

Biomedical Technologies

- 1 **Oncology/
Hematology/
Angiogenesis**
- 3 **Neurology/
Sleep Apnea**
- 4 **Metabolic/
Immunology**
- 5 **Cardio-Pulmonary**
- 6 **Anti-Infectives**
- 7 **Drug Delivery**
- 8 **Diagnostics**
- 9 **Ophthalmology**
- 10 **Medical Devices**
- 12 **Software, Educational
Programs, and
Copyright Materials**
- 13 **Startups**

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Oncology/Hematology/Angiogenesis

Indication	Target	Therapeutic Description	Stage of Development	Patents	Faculty
Melanoma, Mantle Cell Lymphoma	Epigenetics: HDAC	Highly potent selective HDAC6 Inhibitors	Nexturastat series is the most advanced oncology validated HDAC inhibitor confirmed in melanoma animal models	Patents Pending	Alan Kozikowski
Oncology	RAD51 DNA repair pathway	Inhibitors of RAD 51 DNA repair pathway as a target for cancer therapy	Compounds are validated in prostate cancer xenograft rodent models	US Patent Pending	Alan Kozikowski & Philip Connell
Blood Disorders & Malignancies	Blood progenitor cells	Reprogramming and expansion of blood progenitor cells using valproic acid, or 5-aza-2'-deoxycytidine and trichostatin A	Currently testing in non-human primates in preparation for filing an IND	US Patent 7,927,785 US Patent Pending	Nadim Mahmud
Prostate Cancer	PSA and TEM8	Vaccine combining a PSA (Prostate specific) peptide and a TEM-8 (Tumor endothelial marker 8) peptide plus GM-CSF	PSA peptide/GM-CSF vaccine has been tested in a phase I human clinical trial; the combination with a TEM-8 peptide is currently being tested in vivo	US Patent 8,557,777	David Peace
Breast & Pancreatic Cancer	Oxidative stress	Mitochondrial targeted small molecule anti-oxidant	In vitro validation and early in vivo studies in a mouse breast cancer model	Provisional Application	Marcelo Bonini
Tumor & Ocular Angiogenesis	VEGF regulation	Peptide based inhibitor of VEGF activation	In vitro validation and early in vivo studies in a mouse lung cancer model	Provisional Application	Kaori Yamada & Asrar Malik
Tumor & Ocular Angiogenesis	VEGF activation	Fusion peptide inhibitor based on Histatins	In vitro data, In vivo data	PCT Patent Pending	Vinay Aakalu
Acute Lymphocytic Leukemia and Pancreatic Cancer and BC Metastasis	Asparagine Depletion via Asparaginase enzyme	Engineered selective Asparaginases that are safer to use in adult cancer patients	Biochemical and in vivo animal validated biologics	Provisional Application and PCT application	Arnon Lavie
Breast Cancer, Estrogen Positive	Estrogen Receptor	Brain penetrating Selective Estrogen Receptor Degraders	In vitro data, In vivo pending	Provisional Application	Greg Thatcher, Rui Xiong and Debra Tonetti

