

# Biomedical Technologies

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# Oncology/Hematology/Angiogenesis

Indication	Target	Therapeutic Description	Stage of Development	Patents	Faculty
<b>Melanoma, Mantle Cell Lymphoma</b>	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
<b>Oncology</b>	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
<b>Blood Disorders &amp; Malignancies</b>	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
<b>Prostate Cancer</b>	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
<b>Breast &amp; Pancreatic Cancer</b>	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
<b>Tumor &amp; Ocular Angiogenesis</b>	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
<b>Tumor &amp; Ocular Angiogenesis</b>	VEGF activation	Fusion peptide inhibitor based on Histatins	In vitro data, In vivo data	PCT Patent Pending	Vinay Aakalu
<b>Acute Lymphocytic Leukemia and Pancreatic Cancer and BC Metastasis</b>	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
<b>Breast Cancer, Estrogen Positive</b>	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
<b>Prostate Cancer</b>	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
<b>Oncology, specifically Melanoma, MCL</b>	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
<b>Oncology,</b>	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
<b>Metastatic Breast Cancer (BC) Cell Models</b>	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
<b>Triple Negative Breast Cancer (TNBC)</b>	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
<b>Breast Cancer</b>	Estrogen Receptor	Novel Constrained Peptides	Currently in vitro stage proof of concept.	Patent in preparation	Terry Moore
<b>Oncology</b>	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
<b>Charcot Marie Tooth (CMT), Autism, Neuroprotection</b>	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
<b>Schizophrenia, Autism, Addiction</b>	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
<b>Sleep Apnea</b>	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
<b>Sleep Apnea</b>	CCK-B	CCK-B Receptor Antagonists	Rat model for obstructive sleep apnea	US Patent 8,053,413	David Carley & Miodrag Radulovacki
<b>Alzheimer's Disease, Multiple Sclerosis</b>	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
<b>Alcoholism</b>	Histone acetylation	Treatment of alcohol withdrawal and reducing desire to consume alcohol	Data in rat models	US Patent Pending	Subhash Pandey
<b>Alzheimer's Disease</b>	Calpain Protease	Utilized caspase inhibitors on a rodent model of AD	Early stage in vivo studies	Provisional Application	Greg Thatcher
<b>Amyotrophic Lateral Sclerosis (ALS)</b>	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
<b>Tolerance resulting from chronic opioid administration</b>	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
<b>Parkinson's, Other Synucleinopathies</b>	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
<b>Rheumatoid Arthritis, Inflammatory Bowel Disease, Ulcerative colitis</b>	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
<b>Obesity</b>	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
<b>Type 1 Diabetes</b>	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
<b>Asthma, Eosinophilic Esophagitis</b>	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
<b>Wound Healing</b>	Pro-regenerative cytokines & growth factors	Interferon gamma activated mesenchymal stem cells	Validated in primate & rodent models	US Patent 9,011,840	Amelia Bartholomew
<b>Type I Diabetes</b>	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
<b>Radiation-induced lung injury</b>	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
<b>Pulmonary Arterial Hypertension</b>	Visfatin/Pbef/Nampt inhibition	Small molecule Inhibitors	Small molecules show efficacy against NAMPT Enzymatic activity	Provisional Application	Tom Driver
<b>Ischemic cardiovascular diseases</b>	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
<b>Thrombosis, blood disorders, cancer</b>	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
<b>Sudden Cardiac Arrest</b>	Phosphatase inhibitors	Peptide	Efficacy in mouse and pig models	PCT Patent Pending	Terry Vanden Hoek
<b>Thrombosis, sepsis</b>	Von Willebrand factor	Inhibitory peptide	In vitro and early in vivo studies	US Patent 9,796,757	Richard Minshall
<b>Ischemic cardiovascular diseases</b>	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
<b>Pulmonary diseases</b>	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
<b>Atherosclerosis</b>	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
<b>TB and Cystic Fibrosis Pathogens</b>	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
<b>Hepatitis C</b>	NPC1L1	Ezetimibe (Zetia – repurposed)	In vivo validation in a mouse model of HCV infection	US Patents 8,673,288, 9,034,863	Susan Uprichard
<b>Lymphatic filariasis</b>	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
<b>TB</b>	Multiple	Macrolides and small molecule antibiotics	In vitro validation	Patents Pending	Scott Franzblau
<b>Herpes</b>	Viral binding and cell entry	Inhibitory peptide	In vivo validation in a mouse model of HSV infection	US Patent 9,464,113	Deepak Shukla
<b>Herpes</b>	Multiple	Live Attenuated HSV Vaccine	Fine tuning of attenuation profile underway	US Patent 8,765,444	Bin He
<b>Ebola</b>	Ebola virus	Small molecule anti-virals	In vitro validation	In preparation, unpublished	Irina Gaisina
<b>MRSA</b>	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
<b>MERS Virus, SARS</b>	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
<b>HIV</b>	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
<b>Dry eye, retinopathy, angiogenesis</b>	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
<b>Corneal Blindness</b>	Medical Device	Device for projection onto retina from corneal blindness	Prototype	Provisional	Mark Rosenblatt, Charles Yu
<b>Tumor &amp; Ocular Angiogenesis</b>	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
<b>Ocular Surface Toxicity</b>	Bacterial Keratitis	Neutralization of alpha toxin in the eye	In vitro data	Patents Pending	Ali Djililian

