

AUTM Partnering Forum

Oncology and Research Tools Technologies

AUTM Innovation Marketplace

Visit the [AUTM Innovation Marketplace \(AIM\)](#) for more information on university technologies for licensing worldwide. The AUTM Innovation Marketplace (AIM) showcases university technologies that are available for licensing. With more than 19,000 technologies listed to-date, AIM now has more innovations listed than any other portal of its kind.

Technologies represented: Updated on 2/3/2020

Research Reagents				
Type	Technology/Invention Title	Organization	Organization Contact	Patent/IP Status of Technology/Invention
Antibodies	Monoclonal NKG2D Antibodies for the Treatment of Autoimmune and Inflammatory Disorders	<i>Fred Hutch Cancer Research Center</i>	Rachael Stein	Issued and Pending
Antibodies	A human monoclonal antibody that neutralizes EBV infections in both B cells and epithelial cells, and new approaches to developing an EBV vaccine.	<i>Fred Hutch Cancer Research Center</i>	Rachael Stein	Pending
Antibodies	Murine monoclonal antibody against TLT-1 for cardiovascular disease research	<i>Puerto Rico Science, Technology and Research Trust</i>	David Gulley	Not Seeking Patent Protection
Antibodies	Metastasis-predicting biomarker	<i>Puerto Rico Science, Technology and Research Trust</i>	David Gulley	Not Yet Disclosed to the TTO
Antibodies	Monoclonal Antibody that Suppresses Thyrotropin Receptor Constitutive Activity	<i>Cedars-Sinai Medical Center</i>	Song Qu	US patent 8,305,012 granted
Antibodies	Phosphohistidine Antibodies	<i>The Salk Institute for Biological Studies</i>	Taneashia R. Morrell	U.S. Patent 9,957,294 (pHis1) and Patent pending (pHis3)
Antibodies	Anti-Alpha-Catenin (1G5) Monoclonal Antibody	<i>University of Toledo</i>	Lokesh Mohan	

Antibodies	Anti-Beta-Catenin (9F2) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	Anti-Beta-Catenin (15B8) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	Anti-Beta-Catenin (12F7) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	Anti-Gamma-Catenin (11E4) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	Anti-Gamma-Catenin (15F11) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	Desmocollin (7G6) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	Desmoglein 1 (27B2) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	Desmoglein 2 (8E5) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	Desmoglein 2(6D8) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	Desmoglein 3 (5H10) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	P-Cadherin (6A9) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	P-Cadherin (6A9) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	P-Cadherin (12H6) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	N-Cadherin (13A9) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	Plakophilin-1 (10B2) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	FAT2 (Protocadherin 30) Monoclonal Antibody (8C5)	University of Toledo	Lokesh Mohan	
Antibodies	Desmoglein 1 (18D4) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	Anti-Beta-Catenin (6F9) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	E-Cadherin (4A2) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	Anti-Beta-Catenin (5H10) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Antibodies	Anti-properdin monoclonal antibody 3A3E1	University of Toledo	Lokesh Mohan	
Antibodies	Anti-properdin monoclonal antibody 6E11A4	University of Toledo	Lokesh Mohan	
Antibodies	Anti-properdin monoclonal antibody 1G6D2	University of Toledo	Lokesh Mohan	
Antibodies	N-Cadherin (8C11) Monoclonal Antibody	University of Toledo	Lokesh Mohan	
Cell Lines	Ron/R7 cells, generated from murine Ron overexpressing mammary tumors	University of Cincinnati	Melissa Baines	
Cell Lines	Pediatric High-Grade and Diffuse Intrinsic Potine Gliomas Mouse Model Cell Line(s)	University of Cincinnati	Melissa Baines	
Cell Lines	Hybridoma cell line CTC1 monoclonal antibody C482	University of Cincinnati	Melissa Baines	
Cell Lines	RWPE-1 cells with stable expression of KLK4-KLKP1	Henry Ford Health System	Aparna Bubna	

Cell Lines	Swarm rat chondrosarcoma cell lines expressing Cas9	Henry Ford Health System	Aparna Bubna	
Cell Lines	Genetic Rat Model For Pulmonary Hypertension	Tech Launch Arizona	Kaitlyn Norman-Powers	Materials; No patents
Cell Lines	Novel Conditional Knockout Model of ER-Alpha in Rats	Tech Launch Arizona	Kaitlyn Norman-Powers	Materials; No patents
Cell Lines	Novel Conditional Knockout Model of ER-Beta in Rats	Tech Launch Arizona	Kaitlyn Norman-Powers	Materials; No patents
Cell Lines	Novel Forebrain Neuron Specific CreERT2 Rat Model	Tech Launch Arizona	Kaitlyn Norman-Powers	Materials; No patents
Cell Lines	Novel Knockout Model of ER-Alpha in Rat Neurons	Tech Launch Arizona	Kaitlyn Norman-Powers	Materials; No patents
Cell Lines	Novel Knockout Model of ER-Beta in Rat Neurons	Tech Launch Arizona	Kaitlyn Norman-Powers	Materials; No patents
Cell Lines	Syngeneic Mouse Ovarian Cancer Cell Lines	Cedars-Sinai Medical Center	Song Qu	
Cell Lines	Isogenic LKB1 cell lines	The Salk Institute for Biological Studies	Ha Nguyen	
Cell Lines	Retroviral Packaging Cell Line Generating High-Titer Vectors	The Salk Institute for Biological Studies	Ha Nguyen	U.S. Patents 6,218,181 and 6,727,058
Cell Lines	Cell lines Derived from Huntington's Disease Induced Pluripotent Stem Cells, and their Use for Identification of Novel Therapeutics	JHMI	Christine Joseph	
Genetic Modification Tools	A non-viral method for genetic modification of cells	Duke	Alex Mullins	
Genetic Modification Tools	CRISPR-Cas System for RNA Targeting and Manipulation	The Salk Institute for Biological Studies	Jon Jensen	Patent pending
Genetic Modification Tools	WPRE: A Powerful Tool to Significantly Increase Gene Expression from Retroviral Vectors	The Salk Institute for Biological Studies	Taneashia R. Morrell	U.S. Patents 6,136,597 and 6,287,814