Oncology/Hematology/Angiogenesis

Indication	Target	Therapeutic Description	Stage of Development	Patents	Faculty
Prostate Cancer	Prostate Specific Membrane Antigen PSMA	A therapeutic agent targeted specifically to PSMA which is highly specific to prostate derived tissues.	Clinically validated HDAC inhibitors modified into novel molecules targeting domains to specifically localize to PSMA-expressing cells.	Patent in preparation	Alan Kozikowski & Ryo Nakajima
Oncology, specifically Melanoma, MCL	HDAC6	isoxazole and urea core hydroxamic acids as selective histone deacetylase 6 inhibitors	Hydroxamic acid HDAC6 inhibitors with a novel core	PCT and National phase application	Alan Kozikowski, SS Shen & Alejandro Villagra
Oncology,	BET Bromodomain Inhibitors	BET proteins are involved in transcriptional and cell cycle regulation.	In vitro data characterized but awaiting in vivo validation.	Provisional application	Greg Thatcher and Rui Xiong
Metastatic Breast Cancer (BC) Cell Models	Estrogen Receptor & specific kinases	When BC Mets become resistant to tamoxifen, ER-targeting agents become a valuable therapeutic option.	Cellular and xenograft/PDX models of tamoxifen resistance have been used to validate novel SERDs and SEMs for preclinical /IND development.	Material license	Debra Tonetti
Triple Negative Breast Cancer (TNBC)	HDACs & kinases	Inhibition of specific kinases leads to increased efficacy of HDAC3 inhibitors in TNBC models	Novel HDAC inhibitor compounds are tested in cell models of triple negative breast cancer	Provisional Application	Pavel Pasha Petukhov & Jonna Frasor
Breast Cancer	Estrogen Receptor	Novel Constrained Peptides	Currently in vitro stage proof of concept.	Patent in preparation	Terry Moore
Oncology	PARP agents	Cell Lines for determining PARP agents function	Research Tool to evaluate the activity of PARP inhibitors.	Material License	Lesley Hanakahi

Neurology/Sleep Apnea

Indication	Target	Therapeutic Description	Stage of Development	Patents	Faculty
Charcot Marie Tooth (CMT), Autism, Neuroprotection	HDAC6	Nanomolar inhibitors of HDAC6 highly selective over other HDACs	Compounds were dosed into transgenic models of CMT and successfully blunted the disease in a transgenic animal model	Patents Pending	Alan Kozikowski
Schizophrenia, Autism, Addiction	Human 5HT2c Serotonin Receptor	Compounds with superior safety profile over FDA approved molecule and excellent efficacy against target receptor; target is highly validated. In contrast to approved schizophrenia agents, these compounds may induce weight loss.	Compounds were characterized for preclinical assessment safety and PK profiling package, and are being evaluated for other CNS indications	US Patents 8,492,591, 8,754,132 Patents Pending	Alan Kozikowski
Sleep Apnea	Serotonin	Serotonin Receptor Antagonists +/- Selective Serotonin Reuptake Inhibitor • Ondansetron/Fluoxetine (repurposing)	Human clinical pilot showing efficacy; pre-clinical dose and dose-ratio optimized; pre-IND meeting with FDA	US Patents 6,331,536, 8,512,751 EP 1833467	David Carley & Miodrag Radulovacki
Sleep Apnea	CCK-B	CCK-B Receptor Antagonists	Rat model for obstructive sleep apnea	US Patent 8,053,413	David Carley & Miodrag Radulovacki
Alzheimer's Disease, Multiple Sclerosis	Noradrenaline	Combination of L-DOPS, carbidopa, and reboxetine	Prevents worsening of symptoms in AD and MS mouse models	US Patent 8,580,776	Doug Feinstein
Alcoholism	Histone acetylation	Treatment of alcohol withdrawal and reducing desire to consume alcohol	Data in rat models	US Patent Pending	Subhash Pandey
Alzheimer's Disease	Calpain Protease	Utilized caspase inhibitors on a rodent model of AD	Early stage in vivo studies	Provisional Application	Greg Thatcher
Amyotrophic Lateral Sclerosis (ALS)	Neuregulin Signaling	GlyB4 Fusion with Neuregulin Heparin-Targeting Domain to Block Neuregulin Signaling	Improves early chronic motor performance deficits, delays disease onset and prolongs survival in an ALS mouse model	US Patents 7,527,794, 7,994,123 EP Patent 1824879	Jeff Loeb
Tolerance resulting from chronic opioid administration	Calcium Calmodulin Kinase (CaMKII)	Utilized an FDA approved drug & other preclinical compound inhibitors of CaM II kinase	Compound successfully attenuated experimentally induced nerve hypersensitivity caused by opioid drugs in preclinical models; human clinical trial validated this approach	US Patent 7,256,200 US Patent Pending	Jim Wang
Parkinson's, Other Synucleinopathies	Protein Kinase C mu or Src-Family Tyrosine Kinase	Utilized a demonstrator compound inhibitors of protein kinase C mu and src family tyrosine kinase	Early stage in vitro studies	US Patent 8,618,063	Scott Brady

