2011

Technology Innovation Awards

Honoring Students, Faculty, and Staff
for their Dedication to Innovation and Entrepreneurship at OHSU

TUESDAY OCTOBER 18, 2011

UNIVERSITY CLUB
PORTLAND, OREGON

2011 OHSU Technology Innovation Awards sponsored by:

KLARQUIST SPARKMAN
INTELLECTUAL PROPERTY LAW

OHSU Technology Transfer and Business Development
www.ohsu.edu/techtransfer
0690 SW Bancroft Street
Portland, OR 97239
503-494-8200
# The Technology Transfer and Business Development Team

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vice President</td>
<td>J. Timothy Stout, MD, PhD, MBA</td>
</tr>
<tr>
<td>Associate Vice President</td>
<td>Arundeep S. Pradhan, MS</td>
</tr>
<tr>
<td>Technology Transfer</td>
<td>Michele E. Gunness, PhD</td>
</tr>
<tr>
<td>Senior Technology Dev. Manager</td>
<td>Andrew R.O. Watson, PhD</td>
</tr>
<tr>
<td>Technology Dev. Manager</td>
<td>Robert Copenhaver, MS, MBA</td>
</tr>
<tr>
<td>Technology Dev. Manager</td>
<td>H. Tommy Pham, MBA</td>
</tr>
<tr>
<td>Technology Dev. Coordinator</td>
<td>Sangeeta Rojanala, PhD</td>
</tr>
<tr>
<td>Technology Dev. Coordinator</td>
<td>Trina L. Voss</td>
</tr>
<tr>
<td>Director, Business Development</td>
<td>Abhijit Banerjee, PhD, MBA</td>
</tr>
<tr>
<td>Business Dev. Coordinator</td>
<td>Brittany E. Sale, MS</td>
</tr>
<tr>
<td>Technology Ventures &amp; Marketing</td>
<td>Kristin Rencher, MBA</td>
</tr>
<tr>
<td>Director, Tech. Ventures &amp; Marketing</td>
<td>Kristen Dincher, MS</td>
</tr>
<tr>
<td>Patent Counsel</td>
<td>Christopher Andon, MS</td>
</tr>
<tr>
<td>Patent Associate</td>
<td>Jeffrey Jackson, MS, JD</td>
</tr>
<tr>
<td>Patent Paralegal</td>
<td>Tracy J. Cooper</td>
</tr>
<tr>
<td>Finance &amp; Administration</td>
<td>Simone Waddell</td>
</tr>
<tr>
<td>Finance Administrator</td>
<td>Elaine Soljaga</td>
</tr>
<tr>
<td>Exec. Assistant to Arundeep S. Pradhan</td>
<td>Nicole D.W. Garrison</td>
</tr>
<tr>
<td>Office Specialist</td>
<td>James R. Le Fever</td>
</tr>
</tbody>
</table>

# 2011 Technology Innovation Awards

## WELCOMING REMARKS

Arundeep S. Pradhan  
Associate Vice President  
Technology Transfer and Business Development

## KEYNOTE PRESENTATION

Albert Starr, MD  
Distinguished Professor of Cardiovascular Medicine  
School of Medicine

## AWARDS REMARKS

J. Timothy Stout, MD, PhD, MBA  
Vice President  
Technology Transfer and Business Development

## PRESENTATION OF AWARDS

Daniel M. Dorsa, PhD  
Vice President for Research  
J. Timothy Stout, MD, PhD, MBA
KEYNOTE PRESENTATION
Albert Starr, MD

Through his many years of providing expert clinical care and his development of the groundbreaking Starr-Edwards heart valve, Dr. Starr has saved and prolonged the lives of hundreds of thousands of people in Oregon and across the world. Dr. Starr is one of Oregon's best-known surgeons – his work has had a beneficial impact on families in every corner of the state.

Dr. Starr was named a winner of the Albert Lasker Award for Clinical Medical Research – often called the U.S. equivalent of the Nobel Prize – in 2007 in recognition of the profound impact his work has had on prolonging and enhancing the lives of millions with heart disease.

Dr. Starr joined OHSU in 1957, and from then until 1964, he led OHSU’s heart surgery program. In 1960, he and engineer M. Lowell Edwards invented the Starr-Edwards heart valve. Since then, he and thousands of surgeons across the world have placed his and subsequent heart valves into patients with valve disease. Dr. Starr led a joint cardiac surgery program for OHSU and Providence from 1964 until 1989, when he began to practice solely at Providence.