Genetic Modification Tools	Efficient Targeted Knock-in in Non-Dividing Cells Using Engineered Nucleases	<i>The Salk Institute for Biological Studies</i>	Jon Jensen	Patent pending
Genetic Modification Tools	Generation of Blastocyst-like Structures from Extended Pluripotent Stem Cells in mice	<i>The Salk Institute for Biological Studies</i>	Jon Jensen	Patent pending
Genetic Modification Tools	CRISPR Platform & Portfolio	<i>Skysong Innovations (Arizona State University)</i>	Jovan Heusser	Patent Pending (Provisional)
Genetic Modification Tools	Novel Cas9 Fusion (iCas9)	<i>Skysong Innovations (Arizona State University)</i>	Jovan Heusser	Patent Pending (Provisional)
Genetic Modification Tools	Compositions and methods for recognition of RNA using triple helix forming peptide nucleic acids	<i>Binghamton University</i>	Olga Petrova	US10385100B2
Genetic Modification Tools	A CRISPR-Cas9 Platform with an Intrinsic Off-switch and Enhanced Specificity	<i>JHMI</i>	Christine Joseph	
Genetic Modification Tools	Very Fast and Efficient Light-inducible CRISPR/Cas9 System for Genome Editing	<i>JHMI</i>	Christine Joseph	
Protein Modification Analysis	Cleavage Under Targets and Release Using Nuclease (CUT & RUN)	<i>Fred Hutch Cancer Research Center</i>	Rachael Stein	Pending
Protein Modification Analysis	Enhanced Applications of Molecular Libraries	<i>Skysong Innovations (Arizona State University)</i>	Jovan Heusser	Patent Pending (US)
Nucleic Acid Modification Analysis	Detection and measurement of RNA modifications through targeted RNA editing (6559)	<i>Duke</i>	Alex Mullins	
Nucleic Acid Modification Analysis	A method of modulating the activity of a nucleic acid molecule (2660)	<i>Duke</i>	Alex Mullins	

Nucleic Acid Modification Analysis	Analytical method to determine proportion of capped RNA in messenger RNA (mRNA) samples	Houston Methodist Hospital/Houston Methodist Research Institute	Lynn Crow	
Nucleic Acid Modification Analysis	Epigenetic Signatures for Quality Control of Pluripotent Stem Cells	The Salk Institute for Biological Studies	Jon Jensen	U.S. Patent 9,427,811
Nucleic Acid Modification Analysis	Probes and Methods for Measuring Tandem Repeats	Skysong Innovations (Arizona State University)	Jovan Heusser	Patent Pending (US)
Cell Analysis	Sensor and assay for screening of photosensitizers in living cells	University of Toledo	Lokesh Mohan	
Cell Analysis	High Throughput Identification of T-cell Recognition Epitopes	Skysong Innovations (Arizona State University)	Jovan Heusser	Patent Pending (PCT)
Cell Analysis	Novel Sensitive Detection of Oxidative Damage in Tissues and Live Cells	Binghamton University	Olga Petrova	Pending
Cell Analysis	Anastasis Biosensor CaspaseTracker rtTA	JHMI	Christine Joseph	
Cell Analysis	C14439: Anastasis Biosensor (Split version)	JHMI	Christine Joseph	
Sequencing	Single Cell Droplet Sequencing to Accelerate Functional Genomic Studies	Skysong Innovations (Arizona State University)	Jovan Heusser	Patent Pending (PCT)
Synthetic Biology	Multimerized HIV gp120s for Vaccine Development	Fred Hutch Cancer Research Center	Rachael Stein	Issued and Pending
Synthetic Biology	Artificial fused dehydratase enzymes to increase fatty acid production in E Coli	Puerto Rico Science, Technology and Research Trust	David Gulley	Provisional Patent Application Filed
Synthetic Biology	Increased fatty acid production in E. coli using artificial covalently linked Acyl Carrier Proteins (ACPs)	Puerto Rico Science, Technology and Research Trust	David Gulley	Provisional Patent Application Filed
Synthetic Biology	Synthesis of Glycoproteins using Modified Bacterial Ribosomes	Skysong Innovations (Arizona State University)	Jovan Heusser	Patent Pending (US)

Synthetic Biology	Incorporation of Fluorescent Dipeptidomimetics into Peptides and Proteins	Skysong Innovations (Arizona State University)	Jovan Heusser	Patent Pending (US, EU, CA, AU, JP)
Synthetic Biology	Method and Composition for Biocatalytic Protein-Oligonucleotide Conjugation	Binghamton University	Olga Petrova	US15/782,391
Synthetic Biology	Versatile Biomolecule Coupling Technology (Bioorthogonal ADC labeling)	Binghamton University	Olga Petrova	US9758533B2
PCR	Codon-Mutant Libraries of Protein-Coding Genes	Fred Hutch Cancer Research Center	Rachael Stein	Issued
Tissue Analysis	Cleavable Fluorophores for Multiplexed Analysis of Biological Samples	Skysong Innovations (Arizona State University)	Jovan Heusser	Patent Pending (PCT)
Tissue Analysis	Ligation in situ Hybridization for highly multiplexed RNA analysis of fixed tissue specimens	Johns Hopkins University	Jeanine Pennington	
Software	Software for Automated Segmentation and Quantification of Epithelial Cell Nuclei in Images of Pap Smears Stained with Immunoreactive Biomarkers	Cedars-Sinai Medical Center	Song Qu	Registered copyright TXu 1-809-420
Software	Software for Rapid 3-D Delineation of Cell Nuclei for High-Content Screening Platforms	Cedars-Sinai Medical Center	Song Qu	US application 15/565,677 and EP application 16784018 pending
Software	Machine Learning Tools to Automatically Annotate Digital Pathology Images	Cedars-Sinai Medical Center	Song Qu	Copyright
Software	Brain-Inspired Algorithms for Improving Similarity Search	The Salk Institute for Biological Studies	Jon Jensen	Patent pending
Data analysis and/or visualization	Genomic-driven Mobile App to Guide Antiplatelet Therapy at Clinical Settings	Puerto Rico Science, Technology and Research Trust	David Gulley	Disclosed to the TTO
Data analysis and/or visualization	Deep Learning-Based Point Scanning Super-Resolution Imaging	The Salk Institute for Biological Studies	Ha Nguyen	Patent pending