Metabolic/Immunology/Wounds

Indication	Target	Therapeutic Description	Stage of Development	Patents	Faculty
Rheumatoid Arthritis, Inflammatory Bowel Disease, Ulcerative colitis	Epigenetics: HDAC6	HDAC6 Selective Inhibitors: nanomolar and sub nanomolar inhibitors of HDAC6	Potent HDAC6 inhibitors successfully prevented cardiac organ transplant rejection in rodent model; also prevented experimentally induced ulcerative colitis in rodents	Patents Pending	Alan Kozikowski
Obesity	Human 5HT2c Serotonin Receptor	Compounds with superior safety profile over Lorcaserin (a FDA approved weight loss drug by Arena) and excellent efficacy against target receptor	Compounds were thoroughly characterized for preclinical assessment safety and PK profiling package, and are being evaluated for other CNS indications	US Patents 8,492,591, 8,754,132 Patents Pending	Alan Kozikowski
Type 1 Diabetes	Antigen specific regulatory T-cells	Bispecific antibody targeted to GLUT2 and CTLA4	Validated in NOD diabetes mouse model	US Patents 8,822,649, 9,221,911 US Patent Pending	Bellur Prabhakar
Asthma, Eosinophilic Esophagitis	CCR3, eosinophils	Peptide therapeutic to compete against Eotaxin and other chemokines as a treatment for asthma	In vivo experiments in eosinophil mouse model	PCT Patent Pending	Steven Ackerman & Vadim Gaponenko
Wound Healing	Pro-regenerative cytokines & growth factors	Interferon gamma activated mesenchymal stem cells	Validated in primate & rodent models	US Patent 9,011,840	Amelia Bartholomew
Type I Diabetes	Pathway inhibitor	Genetic blockade of gene X in duct cells	Early proof of target	Patents Pending	Solomon Afelik

Indication	Target	Therapeutic Description	Stage of Development	Patents	Faculty
Radiation-induced lung injury	Pbef/Nampt inhibition	Humanized Pbef antibodies	Proof of principle validated in rodent model; antibody development and testing ongoing	US Patent 9,409,983	Joe Garcia
Pulmonary Arterial Hypertension	Visfatin/Pbef/Nampt inhibition	Small molecule Inhibitors	Small molecules show efficacy against NAMPT Enzymatic activity	Provisional Application	Tom Driver
Ischemic cardiovascular diseases	Autologous endothelial cells	Method to produce autologous human endothelial cells from human postnatal dermal fibroblasts	In vitro and early in vivo studies in rodent models	US Patent Pending	Changwon Park
Thrombosis, blood disorders, cancer	Platelet Adhesion Receptor Inhibitors	Inhibitory peptides of the interaction between 14-3-3 Protein and Glycoprotein Ib-IX Complex	In vitro and early in vivo studies	US Patent 8,173,595	Xiaoping Du
Sudden Cardiac Arrest	Phosphatase inhibitors	Peptide	Efficacy in mouse and pig models	PCT Patent Pending	Terry Vanden Hoek
Thrombosis, sepsis	Von Willebrand factor	Inhibitory peptide	In vitro and early in vivo studies	US Patent 9,796,757	Richard Minshall
Ischemic cardiovascular diseases	Autologous endothelial and erythroblast cells	Method to produce erythro-angioblast progenitor cells from fibroblasts	In vitro and early in vivo studies in rodent models	US Patent Pending	Jalees Rehman & Asrar Malik
Pulmonary diseases	Pathogenic mutations	In vivo CRISPR/Cas9-mediated genome editing that targets the cardiopulmonary vasculature	In vitro and early in vivo studies in rodent models	Provisional Application	Jalees Rehman & Asrar Malik
Atherosclerosis	Novel athero-sclerosis auto-antigen	Auto-antigen antibody	In vitro and early in vivo studies	Provisional Application	Guoxing Zheng