Dr. Starr is now taking on a new role at OHSU as special adviser to OHSU Dean of Medicine Mark Richardson, M.D., M.B.A., and OHSU President Joe Robertson, M.D., M.B.A. In his new position, Dr. Starr will leverage his extraordinary experience to enhance and build OHSU’s public and private partnerships in research, education, clinical care and outreach to improve the health of all Oregonians.

Dr. Starr's biography adapted from:
Inventors of US Patents
Issued in Fiscal Year 2011

**Medical Device Delivery System**
Patent  7,871,430
Inventor  Dusan Pavcnik, MD, PhD

**Device for Conditioning Balance and Motor Co-ordination**
Patent  7,867,140
Inventors  Fay Horak, PhD

**Method for Pharmacoperones Correction of GNRHR Mutant Protein Misfolding**
Patent  7,842,470
Inventor  P. Michael Conn, PhD

**Methods for Producing an Immune Response to Tuberculosis**
Patent  7,842,299
Inventors  David Lewinsohn, MD, PhD, Deborah Lewinsohn, PhD

**Aromatic Ketones and Uses Thereof**
Patent  7,829,578
Inventors  Michael Riscoe, PhD, Rolf Winter, PhD, David Hinrichs, PhD
           Jane Kelly, PhD, Martin Smilkstein, MD

**Accessory Panel for Diagnostic Platform, Patient Bed and other Support Surfaces**
Patent  7,814,590
Inventors  Susan Powell, RN, Karen Ellmers, RN, MS, Susan Duncan, RN

Top Three Licenses
Completed in Fiscal Year 2011

**Apnea Prevention Device**
Inventor  Mark Zornow, MD

The following six technologies were included in a single license:
**Recombinant MHC Molecules Useful for Manipulation of Antigen-Specific T-Cells**
Inventors  Arthur Vandenbark, PhD, Gregory Burrows, PhD

**Recombinant Molecules for Stroke**
Inventors  Arthur Vandenbark, PhD, Gregory Burrows, PhD
           Patricia Hurn, PhD, Halina Offner, DrMed

**Recombinant Molecules for Eye Disorders**
Inventors  Grazyna Adamus, PhD, Gregory Burrows, PhD

**Recombinant Molecules for Retinal Disorders**
Inventors  Grazyna Adamus, PhD

**Recombinant Molecules for Addiction**
Inventors  Jennifer Loftis, PhD, Arthur Vandenbark, PhD
           Marilyn Huckans, PhD

**Antibodies for Autoimmune Diseases**
Inventors  Jianya Huan, PhD, Arthur Vandenbark, PhD

The following three technologies were included in a single license:
**Risk Assessment Test for Heart Attacks**
**Fibrinogen Gamma’ Peptide as an Anticoagulant**
**Degradation-Resistant Fibrin Sealants**
Inventor  David Farrell, PhD
Inventors of Technologies Licensed in Fiscal Year 2011

A Blood Anticoagulant
Inventor  David Farrell, PhD

Acridones for Antiparasitic and MultiDrug Resistance Use
Inventors  David Hinrichs, PhD, Jane Kelly, PhD
            Martin Smilkstein, MD, Michael Riscoe, PhD
            Rolf Winter, PhD

Antibodies for Autoimmune Diseases
Inventors  Jianya Huan, PhD, Arthur Vandenbark, PhD

Antiviral Drug Discovery for AIDS: The HIV-1 Vif Protein
Inventors  David Kabat, PhD, Susan Kozak, BSc

Apnea Prevention Device
Inventor  Mark Zornow, MD

Balance Evaluation Systems Test (BESTest)
Inventor  Fay Horak, PhD

BB19 Cell Line
Inventors  Ashlee Moses, PhD, Jay Nelson, PhD

Fluid Samples
Inventor  Joseph Quinn, MD

Corpora from CSLU
Inventor  Center for Spoken Language Understanding
            Jan van Santen, PhD

Cytomegalovirus Isolate
Inventor  Scott Wong, PhD

Inventors of US Patents Issued in Fiscal Year 2011

Degradation-Resistant Fibrinogen Sealants
Patent  7,968,682
Inventor  David Farrell, PhD

Methods of Screening using a Natriuretic Peptide Receptor
Patent  7,943,296
Inventors  G. Michael Silberbach, MD, Charles Roberts, Jr., PhD

