UNIVERSITY OF ILLINOIS
URBANA-CHAMPAIGN • CHICAGO • SPRINGFIELD

# The Offices of Technology Management

## FISCAL 2013 ANNUAL REPORT

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# The Offices of Technology Management

## FISCAL 2013 ANNUAL REPORT

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## University of Illinois



## Chicago



## Urbana-Champaign

# Lawrence Schook, Vice President for Research

As I reflect back on fiscal 2013, it is encouraging to think about all that our team has accomplished in just one year. The Office of the Vice President for Research (OVPR) pipeline ensures that innovations grow beyond the University and into the private sector by protecting, funding, and supporting ideas prior to their launch as viable businesses. In doing so, we stimulate economic development in Illinois, the nation, and the world.

The Offices of Technology Management (OTMs) are responsible for the very first function in the pipeline – protecting and licensing ideas and intellectual property. The OTMs play a critical role in helping students and faculty transform their ideas into real goods and services that affect the way people around the world work and live.

Fiscal 2013 was very successful and rewarding as we celebrated innovation, engaged with stakeholders, and leveraged resources. A few highlights include:

- **Inventor of the Year / Innovation Celebration** – Awards on both campuses celebrating the entrepreneurial spirit and recognizing individuals or teams who have contributed to the development of intellectual property and commercialization.
- **Illinois Venture-Investor-Entrepreneur Forum** – OTM staff collaborated with the University Advancement team to connect with venture capitalists, investors, and entrepreneurs in Silicon Valley to help grow our entrepreneurial ecosystem.

Ribbon cutting ceremony at the launch of the Health, Technology, and Innovation facility. Pictured from left: University of Illinois Vice President for Research Lawrence Shook, Illinois Governor Pat Quinn, Burrill and Company Chief Executive Officer G. Steven Burrill, and University of Illinois President Robert Easter.
PHOTO: UIC PHOTO SERVICES

**Fiscal 2013 Totals**

| | Chicago | Urbana | Total |
|---|---|---|---|
| Disclosures | 163 | 181 | 344 |
| U.S. Patent Applications Filed | 187 | 191 | 378 |
| U.S. Patents Issued | 24 | 72 | 96 |
| Licenses & Options | 50 | 46 | 96 |
| Start-Ups | 5 | 6 | 11 |
| Royalties Earned | $20.5M | $4.9M | $25.4M |

- **Supporting Innovation and Creativity** – An event on the Urbana campus showcasing the plethora of University tools and resources that help faculty increase the impact of their research.
- **Chancellor's Innovation Fund** –A $10 million commitment by the UIC Chancellor to help facilitate the launch of new companies by providing proof of concept and seed funding to UIC faculty, staff, and students

I am grateful to Jeremy Hollis, Lesley Millar, and Nancy Sullivan for the leadership they have provided to the OTM teams this past year. I look forward to another productive year; we have a lot of exciting things on the horizon for fiscal 2014!

# Five-Year History By Campus: Fiscal 2009 – Fiscal 2013


## Invention Disclosures

| | FY2009 | FY2010 | FY2011 | FY2012 | FY2013 |
|---|---|---|---|---|---|
| Chicago | 130 | 146 | 164 | 184 | 163 |
| Urbana-Champaign | 203 | 180 | 182 | 223 | 181 |
| Combined | 333 | 326 | 346 | 407 | 344 |

## U.S. Patents Filed

| | FY2009 | FY2010 | FY2011 | FY2012 | FY2013 |
|---|---|---|---|---|---|
| Chicago | 202 | 166 | 183 | 238 | 187 |
| Urbana-Champaign | 145 | 143 | 166 | 194 | 191 |
| Combined | 347 | 309 | 349 | 432 | 378 |

## U.S. Patents Issued

| | FY2009 | FY2010 | FY2011 | FY2012 | FY2013 |
|---|---|---|---|---|---|
| Chicago | 15 | 24 | 23 | 30 | 24 |
| Urbana-Champaign | 42 | 69 | 68 | 76 | 72 |
| Combined | 57 | 93 | 91 | 106 | 96 |

## Patent Costs ($ MILLIONS)

| | FY2009 | FY2010 | FY2011 | FY2012 | FY2013 |
|---|---|---|---|---|---|
| Chicago | 1.66 | 1.69 | 1.25 | 1.57 | 1.39 |
| Urbana-Champaign | 3.72 | 3.06 | 3.02 | 3.05 | 2.76 |
| Combined | 5.39 | 4.75 | 4.27 | 4.63 | 4.15 |

## Licenses & Options

| | FY2009 | FY2010 | FY2011 | FY2012 | FY2013 |
|---|---|---|---|---|---|
| Chicago | 16 | 21 | 44 | 44 | 50 |
| Urbana-Champaign | 33 | 40 | 55 | 46 | 46 |
| Combined | 49 | 61 | 99 | 90 | 96 |

## Number of Start-Ups

| | FY2009 | FY2010 | FY2011 | FY2012 | FY2013 |
|---|---|---|---|---|---|
| Chicago | 2 | 3 | 8 | 7 | 5 |
| Urbana-Champaign | 6 | 5 | 12 | 5 | 6 |
| Combined | 8 | 8 | 20 | 12 | 11 |

## Royalties Earned by Campus ($ MILLIONS)

| | FY2009 | FY2010 | FY2011 | FY2012 | FY2013 |
|---|---|---|---|---|---|
| Chicago | 10.55 | 9.08 | 12.71 | 17.05 | 20.5 |
| Urbana-Champaign | 5.12 | 6.12 | 6.36 | 6.41 | 4.91 |
| Combined | 15.67 | 15.20 | 19.08 | 23.46 | 25.41 |

# Chicago

## CHICAGO OTM FY2013: BY THE NUMBERS

**163** Disclosures

**187** U.S. Patent applications filed

**24** U.S. Patents issued

**50** Licenses and Options

**5** Start-Ups

**$20M** Total Revenue

PHOTO: UI PUBLIC AFFAIRS

Dear Colleagues,

I am excited to share with you our successes from this past year in the commercialization of the exciting innovations that are a result of the **outstanding research of UIC faculty, students and staff.** The accomplishments shared in this report would not be possible without their remarkable research and assistance in the commercialization of that research.The other critical part of the equation for our success is the dedication of our outstanding team in the UIC OTM. Their efforts day in and day out to help drive the portfolio of inventions at UIC towards commercialization contribute directly to the success you will see on the following pages.

**Fiscal year 2013 was another year of growth** in key metrics, such as the number of licenses and options executed and the total licensing revenue. Licensing revenue continues to be driven by the success of Prezista, an HIV therapeutic based on a compound discovered at UIC. In addition, the Office has continued efforts related to increasing the funding available to bridge the gap between research and technology commercialization. The OTM partnered with IllinoisVENTURES and the Office of the Vice Chancellor for Research in the formation of the **UIC Chancellor's Innovation Fund. Created by Chancellor Paula Allen-Meares and administered by IllinoisVENTURES**, the fund provides both proof-of-concept funding and seed stage equity investments to help advance the commercialization of UIC inventions. The Chancellor's Innovation Fund launched the inaugural round of the **Proof of Concept (POC) Awards Program in FY13 and will be begin awarding the first grants in FY14**.