Anti-Infectives

Indication	Target	Therapeutic Description	Stage of Development	Patents	Faculty
TB and Cystic Fibrosis Pathogens	Multiple	Small molecule therapeutics	Animal data available for best lead molecule against XDR and MDR TB. Herg safety.	PCT and Provisional Application	Alan Kozikowski, William Bishai & Laurent Kremer
Hepatitis C	NPC1L1	Ezetimibe (Zetia – repurposed)	In vivo validation in a mouse model of HCV infection	US Patents 8,673,288, 9,034,863	Susan Uprichard
Lymphatic filariasis	Three conserved filarial surface proteins	Vaccine (Purified Protein and/or DNA)	Proof of Principle studies in a primate model of infection ongoing	Patents Pending CN Issued ZL201180064793.8	K. Ramaswamy
TB	Multiple	Macrolides and small molecule antibiotics	In vitro validation	Patents Pending	Scott Franzblau
Herpes	Viral binding and cell entry	Inhibitory peptide	In vivo validation in a mouse model of HSV infection	US Patent 9,464,113	Deepak Shukla
Herpes	Multiple	Live Attenuated HSV Vaccine	Fine tuning of attenuation profile underway	US Patent 8,765,444	Bin He
Ebola	Ebola virus	Small molecule anti-virals	In vitro validation	In preparation, unpublished	Irina Gaisina
MRSA	vraSR Operon	Small molecule inhibitors of MRSA related OPERON.	In vitro cellular demonstration of technology.	PCT US 029237	Mike Johnson, Robert Daum & Susan Boyle-Vavra
MERS Virus, SARS	Papain-like Viral Protease	Inhibitors of Viral replication against the Middle East Respiratory Syndrome virus	Early stage program with viable hit to lead compounds	Material License	Mike Johnson
HIV	Reverse Transcriptase	Novel compounds from natural sources that inhibit HIV viral replication	Validated in viral assays	US Patent Pending UK, EP and DE Patents Issued	Lijun Rong, Djaja Soejarto & HongJie Zhang

Drug Delivery

Indication	Target	Therapeutic Description	Stage of Development	Patents	Faculty
Drug Delivery	Non-specific	Nano-hybrid delivery system for anticancer, anti-viral and anti-angiogenic agents	No animal data to date	US Patent 9,168,225	Seungpyo Hong
Drug Delivery	Opioid Receptors	Dermorphinin Analogues for the Target-Delivery of Novel Therapies for Pain and Opioid Addiction	Effective delivery in rodent models	US Patent 7,776,819	Jim ZaiJie Wang
Drug Delivery	Non-specific	FDA-approved biomaterials employed in proprietary micelle nano-particle	Very extensive animal validation.	US Patent US6,322,810 US6,217,886 EPO cases issued	Hayat Onyuksel
Drug Delivery	Non-specific	Toroidal-spiral design allows for two different drugs to be released at two different rates	No animal data to date	US Patent 8,852,645 US Patent Pending	Ludwig Nitsche & Ying Liu
Drug Delivery	Endothelial cells	Myeloperoxidase-derived peptide	Validation of specific delivery of peptidelinked compounds into sub-endothelial spaces in mouse models	US Patent 7,429,563	Chinnaswamy Tiruppathi & Asrar Malik
Drug Delivery	Dermal delivery	Hydrogel to treat wound healing	Proof of concept in animals shows efficacy of repurposed FDA-approved drug to facilitate wound healing in diabetic animal model. Human clinical trial in preparation	Provisional in preparation, unpublished	Al Mancini, Tim Koh, Paul Pluta
Drug Delivery	Non-specific	Drug delivery system to increase bio availability of hydrophobic components	Mice and dog testing	US Patent Pending	Ying Liu