HER-2 Binding Antagonists
Patent  7,939,080
Inventor  John Adelman, PhD

Stent Tissue Graft Prosthesis
Patent  7,914,567
Inventor  Dusan Pavcnik, MD, PhD

Nucleic Acids Encoding Platelet Derived Growth Factor Receptor Alpha (PDGFRA) Activating Mutations
Patent  7,875,710
Inventors  Christopher Corless, MD, PhD, Michael Heinrich, MD
TomegaVax will develop novel prophylactic and therapeutic vaccines for unmet medical needs in infectious disease and cancer. TomegaVax's core technology is the spread-deficient Cytomegalovirus (CMV) vaccine vector. It was initially developed to address human immunodeficiency virus (HIV). Currently, more than 33 million people are living with HIV/AIDS worldwide with approximately 1.8 million deaths in 2009 alone, including 260,000 children. The core technology can be leveraged to develop vaccines for other forms of infectious disease, such as malaria and tuberculosis, as well as to develop novel anti-cancer vaccines.

Ann Hill, PhD
UBIVAC CMV, INC.

UbiVac CMV, Inc. is developing effective therapeutic vaccines focused on the treatment of cancer. A major hurdle for the development of effective cancer vaccines is the inability of currently available cancer vaccines to induce a robust immune response against a broad spectrum of tumor antigens. UbiVac CMV's primary technology is a recombinant and replication-deficient Cytomegalovirus vaccine vector that it believes will allow the delivery of numerous tumor antigens simultaneously in a vector with capacity to amplify T-cell responses, resulting in a broad spectrum tumor-destructive immune response.

David Lewinsohn, MD, PhD
Deborah Lewinsohn, PhD
VITI, INC.

Viti is developing Tuberculosis (TB) diagnostics for adults and also young children. TB remains the leading infectious disease in the world with more than 40% of the world's population infected with Mycobacterium Tuberculosis (MTb). The worldwide resurgence of multiple drug resistant MTb has underscored the importance of TB diagnostics, especially in the pediatric population where the current TB diagnostics used for adults do not work. Viti's core technologies include a series of novel TB antigens and T cell clones as well as unique expertise in T cell expansion that will contribute to the development of successful TB diagnostics.
Inventors of Technologies Licensed in Fiscal Year 2011

Monoclonal Antibodies to Cell Surface Molecules on Human Pancreatic Duct Cells, Endocrine (Islet) Cells, Exocrine Cells and Alpha Cells
Inventors Markus Grompe, MD, Philip Streeter PhD Craig Dorrell, PhD, Kelsea Shoop, MPH

Monoclonal Antibodies to the Human CD46 Cytoplasmic Tails Cyt1 and Cyt2
Inventor Daniel Cawley, PhD

Mutated ABL Kinase Domains
Inventor Brian Druker, MD

Pain Management Skills CD
Inventor Beth Darnall, PhD

pFB-GluA2 Cryst
Inventor Eric Gouaux, PhD

Rabbit Polyclonal Antibodies Directed Against Human Cytomegalovirus Proteins
Inventor David Johnson, PhD

Reading Center Database and Clinical Trial Research Tool
Inventors Peter Francis, MD, PhD, Richard Weleber, MD

ReBEL: Recursive Bayesian Estimation Library
Inventor Eric Wan, PhD

Recombinant MHC Molecules Useful for Manipulation of Antigen-Specific T-Cells
Inventors Arthur Vandenbark, PhD, Gregory Burrows, PhD

Top Ten Industry Collaborations Awardees in Fiscal Year 2011

Steven Jacques, PhD
Development of a Catheter-based Technology
Imaging Technology for the Treatment of Cancer
Skin Optics for Cosmetic Development

Richard Stouffer, PhD
Receptor Antagonist Contraceptive Testing in a Female Animal Model

Richard Weleber, MD
Reading Center Clinical Trial Services

Tamara Hayes, PhD
Research and Development of Consumer Electronic Products
BAIC Living Laboratory- Data Visualization, Meds Prompting & Development of Cognitive Metrics

Steven Kazmierczak, PhD
Measurement of Albumin Binding Affinity for a Fatty Acid Technology

Eliot Spindel, MD, PhD
Evaluation of Compound X to Inhibit Lung Cancer Growth

David Huang, MD, PhD
OCT Imaging: Glaucoma & Retinal Disease Application

Sanjiv Kaul, MD
Anti-Ischemic Agent Study
Top Ten Industry Collaborations
Awardees in Fiscal Year 2011

Ov Slayden, PhD
- Effect of Novel Androgens of Ectopic Endometrium in an Animal Model
- Studies on Menstrual Bleeding in an Artificially-Cycled Animal Model
- Suppression of Menstrual Bleeding in an Animal Model
- Preclinical Studies on Endometrial Xenografts

