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Publication	Enzyme
Development of Highly Potent and Selective FGFR4 Inhibitors Based on SNAr Electrophiles. Schwarz, M., Kurkunov, M., Wittlinger, F., Rudalska, R., Wang, G., Schwalm, M. P., ... & Gehringer, M. (2024). Preprint.	*FGFR4*
A destabilizing Y891D mutation in activated EGFR impairs sensitivity to kinase inhibition. Lenchner, D. S., Petrova, Z. O., Hunihan, L., Ashtekar, K. D., Walther, Z., & Wilson, F. H. (2024). *NPJ Precision Oncology*, *8*(1), 3.	*EGFR and EGFR mutants*
Linking ATP and allosteric sites to achieve superadditive binding with bivalent EGFR kinase inhibitors. Wittlinger, F., Ogboo, B. C., Shevchenko, E., Damghani, T., Pham, C. D., Schaeffner, I. K., ... & Heppner, D. E. (2024). *Communications Chemistry*, 7(1), 38.	*EGFR and EGFR mutants*
Pitfalls and Considerations in Determining the Potency and Mutant Selectivity of Covalent Epidermal Growth Factor Receptor Inhibitors. Hoyt, K.W., Urul, D. A., Ogboo, B. C., Wittlinger, F., Laufer, S. A., Schaefer, E. M., May, E. W., Heppner, D. E. (2024). *Journal of Medicinal Chemistry*, *67*(1), 2-16.	*EGFR*
Novel LRR-ROC Motif That Links the N- and C-terminal Domains in LRRK2 Undergoes an Order–Disorder Transition Upon Activation. Weng, J. H., Trilling, C. R., Sharma, P. K., Störmer, E., Wu, J., Herberg, F. W., & Taylor, S. S. (2023). *Journal of molecular biology*, *435*(12), 167999.	*LRRK2 and LRRK2 mutants*
Mutation in the Common Docking Domain Affects MAP Kinase ERK2 Catalysis and Stability. Novak, L., Petrosino, M., Pasquo, A., Chaikuad, A., Chiaraluce, R., Knapp, S., & Consalvi, V. (2023). *Cancers*, *15*(11), 2938	*ERK2*
NVL-520 Is a Selective, TRK-Sparing, and Brain-Penetrant Inhibitor of ROS1 Fusions and Secondary Resistance Mutations. Drilon, A., Horan, J. C., Tangpeerachaikul, A., Besse, B., Ou, S. H. I., Gadgeel, S. M., Lin, J. J. (2023). *Cancer discovery*, 13(3), 598-615.	*ROS1 and ROS1 mutants*

Publication	Enzyme
Controlling Ibrutinib's Conformations about Its Heterobiaryl Axis to Increase BTK Selectivity. Toenjes, S. T., Heydari, B. S., Albright, S. T., Hazin, R., Ortiz, M. A., Piedrafita, F. J., & Gustafson, J. L. (2023). *ACS Medicinal Chemistry Letters*, *14*(3), 305-311.	*BTK*
Proteome-wide screening for mitogen-activated protein kinase docking motifs and interactors. Shi, G., Song, C., Torres Robles, J., Salichos, L., Lou, H. J., Lam, T. T., ... & Turk, B. E. (2023). *Science Signaling*, *16*(767), eabm5518.	*MAPKs, JNK1, p38α*
Triple targeting of mutant EGFRL858R/T790M, COX-2, and 15-LOX: design and synthesis of novel quinazolinone tethered phenyl urea derivatives for anti-inflammatory and anticancer evaluation. Kothayer, H., Rezq, S., Abdelkhalek, A. S., Romero, D. G., Elbaramawi, S. S. (2023). *Journal of Enzyme Inhibition and Medicinal Chemistry*, 38(1), 2199166.	*EGFR and EGFR L858R/T790M*
Circulating tumor DNA reveals mechanisms of lorlatinib resistance in patients with relapsed/refractory ALK-driven neuroblastoma. Berko, E. R., Witek, G. M., Matkar, S., Petrova, Z. O., Wu, M. A., Smith, C. M., Mossé, Y. P. (2023). *Nature Communications*, 14(1), 2601.	*ALK and ALK Mutants*
