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Neha Malik, Iredia D. Iyamu, Karl A. Scheidt, Gary E. Schiltz

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Title:

Synthesis of a novel fused pyrrolodiazepine-based library with anti-cancer activity

Authors:

Neha Malik [a], Iredia D. Iyamu [a], Karl A. Scheidt [a,b,c,d], Gary E. Schiltz [a,c,d*]

Affiliations:

[a]Center for Molecular Innovation and Drug Discovery, Northwestern University, Evanston, Illinois, 60208, United States

[b]Department of Chemistry, Northwestern University, Evanston, Illinois, 60208, United States

[c]Department of Pharmacology, Northwestern University, Chicago, Illinois 60611, United States

[d]Robert H. Lurie Comprehensive Cancer Center, Feinberg School of Medicine, Northwestern University, Chicago, Illinois 60611, United States

*** Corresponding Author Information:**

[*]Phone: 847-467-2287; email: gary-schiltz@northwestern.edu (G.E.S)

Abstract:

Development of drugs for new and persistent diseases will increasingly rely on the expansion of accessible chemical space to allow exploration of novel molecular targets. Here we report the synthesis of a library of novel fused heterobicyclic small molecules based on the 1,4-diazepine and 2,4-pyrrolidinedione scaffolds. Key chemical transformations included a Mannich-type condensation and chemoselective N-acylation reactions. Screening shows anti-cancer activity of several library compounds which suggests translational potential of this novel chemical scaffold.

Keywords:

Library, Diazepine, Mannich reaction, Cancer