

CTSPGP - Funded Projects Report

AWARD TYPE: **ADVANCED**

APPLICATION CYCLE:

11/16/2009

| PI/DEPARTMENT | PROJECT TITLE |
|--|--|
| Last Name: Bodduluri First Name: Haribabu Dept: Microbiology and Immunology | Leukotriene B4 receptor for inflammatory diseases |
| Last Name: Cave First Name: Matthew Dept: Medicine | Proteomic Biomarkers for Hepatic Hemangiosarcoma |
| Last Name: Chesney First Name: Jason Dept: Medicine | Pre-Clinical Testing of 3-(3-Pyridinyl)-1-(4-Pyridinyl)-2-Propen-1-One In Autoimmunity |
| Last Name: Davis First Name: Keith R. Dept: Pharmacology and Toxicology | Development of the Soy Peptide Lunasin as a Chemoprevention Agent |
| Last Name: Galandiuk First Name: Susan Dept: Surgery | Method for the Diagnosis of Inflammatory Bowel Disease-Associated Cancer |
| Last Name: Koenig First Name: Steven C. Dept: Bioengineering | Phasic left ventricular assistance using continuous flow blood pumps |
| Last Name: Merchant First Name: Michael L. Dept: Nephrology | Urinary Biomarkers of Renal Disease |
| Last Name: Miller First Name: Donald Dept: Medicine | Growth Inhibition by Genomic Quadruplex-forming Sequences |

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11/16/2009

| PI/DEPARTMENT | PROJECT TITLE |
|--|---|
| Last Name: Mitchell First Name: Robert A. Dept: Med-Onc | Characterization of Dual MIF/D-DT Inhibitory Compounds |
| Last Name: Trent First Name: John O. Dept: Hematology/ Oncology | Quadruplex-targeted molecules as chemotherapeutic agents. |

AWARD TYPE: **BASIC**

APPLICATION CYCLE:

11/15/2009

| PI/DEPARTMENT | PROJECT TITLE |
|---|---|
| Last Name: Alphenaar First Name: Bruce Dept: Electrical and Computer Engineering | High Resolution Dielectric Imaging using Nanoparticle Fluorescence |
| Last Name: Cai First Name: Chuanxi Dept: Cardiology | MG53-mediated membrane repair in cardioprotection. |
| Last Name: Cloud First Name: Richard N. Dept: Social Work | Web intervention and survey infrastructure tools (WISIT) |
| Last Name: Fan First Name: Teresa Dept: Chemistry | Selective enrichment and global profiling of biosynthetic carbonyl metabolites for biomarker discovery of biofluids and tissues. |
| Last Name: Gobin First Name: Andre M. Dept: Bioengineering | Chitosan Coated Gold Nanoparticles: Flexible Nanoparticles for Therapeutic and Imaging Applications |
| Last Name: Jenson First Name: A. Bennett Dept: James Graham Brown Cancer Center | Development of a novel laboratory mouse papillomavirus animal model for preventive vaccines and therapeutic treatment of cancer caused by human papillomaviruses. |

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AWARD TYPE: BASIC

APPLICATION CYCLE:

11/15/2009

| PI/DEPARTMENT | PROJECT TITLE |
|--|--|
| Last Name: Kumar First Name: Ashok Dept: Anatomical Sciences and Neurobiology | Role of TWEAK/Fn14 system in Muscular Atrophy |
| Last Name: Matoba First Name: Nobuyuki Dept: Pharmacology & Toxicology | A Broad-spectrum Vaccine against Enveloped Viruses |
| Last Name: McGregor First Name: W. Glenn Dept: Pharmacology and Toxicology | Small molecule inhibitors of mutagenesis to prevent skin cancer |
| Last Name: Naber First Name: John Dept: Electrical and Computer Engineering | Next Generation RFID Telemetry Designs for Biomedical Implants |
| Last Name: Ratajczak First Name: Mariusz Dept: Medicine | Priming strategy of hematopoietic stem cells (HSCs) before transplantation |
| Last Name: Wattenberg First Name: Binks Dept: Medicine | Identification and testing of small molecule inhibitors of sphingosine kinase-1 as therapeutic agents in lung cancer. |
| Last Name: Wittliff First Name: James L. Dept: Biochemistry and Molecular Biology | Development of a Diagnostic Assay for Predicting Recurrence and Survival of Breast Cancer using an Estrogen Response Element Binding Protein |

AWARD TYPE: BASIC

APPLICATION CYCLE:

2/15/2010

| PI/DEPARTMENT | PROJECT TITLE |
|---|--|
| Last Name: Barski First Name: Oleg Dept: Cardiovascular Medicine | Drug development for preventing Kv Hyperexcitability |

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AWARD TYPE: BASIC

APPLICATION CYCLE:

2/15/2010

| PI/DEPARTMENT | PROJECT TITLE |
|---|--|
| Last Name: Friedland First Name: Robert P. Dept: Neurology | The role of the potato virus Y nuclear inclusion B protein in the immunobiology of Alzheimer's disease |
| Last Name: Gobin First Name: Andrea S. Dept: Bioengineering | Reengineering the Aged Bruch's Membrane |
| Last Name: Hein First Name: David W. Dept: Pharmacology and Toxicology | Understanding and predicting individual cancer risk |
| Last Name: Hill First Name: Bradford G. Dept: Cardiovascular Medicine | Bioenergetic regulation of human cardiac progenitor cells. |
| Last Name: Kakar First Name: Sham S. Dept: Physiology and Biophysics | Targeted Therapy for Cancer Treatment |
| Last Name: Kaplan First Name: Henry J. Dept: Ophthalmology & Visual Sciences | Mini-Swine Model of Retinitis Pigmentosa |
| Last Name: Li First Name: Yan Dept: Surgery | Light-absorbing nanoparticles to induce localized tumor tissue heating in esophageal cancer therapy |
| Last Name: Maldonado First Name: Claudio Dept: Physiology & Biophysics | Hepatic targeted liposomes: Treatment of liver disease |
| Last Name: McNamara First Name: Shamus Dept: Electrical and Computer Engineering | An Improved and Packaged Knudsen Pump |

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AWARD TYPE: BASIC

APPLICATION CYCLE:

2/15/2010

| PI/DEPARTMENT | PROJECT TITLE |
|---|---|
| <p>Last Name: Shirwan</p> <p>First Name: Haval</p> <p>Dept: Institute of Cellular Therapeutics</p> | Engineering tumors in vivo for cancer immunotherapy |
| <p>Last Name: Vetvicka</p> <p>First Name: Vaclav</p> <p>Dept: Medicine</p> | Procathepsin D in breast cancer screening |
| <p>Last Name: Voor</p> <p>First Name: Michael J.</p> <p>Dept: Orthopaedic Surgery</p> | Hip Fracture Prevention Technology |
| <p>Last Name: Williams</p> <p>First Name: Matthew</p> <p>Dept: Surgery</p> | Comparative Effectiveness of Continuous Flow Ventricular Assist Device to Medical Management for Patients Hospitalized with Heart Failure |
| <p>Last Name: Wittliff</p> <p>First Name: James L.</p> <p>Dept: Biochemistry and Molecular Biology</p> | A Novel Molecular Diagnostic Identifying an Increased Likelihood for Breast Cancer Recurrence & Survival |
| <p>Last Name: Zhang</p> <p>First Name: Qunwei</p> <p>Dept: Environmental and Information Sciences</p> | Develop and Evaluate the Degradable Polymerpoly(troloxester) Nanoparticles for Medical Application |

AWARD TYPE: BASIC

APPLICATION CYCLE:

5/15/2010

| PI/DEPARTMENT | PROJECT TITLE |
|---|--|
| <p>Last Name: Bertocci</p> <p>First Name: Gina E.</p> <p>Dept: Mechanical Engineering</p> | Development of economic pressure ulcer prevention support system |
| <p>Last Name: Cohn</p> <p>First Name: Robert W.</p> <p>Dept: Electrical and Computer Engineering</p> | Lateral and torsional deflections of tethered magnetic nanowires for measuring the viscoelasticity of organelles, cytosol and membranes inside individual live cells |

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AWARD TYPE: BASIC

APPLICATION CYCLE:

5/15/2010

| PI/DEPARTMENT | PROJECT TITLE |
|---|---|
| Last Name: Dryden First Name: Gerald W Dept: Internal Medicine | Inflatable double wall balloon duodenal sleeve for treatment of obesity and diabetes |
| Last Name: Fu First Name: Xiaoan (Sean) Dept: Chemical Engineering | A Micro-Preconcentration Method for Analysis of Breath Volatile Organic Compounds |
| Last Name: Hnat First Name: William P Dept: Mechanical Engineering | Measuring Peak Blast Wave Pressure and Acceleration with a Potential to Induce Traumatic Brain Injuries by a Passive Sensor Mechanism |
| Last Name: Hu First Name: Chuan Dept: Biochemistry and Molecular Biology | VAMP3 as a New Drug Target for Metastatic Melanoma |
| Last Name: Kidd First Name: La Creis R. Dept: Pharmacology & Toxicology | Innate Immune Response Predictors of Prostate Cancer Outcomes |
| Last Name: Li First Name: Chi Dept: J.G. Brown Cancer Center | Promotion of Tumor Cell Apoptosis by Direct Activation of the Pro-apoptotic Bcl-2 Protein Bax |
| Last Name: McGregor First Name: W. Glenn Dept: Pharmacology and Toxicology | Inhibition of error-prone DNA polymerases to prevent lung cancer |
| Last Name: Panchapakesan First Name: Balaji Dept: Mechanical Engineering | Rapid Detection and Profiling of Circulating Cancer Cells in Blood |
| Last Name: Ratnasamy First Name: Paul Dept: Chemical Engineering | Development of catalyst and process for the skeletal isomerisation of unsaturated linear fatty acids and esters to branched isomers |