Structural Basis for Inhibition of Mutant EGFR with Lazertinib (YH25448). Heppner, D. E., Wittlinger, F., Beyett, T. S., Shaurova, T., Urul, D. A., Buckley, B., ... & Hershberger, P. A. (2022). *ACS Medicinal Chemistry Letters*, *13*(12), 1856-1863.	*EGFR and HER2*
Highly Conserved Interaction Profiles between Clinically Relevant Mutants of the Cytomegalovirus CDK-like Kinase pUL97 and Human Cyclins: Functional Significance of Cyclin H Schütz, M., Müller, R., Socher, E., Wangen, C., Full, F., Wyler, E., Marschall, M. (2022). *International journal of molecular sciences*, 23(19), 11814.	*pUL97 that represents a viral CDK ortholog (vCDK)*
Biochemical and structural basis for differential inhibitor sensitivity of EGFR with distinct exon 19 mutations. van Alderwerelt van Rosenburgh, I. K., Lu, D. M., Grant, M. J., Stayrook, S. E., Phadke, M., Walther, Z., ... & Tsutsui, Y. (2022). *Nature Communications*, *13*(1), 6791.	*EGFR and EGFR variants*
High-throughput mechanistic screening of non-equilibrium inhibitors by a fully automated data analysis pipeline in early drug-discovery. Srinivasan B., Flórez Weidinger J.D., Zhai X., Lemercier G., Ikeda T., Brewer M., Zhang B., Heyse S., Wingfield J., Steigele S. (2022). *SLAS Discovery*. 27 (8), 460-470.	*Multiple, names not disclosed*
Neurospora casein kinase 1a recruits the circadian clock protein FRQ via the C-terminal lobe of its kinase domain. Marzoll, D., Serrano, F. E., Diernfellner, A. C., & Brunner, M. (2022). *FEBS letters*, *596*(15), 1881-1891.	*CK1a, CK1a-p1, and CK1a-p2*

Publication	Enzyme
Deactivatable Bisubstrate Inhibitors of Protein Kinases. Sõrmus, T., Lavogina, D., Enkvist, E., Uri, A., & Viht, K. (2022). *Molecules*, *27*(19), 6689.	*PKAc*
The CAMKIIα hub ligand Ph-HTBA promotes neuroprotection after focal ischemic stroke by a distinct molecular interaction. Griem-Krey, N., Gauger, S. J., Gowing, E. K., Thiesen, L., Frølund, B., Clarkson, A. N., & Wellendorph, P. (2022). *Biomedicine & Pharmacotherapy*, *156*, 113895.	*CaMKIIα*
Linear motif specificity in signaling through p38α and ERK2 mitogen-activated protein kinases. Torres Robles, J., Lou, H. J., Shi, G., Pan, P. L., & Turk, B. E. (2023). *Proceedings of the National Academy of Sciences*, *120*(48), e2316599120.	*MAPK*
Casein kinase 1 and disordered clock proteins form functionally equivalent, phospho-based circadian modules in fungi and mammals. Marzoll, D., Serrano, F. E., Shostak, A., Schunke, C., Diernfellner, A. C., & Brunner, M. (2022). *Proceedings of the National Academy of Sciences*, *119*(9), e2118286119.	*CK1*
Nanobodies as allosteric modulators of Parkinson's disease–associated LRRK2. Singh, R. K., Soliman, A., Guaitoli, G., Störmer, E., von Zweydorf, F., Dal Maso, T., ... & Versées, W. (2022). *Proceedings of the National Academy of Sciences*, *119*(9), e2112712119.	*LRRK2*