The UIC OTM also continues to highlight and recognize the achievements of the outstanding inventors and innovators on the UIC campus. This included **expanding our annual award for Inventor of the Year to include an Innovator of the Year** which recognizes an outstanding innovator or team of innovators at University of Illinois at Chicago who through their efforts have contributed to significantly advancing their invention towards commercialization. This award was created to acknowledge an exceptional commitment to commercialization either through participation in the licensing process or through entrepreneurial efforts in a startup company based on their invention. The **inaugural award winner was Dr. Craig Niederberger, Department of Urology**, one of the inventors of a medical device that accurately measures the force applied to the urethra and the Cofounder and Chief Technology Officer of the company NexHand.

I also want to thank and acknowledge **Nancy Sullivan for her leadership over the last four years as Director of the OTM.** The achievements in FY13 are a direct result of her efforts to advance technology commercialization at UIC to new levels of success. As you will see in the updates section, **Nancy has transitioned into the CEO and Managing Director role at IllinoisVENTURES** while retaining a role in the OTM as Interim Executive Director to provide strategic guidance to the Office. We are lucky to have her continued involvement with the OTM and to partner with her and IllinoisVENTURES to enhance technology commercialization at UIC.

**Jeremy Hollis, Director**
Office of Technology Management
Urbana-Champaign

# Fiscal 2013 Summary

50
Licenses and Options

## Chicago Fiscal 2013 - Colleges, Departments & Units

| College/Department/Unit | Disclosures | U.S. Patent Applications Filed | U.S. Patents Issued | Licenses & Options |
|---|---|---|---|---|
| **Campus Total** | **163** | **187** | **24** | **50** |
| College of Applied Health Science | 6 | 4 | | |
| College of Architecture & the Arts | 2 | 2 | | 1 |
| College of Business Administration | 1 | 1 | | |
| College of Dentistry | 6 | 10 | 1 | 3 |
| College of Engineering | 43 | 36 | 8 | 11 |
| College of Liberal Arts & Sciences | 18 | 8 | | 1 |
| College of Medicine | 81 | 85 | 7 | 24 |
| College of Medicine - Peoria | 1 | 2 | | |
| College of Medicine – Rockford | 0 | 1 | | |
| College of Nursing | 2 | 1 | | |
| College of Pharmacy | 27 | 45 | 8 | 7 |
| School of Public Health | 4 | | | |
| College of Social Work | | | | 2 |
| Innovation Center | 13 | 6 | | 5 |
| Center for Clinical and Translational Science (CCTS) | 1 | | | |
| UIC/Hospital | | 2 | | |

*Note: As a result of the large amount of interdisciplinary research on campus, inventions are often associated with more than one college or unit. As a result, the numbers reported in the table may be counted multiple times, once for each associated college or unit.*

## Licenses & Options


## Total Revenues in Millions

(Last four fiscal years)


# Royalties & Royalty Distribution

## Royalties & Royalty Distribution

**Royalties earned: $20,513,400**

Non UI Share: $3,525
Litigation Expense Reimbursement: $788,301
Patent Expense Reimbursement: $513,489
Previously Undistributed: $2,453
Net Available for Distribution: $19,209,198

**Actual Distributions**

Creators' Share: $6,775,872
University Share:
*Unit: $5,215,808*
*OTM Cost Recovery: $1,250,000*
*OVPR: $2,385,598*
*Campus: $3,578,397*

Note: "Actual Distributions" do not match the "Net Available for Distribution" in any one year because of the time lag between the date many are received and the date actual distributions are made.

### Top Three Royalty Generating Technologies

**Multidrug Resistant Retroviral Protease Inhibitors:** protease inhibitor compound known as Prezista used to treat HIV-AIDS

**TICE BCG:** for the treatment and prophylaxis of carcinoma in situ (CIS) of the urinary bladder, and for the prophylaxis of Ta and/or T1 papilary tumors following transuretral resection

**Intensified Algebra:** coherent program that incorporates into algebra instruction areas that historically reside outside of the domain of algebra class but are fundamental to the students' success.

# Disclosures

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Disclosures

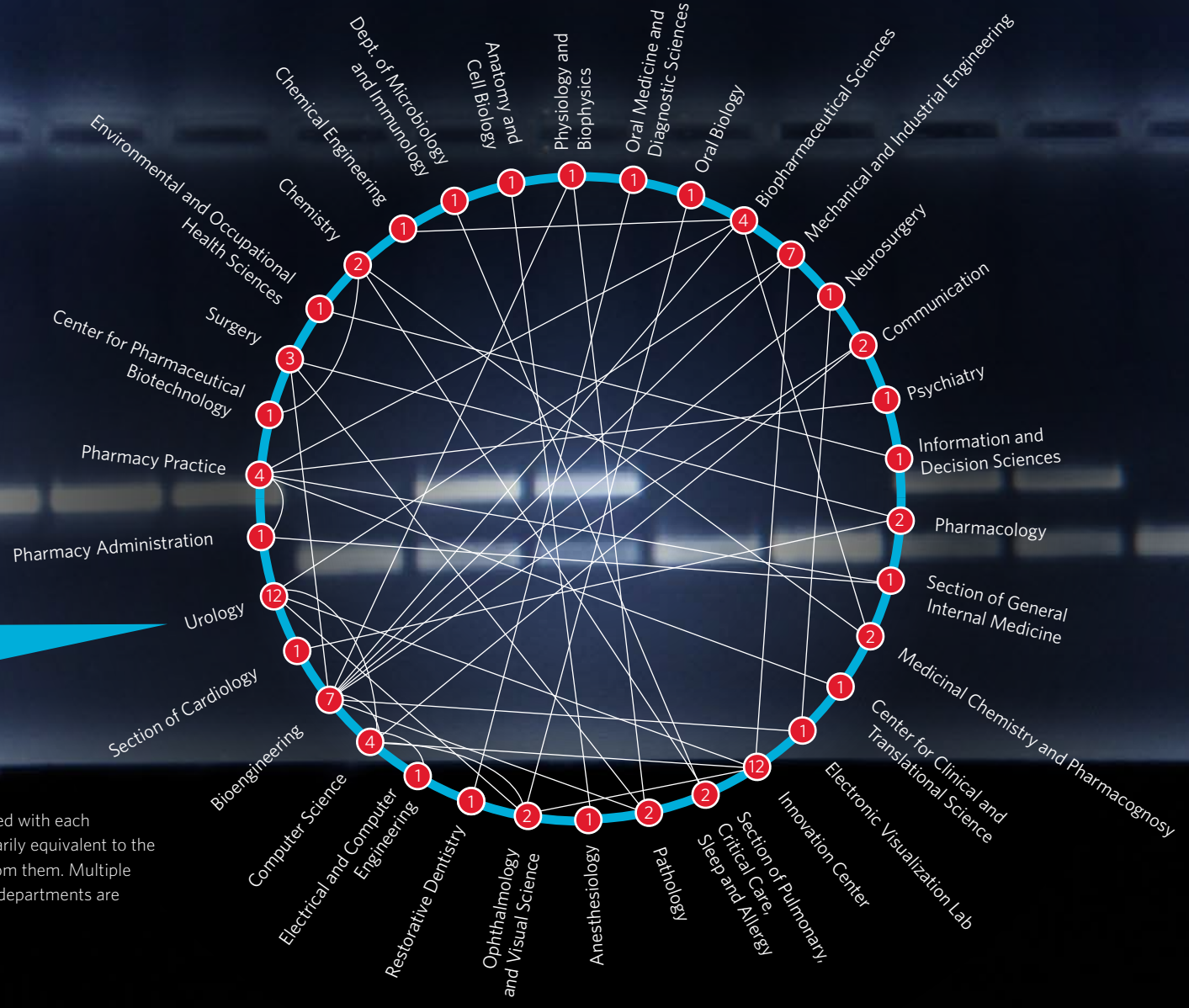
The initial disclosure to the Office of Technology Management is not only the first step in the process of commercialization for university technologies, but it might just be the most important. Once a faculty member discloses to our office, an entire world of services and knowledge is opened to them. By exposing faculty to the strategic partners of OTM, the path to commercialization is made easier through the **Spirit of Collaboration**.

