

Publications with Contributions from Southern Research High-throughput Screening Center

2015 – Present

Infectious Disease

1. Rasmussen, L., et al., *A High-throughput Response to the SARS-CoV-2 Pandemic*. SLAS Discov, 2024: p. 100160. <https://doi.org/10.1016/j.slasd.2024.100160>.
2. Martinez-Gzregorzewska, Y., et al., *High-Throughput cell-based immunofluorescence assays against influenza*. SLAS Discov, 2023. <https://doi.org/10.1016/j.slasd.2023.10.008>.
3. Robinson, C.A., et al., *Novel Compound Inhibitors of HIV-1(NL4-3) Vpu*. Viruses, 2022. **14**(4). <https://doi.org/10.3390/v14040817>.
4. Kannon, M., et al., *A Novel Approach To Identify Inhibitors of Iron Acquisition Systems of Pseudomonas aeruginosa*. Microbiol Spectr, 2022. **10**(5): p. e0243722. <https://doi.org/10.1128/spectrum.02437-22>.
5. Emert-Sedlak, L.A., et al., *Inhibitors of HIV-1 Nef-Mediated Activation of the Myeloid Src-Family Kinase Hck Block HIV-1 Replication in Macrophages and Disrupt MHC-I Downregulation*. ACS Infect Dis, 2022. **8**(1): p. 91-105. <https://doi.org/10.1021/acsinfecdis.1c00288>.
6. Zhang, S., et al., *Pyrimidone inhibitors targeting Chikungunya Virus nsP3 macrodomain by fragment-based drug design*. PLoS One, 2021. **16**(1): p. e0245013. <https://doi.org/10.1371/journal.pone.0245013>.
7. Haese, N.N., et al., *Identification of Quinolones as Antivirals against Venezuelan Equine Encephalitis Virus*. Antimicrob Agents Chemother, 2021. **65**(9): p. e0024421. <https://doi.org/10.1128/AAC.00244-21>.
8. Gorshkov, K., et al., *The SARS-CoV-2 Cytopathic Effect Is Blocked by Lysosome Alkalinizing Small Molecules*. ACS Infect Dis, 2021. **7**(6): p. 1389-1408. available from: <https://doi.org/10.1021/acsinfecdis.0c00349>.
9. Ahmed, S.K., et al., *Targeting Chikungunya Virus Replication by Benzoannulene Inhibitors*. J Med Chem, 2021. **64**(8): p. 4762-4786. available from: <https://doi.org/10.1021/acs.jmedchem.0c02183>.
10. Chen, C.Z., et al., *Drug Repurposing Screen for Compounds Inhibiting the Cytopathic Effect of SARS-CoV-2*. Front Pharmacol, 2020. **11**: p. 592737. <https://doi.org/10.3389/fphar.2020.592737>.
11. Xiao, S., et al., *Revisiting the beta-Lactams for Tuberculosis Therapy with a Compound-Compound Synthetic Lethality Approach*. Antimicrob Agents Chemother, 2019. **63**(11). <https://doi.org/10.1128/AAC.01319-19>.
12. Shapiro, J.A., et al., *Identification of Specific and Nonspecific Inhibitors of Bacillus anthracis Type III Pantothenate Kinase (Pank)*. ChemMedChem, 2019. **14**(1): p. 78-82. <https://doi.org/10.1002/cmdc.201800652>.
13. Nguyen, T.H., et al., *Studies on Dibenzylamines as Inhibitors of Venezuelan Equine Encephalitis Virus*. ACS Infect Dis, 2019. **5**(12): p. 2014-2028. <https://doi.org/10.1021/acsinfecdis.9b00035>.
14. Dalecki, A.G., et al., *High-throughput screening and Bayesian machine learning for copper-dependent inhibitors of Staphylococcus aureus*. Metallomics, 2019. **11**(3): p. 696-706. <https://doi.org/10.1039/c8mt00342d>.
15. Everts, M., et al., *Accelerating Drug Development: Antiviral Therapies for Emerging Viruses as a Model*. Annu Rev Pharmacol Toxicol, 2017. **57**: p. 155-169. <https://doi.org/10.1146/annurev-pharmtox-010716-104533>.
16. White, E.L., N.A. Tower, and L. Rasmussen, *Mycobacterium tuberculosis High-Throughput Screening*. Methods Mol Biol, 2016. **1439**: p. 181-95. https://doi.org/10.1007/978-1-4939-3673-1_12.
17. Goebel, S., et al., *A sensitive virus yield assay for evaluation of Antivirals against Zika Virus*. J Virol Methods, 2016. **238**: p. 13-20. <https://doi.org/10.1016/j.jviromet.2016.09.015>.
18. Rasmussen, L., et al., *Adapting high-throughput screening methods and assays for biocontainment laboratories*. Assay Drug Dev Technol, 2015. **13**(1): p. 44-54. <https://doi.org/10.1089/adt.2014.617>.
19. Pery, E., et al., *Identification of a novel HIV-1 inhibitor targeting Vif-dependent degradation of human APOBEC3G protein*. J Biol Chem, 2015. **290**(16): p. 10504-17. <https://doi.org/10.1074/jbc.M114.626903>.