Inhibitors of the Hippo Pathway Kinases STK3/MST2 and STK4/MST1 Have Utility for the Treatment of Acute Myeloid Leukemia. Bata, N., Chaikuad, A., Bakas, N. A., Limpert, A. S., Lambert, L. J., Sheffler, D. J., Berger, L. M., Liu, G., Yuan, C., Wang, L., Peng, Y., Dong, J., Celeridad, M., Layng, F., Knapp, S., & Cosford, N. D. P. (2022). *Journal of medicinal chemistry*, 65(2), 1352–1369.	*STK3/4 (Ser/Thr)*
Synthesis and pharmacological characterization of Visabron, a backbone cyclic peptide dual antagonist of 41 (VLA-4)/ 91 integrin for therapy of multiple sclerosis. Gilon, C., Klazas, M., Lahiani, A., Schumacher-Klinger, A., Merzbach, S., Naoum, J. N., ... & Lazarovici, P. (2021). *JACS Au*, *1*(12), 2361-2376.	*NTRK1 (TRKA)/ NTRK2 (TRKB) (Tyr)*
Cellular model system to dissect the isoform-selectivity of Akt inhibitors. Quambusch, L., Depta, L., Landel, I., Lubeck, M., Kirschner, T., Nabert, J., ... & Rauh, D. (2021). *Nature Communications*, *12*(1), 5297.	*Akt (Ser/Thr)*
Separase cleaves the kinetochore protein Meikin at the meiosis I/II transition. Maier, N. K., Ma, J., Lampson, M. A., & Cheeseman, I. M. (2021). *Developmental cell*, *56*(15), 2192-2206.	*Plk1 (Ser/Thr).*
A novel GSK3 inhibitor binds to GSK-3β via a reversible, time and Cys-199-dependent mechanism. Ghazanfari, D., Noori, M. S., Bergmeier, S. C., Hines, J. V., McCall, K. D., & Goetz, D. J. (2021). *Bioorganic & medicinal chemistry*, *40*, 116179.	*GSK-3 (Ser/Thr)*
A Novel High-Throughput FLIPR Tetra-Based Method for Capturing Highly Confluent Kinetic Data for Structure-Kinetic Relationship Guided Early Drug Discovery. Khurana, P., McWilliams, L., Wingfield, J., Barratt, D., & Srinivasan, B. (2021). *SLAS DISCOVERY: Advancing the Science of Drug Discovery*, *26*(5), 684-697.	*REVIEW. Multiple kinases, names not disclosed*

Publication	Enzyme
Biochemical characterization of tirabrutinib and other irreversible inhibitors of Bruton's tyrosine kinase reveals differences in on-and off-target inhibition. Liclican, A., Serafini, L., Xing, W., Czerwieniec, G., Steiner, B., Wang, T., ... & Feng, J. Y. (2020). *Biochimica et Biophysica Acta (BBA)-General Subjects*, *1864*(4), 129531.	*BTK (Tyr)*
A fluorescent probe for monitoring PTP-PEST enzymatic activity. Casey, G. R., & Stains, C. I. (2020). *Analyst*, *145*(20), 6713-6718.	*Phosphatase non-receptor type 12 (PTPN12 or PTP-PEST).*
Neurotropic activity and safety of methylene-cycloalkylacetate (MCA) derivative 3- (3-allyl-2-methylenecyclohexyl) propanoic acid. Lahiani, A., Haham-Geula, D., Lankri, D., Cornell-Kennon, S., Schaefer, E. M., Tsvelikhovsky, D., & Lazarovici, P. (2020). *ACS Chemical Neuroscience*, *11*(17), 2577-2589.	*Multiple kinases (Ser/Thr & Tyr)*
Insight into the Therapeutic Selectivity of the Irreversible EGFR Tyrosine Kinase Inhibitor Osimertinib through Enzyme Kinetic Studies. Zhai, X., Ward, R. A., Doig, P., & Argyrou, A. (2020). *Biochemistry*, *59*(14), 1428-1441.	*EGFR (Tyr) wild-type & oncogenic mutants, Covalent Inhibitors*
Design and synthesis of fluorescent activity probes for protein phosphatases. Casey, G. R., Beck, J. R., Stains, C. I. (2019). *Methods in enzymology*, 622, 29-53.	