Data analysis and/or visualization	A New Method to Suppress Background Noise in Stimulated Emission Depletion (STED) Nanoscopy	JHMI	Christine Joseph	
Microscopy	Novel Sensitive Detection of Oxidative Damage in Tissues and Live Cells	Binghamton University	Olga Petrova	Pending
Microscopy	System for Long-Term Live-Cell Imaging Using Two-Photon Imaging	Binghamton University	Olga Petrova	Pending
Chemicals	3 nitrobenzazolo[3,2-a]quinolinium chloride salts (NBQS)	Puerto Rico Science, Technology and Research Trust	David Gulley	Disclosed to the TTO
Chemicals	MBQ-167 Novel compounds and methods for treatment of cancer and hyperproliferative diseases	Puerto Rico Science, Technology and Research Trust	David Gulley	Patented
Chemicals	Low cost, robust and durable lead selenide using aromatics as capping ligands	Puerto Rico Science, Technology and Research Trust	David Gulley	Patented
Chemicals	Simple Colorimetric Assay for Sulfite Detection	Binghamton University	Olga Petrova	WO2019071240A1
Devices	Adjustable transperineal needle guide	Henry Ford Health System	Aparna Bubna	
Devices	Transesophageal echocardiography probe cover	Henry Ford Health System	Aparna Bubna	
Devices	Methods and Apparatus Suitable for Interrogating Biological Systems: Tumor-on-Chip	Tech Launch Arizona	Kaitlyn Norman-Powers	Provisional patent application filed
Devices	Methods for Building a Self-Contained Responsive Biological System	Tech Launch Arizona	Kaitlyn Norman-Powers	Provisional patent application filed
Devices	Methods To Use HDACi To Generate Antigen Specific Memory T Cell Responses For Durable Immunotherapy	Tech Launch Arizona	Kaitlyn Norman-Powers	PCT application filed
Devices	Smart Box for Health Logistics	Tech Launch Arizona	Kaitlyn Norman-Powers	PCT application filed
Devices	Compact Mechanical Syringe Extruder for 3D Bioprinting of Cell Laden Gels	Cedars-Sinai Medical Center	Song Qu	PCT/US2019/039277 pending
Devices	Intracavity Radiation Applicator	University of Toledo	Lokesh Mohan	

Devices	Concurrent Delivery of Interstitial Thermobrachytherapy in Cancer Treatment	University of Toledo	Lokesh Mohan	
Devices	High-Throughput Microfluidic Instrument for Constructing Custom Synthetic Vesicles with Asymmetric Membranes	Binghamton University	Olga Petrova	
Cell Culture	Perfusion System for Automatic Cell Culture	Tech Launch Arizona	Kaitlyn Norman-Powers	Provisional patent application filed
Cell Culture	L-Glass: a Novel Functionalization Method for Covalently Attaching ECM Protein to Optical Glass	Cedars-Sinai Medical Center	Song Qu	US 16/631,132 pending
Cell Culture	Rapid detection of mycoplasma-infected cells by ssDNA aptamer probe	Houston Methodist Hospital/Houston Methodist Research Institute	Lynn Crow	Provisional patent filed
Cell Culture	Generation of Stable iTregs as Therapeutics against Autoimmune Diseases (Type I Diabetes)	University of Toledo	Lokesh Mohan	
Cell Culture	Heart on Chip Tissue Microfluidic Platform	Skysong Innovations (Arizona State University)	Jovan Heusser	Patent Pending (PCT)
Cell Culture	Tumor Microenvironments/Models on a Microfluidic Chip	Skysong Innovations (Arizona State University)	Jovan Heusser	Patent Issued/Patent Pending
Cell Culture	Microenvironments for Self-Assembly of Islet Organoids from Stem Cell Differentiation	Binghamton University	Olga Petrova	US20180282699A1
Cell Culture	Generatino of Pancreatic Decellularized Tissue-Specific Extracellular Matrix (dpECM)using Non-Denaturing Conditions	Binghamton University	Olga Petrova	US20180282699A1
Media	Media and Methods for In Vitro Expansion of Adult Lung Stem Cells and Organoids	Cedars-Sinai Medical Center	Song Qu	PCT/US2019/026654 pending
Media	Hydrogel Film Containing Gold Nanoparticles and Chemotherapy for Mild Hyperthermia and Elution of Chemotherapy	Houston Methodist Hospital/Houston Methodist Research Institute	Lynn Crow	Provisional patent filed