Device	Function	Stage of Development	Patents	Faculty
<b>Heart Rate Monitor</b>	Non-contact videoplethysmograph (VPG) measure of human arterial pulse using a digital camera	Prototype developed	Patents pending	Stephen Porges
<b>Jaw-Thrust and Immobilization Device</b>	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
<b>Endotracheal tube</b>	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
<b>Extendable Intravenous Catheter</b>	A catheter designed for pediatric patients	Prototype being developed	US Patent 9,517,324	Girish Desphande
<b>Electromagnetic field shock therapy</b>	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
<b>Large Memory Storage And Retrieval (LAMSTAR) neural network (NN)</b>	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
<b>Spinal surgical implant</b>	A surgical implant for use in patients needing surgical correction of deformity of the spine	Prototypes developed	PCT Patent Pending	Sergey Neckrysh
<b>Physical Activity Monitor</b>	Wireless remote monitoring of multiple aspects of patient physiology	Prototype used in research laboratory	Provisional Application	Shane Phillips
<b>Transcorneal Telescope</b>	Visual aid for vision impairment due to eye diseases	Prototype being developed	US Patent 8,506,626	Jose de la Cruz
<b>CTO Wire</b>	Wire designed to allow angioplasty to occluded vessels	Prototype being developed	Provisional Application	Mladen Vidovich
<b>Device for insertion of spinal cord stimulation paddle electrodes</b>	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
<b>Urine Flow Meter</b>	Automated Urineometer for ICO	Prototype	Provisional	Niederberger, Sofer
<b>Intercranial Fluorescence Monitor</b>	Monitor delivery of chemo for glioblastoma patients	Early Prototype	Provisional	Engelhard
<b>Non-contact non-mydratric fundus camera Ultra wide angle</b>	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
<b>Multimodal OCT for concurrent imaging of retinal neural activity and vascular hemodynamics</b>	Fosters the study of neurovascular coupling mechanisms in the retina, providing a new method for retinal disease detection and diagnosis.	Prototype	PCT	Yao
<b>Miniaturized indirect ophthalmoscopy</b>	Miniaturized indirect ophthalmoscopy for wide-field fundus photography.	Prototype, some human data	Provisional	Yao
<b>Novel Keratoprotheses</b>	Sutureless Keratoprosthesis with flexible component for treatment of corneal blindness	Numerous prototypes, rabbit data	PCT	Rosenblatt, Yu
<b>Vision Restoration System</b>	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
<b>Operating table Patient Stabilizer</b>	Operating table for procedures in the Trendelenburg position to reduce stress on nerves and prevent musculoskeletal injury	Prototype	Provisional	Young
<b>Vari-Ox Self-inflating Resuscitation Bag</b>	Allows clinician to provide accurate concentration of oxygen using oxygen tank and room air in novel fashion	Prototype	Provisional	Deshpande
<b>Blink Assistant</b>	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
<b>My IDEA</b>	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. <a href="https://www.frontiersin.org/articles/10.3389/fpubh.2016.00272/full">https://www.frontiersin.org/articles/10.3389/fpubh.2016.00272/full</a>	Copyright	Andrew Boyd
<b>BiAffect</b>	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 <a href="https://itunes.apple.com/us/app/biaffect/id1355144276?ls=1&amp;mt=8">https://itunes.apple.com/us/app/biaffect/id1355144276?ls=1&amp;mt=8</a>	Copyright	Alex Leow Olusola Ajilore
<b>DiaBetty</b>	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
<b>Fit-N Strong</b>	Osteoarthritis	An evidence-based exercise program to treat osteoarthritis. This program is currently being taught in almost 100 sites in 24 states.	<a href="https://www.fitandstrong.org/">https://www.fitandstrong.org/</a>	Copyright	Susan Hughes
<b>FertilityABC</b>	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
<b>LEAD Experience</b>	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
<b>LUPUS- PRO</b>	SLE Lupus	Patient Reported Outcomes <a href="#">Questionnaire</a>	Used by pharmaceutical and clinical units to gauge disease severity <a href="http://www.lupuspro.com/information.html">http://www.lupuspro.com/information.html</a>	Copyright	Simon Pickard M. Jolly
<b>Medicinal Cannabis Technical Manuals</b>	Medical Marijuana/ Cannabis	Laboratory protocols describing the processing of medical cannabinoid products	Turn-key validated protocols	Copyright	Jenn Bash Karl Larsen
<b>DEEP</b>	Diabetes	This is a diabetes education and self-management program endorsed by CMS	Commercially deployed	Copyright	Amparo Castillo