Safety profiling of genetically engineered Pim-1 kinase overexpression for oncogenicity risk in human ckit+ cardiac interstitial cells. Broughton, K., Korski, K., Echeagaray, O., Adamson, R., Dembitsky, W., Lu, Z., ... & Sussman, M. A. (2019). *Gene Therapy*, *26*(7-8), 324-337.	*AKT1-3, CDK1/3-6, CK1, ERK1/2, JNK1-3, p38a/b/g/d, PIM1, SGK1-3 (Ser/Thr)*
Enrichment of Aurora B kinase at the inner kinetochore controls outer kinetochore assembly. Bonner, M. K., Haase, J., Swinderman, J., Halas, H., Miller Jenkins, L. M., Kelly, A. E. (2019). *Journal of Cell Biology*, 218(10), 3237-3257.	*Aurora B (Ser/Thr).*
Interrogating Protein Phosphatases with Chemical Activity Probes. Casey GR, Stains CI. (2018). *Chemistry*. 24(31):7810-7824.	*REVIEW. Phosphatases.*
Phosphorylated immunoreceptor tyrosine-based activation motifs and integrin cytoplasmic domains activate spleen tyrosine kinase via distinct mechanisms. Antenucci, L., Hytönen, V. P., & Ylänne, J. (2018). *Journal of Biological Chemistry*, *293*(13), 4591-4602.	*Syk (Tyr)*
An algebraic model to determine substrate kinetic parameters by global nonlinear fit of progress curves. González, M. L. R., Cornell-Kennon, S., Schaefer, E., & Kuzmič, P. (2017). *Analytical Biochemistry*, *518*, 16-24.	*EGFR (Tyr)*

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Publication	Enzyme
Quantification of Cell Signaling Networks Using Kinase Activity Chemosensors. Beck, J. R., Harris, E. N., & Stains, C. I. (2017). *Kinase Signaling Networks*, 61-70.	*REVIEW*
Measuring Kinase Activity-A Global Challenge. C Cann, M. L., McDonald, I. M., East, M. P., Johnson, G. L., & Graves, L. M. (2017). *Journal of Cellular Biochemistry*, *118*(11), 3595-3606.	*REVIEW*
Discovery of a Potent BTK Inhibitor with a Novel Binding Mode by Using Parallel Selections with a DNA-Encoded Chemical Library. Cuozzo, J. W., Centrella, P. A., Gikunju, D., Habeshian, S., Hupp, C. D., Keefe, A. D., ... & Clark, M. A. (2017). *ChemBioChem*, *18*(9), 864-871.	*BTK (Tyr)*
Discovery of N-((3R,4R)-4-Fluoro-1-(6-((3-methoxy-1-methyl-1H-pyrazol-4-yl)amino)-9-methyl-9Hpurin-2-yl)pyrrolidine-3-yl)acrylamide (PF-06747775) through Structure-Based Drug Design: A High Affinity Irreversible Inhibitor Targeting Oncogenic EGFR Mutants with Selectivity over Wild-Type EGFR. Planken, S., Behenna, D. C., Nair, S. K., Johnson, T. O., Nagata, A., Almaden, C., ... & Lafontaine, J. (2017). *Journal of Medicinal Chemistry*, *60*(7), 3002-3019.	*EGFR (Tyr) wild-type & oncogenic mutants: exon 19 deletion (Del), L858R, and double mutants T790M/L858R and T790M/Del), Covalent Inhibitors.*
Phosphorylation of the dimeric cytoplasmic domain of the phytosulfokine receptor, PSKR1. Victor Muleya, Claudius Marondedze, Janet I. Wheeler, Ludivine Thomas, Yee-Fong Mok, Michael D.W. Griffin, David T. Manallack, Lusisizwe Kwezi, Kathryn S. Lilley, Christoph Gehring, and Helen R. Irving (2016). Biochem. J., 473: 3081 - 3098.	*PSKR1 (Ser/Thr)*
Phosphodiesterase 5 Inhibition Limits Doxorubicin-induced Heart Failure by Attenuating Protein Kinase G Iα Oxidation. Prysyazhna O, Burgoyne JR, Scotcher J, Grover S, Kass D, Eaton P. (2016). J. Biol. Chem., 291: 17427 - 17436.	*PKG (Ser/Thr).*
Discovery of 1-{(3R,4R)-3-[({5-Chloro-2-[(1-methyl-1H-pyrazol-4-yl)amino]-7H-pyrrolo[2,3-d]pyrimidin-4- yl}oxy)methyl]-4-methoxypyrrolidin-1-yl}prop-2-en-1-one (PF-06459988), a Potent, WT Sparing, Irreversible Inhibitor of T790M-Containing EGFR Mutants. Cheng H, Nair SK, Murray BW, Almaden C, Bailey S, Baxi S, Behenna D, Cho-Schultz S, Dalvie D, Dinh DM, Edwards MP, Feng JL, Ferre RA, Gajiwala KS, Hemkens MD, Jackson-Fisher A, Jalaie M, Johnson TO, Kania RS, Kephart S, Lafontaine J, Lunney B, Liu KK, Liu Z, Matthews J, Nagata A, Niessen S, Ornelas MA, Orr ST, Pairish M, Planken S, Ren S, Richter D, Ryan K, Sach N, Shen H, Smeal T, Solowiej J, Sutton S, Tran K, Tseng E, Vernier W, Walls M, Wang S, Weinrich SL, Xin S, Xu H, Yin MJ, Zientek M, Zhou R, Kath JC. (2016). J Med Chem. 59: 2005-24.	*EGFR & Mutants (Tyr), Covalent Inhibitors*
Disulfide-activated protein kinase G Iα regulates cardiac diastolic relaxation and fine-tunes the Frank-Starling response.	*PKG (Ser/Thr)*

Publication	Enzyme
Scotcher J, Prysyazhna O, Boguslavskyi A, Kistamas K, Hadgraft N, Martin ED, Worthington J, Rudyk O, Rodriguez Cutillas P, Cuello F, Shattock MJ, Marber MS, Conte MR, Greenstein A, Greensmith DJ, Venetucci L, Timms JF, Eaton P. (2016). Nat Commun. 7:13187(1-11).	