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APPLICATION CYCLE:

5/15/2010

| PI/DEPARTMENT | PROJECT TITLE |
|--|---|
| Last Name: Tamiya First Name: Shigeo Dept: Ophtalmology | Inhibition of proliferative vitreoretinopathy, the major cause of retinal reattachment surgery failure, by curcumin and FH535 |
| Last Name: Villafuerte First Name: Betty C. Dept: Medicine | A Novel Genetic Marker for Colorectal Cancer |
| Last Name: Wittliff First Name: James L. Dept: Biochemistry & Molecular Biology | Combination Diagnostic Test for Simultaneous Assessment of Risk of Breast Cancer Recurrence and Response to Hormone Therapy |
| Last Name: Yolcu First Name: Esmat S. Dept: Microbiology and Immunology | Engineering pancreatic islets with immunomodulatory proteins for the treatment of type 1 diabetes |

AWARD TYPE: INNOVATIVE

APPLICATION CYCLE:

1/15/2010

| PI/DEPARTMENT | PROJECT TITLE |
|---|--|
| Last Name: Amini First Name: Amir A. Dept: Electrical & Computer Engineering | Non-invasive Determination of Intravascular Pressures from MRI |
| Last Name: Bates First Name: Paula J. Dept: Oncology | Cancer Stem Cell Consortium |
| Last Name: Beache First Name: Garth Dept: Radiology | MRI of the insulin cardiometabolism syndrome |
| Last Name: Bolli First Name: Roberto Dept: Cardiology | Cell Therapy for Cardiac Failure |

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AWARD TYPE: *INNOVATIVE*

APPLICATION CYCLE:

1/15/2010

| PI/DEPARTMENT | PROJECT TITLE |
|--|---|
| Last Name: Chesney First Name: Jason Dept: Medicine | Targeting Cancer Metabolism for the Development of Novel Anti-Neoplastic Agents |
| Last Name: Dean First Name: Douglas Dept: Ophthalmology & Visual Sciences | A Novel Method for Creation of Induced Pluripotent Stem Cells (iPSC) from Somatic Cells that Relies on Reactivation of Endogenous Stem Cell Specification Genes |
| Last Name: Fan First Name: Teresa Dept: Chemistry | Biomarker Discovery by Interrogating Lung Cancer Metabolome |
| Last Name: Hagg First Name: Theo Dept: Neurological Surgery | Novel treatments of neurological auto-immune disease |
| Last Name: Ildstad First Name: Suzanne Dept: Surgery | FcRX to Treat Red Blood Cell Disorders |
| Last Name: Jonsson First Name: Colleen B. Dept: Microbiology and Immunology | Discovery of Biomarkers of Respiratory Viral Infections |
| Last Name: Keller First Name: Bradley Dept: Pediatrics/CII | Pediatric Home TeleHealth Demonstration Project: Home TeleCare for High-Risk Pediatric Cardiac Patients |
| Last Name: Lane First Name: Andrew N. Dept: Medicine | Identifying predictive biomarkers in breast cancer patients by metabolomics. |
| Last Name: Li First Name: Yong Dept: Biochemistry and Molecular Biology | Therapeutic Modulation of MicroRNAs in Pancreatic Cancer |

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APPLICATION CYCLE:

1/15/2010

| PI/DEPARTMENT | PROJECT TITLE |
|--|--|
| <p>Last Name: Martin First Name: Robert C.G. Dept: Surgery</p> | Validated animal model to identify novel predictors of Barrett's progression into cancer |
| <p>Last Name: McClain First Name: Craig Dept: Medicine</p> | High Fructose Feeding Induces Copper Deficiency: A Novel Mechanism for Obesity Related Hyperlipidemia and Fatty Liver |
| <p>Last Name: McClain First Name: Craig Dept: Medicine</p> | Gut-derived Toxins and Non-Alcoholic Steatohepatitis |
| <p>Last Name: McMasters First Name: Kelly M. Dept: Surgery</p> | Develop a Prognostic System Incorporating Gene Signatures in Melanoma Patients with Positive Sentinel Lymph Nodes (SLNs) |
| <p>Last Name: Palmer First Name: Kenneth Dept: Pharmacology & Toxicology</p> | Selection of a Novel Composition Pan-Oncogenic HPV Vaccine |
| <p>Last Name: Sunkara First Name: Mahendra K. Dept: Conn Center for Renewable Energy Research and Environmental Stewardship</p> | A platform technology and reactor for bulk production of nanowires (NanowireX) |
| <p>Last Name: Sunkara First Name: Mahendra Dept: Conn Center for Renewable Energy Research and Environmental Stewardship</p> | High capacity and durable electrode materials for next generation Li ion batteries. |
| <p>Last Name: Suttles First Name: Jill Dept: Microbiology and Immunology</p> | Targeting TRAFs as a therapy for autoimmune inflammatory disease |
| <p>Last Name: Trent First Name: John O. Dept: Hematology/ Oncology</p> | CXCR4 targeted chemotherapeutic agents. |