Diagnostics

Disease/Condition	Target/Marker	Stage of Development	Patents	Faculty
Stroke risk	Blood flow through microvasculature in the eyes	Device and concept tested in rabbits; human validation currently underway	US Patents 8,801,183 8,332,007	Mahnaz Shahidi
Endometriosis	Non-invasive diagnostic using vaginal lavage or other bodily fluids	Baboon data and small human trial	US Patent 7,794,958	Asgi Fazleabas
Idiopathic Pulmonary Fibrosis	Peripheral blood biomarkers	Validated in a small set of human samples	US Patent Pending	Joe Garcia
Cancer	Transcriptome analytics to predict disease progression and determine personalized therapeutics	Validated in human breast cancer	US Patent Pending	Yves Lussier
Alzheimer's Disease	pCREB and CREB Signaling as Blood based biomarkers for cognitive deficits in AD	Pilot study in patients with AD compared to controls	Provisional Application	Orly Lazarov
Epilepsy	Metabolite expression profile using MRI Spectroscopy	Identified in human epileptic brain tissue	Provisional Application	Jeff Loeb
Alzheimer's Disease	Blood based biomarkers for diagnosing AD	Pilot study in patients with AD compared to controls	Provisional Application	Mary Jo LaDu
Radiation-induced gastrointestinal injury	Reactive oxygen species	Validated in a mouse model	US Patent 9,643,985	Marcelo Bonini & Alex Lyubimov
Metastatic cancer	Biomimetic device for capturing Circulating Tumor Cells and cancer stem cells	Validated using both human primary cancer cells and cell lines	Patents Pending	Howard Ozer
Breast Cancer	Estrogen receptor binding agent	In vitro development in progress	Provisional Application	Steve DiMagno & Thatcher/Tonetti
Cellular Lipids	In Situ Quantitative imaging with specific molecular sensors for detection from Cholesterol to Cancer	Demonstration of several in situ molecular sensors	Material License	Wonhwa Cho
Pancreatic Cancer	PCR-based assay using multiple data-driven targets to create an optimized model that can predict IPMN with high-malignant potential with up to 86% accuracy	Assay run on multinational human pancreatic cancer cyst fluid	PCT	Ajay Maker

Ophthalmology

Disease/Condition	Target	Target/Marker	Stage of Development	Patents	Faculty
Dry eye, retinopathy, angiogenesis	VEGF Activation	Fusion peptide inhibitor based on Histaminesm. Applications in wound healing, metal ion chelation, anti-inflammatory effects and angiogenesis	In vitro data, In vivo data in mouse	PCT Patent Pending	Vinay Aakalu
Corneal Blindness	Medical Device	Device for projection onto retina from corneal blindness	Prototype	Provisional	Mark Rosenblatt, Charles Yu
Tumor & Ocular Angiogenesis	VEGF regulation	Peptide based inhibitor of VEGF activation	In vitro validation and early in vivo studies in a mouse lung cancer model	Provisional Application	Kaori Yamada & Asrar Malik
Ocular Surface Toxicity	Bacterial Keratitis	Neutralization of alpha toxin in the eye	In vitro data	Patents Pending	Ali Djililian

