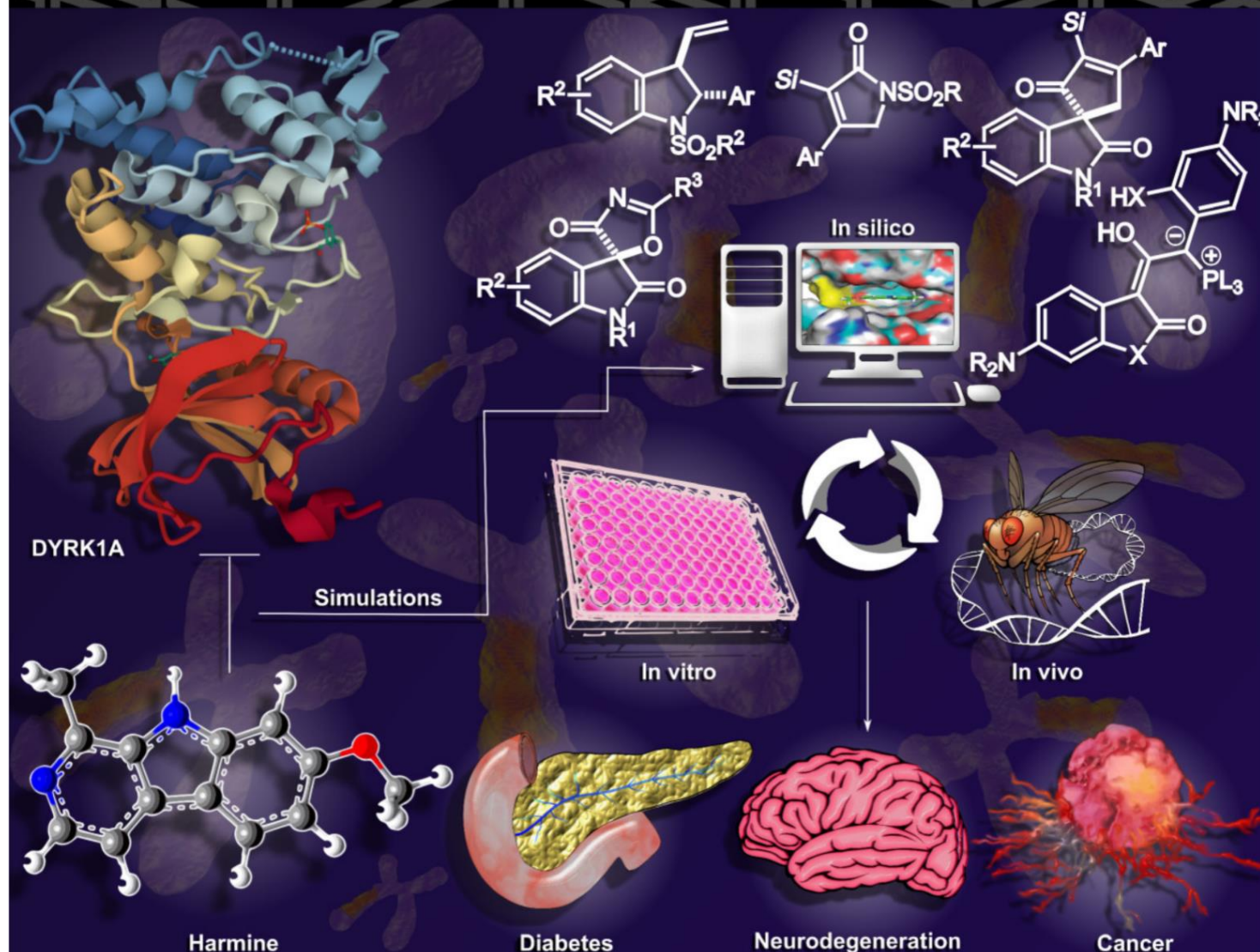


Front Cover:

Francisco J. Huizar, Jeremiah Zartman, Brandon L. Ashfeld et al.
Rational Design and Identification of Harmine-Inspired, *N*-Heterocyclic DYRK1A Inhibitors Employing
a Functional Genomic In Vivo *Drosophila* Model System



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Abstract

The **Front Cover** shows the combinatorial approach of development, testing, and validation of novel *N*-heterocyclic DYRK1A inhibitors. An initial in silico investigation of the toxic DYRK1A inhibitor, harmine, within the active site of DYRK1A inspired generation of diverse molecular scaffolds. Scaffolds tested in vitro for inhibition of DYRK1A were substantiated in an in vivo model organism. This study serves as a platform for future investigations into treatments for disorders associated with genetic *DYRK1A* dysregulation. Cover design by Francisco J. Huizar. More information can be found in the [Communication by Francisco J. Huizar, Jeremiah Zartman, Brandon L. Ashfeld et al.](#)