"As a physician and an engineer, two incredibly exciting things are happening here: One is the Innovation Center, which allows me to take my ideas and make them so much better by working with other talented people, And the other is OTM, which over the last couple of years has facilitated commercialization by teaching me how to start a company, and make it work."

— **Craig Niederberger**
Professor and Head, Founder, Department of Urology, Nexhand

# The Spirit of Collaboration

## A visual map of disclosure collaboration on a department level




Note: The numbers associated with each department are not neccessarily equivalent to the amount of lines that stem from them. Multiple collaborations between two departments are represented by one line.

# Patents

24
U.S. Patents issued

| Patent Number | Title | Inventor Names | Departments | Licensed |
|---|---|---|---|---|
| 8,217,010 | Methods, Compositions and Articles of Manufacture fro Contributing to the Treatment of Solid Tumors | Anil Gulati | Biopharmaceutical Sciences | L |
| 8,227,402 | Compositions and Methods to Prevent Cancer with Cupredoxins | Ananda Chakrabarty, Tapas Das Gupta | Surgery, Microbiology and Immunology, Surgical Oncology | L |
| 8,232,244 | Compositions and Methods to Prevent Cancer with Cupredoxins | Criag Beattie, Ananda Chakrabarty, Tapas Das Gupta, Tohru Yamada | Microbiology and Immunology, Surgical Oncology | L |
| 8,248,462 | Dynamic Parallax Barrier Autosteroscopic Display System and Method | Thomas Peterka, Daniel Sandin | Computer Science | L |
| 8,273,756 | Use of Modified Pyrimidine Compounds to Promote Stem Cell Migration and Proliferation | Tingyu Qu, Kiminobu Sugaya | Psychiatry | L |
| 8,280,516 | Wireless Deep Brain Stimulator for Parkinson's Disease | Daniel Graupe, Daniela Tuninetti | Electrical and Computer Engineering | |
| 8,294,078 | Optically-Triggered Multi-Stage Power System and Devices | Sudip Mazumder, Tirthajyoti Sarkar | Electrical and Computer Engineering | |
| 8,308,452 | Dual Chamber Valveless MEMS Micropump | Farid Amirouche, Enrico Zordan | Mechanical and Industrial Engineering | L |
| 8,332,007 | Quantitative Three-Dimensional Mapping of Oxygen Tension | Mahnaz Shahidi | Ophthalmology and Visual Science | |
| 8,337,873 | Hollow and Porous Orthopedic or Dental Implant That Delivers a Biological Agent | Jeremy Mao | Orthodontics | |
| 8,349,318 | Use Of Specifically Engineered Enzymes To Enhance The Efficacy Of Prodrugs | Manfred Konrad, Arnon Lavie | Biochemistry and Molecular Genetics | |
| 8,349,802 | Methods and Compositions for Contributing to the Treatment of Cancers | Anil Gulati | Biopharmaceutical Sciences | L |
| 8,361,401 | Vortex Reactor and Method of Using It | Lawrence Kennedy, Alexei Saveliev | Mechanical and Industrial Engineering | |
| 8,372,962 | Compositions and Methods to Control Angiogenesis with Cupredoxins | Ananda Chakrabarty, Tapas Das Gupta | Surgery, Microbiology and Immunology, Surgical Oncology | L |
| 8,391,986 | Apparatus for Managing a Neurological Disorder | Daniel Graupe, Daniela Tuninetti | Electrical and Computer Engineering | |
| 8,394,421 | Synthesis of Nanoparticles by Fungi | G. Ali Mansoori | Bioengineering | |
| 8,394,757 | Sensitization of Tumor Cells to Radiation Therapy Through the Administration of Endothelin Agonists | Anil Gulati | Biopharmaceutical Sciences | L |
| 8,410,148 | Method and Composition for Potentiating an Opiate Analgesic | Anil Gulati | Biopharmaceutical Sciences | L |
| 8,414,879 | Superporous Hydrogel with Cells Encapsulated Therein and Method for Producing the Same | Richard Gemeinhart | Biopharmaceutical Sciences | |
| 8,431,522 | Methods of Inhibiting Tumor Cell Proliferation | Robert Costa, Vladimir Kalinichenko, Michael Major, Pradip Raychaudhuri, I-Ching Wang, Xinhe Wang | Biochemistry and Molecular Genetics | |
| 8,431,538 | HDAC Inhibitors and Therapeutic Methods of Using the Same | Alan Kozikowski, Kyle Butler, Jay Kalin | Medicinal Chemistry and Pharmacognosy | |
| 8,440,620 | Evidence For Prevention And Therapeutic Use Endothelin ET-B Receptor Antagonists In Breast Tumor | Anil Gulati | Biopharmaceutical Sciences | L |
| 8,445,684 | Nicotinic Acetylchlorine Receptor Ligands and the Uses Thereof | Alan Kozikowski, Jianhua Liu | Medicinal Chemistry and Pharmacognosy | L |
| 8,457,733 | Monitoring and Controlling Hydrocephalus | Andreas Linninger | Bioengineering | |

# Start-Ups

5
Start-Ups

## Immune Cell Therapy

Immune Cell Therapy, Inc. (ICT) is therapeutics company developing a cell-based vaccine treatment for cancer patients with a focus on lung and breast cancer. The vaccine is made from a human fibroblast cell line that has been transfected with DNA from a patient's tumor cells resulting in expression of a patient's specific tumor cell antigens. Administration of this vaccine induces the patient's immune system to specifically target and kill cells that express such specific tumor antigens. ICT has tested this vaccine in preclinical models, filed an Investigational New Drug (IND) Application with the FDA, which has been accepted, and secured NIH funding to test this vaccine in small number of patients. ICT is working with the University of Pittsburg on the pilot clinical trial, but is looking to expand the trial to other sites possibly including UIC and MD Anderson. This vaccine would be administered to patients after they receive conventional cancer treatments as a way to kill off any remaining cancer cells and prevent recurrence and metastasis.