Device	Function	Stage of Development	Patents	Faculty
Heart Rate Monitor	Non-contact videoplethysmograph (VPG) measure of human arterial pulse using a digital camera	Prototype developed	Patents pending	Stephen Porges
Jaw-Thrust and Immobilization Device	A device to open and maintain an airway in an unconscious patient without any continuous attention	Tested using a human patient simulator in an obstructed airway state	US Patent 9,125,745	Girish Desphande
Endotracheal tube	A two port endotracheal tube designed to decrease the incidence of unplanned extubations with (1) a straight port used during intubation for suction tubing and introduction of other instruments (e.g., bronchoscope, in-line suction, or endotracheal tube exchanger devices) and (2) a distal (curved port) used for connecting endotracheal tube to a ventilator and sensors used for end-tidal CO2 measurement	Fully-functional prototype being tested in mannequin models	US Patent 8,991,396	Girish Desphande
Extendable Intravenous Catheter	A catheter designed for pediatric patients	Prototype being developed	US Patent 9,517,324	Girish Desphande
Electromagnetic field shock therapy	Delays and reverses cellular senescence and mortality by preconditioning of the HSF1/HSR pathway	Protocol validated in animal models; device prototype in development	US Patent 9,014,801	Felipe Perez
Large Memory Storage And Retrieval (LAMSTAR) neural network (NN)	A method that predicts the occurrence of individual episodes of obstructive apnea during sleep, and which can be integrated into current CPAP systems to reduce occurrences of apnea episodes	Human trials have been conducted.	US Patent 8,775,340	Jonathon Waxman, David Carley & Daniel Graupe
Spinal surgical implant	A surgical implant for use in patients needing surgical correction of deformity of the spine	Prototypes developed	PCT Patent Pending	Sergey Neckrysh
Physical Activity Monitor	Wireless remote monitoring of multiple aspects of patient physiology	Prototype used in research laboratory	Provisional Application	Shane Phillips
Transcorneal Telescope	Visual aid for vision impairment due to eye diseases	Prototype being developed	US Patent 8,506,626	Jose de la Cruz
CTO Wire	Wire designed to allow angioplasty to occluded vessels	Prototype being developed	Provisional Application	Mladen Vidovich
Device for insertion of spinal cord stimulation paddle electrodes	This device decreases pressure on the midline spinal structures, primarily the spinal cord, and instead main pressure points will be at the lateral aspects of the spinal canal, away from the spinal cord itself	Theoretical concept exists	US Patent 9,351,752	Konstantin Slavin

Device	Function	Stage of Development	Patents	Faculty
Urine Flow Meter	Automated Urineometer for ICO	Prototype	Provisional	Niederberger, Sofer
Intercranial Fluorescence Monitor	Monitor delivery of chemo for glioblastoma patients	Early Prototype	Provisional	Engelhard
Non-contact non-mydratric fundus camera Ultra wide angle	By freeing the pupil for collecting imaging light only, trans-pars-planar illumination enables >200ofundus view in single-shot images	Prototype, some human data	Provisional	Yao
Multimodal OCT for concurrent imaging of retinal neural activity and vascular hemodynamics	Fosters the study of neurovascular coupling mechanisms in the retina, providing a new method for retinal disease detection and diagnosis.	Prototype	PCT	Yao
Miniaturized indirect ophthalmoscopy	Miniaturized indirect ophthalmoscopy for wide-field fundus photography.	Prototype, some human data	Provisional	Yao
Novel Keratoprotheses	Sutureless Keratoprosthesis with flexible component for treatment of corneal blindness	Numerous prototypes, rabbit data	PCT	Rosenblatt, Yu
Vision Restoration System	A system for projecting electronic visual information into the eye. May be fixated in the lens capsule, haptics, or sutures to the eye wall	Prototype	Provisional	Rosenblatt, Yu
Operating table Patient Stabilizer	Operating table for procedures in the Trendelenburg position to reduce stress on nerves and prevent musculoskeletal injury	Prototype	Provisional	Young
Vari-Ox Self-inflating Resuscitation Bag	Allows clinician to provide accurate concentration of oxygen using oxygen tank and room air in novel fashion	Prototype	Provisional	Deshpande
Blink Assistant	Restore blink in patients with Bell's palsy	Prototype	Provisional	Aakalu