Media	BrainPhys™: A Novel Medium for Functional Neuronal Cultures	<i>The Salk Institute for Biological Studies</i>	Jon Jensen	PCT patent application WO 2014/172580 A1 is pending
Media	In vitro drug treatment to proliferate and activate effector cells for immunotherapy	<i>George Washington University</i>	Brian Coblitz	Pending
Clinical and Diagnostics	A prognostic test for early-stage breast lesions	<i>University of Cincinnati</i>	Tais Doll	Pending
Clinical and Diagnostics	A Non-invasive technique for Detection and Quantification of EGFRvIII in Brain Tumors	<i>University of Cincinnati</i>	Jill Uhl	Issued
Clinical and Diagnostics	Plasma Test to Assess Liver Disease Severity	<i>University of Cincinnati</i>	Tais Doll	Pending
Clinical and Diagnostics	Exosome-associated long non-coding RNA as Circulatory Cancer Biomarkers	<i>University of Cincinnati</i>	Jill Uhl	Pending
Clinical and Diagnostics	Mapping of Viral Epitopes for Therapeutic Antibody and Vaccine Design	<i>Fred Hutch Cancer Research Center</i>	Rachael Stein	Pending
Clinical and Diagnostics	Biomarker panel for the diagnosis and treatment of Bacterial Vaginosis (BV).	<i>Fred Hutch Cancer Research Center</i>	Rachael Stein	Pending
Clinical and Diagnostics	Method for isolating a patient sample and detecting fungal pathogens	<i>Fred Hutch Cancer Research Center</i>	Rachael Stein	Issued
Clinical and Diagnostics	MAIT Cell Immunomodulation for Targeted Treatment of Inflammatory Diseases	<i>Fred Hutch Cancer Research Center</i>	Rachael Stein	Pending
Clinical and Diagnostics	Vaccine Epitopes Elicit Specific Tissue Resident Memory T Cells to Treat HSV-2 Infection	<i>Fred Hutch Cancer Research Center</i>	Rachael Stein	Pending
Clinical and Diagnostics	Regulation of ERp5 as a Therapeutic Target in Autoimmune Diseases	<i>Fred Hutch Cancer Research Center</i>	Rachael Stein	Issued and Pending
Clinical and Diagnostics	Production of Differentially Methylated Minicircle DNA in E. Coli	<i>Fred Hutch Cancer Research Center</i>	Rachael Stein	Pending
Clinical and Diagnostics	Epitope mapping using a combination of phage display high throughput sequencing and deep mutational scanning (DMS-Phage-seq)	<i>Fred Hutch Cancer Research Center</i>	Rachael Stein	Pending

Clinical and Diagnostics	Isolation of HIV infected cells for quantitating HIV reservoir	<i>Fred Hutch Cancer Research Center</i>	Rachael Stein	Pending
Clinical and Diagnostics	Methods for HIV vaccination	<i>Fred Hutch Cancer Research Center</i>	Rachael Stein	Pending
Clinical and Diagnostics	A multimeric decoy to block activation of NKG2D and treat autoimmune and inflammatory diseases, and for use in vaccine development.	<i>Fred Hutch Cancer Research Center</i>	Rachael Stein	Pending
Clinical and Diagnostics	Immune-based non-invasive diagnostic assay for endometriosis	<i>Puerto Rico Science, Technology and Research Trust</i>	David Gulley	Disclosed to the TTO
Clinical and Diagnostics	CometChip technology for Breast Cancer risk estimation	<i>Puerto Rico Science, Technology and Research Trust</i>	David Gulley	Disclosed to the TTO
Clinical and Diagnostics	Biomarkers for X-linked adrenoleukodystrophy phenotypes	<i>Henry Ford Health System</i>	Aparna Bubna	
Clinical and Diagnostics	Gene expression profiles that accurately reflect prior radiation exposure (2807)	<i>Duke</i>	Alex Mullins	
Clinical and Diagnostics	ELISA for measuring function of properdin	<i>University of Toledo</i>	Lokesh Mohan	
Clinical and Diagnostics	Rapid Nuclear Receptor Fluorescence-Based Competitive Binding Assay	<i>University of Toledo</i>	Lokesh Mohan	
Clinical and Diagnostics	A mirna signature associated to melanoma brain metastasis	<i>NYU</i>	Ananda Ghosh	US Patent 9,421,218
Clinical and Diagnostics	Alpha-synuclein tracer single domain antibodies (sd Ab)	<i>NYU</i>	Ananda Ghosh	Patent pending
Clinical and Diagnostics	Tau tracer single domain antibodies (sd Ab)	<i>NYU</i>	Ananda Ghosh	Patent pending
Clinical and Diagnostics	h3k27me2/3 monoclonal	<i>NYU</i>	Ananda Ghosh	Patent pending
Clinical and Diagnostics	Pathogen Molecular Detection Platform	<i>Skysong Innovations (Arizona State University)</i>	Jovan Heusser	Patent Pending (US)
Clinical and Diagnostics	Glycan Nodes as Cancer Markers	<i>Skysong Innovations (Arizona State University)</i>	Jovan Heusser	Patent Pending (US)

Clinical and Diagnostics	Utilization of CRISPR-Cas Systems for Analyte Detection	Skysong Innovations (Arizona State University)	Jovan Heusser	Patent Pending (Provisional)
Clinical and Diagnostics	Liquid Biopsy of Malignant Ground-Glass Opacity	Binghamton University	Olga Petrova	
Clinical and Diagnostics	Intraoperative 'non-lifting' Peripheral Nerve Action Potential Recording	JHMI	Christine Joseph	
Clinical and Diagnostics	Protein Expression Markers for the Detection of Thyroid Cancer Metastasis	Johns Hopkins University	Nakisha Holder	
Clinical and Diagnostics	Most Pancreatic Ductal Adenocarcinomas have Detectable Telomere Fusions and their Detection in Pancreatic Cyst Fluids Predicts the Grade of Dysplasia of Intraductal Papillary Mucinous Neoplasms	JHMI	Christine Joseph	
Clinical and Diagnostics	RNA In Situ Hybridization Assay (RISH) for the Detection of Prostate Cancer Cells in Urine	Johns Hopkins University	Nakisha Holder	
Clinical and Diagnostics	Novel Molecular Method for the Detection of Mycobacterium Tuberculosis	JHMI	Christine Joseph	
Other	Mice and tumor cell model for lymphangiosarcoma	University of Cincinnati	Melissa Baines	
Other	Siderocalin Fusions Improve Protein Production in Clinically Relevant Difficult-to-Express-Proteins	Fred Hutch Cancer Research Center	Rachael Stein	Issued and Pending
Other	Novel biomarker development for thrombus imaging (OTT201828)	Houston Methodist Hospital/Houston Methodist Research Institute	Lynn Crow	
Other	ReBiL: A Powerful Platform to Analyze Protein-Protein Interactions (PPIs) and Screen for Antagonists and Agonists of PPIs In Vivo	The Salk Institute for Biological Studies	Taneashia R. Morrell	
Other	Novel Method for Long-term In Vitro Propagation of Highly Pure Nephron Progenitor Cells	The Salk Institute for Biological Studies	Jon Jensen	Patent pending