Dr. Cohen, Founder, Immune Cell Therapy

PHOTO: UIC PHOTO SERVICES

## Mariam Medical

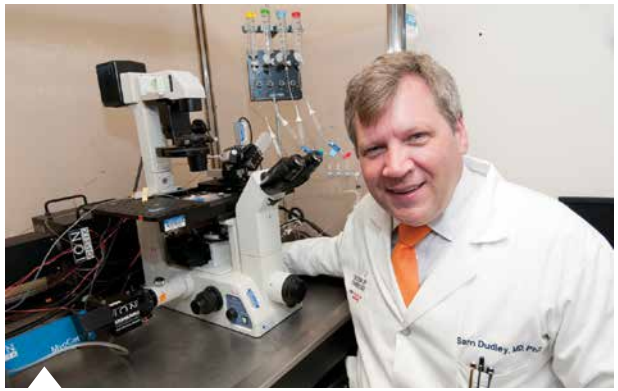
Mariam Medical is a biotechnology company pursuing therapies for breast, ovarian, thyroid, neuroblastoma, and glioblastoma cancers through the use of RNAi (RNA interference or Gene Silencing) techniques. Mariam is headquartered in Peoria, Illinois and hopes to bring therapies to market by partnering with large pharma companies around the world.

## Piroutte Software Consulting, Inc.

In April of 2013, Piroutte Software Consulting, Inc. obtained a license from UIC for a suite of technologies related to advanced methods for locating and navigating cars to parking places. Piroutte Software Consulting, Inc. is a company founded by Dr. Ouri Wolfson, professor of Computer Science at the University of Illinois at Chicago. His company recently submitted and received SBIR funding to further develop these technologies.

## Remedyon, LLC

Remedyon, LLC. Is a Chicago-based developing stage pharmaceutical company with the novel therapeutics that target glycogen synthase kinase-3Đ (GSK-3Đ). Company has secured exclusive licensing for several class of compounds that are potent GSK-3Đ inhibitor or modulator. While the initial focus will be on orphan oncology indications, Remedyon's class of compounds is anticipated to yield agents useful for the treatment of multiple non-malignant



Dr. Dudley, Founder, ROS Technologies

PHOTO:

pathologies including Alzheimer's disease, inflammation, bipolar disorder and diabetes type II. The company is led by a strong management team with expertise in medicinal chemistry, GSK-3Đ biology, drug development as well as extensive experience in leading biopharma & biotech start-ups.

## ROS Technologies

ROS Technologies, Inc. is a medical diagnostics company developing a blood test to predict sudden cardiac death (SCD) risk in patients with heart failure. Heart failure occurs in more than 550,000 US citizens each year, but there are no simple, reliable ways of predicting who is at highest risk for SCD and who will benefit from an implanted defibrillator. This blood test will enable the optimization of the intervention by providing a simple, reliable, convenient to administer (i.e., point-of-care), and cost effective blood test. It is specific to SCD risk and is linked to the pathophysiology of the disease process. This test could help direct more than$1 billion/year in medical exposure to those most likely to benefit. ROS has also recruited new management: Charlie Polsky is the new CEO and it is also working with LifeTech Research, Inc.

# Updates & Highlights

## Bridging the Gap between Research and Technology Commercialization

### New Roles, New Opportunities for the OTM

In January of 2013, **Nancy Sullivan** assumed the newly created role of Interim Executive Director of the OTM to provide strategic direction to the office after having served as Director of the OTM for the last four years. Nancy also assumed the role of CEO and Managing Director at IllinoisVENTURES, LLC. Stepping into the Interim Director role for the OTM is **Jeremy Hollis**, previously the OTM's Assistant Director of Business Development. This change has further strengthened the partnership between OTM and IllinoisVENTURES and has greatly facilitated the founding and management of a major new UIC initiative, the **UIC Chancellor's Innovation Fund**.


Nancy Sullivan speaking at Inventor of The Year Award Ceremony. PHOTO: UIC PHOTO SERVICES

Jeremy Hollis at inaugural event of the Chicago Innovators Mentors program. PHOTO: JASON SMITH

In addition, Kapila Viges joined the Office of the Vice President for Research (OVPR) as Director of EnterpriseWorks Chicago. EnterpriseWorks Chicago supports startup companies with an array of programs, facilities, activities and events designed to nurture entrepreneurship and company formation. EnterpriseWorks Chicago is located on the UIC campus in the Illinois Medical District. The addition of EnterpriseWorks Chicago provides a vital resource in the commercialization pathway and the OTM is excited to work closely with her to strengthen the pipeline of startup companies resulting from UIC inventions.

### Building the Innovation Pipeline

The OTM, IllinoisVENTURES, and EnterpriseWorks Chicago have worked closely together through FY13 to strengthen the innovation pipeline at the University of Illinois at Chicago. Focusing on fostering and accelerating innovation at UIC, the three units have worked to streamline and enhance the support provided to UIC faculty, students, and staff at critical stages along the path to commercialization. This process is supported by OTM, EnterpriseWorks Chicago and IllinoisVENTURES, which together possess vast amounts of experience, knowledge and resources around technology commercialization.

- **The UIC Office of Technology Management (OTM)** provides expertise in the management of the transfer and commercialization of technology and intellectual property disclosed by faculty, staff and students. The OTM team specializes in evaluating early stage technologies and protects, markets and licenses University intellectual property. The OTM is the first step in the Innovation Pipeline and offers valuable support and guidance for researchers looking to either connect with established companies capable of further developing University technology, or for researchers interested in starting their own business venture.

- **EnterpriseWorks Chicago (EWC)** provides a nurturing environment where new technology-based businesses can form and take advantage of opportunities for collaborative research and have easy access to University labs, equipment and services. In addition to supporting all stages of company formation, EWC also manages the University's incubators, which provide excellent environments for technologies in the proof-of-concept stage of the Innovation Pipeline.

- **IllinoisVENTURES (IV)** is a premier seed and early stage technology investment firm launched by the University of Illinois. It has been consistently named by Entrepreneur Magazine as one of the top 100 venture capital firms. IV provides essential funding for new companies cultivated

## The Power of Gap Funding

**365**
Start-ups formed because of gap funding

**7,753**
Jobs supported by commercialized gap funding projects

**$16K+**
Gap funding dollars invested per job created

**70% vs 51$**
Survival rate over five years of gap-funded start-ups vs. all new firms

**Each $1 of gap funding attracts up to:**

**$9.3** in government grants
**$3.6** in industrial support
**$11** in angel capital
**$148** in venture capital

by the Innovation Pipeline and brings together leading researchers and entrepreneurs to turn concepts and intellectual property into breakthrough, high-growth companies.

By working closely together, these units more efficiently achieve OVPR's mission to advocate and provide support for University faculty, staff and students who create and capture knowledge to solve the pressing problems facing society today.

## The UIC Chancellor's Innovation Fund

**An example of building on the programs and initiative to support the innovation pipeline, the UIC Chancellor's Innovation Fund (CIF)** was recently established through a $10 million commitment by Chancellor Paula Allen-Meares. Managed by IllinoisVENTURES, the CIF is a hybrid of a proof-of-concept (POC) and an equity investment fund, which enhances the POC Awards Program by providing the funding needed to bridge the gap between basic research and commercialization. The CIF provides direct investments and seed funding to early stage companies formed to develop University technologies that are beyond the proof-of-concept stage but not yet into the commercialization stage.