Software, Educational Programs, and Copyright Materials

Indication	Target	Description	Stage of Development	Intellectual Property	Faculty
My IDEA	Drug-Eluting Stent	My IDEA: Patient-Centered Tablet Application for Improving Medication Adherence after a Drug-Eluting Stent	Clinical trials with patients have been conducted. https://www.frontiersin.org/articles/10.3389/fpubh.2016.00272/full	Copyright	Andrew Boyd
BiAffect	Bipolar Disorder	A smartphone application that enables monitoring of non-verbal speech using keyboard dynamics, meta-data, and related mobile sensor information to infer the users' neuropsychological state	Launched prototype (app) for clinical validation Available for download at https://itunes.apple.com/us/app/biaffect/id1355144276?ls=1&mt=8	Copyright	Alex Leow Olusola Ajilore
DiaBetty	Diabetes	Technology-enabled diabetes coach that provides ongoing diabetes self-management support in a mood-sensitive manner for patients through use of their cell phone	Software app is in development	Copyright Provisional Patent Application pending	Ben Gerber Alex Leow Olusola Ajilore Faraz Hussain Jun Ma
Fit-N Strong	Osteoarthritis	An evidence-based exercise program to treat osteoarthritis. This program is currently being taught in almost 100 sites in 24 states.	https://www.fitandstrong.org/	Copyright	Susan Hughes
FertilityABC	Infertility	Software (app) for primary care physicians, their patients, and Resident physicians to provide guidance on methods besides in vitro fertilization to increase opportunity/likelihood for pregnancy	All clinical methods have been worked out and reduced to the software Software(app) will be available soon	Copyright	John Holden
LEAD Experience	Legislative Education & Advocacy Development	Interdisciplinary software (learning module) designed to teach health policy to medical students	2 week program that has already been rolled out in some states	Copyright	James Ronayne
LUPUS- PRO	SLE Lupus	Patient Reported Outcomes Questionnaire	Used by pharmaceutical and clinical units to gauge disease severity http://www.lupuspro.com/information.html	Copyright	Simon Pickard M. Jolly
Medicinal Cannabis Technical Manuals	Medical Marijuana/ Cannabis	Laboratory protocols describing the processing of medical cannabinoid products	Turn-key validated protocols	Copyright	Jenn Bash Karl Larsen
DEEP	Diabetes	This is a diabetes education and self-management program endorsed by CMS	Commercially deployed	Copyright	Amparo Castillo

Company	Technology	Website	Type	Faculty
Actuate Therapeutics	Highly Selective GSK3 inhibitors for Oncology and CNS indications	https://actuatetherapeutics.com	Therapeutic	Alan Kozikowski
Adaptae	Tumor stem cells therapeutics, diagnostics and research tools	https://actuatetherapeutics.com	Therapeutic	Jim Radosevich
Advaite	Anti-inflammatory in ocular surface diseases	http://advait.com/	Therapeutic	Sandeep Jain
CDG Therapeutics	Peptide based drugs for treating neuroblastoma and other cancers	http://www.cdgti.com	Therapeutic	Ananda Chakrabarty & Tapas Das Gupta
Dystrogen Therapeutics	Chimeric Cell Therapy for Treating Muscular Dystrophy including Duchenne Muscular Dystrophy (DMD)	http://dystrogen.com/	Therapeutic	Maria Seimionow
DuPage Medical	Peptide based anti-thrombotics that don't cause bleeding		Therapeutic	Xiaoping Du
Enzyme by Design	Safer asparaginase proteins that have been designed to minimize glutaminase activity for treating cancer		Therapeutic	Arnon Lavie
EpiDestiny	Decitabine formulation for treating blood related cancers and indications including sickle cell anemia		Therapeutic	Yogen Saunthararajah & Joe DeSimone
Jivana Biotechnology	siRNA technology targeting breast, lung, and liver cancer	http://www.jivanabiotech.com	Therapeutic	Bellur Prabhakar
Laurel Therapeutics	Peptide based therapy for treating diseases associated with ocular angiogenesis		Therapeutic	Yulia Komarova & Asrar Malik
Progenicyte	Adult stem cell and genetic analyses and therapies for hair loss restoration and tissue regeneration	http://progenicyte.com	Therapeutic	Kiminobu Sugaya
RespireRX	Novel drug therapies for sleep apnea, drug-induced respiratory depression, and other brain-medicated breathing disorders	http://www.respirerx.com/	Therapeutic	David Carley
Revivo Therapeutics	Novel methylthiazoles for CNS indications with the lead molecule well tolerated in a Phase 1 study in healthy volunteers	http://www.revivotherapeutics.com/	Therapeutic	Greg Thatcher
Sahane Biotech	Recombinant protein therapy for in vivo expansion of regulatory t cells for treating type 1 diabetes & other autoimmune disorders		Therapeutic	Bellur Prabhakar
Sphingo Therapeutics	Selective inhibitors of sphingosine kinase 1 (SphK1) for treating pulmonary disorders, e.g., Bronchopulmonary dysplasia (BPD)		Therapeutic	Anantha Harajith & Viswanathan Natarajan
TTC Oncology	Clinical stage hormone receptor modulators for treating cancer		Therapeutic	Greg Thatcher
Vista Oncology	Micelle therapeutic drug delivery platform		Therapeutic	Hayat Onyuksel
Yaso Biotech	Therapeutic and prophylactic agent for sexually transmitted viral pathogens with contraceptive properties	http://www.yasotherapeutics.com/	Therapeutic	Alex Kronic & Don Waller