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

Company	Technology	Website	Type	Faculty
<b>Cell Biologics</b>	Therapeutics for treating sepsis and other pulmonary indications; primary cultured cells and cell culture products	<a href="http://www.cellbiologics.com">http://www.cellbiologics.com</a>	Therapeutic & Reagents	Asrar Malik
<b>3PrimeDX</b>	Blood based test for determining risk of sudden cardiac death and diastolic heart failure	<a href="http://3primedx.com">http://3primedx.com</a>	Diagnostic	Samuel Dudley
<b>Ocugen</b>	Ocular graft versus host disease	<a href="https://ocugen.com/">https://ocugen.com/</a>	Therapeutic	Sandeep Jain
<b>Arphion</b>	Test for early detection of oral squamous cell carcinoma	<a href="http://www.arphiondiagnostics.com">http://www.arphiondiagnostics.com</a>	Diagnostic	Joel Schwartz & Guy Adami
<b>Capio Biosciences</b>	Circulating tumor cell capture device for diagnostic applications. Successfully raised several million in start up funding.	<a href="http://www.capiobiosciences.com/">http://www.capiobiosciences.com/</a>	Diagnostic	Seungpyo Hong
<b>PAX Neuroscience</b>	Blood based test for evaluating antidepressant efficacy and diagnosing depression	<a href="http://www.paxneuroscience.com">http://www.paxneuroscience.com</a>	Diagnostic	Mark Rasenick
<b>VasSol</b>	MRI-based quantification of blood flow in vessels	<a href="http://www.vassolinc.com">http://www.vassolinc.com</a>	Diagnostic	Fady Charbel
<b>Tianhe Stem Cell Biotechnologies</b>	Stem Cell Educator Therapy is a treatment of autoimmune related diseases using stem cells drawn from human umbilical-cord blood	<a href="http://www.tianhecell.com">http://www.tianhecell.com</a>	Device & Therapeutic	Yong Zhao
<b>BioVipra</b>	Biomimetics for tissue regeneration and improved osteo-integration of implants		Device	Sriram Ravindran
<b>Cell Habitats</b>	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	<a href="http://www.cellhabitats.com">http://www.cellhabitats.com</a>	Device	Brenda Russell
<b>NexHand</b>	Sensor-based "smart surgical glove" technology designed to enable physicians to assess the severity of stress urinary incontinence		Device	Craig Neiderberger
<b>OrthoAccel Technologies</b>	Hands-free device designed for faster orthodontic treatment	<a href="http://acceledent.com">http://acceledent.com</a>	Device	Jeremy Mao
<b>PicoLife</b>	Valveless micropump membrane magnetic actuation design for different fluid/drug applications		Device	Farid Amirouche
<b>Remote Vital Monitoring</b>	Coma Alert a device that provides ongoing, continuous monitoring of brainstem integrity	<a href="http://remotevitalmonitoring.com">http://remotevitalmonitoring.com</a>	Device	Jim Stone
<b>RetMap</b>	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	<a href="http://retmapinc.com">http://retmapinc.com</a>	Device	John Hetling
<b>Immersive Touch</b>	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	<a href="http://www.immersivetouch.com">http://www.immersivetouch.com</a>	Software	Pat Banerjee
<b>Simplified Data Tracking</b>	Software for data management of research laboratories	<a href="http://simplifieddatatracking.com">http://simplifieddatatracking.com</a>	Software	Oscar Colomonic