The initial $10 million investment will be spent over five years to support both proof-of-concept discovery and early stage technology companies founded by UIC faculty, staff and students. One million dollars annually funds the POC Awards Program, which provides up to $75,000 for projects that originate at UIC and are disclosed to the UIC Office of Technology Management. Another one million dollars per year is designated as equity seed investments to support early stage technology firms launched by the University.

**Two critical needs in the development of the Midwest's tech industry are addressed by the CIF**. The first is to improve the well-documented challenge to technology commercialization known as the "early stage funding gap" that exists for many discoveries. Discoveries resulting from basic research conducted at universities typically need further support to reach important milestones that are critical to commercial development. Many innovative university-based technologies fail to reach these milestones due to a lack of sufficient funding. The second critical need is to bolster venture capital investments. IllinoisVENTURES is uniquely suited to help address this need. According to Mind the Gap Report 2013 (Innovosource), IlinoisVENTURES was ranked #1 in gap funding for third party capital attraction. By injecting an additional one million dollars per year for the next five years into IllinoisVENTURES, the CIF will provide a much-needed boost to seed funding toward transformative university research and innovation.

In partnership with IllinoisVENTURES, the Office of the Vice Chancellor for Research and the OTM, the CIF is building upon a well-established POC Awards Program. Since its creation in 2012, a total of 182 applications and 43 disclosures have been submitted to the OTM as a direct result of the program. The program has already awarded 10 projects which have gone on to embark on cutting edge research and development.

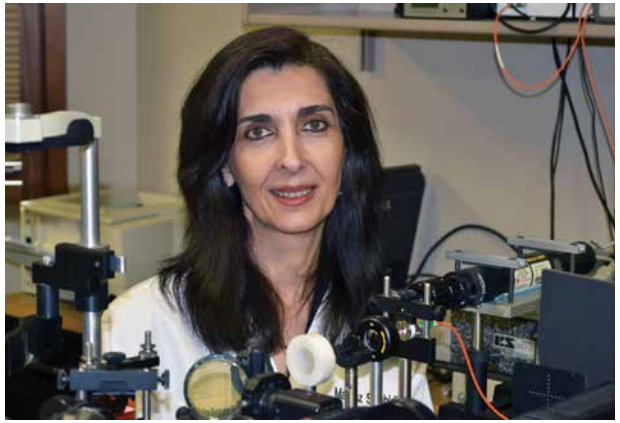
- **Drs. Samuel Dudley** and **Euy-Myoung Jeong** developed a blood test to differentiate systolic from diastolic heart failure and because of the POC, the inventors have been able to collect and test more patient samples. Furthermore, they have gone on to create a startup company, ROS Technologies.

- **Drs. Xavier Llor** and **Rosa Xicola** developed a blood-based test for colorectal cancer screening using a miRNA panel and worked with the University to form a startup, ColoPrev.

- With support from the POC Awards Program, **Drs. Sohail Murad** and **Alan Zdunek** developed a more efficient way to desalinate water by using an electric field enhanced ion exchange process.

- **Dr. Kate Warpeha** has been able to improve the resistance of plants to stresses.

By adding additional funds to the POC program, the **CIF** increases the program's impact and has a positive effect on the local community by facilitating the launch of new companies, which in turn creates new jobs, attracts outside investment and positions. The program will not only benefit UIC, but also the City of Chicago and the surrounding Midwest as a hub for innovation.



Fall 2012 Proof of Concept Award Winners (from top): Sohail Murad, PhD and Alan Zdunek, PhD; Mahnaz Shahidi, PhD; Farhad Ansari, PhD PHOTO: UIC PHOTO SERVICES

## Fall 2012 Proof of Concept Award Winners

Forty-four projects were submitted for review during the second round of the awards in Fall 2012. Eight finalists were chosen to present their product ideas to a panel of local venture capitalists and business leaders. Of those eight finalists, six were chosen to receive a POC Award. The winners were:

- **Farhad Ansari**, PhD
  Project Title: **Crack Sensor**
  *College of Engineering — Department of Civil and Materials Engineering*

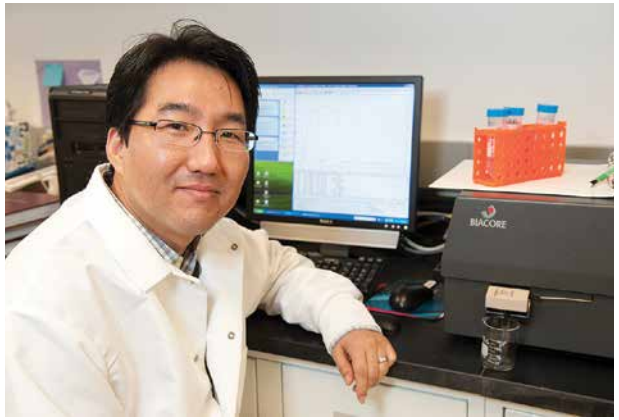
- **Seungpyo Hong**, PhD
  Project Title: **Development of a Biomimetic Device Prototype for Detection of Circulating Tumor Cells**
  *College of Pharmacy — Department of Biopharmaceutical Sciences*

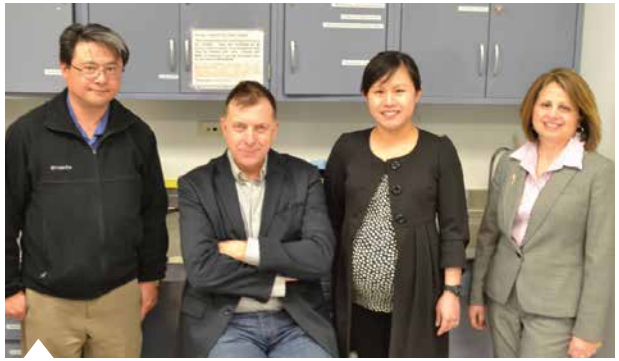
- **Ramaswamy Kalyanasundaram**, DVM, PhD
  Project Title: **Improving the Current [Lymphatic Filariasis] Vaccine Technology**
  *College of Medicine — Department of Biomedical Sciences (Rockford)*

- **Sohail Murad**, PhD and Alan Zdunek, PhD
  Project Title: **Water Desalination by Electric Field Enhanced Ion-Exchanged Process**
  *College of Engineering — Department of Chemical Engineering*

- **Mahnaz Shahidi**, PhD
  Project Title: **EyeFlow: A Device to Detect Impaired Cerebral Blood Flow**
  *College of Medicine — Department of Ophthalmology and Visual Sciences*

- **Gregory Thatcher**, PhD and Debra Tonetti, PhD
  Project Title: **Therapies Associated With Modulation and Mimicry of Hormone Actions**
  *College of Pharmacy — Department Medicinal Chemistry and Pharmacognosy and Department of Biopharmaceutical Sciences*





Fall 2012 Proof of Concept Award Winners (from top): Seungpyo Hong, PhD; Ramaswamy Kalyanasundaram, DVM, PhD; Gregory Thatcher, PhD and Debra Tonetti, PhD PHOTO: UIC PHOTO SERVICES

## UICentre

**Focusing on the earliest stages of the drug discovery pipeline**, the UIC Collaborative Engagement in Novel Therapeutic Research and Enterprise, or UICentre, is an alliance between the Colleges of Pharmacy, Medicine and Liberal Arts and Sciences that is supported by the Center for Clinical and Translational Science (CCTS). The UICentre utilizes multidisciplinary teams to combine expertise in toxicology, bioavailability and targeted drug delivery to work on milestone-driven projects based on inventions disclosed to the OTM. Approved projects that have achieved their milestones will receive awards for further development. These awards are customized for each project providing a combination of direct funding and access to UICentre resources.

