Stanford

Muhammad Murtaza Hassan

Postdoctoral Scholar, Stanford Cancer Center

Bio

BIO

Murtaza is a chemical biologist that joined the Gray Lab in July 2021 as a postdoctoral researcher. He developed his love for medicinal chemistry and chemical biology at the undergraduate level at the University of Toronto Mississauga which then motivated him to pursue an MSc (York University, Supervisor: Prof. Edward Lee-Ruff, 2017) and PhD (University of Toronto Mississauga, Supervisor: Patrick T. Gunning, 2021) in the field. His PhD work involved the development of some of the most potent and selective HDAC8 inhibitors known-to-date. It incorporated inhibitors with L-shaped conformational constraints to compliment the L-shaped HDAC8 pocket. His current work at the Gray Lab revolves around the development of first-in-class covalent inhibitors for recently discovered epigenetic targets that have been shown to synergize with anticancer immunotherapy. Additionally, he is interested in developing small-molecule chemoproteomic tools that can potentially expand our ability to target otherwise undruggable proteins, by using protein-protein interactions for cross-labelling/drugging interacting proteins.

STANFORD ADVISORS

- Nathanael Gray, Postdoctoral Faculty Sponsor

LINKS

- Gray Lab Members: https://graylab.stanford.edu/team/

Publications

PUBLICATIONS

- **Discovery of HDAC6-Selective Inhibitor NN-390 with in Vitro Efficacy in Group 3 Medulloblastoma** *JOURNAL OF MEDICINAL CHEMISTRY*
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- **Development of HDAC Inhibitors Exhibiting Therapeutic Potential in T-Cell Prolymphocytic Leukemia** *JOURNAL OF MEDICINAL CHEMISTRY*
  Toutah, K., Nawar, N., Timonen, S., Sorger, H., Raouf, Y. S., Bukhari, S., von Jan, J., Ianevski, A., Gawel, J. M., Olaoye, O. O., Geletu, M., Abdeldayem, A., Israelian, et al
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- **Unique Molecular Interaction with the Histone Deacetylase 6 Catalytic Tunnel: Crystallographic and Biological Characterization of a Model Chemotype** *JOURNAL OF MEDICINAL CHEMISTRY*
  Olaoye, O. O., Watson, P. R., Nawar, N., Geletu, M., Sedighi, A., Bukhari, S., Raouf, Y. S., Manaswiyoungkul, P., Erdogan, F., Abdeldayem, A., Cabral, A. D., Hassan, M., Toutah, et al
  2021; 64 (5): 2691-2704

- **Characterization of Conformationally Constrained Benzanilide Scaffolds for Potent and Selective HDAC8 Targeting** *JOURNAL OF MEDICINAL CHEMISTRY*

Hassan, M., Israelian, J., Nawar, N., Ganda, G., Manaswiyoungkul, P., Raouf, Y. S., Armstrong, D., Sedighi, A., Olaoye, O. O., Erdogan, F., Cabral, A. D., Angeles, F., Altintas, et al

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- **Recent Advances in Chemical Biology Using Benzophenones and Diazirines as Radical Precursors** *MOLECULES*

  Hassan, M., Olaoye, O. O.

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- **Synthesis of Cyclobutane Analogue 4: Preparation of Purine and Pyrimidine Carbocyclic Nucleoside Derivatives** *MOLECULES*

  Hasaneen, N., Ebead, A., Hassan, M., Afifi, H., Hunter, H., Lee-Ruff, E., El-Gohary, N. S., Maarouf, A. R., El-Emam, A. A.

  2019; 24 (18)

- **Crystal structures of the synthetic intermediate 3-[(6-chloro-7H-purin-7-yl)methyl]cyclobutan-1-one, and of two oxetanocin derivatives: 3-[(6-chloro-8,9-dihydro-7H-purin-7-yl)methyl]-cyclobutan-1-ol and 3-[(6-chloro-9H-purin-9-yl)methyl]cyclobutan-1-ol** *ACTA CRYSTALLOGRAPHICA SECTION E-CRYSTALLOGRAPHIC COMMUNICATIONS*

  Yaseen, A., Hassan, M., Lee-Ruff, E., Audette, G. F.

  2019; 75: 732-+

- **Synthesis of cyclobutane nucleoside analogues 3: Preparation of carbocyclic derivatives of oxetanocin** *NUCLEOSIDES NUCLEOTIDES & NUCLEIC ACIDS*

  Hassan, M., Yaseen, A., Ebead, A., Audette, G., Lee-Ruff, E.

  2018; 37 (9): 518-531