20. Pery, E., et al., *Redoxal, an inhibitor of de novo pyrimidine biosynthesis, augments APOBEC3G antiviral activity against human immunodeficiency virus type 1*. *Virology*, 2015. **484**: p. 276-287. <https://doi.org/10.1016/j.virol.2015.06.014>.

Cancer

1. Metge, B.J., et al., *Targeting EMT using low-dose Teniposide by downregulating ZEB2-driven activation of RNA polymerase I in breast cancer*. *Cell Death Dis*, 2024. **15**(5): p. 322. <https://doi.org/10.1038/s41419-024-06694-7>.
2. Cullum, R.L., et al., *Development and application of high-throughput screens for the discovery of compounds that disrupt ErbB4 signaling: Candidate cancer therapeutics*. *PLoS One*, 2020. **15**(12): p. e0243901. <https://doi.org/10.1371/journal.pone.0243901>.
3. Scull, C.E., et al., *Discovery of novel inhibitors of ribosome biogenesis by innovative high throughput screening strategies*. *Biochem J*, 2019. **476**(15): p. 2209-2219. <https://doi.org/10.1042/BCJ20190207>.
4. Zhang, W., et al., *Discovery of a novel inhibitor of kinesin-like protein KIFC1*. *Biochem J*, 2016. **473**(8): p. 1027-35. <https://doi.org/10.1042/BJ20150992>.
5. Oliva, C.R., et al., *Identification of Small Molecule Inhibitors of Human Cytochrome c Oxidase That Target Chemoresistant Glioma Cells*. *J Biol Chem*, 2016. **291**(46): p. 24188-24199. <https://doi.org/10.1074/jbc.M116.749978>.

CNS and Aging

1. Roth, J.R., et al., *Development of small-molecule Tau-SH3 interaction inhibitors that prevent amyloid-beta toxicity and network hyperexcitability*. *Neurotherapeutics*, 2024. **21**(1): p. e00291. <https://doi.org/10.1016/j.neurot.2023.10.001>.
2. Tomblin, G., et al., *Effects of an unusual poison identify a lifespan role for Topoisomerase 2 in Saccharomyces cerevisiae*. *Aging (Albany NY)*, 2017. **9**(1): p. 68-97. <https://doi.org/10.18632/aging.101114>.

Inflammation

1. Yatchang, M.F., et al., *Development of BRD4 inhibitors as anti-inflammatory agents and antidotes for arsenicals*. *Bioorg Med Chem Lett*, 2022. **64**: p. 128696. <https://doi.org/10.1016/j.bmcl.2022.128696>.

Kidney Disease

1. Ghajar-Rahimi, G., et al., *Identification of Cytoprotective Small-Molecule Inducers of Heme-Oxygenase-1*. *Antioxidants (Basel)*, 2022. **11**(10). <https://doi.org/10.3390/antiox11101888>.

Diabetes

1. Thielen, L.A., et al., *Identification of an Anti-diabetic, Orally Available Small Molecule that Regulates TXNIP Expression and Glucagon Action*. *Cell Metab*, 2020. **32**(3): p. 353-365 e8. <https://doi.org/10.1016/j.cmet.2020.07.002>.

Rare Genetic Disease

1. Siddiqui, A., et al., *Triamterene Functions as an Effective Nonsense Suppression Agent for MPS I-H (Hurler Syndrome)*. *Int J Mol Sci*, 2023. **24**(5). <https://doi.org/10.3390/ijms24054521>.
2. Sharma, J., et al., *A small molecule that induces translational readthrough of CFTR nonsense mutations by eRF1 depletion*. *Nat Commun*, 2021. **12**(1): p. 4358. <https://doi.org/10.1038/s41467-021-24575-x>.
3. Mutyam, V., et al., *Discovery of Clinically Approved Agents That Promote Suppression of Cystic Fibrosis Transmembrane Conductance Regulator Nonsense Mutations*. *Am J Respir Crit Care Med*, 2016. **194**(9): p. 1092-1103. <https://doi.org/10.1164/rccm.201601-0154OC>.

4. Chung, W.J., et al., *Increasing the Endoplasmic Reticulum Pool of the F508del Allele of the Cystic Fibrosis Transmembrane Conductance Regulator Leads to Greater Folding Correction by Small Molecule Therapeutics*. PLoS One, 2016. **11**(10): p. e0163615. <https://doi.org/10.1371/journal.pone.0163615>

Technical

1. Rasmussen, L., E.L. White, and J.R. Bostwick, *Acoustic Droplet Ejection Applications for High-Throughput Screening of Infectious Agents*. J Lab Autom, 2016. **21**(1): p. 188-97. <https://doi.org/10.1177/2211068215620345>.
2. Nebane, N.M., et al., *Acoustic Droplet Ejection Technology and Its Application in High-Throughput RNA Interference Screening*. J Lab Autom, 2016. **21**(1): p. 198-203. <https://doi.org/10.1177/2211068215620346>.