Interrogating Endogenous Protein Phosphatase Activity with Rationally Designed Chemosensors. Beck, J. R., Lawrence, A., Tung, A. S., Harris, E. N. and Stains, C. I. (2016). ACS Chem Biol 11: 284-290.	*PTP1B (Tyr Phosphatase).*
Temporal Analysis of PP2A Phosphatase Activity During Insulin Stimulation Using a Direct Activity Probe. Beck JR, Truong T, Stains CI. (2016). ACS Chem Biol. 16;11(12):3284-3288.	*PP2A (Ser/Thr Phosphatase)*
Nitidine chloride suppresses epithelial-to-mesenchymal transition in osteosarcoma cell migration and invasion through Akt/GSK-3beta/Snail signaling pathway. Cheng, Z., Guo, Y., Yang, Y., Kan, J., Dai, S., Helian, M., Li, B., Xu, J. and Liu, C. (2016). Oncol Rep. 36(2):1023-9.	*GSK-3beta (Ser/Thr)*
Bistability of a coupled Aurora B kinase-phosphatase system in cell division. Zaytsev, A. V., Segura-Pena, D., Godzi, M., Calderon, A., Ballister, E. R., Stamatov, R., Mayo, A. M., Peterson, L., Black, B. E., Ataullakhanov, F. I., Lampson, M. A. and Grishchuk, E. L. (2016). Elife 5:e10644.	*Aurora A & B (Ser/Thr)*
Design and evaluation of a real-time activity probe for focal adhesion kinase. Beck, J. R., Zhou, X., Casey, G. R. and Stains, C. I. (2015). Anal Chim Acta 897: 62-68.	*FAK (Tyr)*
First Selective Small Molecule Inhibitor of FGFR4 for the Treatment of Hepatocellular Carcinomas with an Activated FGFR4 Signaling Pathway. Hagel, M., Miduturu, C., Sheets, M., Rubin, N., Weng, W., Stransky, N., Bifulco, N., Kim, J. L., Hodous, B., Brooijmans, N., Shutes, A., Winter, C., Lengauer, C., Kohl, N. E., Guzi, T. (2015). Cancer Discov 5: 424-437.	*FGFR4 (Tyr), Covalent Inhibitors*
A real-time, fluorescence-based assay for Rho-associated protein kinase activity. Kelly, M. I., Bechtel, T. J., Reddy, D. R., Hankore, E. D., Beck, J. R. and Stains, C. I. (2015). Anal Chim Acta 891: 284-290.	*ROCK (Ser/Thr)*
An algebraic model for the kinetics of covalent enzyme inhibition at low substrate concentrations. Kuzmic, P., Solowiej, J. and Murray, B. W. (2015). Anal Biochem 484: 82-90.	*EGFR (Tyr), Covalent Inhibitors.*
Peptide-based biosensors. Liu, Q., Wang, J. and Boyd, B. J. (2015). Talanta 136: 114-127.	*REVIEW*
Cyclin-dependent kinase 5 regulates degranulation in human eosinophils. Odemuyiwa, S. O., Ilarraza, R., Davoine, F., Logan, M. R., Shayeganpour, A., Wu, Y., Majaesic, C., Adamko, D. J., Moqbel, R. and Lacy, P. (2015). Immunology 144: 641-648.	*CDK5 (Ser/Thr)*
Protein kinase profiling assays: a technology review. Wang, Y. and Ma, H. (2015). Drug Discov Today Technol 18: 1-8.	*REVIEW*

Publication	Enzyme
Quantification of a Pharmacodynamic ERK End Point in Melanoma Cell Lysates: Toward Personalized Precision Medicine. Warthaka, M., Adelmann, C. H., Kaoud, T. S., Edupuganti, R., Yan, C., Johnson, W. H., Jr., Ferguson, S., Tavares, C. D., Pence, L. J., Anslyn, E. V., Ren, P., Tsai, K. Y. and Dalby, K. N. (2015). ACS Med Chem Lett 6: 47-52.	*MAPKs - ERK1& 2 (Ser/Thr).*