Company	Technology	Website	Type	Faculty
Cell Biologics	Therapeutics for treating sepsis and other pulmonary indications; primary cultured cells and cell culture products	http://www.cellbiologics.com	Therapeutic & Reagents	Asrar Malik
3PrimeDX	Blood based test for determining risk of sudden cardiac death and diastolic heart failure	http://3primedx.com	Diagnostic	Samuel Dudley
Ocugen	Ocular graft versus host disease	https://ocugen.com/	Therapeutic	Sandeep Jain
Arphion	Test for early detection of oral squamous cell carcinoma	http://www.arphiondiagnostics.com	Diagnostic	Joel Schwartz & Guy Adami
Capio Biosciences	Circulating tumor cell capture device for diagnostic applications. Successfully raised several million in start up funding.	http://www.capiobiosciences.com/	Diagnostic	Seungpyo Hong
PAX Neuroscience	Blood based test for evaluating antidepressant efficacy and diagnosing depression	http://www.paxneuroscience.com	Diagnostic	Mark Rasenick
VasSol	MRI-based quantification of blood flow in vessels	http://www.vassolinc.com	Diagnostic	Fady Charbel
Tianhe Stem Cell Biotechnologies	Stem Cell Educator Therapy is a treatment of autoimmune related diseases using stem cells drawn from human umbilical-cord blood	http://www.tianhecell.com	Device & Therapeutic	Yong Zhao
BioVipra	Biomimetics for tissue regeneration and improved osteo-integration of implants		Device	Sriram Ravindran
Cell Habitats	Micro-sized regenrods that mimic biological material, attract the body's own stem cells, and act as a substitute cellular habitat that promotes endogenous stem cell growth and serves as a platform for the repair of bone, cartilage, muscle and nerve tissues	http://www.cellhabitats.com	Device	Brenda Russell
NexHand	Sensor-based "smart surgical glove" technology designed to enable physicians to assess the severity of stress urinary incontinence		Device	Craig Neiderberger
OrthoAccel Technologies	Hands-free device designed for faster orthodontic treatment	http://acceledent.com	Device	Jeremy Mao
PicoLife	Valveless micropump membrane magnetic actuation design for different fluid/drug applications		Device	Farid Amirouche
Remote Vital Monitoring	Coma Alert a device that provides ongoing, continuous monitoring of brainstem integrity	http://remotevitalmonitoring.com	Device	Jim Stone
RetMap	CLEAR Lens records ERG signals from multiple locations on the cornea simultaneously, which enables sensitive detection of local areas of dysfunction without the need to use complex visual stimuli	http://retmapinc.com	Device	John Hetling
Immersive Touch	Simulation based surgical training and exploration which immerses surgeons in a digitally replicated operating environment with high-fidelity 3D virtual anatomies and haptic instrument replicates	http://www.immersivetouch.com	Software	Pat Banerjee
Simplified Data Tracking	Software for data management of research laboratories	http://simplifieddatatracking.com	Software	Oscar Colomonic