Other	Sonogenetics: A Novel, Non-invasive and Selective Method to Examine & Manipulate Cellular Activity and Function	<i>The Salk Institute for Biological Studies</i>	Taneashia R. Morrell	Patent pending
Other	Spontaneous Type I Diabetes Mouse Model	<i>University of Toledo</i>	Lokesh Mohan	
Other	Preparation of Engineered Extracellular Vesicles	<i>Binghamton University</i>	Olga Petrova	
Other	An ex vivo Model for Rapid Evaluation of Choroidal Mast Cell Degranulation	<i>JHMI</i>	Christine Joseph	
Other	DNA Oligonucleotide Buffers	<i>Johns Hopkins University</i>	Vera Sampels	

Oncology Therapeutics

Type	Technology/Invention Title	Organization	Organization Contact	Patent/IP Status of Technology/Invention
CAR-T	Novel Surrogate Co-Receptors For Redirected T Cell Therapy	<i>Tech Launch Arizona</i>	Kaitlyn Norman-Powers	Provisional patent application filed
CAR-T	Tuning T cell sensitivity and specificity with engineered coreceptor molecules	<i>Tech Launch Arizona</i>	Kaitlyn Norman-Powers	Provisional patent application filed
CAR-T	Prostate specific membrane antigen (PSMA) CAR-T therapy for castration-resistant prostate cancer	<i>Houston Methodist Hospital/Houston Methodist Research Institute</i>	Lynn Crow	Actively working on provisional patent application (anticipated completion before AUTM)
CAR-T	Novel T cell Epitopes and Biomarkers for HPV-immune Therapy	<i>Skysong Innovations (Arizona State University)</i>	Jovan Heusser	Patent Pending (PCT)
Companion Diagnostics	Diagnostic Analyte to Enrich LINE-1 and Detect LINE-1 Driven Oncologic Disease	<i>Tech Launch Arizona</i>	Kaitlyn Norman-Powers	PCT application filed
Companion Diagnostics	Diagnostic for Monitoring Response to Immunotherapy	<i>Tech Launch Arizona</i>	Kaitlyn Norman-Powers	Provisional patent application filed

Companion Diagnostics	Companion Diagnostics and Compound Screening Assay for PI3K Inhibitors	<i>George Washington University</i>	Brian Coblitz	Issued
Companion Diagnostics	IQGAP-pathway biomarkers as diagnostic for cancers	<i>University of Toledo</i>	Lokesh Mohan	
Companion Diagnostics	Serum antibodies as biomarkers to predict toxicity in melanoma patients treated with immunotherapy	<i>NYU</i>	Ananda Ghosh	Patent pending
Companion Diagnostics	Genes that predict prognosis in patients with prostate cancer	<i>NYU</i>	Ananda Ghosh	US Patent 9,200,328
Companion Diagnostics	Single cell analysis using the programmable bio nano chip system: new tools for cancer diagnosis	<i>NYU</i>	Ananda Ghosh	Patent pending
Companion Diagnostics	phosphorylation site-specific antibodies to the glucocorticoid receptor: biomarkers for the activated glucocorticoid receptor in viv	<i>NYU</i>	Ananda Ghosh	US Patent: 6,995,243
Companion Diagnostics	sensitive and reliable assay for screening human sera for antibodies diagnostic for my ashenia gravis	<i>NYU</i>	Ananda Ghosh	
Companion Diagnostics	Method to diagnose and treat SLE	<i>NYU</i>	Ananda Ghosh	Patent pending
Companion Diagnostics	Genome analysis and prediction of cancer/treatment outcome through the combination of deep learning and image analysis	<i>NYU</i>	Ananda Ghosh	Patent pending
Companion Diagnostics	Novel Sensitive Detection of Oxidative Damage in Tissues and Live Cells	<i>Binghamton University</i>	Olga Petrova	Pending
Risk Stratification	Biomarker to Assess Risk for Skin Cancer Development	<i>Tech Launch Arizona</i>	Kaitlyn Norman-Powers	PCT application filed
Risk Stratification	Stratifying the risk of malignancy in indeterminate thyroid nodules	<i>University of Toledo</i>	Lokesh Mohan	
Risk Stratification	Immune regulation by low doses of the DNA methyltransferase inhibitor 5-azacitidine in common human epithelial cancers	<i>Johns Hopkins University</i>	Nakisha Holder	