Olive phenolics as c-Met inhibitors: (-)-Oleocanthal attenuates cell proliferation, invasiveness, and tumor growth in breast cancer models. Akl, M. R., Ayoub, N. M., Mohyeldin, M. M., Busnena, B. A., Foudah, A. I., Liu, Y. Y. and Sayed, K. A. (2014). PLoS One 9: e97622.	*cMET/HGFR (Tyr)*
High-throughput screens for eEF-2 kinase. Devkota, A. K., Warthaka, M., Edupuganti, R., Tavares, C. D., Johnson, W. H., Ozpolat, B., Cho, E. J. and Dalby, K. N. (2014). J Biomol Screen 19: 445-452.	*eEF-2K (Ser/Thr).*
Discovery of novel AKT inhibitors with enhanced anti-tumor effects in combination with the MEK inhibitor. Dumble, M., Crouthamel, M. C., Zhang, S. Y., Schaber, M., Levy, D., Robell, K., Liu, Q., Figueroa, D. J., Minthorn, E. A., Seefeld, M. A., Rouse, M. B., Rabindran, S. K., Heerding, D. A. and Kumar, R. (2014). PLoS One 9: e100880.	*AKT 1, 2 & 3 (Ser/Thr).*
Synthesis and biological evaluation of pyrido[2,3-d]pyrimidine-2,4-dione derivatives as eEF-2K inhibitors. Edupuganti, R., Wang, Q., Tavares, C. D., Chitjian, C. A., Bachman, J. L., Ren, P., Anslyn, E. V. and Dalby, K. N. (2014). Bioorg Med Chem 22: 4910-4916.	*eEF-2K (Ser/Thr)*
Cyclometalated iridium(III)- beta-carboline complexes as potent autophagy-inducing agents. He, L., Liao, S. Y., Tan, C. P., Lu, Y. Y., Xu, C. X., Ji, L. N. and Mao, Z. W. (2014). Chem Commun (Camb) 50: 5611-5614.	*CDK1 & 2 (Ser/Thr)*
SAICAR induces protein kinase activity of PKM2 that is necessary for sustained proliferative signaling of cancer cells. Keller, K. E., Doctor, Z. M., Dwyer, Z. W. and Lee, Y. S. (2014). Mol Cell 53: 700-709.	*MAPKs - ERK1 & 2 (Ser/Thr)*
The spleen tyrosine kinase (Syk) regulates Alzheimer amyloid-beta production and Tau hyperphosphorylation. Paris, D., Ait-Ghezala, G., Bachmeier, C., Laco, G., Beaulieu-Abdelahad, D., Lin, Y., Jin, C., Crawford, F. and Mullan, M. (2014). J Biol Chem 289: 33927-33944.	*SYK (Tyr)*
Single cell kinase signaling assay using pinched flow coupled droplet microfluidics. Ramji, R., Wang, M., Bhagat, A. A., Tan Shao Weng, D., Thakor, N. V., Teck Lim, C. and Chen, C. H. (2014). Biomicrofluidics 8: 034104.	*EGFR (Tyr). Microfluidics*
Protein kinase C and extracellular signal-regulated kinase regulate movement, attachment, pairing and egg release in Schistosoma mansoni. Ressurreicao, M., De Saram, P., Kirk, R. S., Rollinson, D., Emery, A. M., Page, N. M., Davies, A. J. and Walker, A. J. (2014). PLoS Negl Trop Dis 8: e2924.	*PKC (Ser/Thr)*

Publication	Enzyme
Microfluidic probe for single-cell analysis in adherent tissue culture. Sarkar, A., Kolitz, S., Lauffenburger, D. A. and Han, J. (2014). Nat Commun 5: 3421.	*AKT (Ser/Thr), Microfluidics*
Structure-based optimization of tyrosine kinase inhibitor CLM3. Design, synthesis, functional evaluation, and molecular modeling studies. Sartini, S., Coviello, V., Bruno, A., La Pietra, V., Marinelli, L., Simorini, F., Taliani, S., Salerno, S., Marini, A. M., Fioravanti, A., Orlandi, P., Antonelli, A., Da Settimo, F., Novellino, E., Bocci, G. and La Motta, C. (2014). J Med Chem 57: 1225-1235.	*VEGFR2/KDR and RET (Tyr).*
