

Program		Scope	Asset Description	Inventor(s)
<b>Platform Assets</b>				
BD-2410	T Cell Vaccine	Autoimmunity, Inflammation, Oncology, Infectious Disease	T cell vaccine technology that elicits very specific and robust T cell responses, with preliminary proof-of-concept data for cancer, autoimmune, and infectious disease indications.	Joseph Jardine & John Teijaro
BD-2512	Targeted Antigens for Enhanced Vaccine Immunity	Immunology, Vaccines	A novel approach to target any antigen to lymph nodes and promote antigen retention, with in vivo proof-of-concept showing this augments multiple aspects of the immune response to immunization.	Darrell Irvine
BD-2407	Anti-AGO	Neuroscience, Rare Disease	A fast, flexible, and scalable platform that uses superior mapping of RNA regulatory regions and a RNA-targeting CRISPR/Cas system to up-regulate genes for the identification of novel ASOs to treat haploinsufficient diseases.	Giordano Lippi
BD-2204	Glyco-ACC	Oncology	Glycan mediated antibody-cell conjugation platform that enhances solid-tumor killing compared to the constituent monotherapy.	Peng Wu
BD-2214	Exice	Oncology	Enzyme-extended immune cell engagers which confer approximately 10-fold better killing potential than standard bispecifics.	Peng Wu
BD-2203	Fuco-ID	Oncology, Inflammation	T cell and T cell receptor identification and validation platform that is both time and cost effective.	Peng Wu
BD-2216	Targeted Discovery of Molecular Glues	Oncology, Multiple	A high-throughput chemistry synthesis platform that converts targeted ligands into molecular glue degraders.	Michael Erb
BD-2247	Quadruplet Non-Canonical Amino Acids	Synthetic biology, Multiple	New strategy enabling the multiplexed incorporation of quadruplet non-canonical amino acids with improved efficacy.	Ahmed Badran
BD-2307	CATCH	Multiple	Unbiased target discovery platform that uses Clearing-Assisted Tissue Click Chemistry.	Li Ye
BD-2201	Heterobifunctional Molecules to Modulate Protein Acetylation	Multiple	The AceTAG system leverages bifunctional molecules to program protein acetylation, selectively modifying tagged proteins with high specificity, reversibility, and dose-dependent control.	Christopher Parker
BD-2202	Proteomic Development of Heterobifunctional Degraders	Multiple	A chemoproteomics platform enabled by FragTags that identifies degradable protein-ligase pairs across the proteome, guiding heterobifunctional PROTAC design without relying on pre-existing ligands.	Christopher Parker
BD-2528	Next-Generation Nucleotide Platform	Multiple	An advanced nucleotide platform that delivers safer, more precise, and more scalable backbone engineering for advanced RNA targeting therapeutics.	Phil Baran
<b>Single Assets</b>				
BD-2423	Advanced Vancomycin Analogs	Anti-Infectives	Novel vancomycin analogs that overcome bacterial resistance with enhanced in vivo antimicrobial potency and long-term durability.	Dale Boger
BD-2319	Engineered Plasmin Thrombolytic	Cardiovascular	An engineered plasmin designed to directly dissolve fibrin clots and maintain activity longer than existing therapies for the treatment of dangerous blood clots, including stroke, heart attack, and deep vein thrombosis.	M. Reza Ghadiri
BD-2206	Nexinhibs	Inflammation, Autoimmunity	Potent neutrophil exocytosis inhibitors targeting RAB27A GTPase, thereby inhibiting uncontrolled neutrophil mediated secretion and inflammation without interfering with the neutrophil's protective role in the innate immune system.	Sergio Catz
BD-2511	Endos	Inflammation, Autoimmunity	Small molecule inhibitors that block late endosomal fusion, maturation, and signaling by selectively disrupting the interaction between MUNC13-4 and STX7.	Sergio Catz
BD-2503	SLC15A4 Inhibitors	Inflammation, Autoimmunity	Potential first-in-class functional inhibitors of SLC15A4 for the treatment of autoimmune and autoinflammatory diseases with demonstrated in vivo proof of concept data and comprehensive mechanistic characterization.	Christopher Parker & John Teijaro