**The Office of Technology Management has taken a major role in ensuring the success of the UICentre.** Senior Technology Manager David Klick and Technology Transfer Coordinator Nelson Grihalde act as OTM ambassadors to UICentre to help ensure the application of its mission. Nelson provides technical guidance and consulting know-how related to the drug discovery process and methodology. He also leverages his knowledge and contacts in industry to provide project guidance and identify collaboration opportunities with institutions and corporations. David leads the disclosure assessment and new targets evaluation process while also acting as the intellectual property liaison between UICentre and OTM. Together, the two units hope to stimulate and enhance the application of pharmaceutical and translational knowledge in order to elevate biomedical innovation at the University of Illinois to a level where it will enhance human health and benefit society.

## Chicago Innovation Mentors Update

Chicago Innovation Mentors (CIM)is a team-based mentoring program co-founded by the University of Illinois at Chicago, Northwestern University, the University of Chicago and iBIO Institute/ PROPEL and supported by a grant from the Chicago Biomedical Consortium. CIM matches innovating faculty with teams of experienced entrepreneurs, executives and domain experts. These mentor teams encourage innovation and well-informed risk-taking, catalyze the commercialization of technologies, strengthen the support system necessary to create resilient entrepreneurs and enhance local economic development. CIM currently has over 180 mentors serving more than 70 mentee teams  More than 20 faculty members at UIC have received mentoring through CIM to date.

The Chicago Innovators Mentors Matching program organizers (left to right): Alan Thomas, director of UChicagoTech; Alicia Loffler, associate vice president and executive director of the Innovation and New Venture Office, Northwestern University; David Miller, president and CEO, iBio; and Nancy Sullivan, director, Office of Technology Management, UIC. PHOTO: JASON SMITH

# Celebrating and Encouraging Innovation and Entrepreneurship

## 2012 Deals of Distinction Award

Prezista is a protease inhibitor taken in conjunction with other HIV medicines to help lower a patient's viral load and keep HIV under control over the long term. It was developed


PHOTO: UIC PHOTO SERVICES

by researchers at the University of Illinois at Chicago (UIC) and the National Institutes of Health (NIH) during a time when the treatment of HIV/AIDS was being complicated by the rapid emergence of drug-resistant strains. Prezista, also known as Darunavir, prevents HIV-infected cells from producing a new virus. It also has the ability to prevent drug-resistant mutations, so while other inhibitors can become ineffective after continued use, Prezista maintains its effectiveness.

Prezista was approved by the FDA in 2006 and licensed to Johnson & Johnson. A more recent licensing agreement has allowed for Prezista to become more readily accessible and affordable to patients in developing countries. The licensing agreement led to the Licensing Executive Society presenting UIC and partners NIH, Gilead Sciences (Gilead) and the Medicines Patent Pool with the 2012 Deals of Distinction™ Award in the Industry-University-Government Interface Sector. The Deals of Distinction Award recognizes noteworthy licensing deals and encourages innovative solutions to business matters involving contracts. Through this recent licensing agreement, Prezista continues to offer hope to HIV-infected people all around the world. Prezista also continues to be a top royalty producer for UIC, having generated $14 million in royalties in fiscal year 2012 and over $17 million in fiscal year 2013.

## Encouraging Student Innovation: UIC Office of Technology Management Awards

The UIC Office of Technology Management is proud to not only promote new ideas and inventions, but also to have the ability to **encourage and recognize student innovation on the UIC campus**. In 2013, the OTM participated in two competitions on campus and sponsored the OTM Innovation Award at each event. The OTM Innovation Award is a $500 cash prize that is awarded to a project that can best showcase commercialization potential.

- On April 23, 2013, the UIC College of Engineering hosted the 24th Annual Engineering EXPO at Student Center East. Over 260 UIC seniors presented projects to a panel of 68 volunteer judges, including representatives from the OTM. The Innovation Award was presented by the OTM to Yancarlo Maldonado, Oscar Marquez and Alejandro Ruiz. These College of Engineering seniors developed an automated guitar tuner which uses Fourier Analysis and digital signal processing techniques to detect inconsistencies in the sound of electric guitars. The user-friendly graphical user interface (GUI) also offers solutions, allowing the operator to make necessary adjustments to his or her guitar.

- The College of Pharmacy hosted the 2013 Research Day on February 22. Approximately 70 trainees presented research in their respective areas to a panel of OTM, alumni and industry judges. Mary Ellen Molloy received The Innovation Award for her presentation in the Poster Competition. The Biopharmaceutical Sciences student represented the Tonetti lab with research on Selective Estrogen Mimics (SEM) for the treatment of Tamoxifen-resistant breast cancer. TTC-352, a SEM developed at the UIC College of Medicine, is a unique and promising new compound that could offer the advantages of classic therapies with a lower risk of adverse side effects.

The OTM is proud to participate in these events and hopes to inspire UIC students to continue their innovative research and participate in the commercialization process.

## Inventor and Innovator of the Year Award

**The Inventor of the Year Award** is presented by the UIC Office of Technology Management to recognize an exceptional inventor or team of inventors whose work at the University of Illinois at Chicago has contributed to the **development of intellectual property with the potential to make a significant impact on society**. This year, the OTM was proud to present the 2012 UIC Inventor of the Year Award to **Mahnaz Shahidi**, PhD, Morton F. Goldberg Professor of Ophthalmology.

Dr. Shahidi invented an optical imaging device that measures blood flow in the conjunctiva of the eye. This device, EyeFlowTM, can be operated by one technician in less than five minutes providing a cost effective means to quickly screen for and diagnose the risk of stroke, the third leading cause of death and the leading cause of severe long-term disability in the United States. Dr. Shahidi is also a Cofounder of **NovoView Diagnostics**, an early stage company dedicated to commercializing the EyeFlowTM device. NovoView was awarded second place at the University of Louisville's Brown-Forman Cardinal Challenge business plan competition in February 2012.

**The Innovator of the Year Award** was introduced in 2012 by the OTM to honor an outstanding innovator or team of innovators at UIC whose efforts have contributed to **significantly advancing their invention towards commercialization**. This award recognizes extraordinary commitment either through participation in the licensing process or through entrepreneurial efforts in a startup company based on their invention. This year, the OTM proudly presented the Innovator of the Year award to

Inventor and Innovator of the Year Award Ceremony

PHOTO: UIC PHOTO SERVICES

**Dr. Craig Niederberger**, Clarence C. Saelhof Professor and Head of the Department of Urology. He also holds a joint appointment as Professor in the Department of Bioengineering.