Covalent EGFR inhibitor analysis reveals importance of reversible interactions to potency and mechanisms of drug resistance. Schwartz, P. A., Kuzmic, P., Solowiej, J., Bergqvist, S., Bolanos, B., Almaden, C., Nagata, A., Ryan, K., Feng, J., Dalvie, D., Kath, J. C., Xu, M., Wani, R. and Murray, B. W. (2014). Proc Natl Acad Sci U S A 111: 173-178.	*EGFR (Tyr), Covalent Inhibitors.*
A continuous and direct assay to monitor leucine-rich repeat kinase 2 activity. Silva, R. G., Geoghegan, K. F., Qiu, X. and Aulabaugh, A. (2014). Anal Biochem 450: 63-69.	*LRRK2 (Ser/Thr).*
Design, synthesis, and evaluation of a selective chemosensor for leucine-rich repeat kinase 2. Szalewski, D. A., Beck, J. R. and Stains, C. I. (2014). Bioorg Med Chem Lett 24: 5648-5651.	*LRRK2 (Ser/Thr).*
In vitro and in vivo characterization of irreversible mutant-selective EGFR inhibitors that are wild-type sparing. Tjin Tham Sjin, R., Lee, K., Walter, A. O., Dubrovskiy, A., Sheets, M., Martin, T. S., Labenski, M. T., Zhu, Z., Tester, R., Karp, R., Medikonda, A., Chaturvedi, P., Ren, Y., Haringsma, H., Etter, J., Raponi, M., Simmons, A. D., Harding, T. C., Niu, D., Nacht, M., Westlin, W. F., Petter, R. C., Allen, A. and Singh, J. (2014). Mol Cancer Ther 13: 1468-1479.	*EGFR (Tyr), Covalent Inhibitors.*
Differential sensing of MAP kinases using SOX-peptides. Zamora-Olivares, D., Kaoud, T. S., Jose, J., Ellington, A., Dalby, K. N. and Anslyn, E. V. (2014). Angew Chem Int Ed Engl 53: 14064-14068.	*MAPKs, ERK1/2, JNK1/2/3, and p38abdg (Ser/Thr).*
Selective mitogen activated protein kinase activity sensors through the application of directionally programmable D domain motifs. Peterson, L. B., Yaffe, M. B., and Imperiali, B. (2014). Biochemistry 53, 5771- 5778.	
Rapid discovery of a novel series of Abl kinase inhibitors by application of an integrated microfluidic synthesis and screening platform. Desai, B., Dixon, K., Farrant, E., Feng, Q., Gibson, K. R., van Hoorn, W. P., Mills, J., Morgan, T., Parry, D. M., Ramjee, M. K., Selway, C. N., Tarver, G. J., Whitlock, G. and Wright, A. G. (2013). J Med Chem 56: 3033-3047.	*ABL (Tyr), Microfluidics*
Inhibition of Btk with CC-292 provides early pharmacodynamic assessment of activity in mice and humans. Evans, E. K., Tester, R., Aslanian, S., Karp, R., Sheets, M., Labenski, M. T., Witowski, S. R., Lounsbury, H., Chaturvedi, P., Mazdiyasni, H., Zhu, Z., Nacht, M., Freed, M. I., Petter, R. C., Dubrovskiy, A., Singh, J. and Westlin, W. F. (2013). J Pharmacol Exp Ther 346: 219-228.	*BTK (Tyr), Covalent Inhibitors*

Publication	Enzyme
Structural characterization of the RLCK family member BSK8: a pseudokinase with an unprecedented architecture. Grutter, C., Sreeramulu, S., Sessa, G. and Rauh, D. (2013). J Mol Biol 425: 4455-4467.	*BSK5 & 8 (Ser/Thr)*
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