NYBCe RESEARCHER PROFILE

ASIM DEBNATH, PhD

Head, Laboratory of Molecular Modeling and Drug Design

LinkedIn: @asim0debnath-59134755/

BACKGROUND

Degree Institution
- Jadavpur University - PhD (Medicinal Chemistry)

Postdoctoral Institution
- Pomona College

AREAS OF RESEARCH
- Drug Discovery Design
- Virology

NYBCe LAB DESCRIPTION
Laboratory of Molecular Modeling and Drug Design: the lab's research focus is to identify new antiviral drugs by state-of-the-art drug design methods.

KEY NON-EXPIRED AWARDED PATENTS
PCT/US2020/061239 - Substituted Heterocyclics With Therapeutic Activity In HIV – Pending

KEY PUBLICATIONS

CONTACT
To contact the lab, email Dr. Debnath at ADebnath@nybc.org or the Office of Sponsored Programs at researchadmin@nybc.org.

To learn more about NYBCe patents and licensing, visit our webpage: https://www.nybce.org/our-research/nybce-technology-discoveries/.

INDUSTRY & ACADEMIC PARTNER COLLABORATIONS
- AVIDD Center: Collaborator
- NCI: Collaborator
- Current Computer-Aided Drug Design; International Journal of Quantitative Structure-Property Relationship; International Journal of Molecular Sciences: Editorial Board Member
- American Chemical Society; American Association for the Advancement of Science: Affiliate

COLLABORATIONS OF INTEREST
- Collaborators interested in drug discovery design and protein modelling, particularly for antiviral drugs.

ONGOING PROJECTS
- Identification of small molecule entry inhibitors that specifically target HIV-1 envelope glycoprotein gp120 and disrupt its binding to the T-cell surface receptor CD4.
- Identification of the best combination of latency-reversing agents (LRAs) to facilitate the eradication of HIV-1 from virus reservoirs by drugs, antibody-drug conjugates (ADC), or the immune system. This is expected to help in achieving a functional cure for HIV-1.
- Development of small-molecule pancoronavirus inhibitors to fight against any future coronavirus-related pandemics.
- Development of small-molecule Zika virus entry and NS2B-NS3 protease inhibitor. This project is part of NIAID funded Midwest AViDD project.