Kevin Grove, PhD
- Effects of Treating Low Grade Inflammation with an Antibody on Insulin Resistance and Markers of Cardiovascular Disease in Pre-Diabetic Diet Induced Obese Animal Model
- Efficacy of Microparticles in an Animal Model to Monitor Food Intake, Body Weight, Glucose Homeostasis and Pharmacokinetics
- Evaluation of Antibodies in an Obese Animal Model to Determine Reduction in Triglycerides and Very Low-Density Lipoprotein

Christopher Corless, MD, PhD
- Support Contract for the Personalized Cancer Medicine Registry
- Genotyping for Phase I/II Trial
- Oncogene Mutation Screening by Mass Array
- Trial of Compound X for Advanced Malignancies
- Sample Genotyping
- Genotyping for Compound X

Inventors of Technologies
Licensed in Fiscal Year 2011

Recombinant Molecules for Stroke
Inventors
- Arthur Vandenbark, PhD
- Gregory Burrows, PhD
- Patricia Hurn, PhD
- Halina Offner, DrMed

Recombinant Molecules for Eye Disorders
Inventors
- Grazyna Adamus, PhD
- Gregory Burrows, PhD

Recombinant Molecules for Retinal Disorders
Inventor
- Grazyna Adamus, PhD

Recombinant Molecules for Addiction
Inventors
- Jennifer Loftis, PhD
- Arthur Vandenbark, PhD
- Marilyn Huckans, PhD

Replication Deficient CMV Vaccine Vector
Inventor
- Ann Hill, PhD

Rhadinovirus Isolate
Inventors
- Scott Wong, PhD
- Michael Axthelm, DVM
- Robert Searles, PhD

Risk Assessment Test for Heart Attacks
Inventor
- David Farrell, PhD

Solid Tissue Samples
Inventor
- Randall Woltjer, MD

The Pacific Northwest Anti-Inflammatory Cookbook
Inventor
- Martha McMurray, MS
Inventors of Technologies Licensed in Fiscal Year 2011

**Toolkit from the Center for Spoken Language Understanding**
Inventor: Center for Spoken Language Understanding
Jan van Santen, PhD

**T-Cell Diagnostic Assay for Pediatric Tuberculosis**

**T-Cell Antigens for the Development and Use in Tuberculosis Diagnostics**

**Antigen-Specific T-Cell Clones**
Inventors: David Lewinsohn, MD, PhD
Deborah Lewinsohn, PhD

**Use of CMV Vectors for Tuberculosis Vaccination**
Inventors: Jay Nelson, PhD, Louis Picker, MD
Michael Jarvis, PhD, Scott Hansen, PhD

**CMV as a Vaccine Vector for Prophylactic and Therapeutic Treatment of Multiple Pathogens and Cancer**
Inventors: Jay Nelson, PhD, Louis Picker, MD, Klaus Frueh, PhD
Michael Jarvis, PhD, Scott Hansen, PhD

**Use of Recombinant CMV Vector Lacking Specific Molecules as Sensors for CMV-Specific T-Cells and as Inducers of Broad Spectrum Cellular Immune Responses**
Inventors: Louis Picker, MD, Klaus Frueh, PhD
Scott Hansen, PhD

**Varicella Virus Isolate**
Inventor: Ilhem Messaoudi, PhD

---

Top Technology Portal Licenses in Fiscal Year 2011

**HIGHEST VOLUME**
Balance Evaluation Systems Test: BESTest
Inventor: Fay Horak, PhD

**LARGEST SINGLE ORDER**
Human Cytomegalovirus Clinical Isolate Strains
Inventor: Jay Nelson, PhD

---

**ABOUT THE TECHNOLOGY PORTAL**
The OHSU Technology Portal links potential partners to OHSU technologies and resources. Through the Technology Transfer and Business Development (TTBD) website, individuals and businesses looking to license technologies from OHSU can search for and identify innovations, and, in most cases, complete a one-click agreement to finalize the process.

The office has recently unveiled its newest feature of the portal, the click-through outgoing electronic material transfer agreement (eMTA), which allows researchers at other academic centers to order and complete OHSU’s outgoing MTA using the portal’s eMTA automated system.

The Technology Portal is a model of innovation in technology transfer for OHSU. TTBD is currently the only university technology transfer office nationwide to offer technology posting and complete agreement processing through the team’s website.

Averaging 15 to 20 orders per month, revenue from non-exclusive licenses processed through the Technology Portal doubled in fiscal year 2011. Total revenue generated through the portal accounts for approximately 12 percent of the total licensing revenue for the office during the past fiscal year.