Small Molecule Therapies	A New Synthetic Antiandrogenic Compound for Therapy Against Prostate Cancer	<i>University of Cincinnati</i>	Jill Uhl	Issued
Small Molecule Therapies	Method of making Doxorubicin prodrug for sustained and controlled release	<i>University of Cincinnati</i>	Tais Doll	Provisional Filing
Small Molecule Therapies	ROS-Activated Compounds as Selective Anti-cancer Therapeutics	<i>University of Cincinnati</i>	Jill Uhl	Issued
Small Molecule Therapies	MA14: A new ROS Activatable Anti-cancer Agent	<i>University of Cincinnati</i>	Jill Uhl	Issued
Small Molecule Therapies	Prolactin Receptor Targeting by Small Molecule Antagonists for the Treatment of Breast Cancer, Nociceptive Pain and Migraine Headache	<i>University of Cincinnati</i>	Jill Uhl	Pending
Small Molecule Therapies	Prostaglandin E2 Receptor EP2 as a Therapeutic Target for Gliomas	<i>University of Cincinnati</i>	Jill Uhl	Pending
Small Molecule Therapies	Identification of PCNA Targeting Compounds for Cancer Therapy and PCNA Function Regulation	<i>University of Cincinnati</i>	Jill Uhl	Issued
Small Molecule Therapies	Improved derivatives of Ganoderma lucidum compounds	<i>Puerto Rico Science, Technology and Research Trust</i>	David Gulley	Provisional Patent Application Filed
Small Molecule Therapies	EHop-016 A novel small molecule that inhibits Metastatic Breast Cancer	<i>Puerto Rico Science, Technology and Research Trust</i>	David Gulley	Patented
Small Molecule Therapies	Novel Carbazole EHop-016 Derivatives as anti-cancer and-migratory agents	<i>Puerto Rico Science, Technology and Research Trust</i>	David Gulley	
Small Molecule Therapies	Conjugated Curcumin Nanoparticles for the Treatment of Triple Negative Breast Cancer	<i>Henry Ford Health System</i>	Aparna Bubna	

Small Molecule Therapies	Conjugated Curcumin Nanoparticles for the Treatment of Head and Neck Cancer	Henry Ford Health System	Aparna Bubna	
Small Molecule Therapies	Novel mutation-resistant smoothed inhibitors for cancer therapy (3998)	Duke	Alex Mullins	
Small Molecule Therapies	Novel inhibitors of Heat Shock Protein 70 (Hsp70)	Duke	Alex Mullins	
Small Molecule Therapies	Combination Treatment for Cancer Involving CX-3543 and a PARP Inhibitor	Tech Launch Arizona	Kaitlyn Norman-Powers	US Issued Patent
Small Molecule Therapies	G-quadruplex targeting small molecules for the treatment of castration resistant prostate cancer and HSV-1	Tech Launch Arizona	Kaitlyn Norman-Powers	PCT application filed
Small Molecule Therapies	Inhibitors of the Androgen Receptor for the Treatment of Castration Resistant Prostate Cancer (CRPC)	Tech Launch Arizona	Kaitlyn Norman-Powers	PCT application filed
Small Molecule Therapies	Therapeutic repression of glycolysis to inhibit or reverse cellular dysplasias	Houston Methodist Hospital/Houston Methodist Research Institute	Paige Glumac	Provisional patent application filed on 9/27/19
Small Molecule Therapies	Novel Compounds for Treatment of Liposarcomas	The Salk Institute for Biological Studies	Michelle Booden	U.S. Patent 6,586,455
Small Molecule Therapies	Novel Inhibitors of Bromodomain and BET Proteins to Treat & Prevent Fibrosis and Cancer	The Salk Institute for Biological Studies	Michelle Booden	U.S. patent application 2015/015272 and foreign filings corresponding to PCT application WO20151204786A1 are pending
Small Molecule Therapies	Novel Agonists of the Vitamin D Receptor for the Treatment of Cancer and Fibrotic Diseases	The Salk Institute for Biological Studies	Michelle Booden	U.S. Patent 8,318,708 and PCT patent application US 2014/04163 is pending

Small Molecule Therapies	Novel Therapeutic Agonists for the Nuclear Hormone Receptor FXR	<i>The Salk Institute for Biological Studies</i>	Michelle Booden	International applications are pending for WO 2015/138968A1 (AU, CA, JP, KR); International applications are pending for WO 2015/138985A1 (EU, AU, CA, JP, KR); Issued U.S. patents 7,671,085; 7,647,217; and 8,212,006
Small Molecule Therapies	CDK12-Specific Modulators and Methods for the Treatment of Cancer	<i>The Salk Institute for Biological Studies</i>	Jon Jensen	Patent pending
Small Molecule Therapies	Use of an Organoid Culture Platform for Improved Ways to Evaluate CA19-9	<i>The Salk Institute for Biological Studies</i>	Taneashia R. Morrell	
Small Molecule Therapies	JAK2 Inhibition to Treat Platinum Resistant Ovarian Cancer	<i>George Washington University</i>	Brian Coblitz	Pending
Small Molecule Therapies	HDAC inhibitors as anticancer agents	<i>University of Toledo</i>	Lokesh Mohan	
Small Molecule Therapies	Formin agonist for treatment of high grade gliomas by targeting microtubules	<i>University of Toledo</i>	Lokesh Mohan	
Small Molecule Therapies	Necroptosis inducers/autophagy inhibitor for the treatment of triple negative breast cancer	<i>University of Toledo</i>	Lokesh Mohan	
Small Molecule Therapies	Epitranscriptomic regulation of type i interferon- implications in immunooncology	<i>NYU</i>	Ananda Ghosh	Patent pending
Small Molecule Therapies	Use of p.l-trcp1, p.l-trcp2 and rsk1/2 inhibitors to induce apoptosis by increasing the abundance of bim-el in cancerous cells.	<i>NYU</i>	Ananda Ghosh	US Patent 8,093,043