BD-2208	MEF2 Activators	Neuroscience	Activators of MEF2 to regenerate and repopulate damaged nerve cells in response to aging, injury, or disease identified through the Calibr-Skaggs Ph1 Drug Repurposing ReFRAME library.	Stuart Lipton
BD-2210	GABAAR Antagonists	Neuroscience, Pesticides, Anti-Parasitics	Novel allosteric GABAAR antagonists derived from picrotoxinin with higher efficacy and selectivity between related ligand-gate ion channels for multiple applications including new neurological drugs, safer pesticides, and even anti-parasite treatments.	Ryan Shenvi
BD-2211	SalA Tx	Neuroscience	Stabilized salvinorin A analogs as novel KOR agonists with improved therapeutic properties, more amenable to diversification than the destabilized SalA available commercially.	Ryan Shenvi
BD-2212	Galbulimima Alkaloids	Neuroscience	Galbulimima alkaloid NCEs derived from traditional medicine with applications in mental health diseases, addiction, and chronic itch. Highly plastic pharmacology spanning antagonism, partial agonism and full agonism of KOR with G-protein bias.	Ryan Shenvi
BD-2517	Cotylenin Glues	Neuroscience, Oncology	Glycosylated 14-3-3 molecular glues with efficacy in RAS-mutant cancers. Access to NCEs via novel glycosylation methods.	Ryan Shenvi
BD-2525	Small Molecules Targeting RIG-I	Neuroscience, Genetic Diseases, Oncology	A novel therapeutic approach that selectively activates the integrated stress response via RIG I with first-in-class potential for applications including protein misfolding diseases, cancer, and related disorders.	Jeffery Kelly & R. Luke Wiseman

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BD-2527	Autophagy Activators	Neuroscience, Aging	Small-molecule autophagy activators that enhance proteostasis, reduce toxic protein aggregation, and extend lifespan through an mTORC1-independent mechanism, with potential applications for aging and neurodegeneration.	Jeffery Kelly
BD-2316	Siglec Degradaders	Oncology	Novel and highly specific degraders of inhibitory Siglecs-7/9 that exhibit strong antitumor effects in vivo alone or in combination with checkpoint inhibitors.	Peng Wu
BD-2415	Switchable Covalent CAR-T	Oncology	A "universal" or "switchable" CAR-T cell whose tumor targeting element has been replaced with the 38C2 catalytic antibody, which bridges the tumor to the effector via a ligand for tumor cell receptor.	Alexey Stepanov
BD-2520	Portimine NMD3 Modulators	Oncology	Portimine based, potent, and tunable NMD3 inhibitors represent ideal candidates for next generation ADC payloads, offering a differentiated mechanism from traditional ADCs with the potential for enhanced efficacy and reduced off-target toxicity.	Phil Baran, Christopher Parker & Luke Lairson
BD-2521	PARP Bifunctional CIPs	Oncology	PARP bifunctional CIPs selectively rewire DNA repair by recruiting BET proteins to PARP2, offering a novel approach to target homologous recombination deficient and drug resistant cancers.	Michael Erb
BD-2522	Sialidase–PD1 Conjugate	Oncology	A PD1 blocking antibody conjugated to sialidase enhances immune responses by removing inhibitory sialoglycans and potentiating PD1 checkpoint blockade, which boosts T cell effector function and improves tumor control.	James Paulson
BD-2404	Vaccine Against Xylazine Overdose	Vaccines	A hapten conjugate vaccine that reverses the symptoms of a xylazine overdose, an illicit fentanyl-like drug increasingly found in opioids.	Kim Janda
BD-2516	Improved Heroin Vaccine	Vaccines	An improved vaccine formulation that mitigates the lethal effects of heroin while allowing for long-term storage at room temperature.	Kim Janda
BD-2524	Methamphetamine Vaccine	Vaccines	Novel methamphetamine haptens that elicit potent antibody responses and in vivo protection in response to methamphetamine exposure.	Kim Janda
