk will cover the structure-based design and development of anti-*T. brucei* agent, which exhibits low nanomolar inhibition potency against *T. brucei* and over 2,000-fold selectivity versus human HeLa cells. In addition, a novel small-molecule inhibitor of CK1e was identified through in silico screenings of chemical libraries. This hit was subsequently optimized using molecular modeling, organic synthesis,

and biochemical assays, leading to the development of highly potent and selective CK1e inhibitors. Our in-house inhibitors represent promising candidates for further investigation in *in vivo* models of parasitic infection and human cancers. Overall, computer-aided molecular modeling is a powerful technique for the development of therapeutic candidates in medicinal chemistry research.

Bio. Junyong Choi received his Ph.D. degree in bioorganic chemistry from Stony Brook University in 2009, under the direction of Prof. Dale Drueckhammer and Prof. Richard Lin. He studied the development of chemical agents targeting the mammalian target of rapamycin (mTOR). Dr. Choi started his postdoctoral training in the Roush Laboratory at The Scripps Research Institute – Florida as a Pfizer-Scripps Florida postdoctoral fellow in 2009, and after 3 years, he was promoted to Senior Research Associate. His research focused on medicinal chemistry by applying organic synthesis combined with computer-aided drug design techniques. In 2017, Dr. Choi moved to Queens College – City University of New York as an Assistant Professor, tenured in 2025. His research interests focus on the development of small-molecule inhibitors and peptidomimetics by applying organic synthesis, computer-aided molecular design, and biochemical assays.

Date: May 1, 2026

Times: Student presentations : 4:30 pm
Dinner and Awards : 6:00 pm
Plenary lecture : 6:45 pm

Place: Dickinson Hall Room 4468

Cost : complementary, reservations required

Reservations: by April 15, 2026, to Dr. Mihaela Leonida, mleonida@fdu.edu