Small Molecule Therapies	Compounds to Modulate Retinoid X Receptors	Skysong Innovations (Arizona State University)	Jovan Heusser	Patent Pending (Provisional)
Small Molecule Therapies	Anticancer Betulastatin Compositions	Skysong Innovations (Arizona State University)	Jovan Heusser	Patent Pending (PCT)
Small Molecule Therapies	Inhibitors for The Glutamine Transporter ASCT2	Binghamton University	Olga Petrova	Pending
Small Molecule Therapies	Acid-sensitive Small Molecule Prodrugs of Anthracyclines for Improving Cancer Chemotherapy	Binghamton University	Olga Petrova	Pending
Small Molecule Therapies	Targeting YAP Activity in Combination with Immunomodulation to Alter Regulatory T Cell-mediated Immune Regulation in order to Treat Cancer	Johns Hopkins University	Jeanine Pennington	
Small Molecule Therapies	Rapid Induction of Human Cancer Cell Death by Synergistic Treatment of Tetra-O-Methyl Nordihydroguaiaretic Acid (M4N, Terameprocol) with 7-Hydroxystaurosporine (UCN-01)	Johns Hopkins University	Nakisha Holder	
Small Molecule Therapies	Rapid Induction of Cancer Cell Death by Synergistic Treatment of Tetra-O-methyl Nordihydroguaiaretic Acid (M4N) with either Rottlerin or Ly294002	Johns Hopkins University	Nakisha Holder	
Small Molecule Therapies	COMBINATION DRUG THERAPY REDUCES PARP-1 RELATED DNA REPAIR AND INCREASES THE EFFICACY OF GENOTOXIC AGENTS (#2017-035)	Indiana University	Lakshmi Sastry-Dent	US 62/403,423; PCT/US2017/054950; US 16/339,042
Small Molecule Therapies	Materials and methods for sensitizing multidrug resistant cancer cells (#2009-016)	Indiana University	Lakshmi Sastry-Dent	US 61/108,161; PCT/US2009/061980; ZL201510459818.4, US 8,455,252
Small Molecule Therapies	Hydroxyindole Carboxylic Acid Based Inhibitors for Oncogenic Src Homology-2 Domain Containing Protein Tyrosine Phosphatase-2 (Shp2) (#2013-204)	Indiana University	Lakshmi Sastry-Dent	US 61/816,404; PCT/US2014/035435; AU 2014256984; EP

				14788844.0; CN 201910469591.X; US 9,522,881
Cell-based Therapies	Interferon regulatory factor 4 (IRF4)-enhanced T cells to treat various cancers	<i>Houston Methodist Hospital/Houston Methodist Research Institute</i>	Paige Glumac	Non-provisional patent application filed on 2/27/19
Cell-based Therapies	Genetically Engineered Receptors to Protect Immune Cells from Immunosuppression and Enhance Cell Activation	<i>George Washington University</i>	Brian Coblitz	Pending
Cell-based Therapies	Genome Edited Tumor Cells as Anti-Cancer Vaccines	<i>Binghamton University</i>	Olga Petrova	Pending
Genetic-based Therapies	Development of FLT3L-guided, miR150-based nanoparticles for targeted therapy	<i>University of Cincinnati</i>	Tais Doll	Pending
Genetic-based Therapies	miR-22-based therapeutics targeting acute myeloid leukemia	<i>University of Cincinnati</i>	Tais Doll	Issued
Genetic-based Therapies	Liposomal-Gold-Nanoparticles to target MicroRNAs in Glioblastoma	<i>Puerto Rico Science, Technology and Research Trust</i>	David Gulley	Disclosed to the TTO
Genetic-based Therapies	CRISPR-Cas System for RNA Targeting and Manipulation	<i>The Salk Institute for Biological Studies</i>	Jon Jensen	
Genetic-based Therapies	Efficient Targeted Knock-in in Non-Dividing Cells Using Engineered Nucleases	<i>The Salk Institute for Biological Studies</i>	Jon Jensen	
Genetic-based Therapies	Differential Gene Splicing Enables Prostate Cancer Prognosis and Therapy via siRNA	<i>George Washington University</i>	Brian Coblitz	Issued
Genetic-based Therapies	Therapeutic potential of targeting mirna.s in he 7q31- 3 3 chromosomal region against human melanoma.	<i>NYU</i>	Ananda Ghosh	US Patent 8748098, US Patent 8,252,760

Biologic-based Therapies	Monoclonal Antibody Specific for Human asTF Protein that Inhibits Proliferation of asTF-expressing Cancer Cells	<i>University of Cincinnati</i>	Jill Uhl	Issued
Biologic-based Therapies	Exosome for treatment of Heart failure	<i>Henry Ford Health System</i>	Aparna Bubna	
Biologic-based Therapies	A fully human EGFRvIII-targeted bispecific antibody engaging T cells for antitumor therapy (4008)	<i>Duke</i>	Alex Mullins	
Biologic-based Therapies	Improving immune checkpoint therapies for cancer by inhibiting the PCSK9 protein (6339)	<i>Duke</i>	Alex Mullins	
Biologic-based Therapies	Monoclonal Antibody that Suppresses Thyrotropin Receptor Constitutive Activity	<i>Cedars-Sinai Medical Center</i>	Song Qu	US patent 8,350,012 granted
Biologic-based Therapies	Use of antibodies and/or small molecule inhibitors targeting amyloid precursor peptide cleavage to treat melanoma brain metastasis	<i>NYU</i>	Ananda Ghosh	Patent pending
Biologic-based Therapies	Peptoid-peptide hybrid macrocycles as therapeutic agents	<i>NYU</i>	Ananda Ghosh	PCT pending
Biologic-based Therapies	A Novel Humanized Single-chain Antibody Against Beta 3 Integrins as a Potential Therapeutic for Cancer Metastasis	<i>NYU</i>	Ananda Ghosh	US Patent 9,574,001
Biologic-based Therapies	Coiled Coiled peptidomimetics for cancer therapeutics	<i>NYU</i>	Ananda Ghosh	
Biologic-based Therapies	Peptide-DNA Chimeras for Treatment of HER2 Overexpressed Cancers	<i>Skysong Innovations (Arizona State University)</i>	Jovan Heusser	Patent Issued/Patent Pending
Biologic-based Therapies	Antibody fusion protein for targeting cancer	<i>Skysong Innovations (Arizona State University)</i>	Jovan Heusser	Patent Pending (PCT)

