

Stanford



Nathanael S. Gray

Krishnan-Shah Family Professor
Chemical and Systems Biology

Bio

ACADEMIC APPOINTMENTS

- Professor, Chemical and Systems Biology
- Member, Bio-X
- Institute Scholar, Sarafan ChEM-H
- Member, Stanford Cancer Institute

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Woong Sub Byun, Qixiang Geng, Muhammad Hassan, Wenzhi Ji, Erhan Keles, Wenchao Lu, Roman Sarott, Sean Toenjes, Lushun Wang, Yaning Wang, Zhe Zhuang

Doctoral Dissertation Advisor (AC)

Basel Karim, Meredith Nix, Hlib Razumkov, Xijun Zhu

Publications

PUBLICATIONS

- **The Dawn of Allosteric BCR-ABL1 Drugs: From a Phenotypic Screening Hit to an Approved Drug.** *Journal of medicinal chemistry*
Teng, M., Luskin, M. R., Cowan-Jacob, S. W., Ding, Q., Fabbro, D., Gray, N. S.
2022
- **Molecular basis for cooperative binding and synergy of ATP-site and allosteric EGFR inhibitors.** *Nature communications*
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- **Synthesis and Structure-Activity relationships of cyclin-dependent kinase 11 inhibitors based on a diaminothiazole scaffold.** *European journal of medicinal chemistry*
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2022; 238: 114433
- **A preclinical platform for assessing antitumor effects and systemic toxicities of cancer drug targets.** *Proceedings of the National Academy of Sciences of the United States of America*
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- **Selective Macrocyclic Inhibitors of DYRK1A/B.** *ACS medicinal chemistry letters*
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- **An allosteric inhibitor against the therapy-resistant mutant forms of EGFR in non-small cell lung cancer.** *Nature cancer*
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2022
- **Unleashing cell-intrinsic inflammation as a strategy to kill AML blasts.** *Cancer discovery*
Ellegast, J. M., Alexe, G., Hamze, A., Lin, S., Uckelmann, H. J., Rauch, P. J., Pimkin, M., Ross, L. S., Dharia, N. V., Robichaud, A. L., Saur Conway, A., Khalid, D., Perry, et al
2022
- **A new role for the SRC family kinase HCK as a driver of SYK activation in MYD88 mutated lymphomas.** *Blood advances*
Munshi, M., Liu, X., Kofides, A., Tsakmaklis, N., Guerrero, M. L., Hunter, Z. R., Palomba, M. L., Argyropoulos, K. V., Patterson, C. J., Canning, A. G., Meid, K. E., Gustine, J., Branagan, et al
2022
- **Discovery and Optimization of Tau Targeted Protein Degraders Enabled by Patient Induced Pluripotent Stem Cells-Derived Neuronal Models of Tauopathy** *FRONTIERS IN CELLULAR NEUROSCIENCE*
Silva, M., Nandi, G., Donovan, K. A., Cai, Q., Berry, B. C., Nowak, R. P., Fischer, E. S., Gray, N. S., Ferguson, F. M., Haggarty, S. J.
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- **Novel Macrocyclic Peptidomimetics Targeting the Polo-Box Domain of Polo-Like Kinase 1.** *Journal of medicinal chemistry*
Ryu, S., Park, J., Ham, Y. J., Lim, D. C., Kwiatkowski, N. P., Kim, D., Bhunia, D., Kim, N. D., Yaffe, M. B., Son, W., Kim, N., Choi, T., Swain, et al
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- **Abemaciclib is a potent inhibitor of DYRK1A and HIP kinases involved in transcriptional regulation.** *Nature communications*
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- **Development of Highly Potent and Selective Pyrazolopyridine Inhibitor of CDK8/19.** *ACS medicinal chemistry letters*
Hatcher, J. M., Vatsan, P. S., Wang, E., Jiang, J., Gray, N. S.
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- **Targeting transcription cycles in cancer.** *Nature reviews. Cancer*
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- **TRIM8 modulates the EWS/FLI oncoprotein to promote survival in Ewing sarcoma** *CANCER CELL*
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- **Exploring Ligand-Directed N-Acyl-N-alkylsulfonamide-Based Acylation Chemistry for Potential Targeted Degradation Development.** *ACS medicinal chemistry letters*
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- **Targeting Pin1 renders pancreatic cancer eradicable by synergizing with immunochemotherapy.** *Cell*
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- **Dual targeting of salt inducible kinases and CSF1R uncouples bone formation and bone resorption** *ELIFE*
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- **Discovery of a Potent Degradation for Fibroblast Growth Factor Receptor 1/2.** *Angewandte Chemie (International ed. in English)*
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- **PRM-LIVE with Trapped Ion Mobility Spectrometry and Its Application in Selectivity Profiling of Kinase Inhibitors.** *Analytical chemistry*
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- **Coordinating Tissue Regeneration Through Transforming Growth Factor-beta Activated Kinase 1 Inactivation and Reactivation** *STEM CELLS*
Hsieh, H., Agarwal, S., Cholok, D. J., Loder, S. J., Kaneko, K., Huber, A., Chung, M. T., Ranganathan, K., Habbouche, J., Li, J., Butts, J., Reimer, J., Kaura, et al
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- **Coordinating Tissue Regeneration through TGF-beta Activated Kinase 1 (TAK1) In-activation and Re-activation.** *Stem cells (Dayton, Ohio)*
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- **A Next Generation Connectivity Map: L1000 Platform and the First 1,000,000 Profiles** *CELL*
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● **SIKs control osteocyte responses to parathyroid hormone** *NATURE COMMUNICATIONS*

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● **Pathophysiological significance and therapeutic targeting of germinal center kinase in diffuse large B-cell lymphoma.** *Blood*

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● **Activation of HIPK2 Promotes ER Stress-Mediated Neurodegeneration in Amyotrophic Lateral Sclerosis.** *Neuron*

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● **The immunological evolution of catalysis** *SCIENCE*

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