BD-2508	TLR4 Inhibitors	Multiple	De novo peptides that inhibit TLR4 in the transmembrane region and impair its cross-membrane signaling.	Marco Mravic
<b>Software/Algorithm Assets</b>				
BD-2506	Spatial Analysis for Genetic Disease Treatment	Genetic Diseases	Spatial analysis based foundational biological machine learning approach to analyze the relationship between a protein's shape and drug function. Proof-of-concept data in cystic fibrosis shows the ability to predict drugs that would improve upon the current standard of care.	William Balch
BD-2507	Engineering Stable Transmembrane PPIs	Multiple	Computational platform for membrane-specific protein design. Applications include the development of novel biologics to target high-value transmembrane proteins (ex. GPCRs).	Marco Mravic
BD-2505	MovieNet	Multiple	An innovative AI-based technology that mimics brain function to recognize changing scenes or "movies" with broad applications from drug discovery and clinical monitoring to autonomous vehicles.	Hollis Cline
<b>Non-Therapeutic Assets</b>				
BD-2205	High Efficiency Polymers	Materials	Breakthrough polymer technologies delivering high-performance functional polymers and high-temperature dielectric films, engineered via SuFEx chemistry for advanced materials and next-generation electronics.	K. Barry Sharpless
BD-2244	Electrochemistry	Materials	A novel method for the sustainable synthesis of high-value monomers and specialty chemicals.	Phil Baran
BD-2420	Carbon Negative Biosynthetic Pathways	Materials, Synthetic Biology, Green Chemistry	Engineering an efficient RuBisCO enzyme that is selective towards CO <sub>2</sub> over O <sub>2</sub> as a first step towards carbon capture. In the long-run, the team will develop carbon-negative biosynthetic pathways that can be leveraged for food, fuel, and biomaterial synthesis.	Ahmed Badran
BD-2526	Transgenic Mouse Model for Hepatitis B Virus Replication	Mouse Model	A transgenic mouse model that supports high-level hepatitis B virus replication in liver and kidney tissues without causing cytopathology, enabling precise in vivo study of HBV biology.	Francis Chisari
BD-2320	SuFEx Utility in Drug Development	Research Tools	Novel click chemistry utilizing sulfur fluoride to enable exchange reactions in biologically compatible conditions.	K. Barry Sharpless
BD-2408	Scalable Thiol Reactivity Profiling	Research Tools	A novel chemical tool to enable the rapid profiling of chemical matter for reactivity with cysteine.	Michael Bollong
BD-2501	Molecular Editing of Multiple C-H Bonds	Research Tools	Chemical molecular editing strategy to directly modify bicyclic aza-arenes by enabling modular differentiation and functionalization of adjacent remote and spatially similar positions.	Jin-Quan Yu
BD-2502	Precision C-H Activation Chemistry	Research Tools, Manufacturing, Agriculture	Novel sp <sup>3</sup> C-H activation chemistry for the efficient diversification and production of high-value structures for drug discovery or manufacturing.	Jin-Quan Yu
BD-2519	One-Step Butenolide Assembly	Research Tools	A novel palladium catalyst that enables the one-step, scalable conversion of simple aliphatic acids into complex, bioactive butenolides, giving rapid access to medicinally relevant scaffolds for anticancer, antiviral, and other therapeutic applications.	Jin-Quan Yu
BD-2518	Mass Spectrometry Based Quantification	Structural Proteomics, Biomarker Discovery	Novel method for accurately quantifying solvent accessibility of lysine residues in proteins, with a specific focus on peptides containing two lysine residues.	John Yates

\*Additional information on specific technologies and their inventors can be found on our website ([scripps.edu/technology-development](https://scripps.edu/technology-development)).