Biologic-based Therapies	Manipulation of Regulatory T Cell and DC Function by Targeting Neuritin Gene Using Antibodies, Agonists and Antagonists	Johns Hopkins University	Jeanine Pennington	
Biologic-based Therapies	PSMA-based Theranostic Imaging of Metastatic Cancer	Johns Hopkins University	Jeanine Pennington	
Biologic-based Therapies	Targeting Activin Signaling Activity in Combination with Immunomodulation to Alter Regulatory T cell-mediated Immune Regulation in order to Treat Cancer	Johns Hopkins University	Jeanine Pennington	
Biologic-based Therapies	Engineered Cytokine-antibody Fusion for Targeted Expansion of Immune Effector Cells	Johns Hopkins University	Vera Sampels	
Biologic-based Therapies	PSA-activated Maltose-binding Protein (MBP)-proaerolysin Fusion Proteins for Systemic Targeting of Prostate Cancer	Johns Hopkins University	Carole Burns	
Peptide-based Therapies	Selective Tri- and Tetrapeptide Agonists of the Melanocortin 1 Receptor	University of Cincinnati	Jill Uhl	Issued
Peptide-based Therapies	Therapeutic for ovarian cancer that targets NKG2D ligands and prevents binding and stimulating the NKG2D receptor.	Fred Hutch Cancer Research Center	Rachael Stein	Issued and Pending
Peptide-based Therapies	Novel Treatment for Neuropathies and Neurodegeneration	Fred Hutch Cancer Research Center	Rachael Stein	Pending
Peptide-based Therapies	Sublingual immunization using supramolecular peptide-polymer conjugate tablets	Duke	Alex Mullins	
Peptide-based Therapies	Novel Peptidic Inhibitors of Focal Adhesion Kinase (FAK)	Tech Launch Arizona	Kaitlyn Norman-Powers	Provisional patent application filed
Peptide-based Therapies	Novel Cell Permeable Peptide to Treat Melanoma by Inhibiting Akt1 Activation	Cedars-Sinai Medical Center	Song Qu	PCT/US2019/014732 pending

Peptide-based Therapies	Selectively Targeted Coating of Tumor Cells with Foreign Antigenic Peptide Renders Tumor Cells Susceptible to Antigen-specific CD8+ T Cell-mediated Killing	Johns Hopkins University	Vera Sampels	
Adjuvants	Immunostimulatory adjuvant molecules and antibody recruiting molecule-containing lipopeptide vaccines	University of Toledo	Lokesh Mohan	
Adjuvants	Enhanced Immunogenicity Vaccine Development Platform	University of Toledo	Lokesh Mohan	
Other	Undecylenic Acid-based Drug Delivery System	University of Cincinnati	Jill Uhl	Pending
Other	Development of R-2HG-based Therapeutic Strategies Targeting Cancers	University of Cincinnati	Jill Uhl	Pending
Other	Theranostic Biomimetic Chelating Platform for Delivery of Radionuclides	Fred Hutch Cancer Research Center	Rachael Stein	Pending
Other	Novel peroxide probes to study mitochondrial biology	Puerto Rico Science, Technology and Research Trust	David Gulley	Disclosed to the TTO
Other	Biomimetic nanoparticles for improved therapeutic or genetic cargo delivery to inflamed endothelium (applications for cancer and other inflammatory diseases)	Houston Methodist Hospital/Houston Methodist Research Institute	Paige Glumac	Non-provisional patent application filed on 8/22/18
Other	Optimization of Cold Atmospheric Plasma-Stimulated Media for Treatment of Cancer	George Washington University	Brian Coblitz	Pending
Other	Magnetically Enhanced Plasma Treatment of Cancer	George Washington University	Brian Coblitz	Pending
Other	Method to generate cold atmospheric plasma-stimulated media to treat cancer	George Washington University	Brian Coblitz	Pending
Other	Identification of gpd2 and slc1a5 as therapeutic targets in lung cancers with mutations in the oxidative stress pathway	NYU	Ananda Ghosh	Patent pending
Other	Controlling tumor growth using amino acid restriction (dietary and enzymatic)	NYU	Ananda Ghosh	Patent pending

Other	A novel 3d in vitro platform for pre-clinical investigations in drug testing, gene therapy, and immuno-oncology	NYU	Ananda Ghosh	Patent pending
Other	Vaccinia virus based oncolytic virus therapy	NYU	Ananda Ghosh	WO2016205429A1
Other	Gel for Application against Skin Cancer	Binghamton University	Olga Petrova	Pending
Other	Radiation Bandage	Binghamton University/DB Therapeutics		
Other	Novel Gene Targets for Treatments Relating to Wound Healing, Immuno-oncology, and Fibrotic Disease	Johns Hopkins University	Jeanine Pennington	
Other	Inhibition of Autophagy in Cancer Lines	Johns Hopkins University	Carole Burns	
Other	Compositions and Methods for Treating Solid Tumors	Johns Hopkins University	Nakisha Holder	
Other	Cancer Therapy via a Combination of Epigenetic Modulation and Immune Modulation	Johns Hopkins University	Jeanine Pennington	
Other	Acridine Biodegradable CCP:SA Polymers for the Treatment of Malignant Glioma	Johns Hopkins University	Carole Burns	
Other	Therapeutic Targeting of Receptor Tyrosine Kinase Inhibitor-Induced Androgen Receptor Phosphorylation in Cancer	Indiana University	Lakshmi Sastry-Dent	US 62/619,210, 62/647,282 & 62/679,477; PCT/US2019/014153