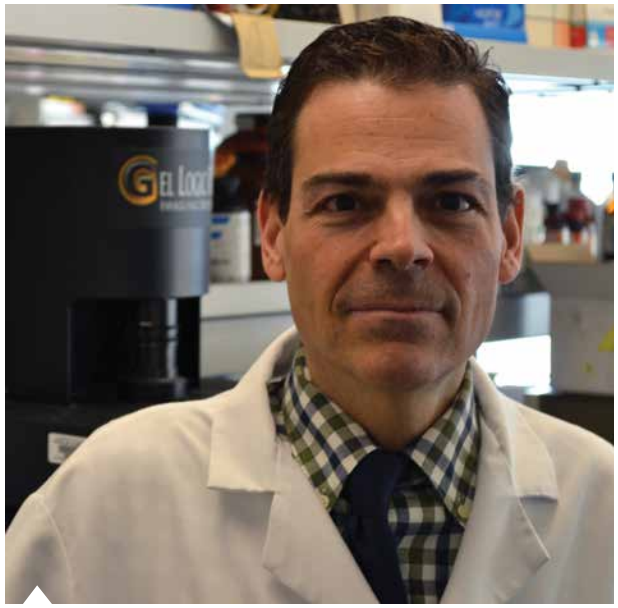
Dr. Niederberger is one of the inventors of a medical device that accurately measures the force applied to the urethra during surgical procedures. He is also the Cofounder and Chief Technology Officer of **NexHand**. NexHand is developing the sensor-based, noninvasive diagnostic tool for use in the surgical treatment of stress urinary incontinence in women.

**The Honorary Innovator of the Year Award** was awarded to the late **Professor Emeritus Philip Wagreich, Director of the Office of Mathematics Education in the Department of Mathematics, Statistics and Computer Science**. Dr. Wagreich cofounded the Teaching Integrated Mathematics and Science Project, an organization that developed the well-known Math Trailblazers elementary level curriculum in 1997. Math Trailblazers is still used in classrooms across the country and is one of UIC's top royalty earners. Professor Wagreich passed away on January 1, 2013.

## The 2013 BIO International Convention

The University of Illinois was proud to be a major academic sponsor of the 2013 BIO International Convention — **the largest gathering of leaders from the biotech industry, government and academia** -- which took place on April 22 – 25th at McCormick Place in Chicago. Vice President for Research, Larry Schook, served as the University's representative on the 2013 BIO Steering Committee.

The convention was kicked off at a satellite location by the **International Cancer Cluster Showcase**. This event put a spotlight on the progressive cancer research and development activities in six regions and clusters. Massachusetts, Quebec, Toulouse, Oslo, the UK "Golden Triangle" and the Chicago Cancer Cluster, made up of Northwestern University, the University of Chicago and the University of Illinois at Chicago, presented their oncology innovations to an international audience.



Dr. Xavier Llor, MD PHOTO: UIC PHOTO SERVICES

From UIC, **Xavier Llor**, MD, PhD presented research he developed in collaboration with **Rosa M. Xicola**, PhD on a blood-based test for colorectal cancer using a micro-RNA panel. Dr. Llor and Dr. Xicola were awarded a Proof of Concept Award in 2012 to further their research. In 2013, they founded **ColoPrev**, a company dedicated to advancing the development of this blood-based colorectal cancer test.

Ground breaking ceremony for the Health, Technology, Innovation (HTI) program at Chicago Tech Park. PHOTO: UIC PHOTO SERVICES

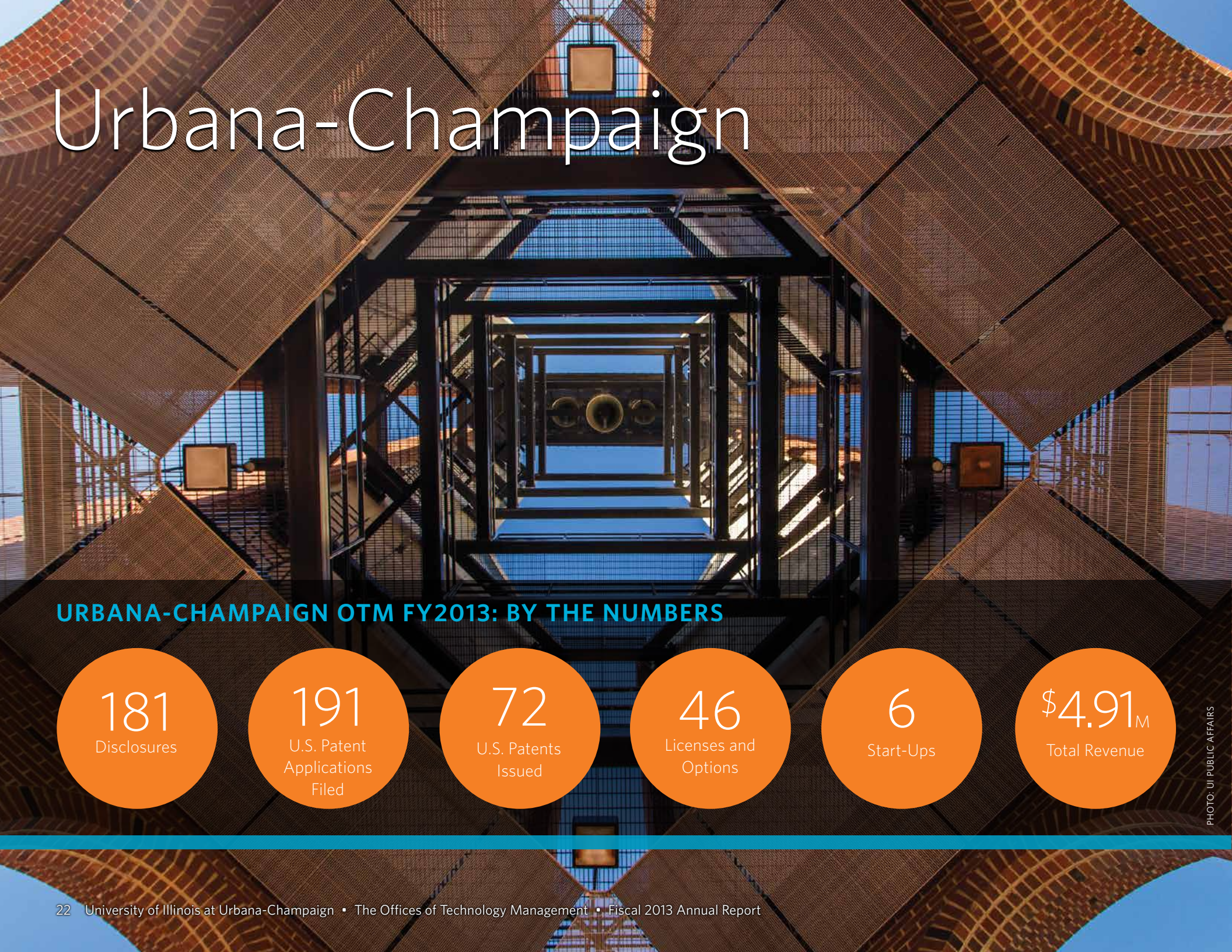
Halfway through the week-long convention the University hosted a reception at Japonais located at 600 W. Chicago Avenue. Faculty, alumni and friends celebrated UIC's contributions to the biotechnology industry over cocktails, hors d'oeuvres and music.

Later on during the week, Governor Pat Quinn, the Illinois Medical District and the University of Illinois joined EnterpriseWorks Chicago in a groundbreaking ceremony for their new program, Health, Technology, Innovation Center (HTI) at Chicago Tech Park. **HTI will serve as a technology research facility for Chicago's booming bioscience industry.**

The 2013 BIO International Convention drew 13,594 industry leaders from almost all 50 US states and 62 countries and hosted a record-breaking 25,573 partnering meetings between 2,800 companies, universities and organizations. The University of Illinois was honored to be a part of this grand event.

HTI lab mock-up. PHOTO: UIC PHOTO SERVICES

# Urbana-Champaign



## URBANA-CHAMPAIGN OTM FY2013: BY THE NUMBERS

- **181** Disclosures
- **191** U.S. Patent Applications Filed
- **72** U.S. Patents Issued
- **46** Licenses and Options
- **6** Start-Ups
- **$4.91M** Total Revenue

PHOTO: UI PUBLIC AFFAIRS

Dear Colleagues,

I am pleased to present the Fiscal 2013 Annual Report, in which you will find details of the Office of Technology Management's activities and accomplishments from the past year. These successes would not have been possible if it were not for our engagement with the outstanding community of Illinois researchers, innovators, entrepreneurs, and corporate entities.

Our efforts can be largely categorized within three themes:

- **Celebrating Innovation**: the events and milestones that marked last year for the OTM, the University, and our start-ups.
- **Engaging with Stakeholders**: as always, collaboration with internal and external partners is an integral part of our work.
- **Leveraging Resources**: new and continuing programs that support University entrepreneurs.

We entered into several agreements and partnerships with national and international universities and companies designed to **simplify collaborative efforts** and **improve research opportunities** for the University. Some notable partnerships include the Model Inter-Institutional Agreement , the International Center for Advanced Materials, and the Joint Center for Energy Storage Research.

Additionally, we partnered with campus and community groups, such as the organizers of Champaign-Urbana's annual Innovation Celebration and the University Library, to co-host events celebrating Illinois innovations.

As innovations were created and new start-ups were launched, we worked closely with colleagues across campus to support entrepreneurial efforts. These relationships also extended to our sister campuses in Chicago and Springfield.

Furthermore, we've been responsive to changes regarding intellectual property law that have resulted from Supreme Court cases like *Association for Molecular Pathology v. Myriad Genetics* and *Bowman v. Monsanto*, and we've taken measures to inform campus innovators of these rulings and their implications.

We can proudly boast that over the last year, our accomplishments, innovations, and start-ups have appeared in publications such as *The Wall Street Journal*, *Time* magazine, *Bloomberg Businessweek*, *Forbes*, and many more.

Finally, thank you to our wonderful staff members and student interns for their continued endeavors and their commitment to making the accomplishments of the last year possible.

In the year to come, I have no doubt that Illinois innovators and innovations will continue to succeed, and I hope you will be a part of that. We look forward to partnering with you.

**Lesley Millar, Director**
Office of Technology Management
Urbana-Champaign

# Updates & Highlights

## Celebrating Innovation: Events & Milestones in FY13

### Innovation Celebration

Innovation Celebration is an annual award recognizing the entrepreneurial spirit around the community and on campus. Eight awards are given, two of which are hosted by the OTM.

In 2013, the OTM received 19 nominations from departments across campus. After the nominations were made, the OTM's Advisory Committee received information on each nomination and assessed them. Winners were then chosen based on their rankings.

OTM's awards are for **Innovation Discovery** and **Innovation Transfer**, which are specific to nominees from the University of Illinois. Innovation Discovery recognizes an individual or group whose research has resulted in a discovery or work with the potential for significant societal impact. Innovation Transfer recognizes an individual or group whose invention or work has been successfully transferred into the public sphere.

In 2013 the **Innovation Discovery** winner was **Dr. Martin Burke** for his innovations in synthesizing organic compounds with the potential to radically change the processes by which new drugs are discovered and manufactured. The **Innovation Transfer** winner was **Dr. Yoram Bresler** for successfully putting his algorithms that increase the efficiency of image reconstruction into practice with his company, **InstaRecon, Inc.**

Professors Martin Burke and Yoram Bresler, winners of Innovation Celebration Awards PHOTO: COURTESY OF JUSTINE BURSONI PHOTOGRAPHY

### Open House

In October 2012, the **OTM held its first-ever open house in the Illini Union**. The event opened with remarks from OTM Director Lesley Millar and Vice Chancellor for Research Peter Schiffer. More than 130 faculty and students attended the open house.

OTM's open house was an opportunity to connect with the faculty, staff, and students across campus.

The OTM team

A full house at Supporting Innovation and Creativity

### Supporting Innovation and Creativity

In April 2013, the University Library and the OTM co-hosted Supporting Innovation and Creativity, an event showcasing the tools that Illinois faculty — especially those in the arts, humanities, and social sciences — have used to increase the impact of their research.

## Fiscal 2013 Start-Up Milestones

Many of our start-ups logged important achievements and received media attention last year. Here are just a few:

- **ANDalyze**, a company that tests water for contamination, was named a certified BlueTech Innovation Company. **ANDalyze** was founded by Dr. Yi Lu.

- **aPriori**, a software company that develops and markets product cost management software, received $5 million in new venture capital from existing investor Sigma Partners. Additionally, the company was named a finalist in *Plant Engineering* magazine's 25th Annual Product of the Year competition and one of *Gartner*'s Cool Vendors in Product Design and Life Cycle Management for 2013. **aPriori** was founded by Dr. Michael Philpott.

- **Aqueous Solutions** is a company that develops, maintains, and supports the Geochemist's Workbench, a software package for solving problems in aqueous geochemistry. The company launched ChemPlugin, new software that can quickly create reactive transport simulators in any configuration. **Aqueous Solutions** was founded by Dr. Craig Bethke

- **Autonomic Materials**, a company that develops self-healing technologies to extend the life of coatings, was featured on the *BBC.com* and *CNN.com*. **Autonomic Materials** was founded by Dr. Scott White, Nancy Sottos, Jeffery Moore, and Paul S. Braun.

- **Cbana Labs**, a company that develops micro devices for the capture and analysis of pollutants, drugs, and other dangerous materials, was awarded the Phase II Enhancement Contract from NASA SBIR. **Cbana Labs** was founded by Drs. Richard Masel and the late Mark Shannon.

- Illinois announced a licensing agreement with **CU Aerospace**, to market unique refrigeration engineering software. **CU Aerospace** was founded by Drs. Scott White, Michael Bragg, Wayne Solomon, and various others.

- The National Institute of Allergy and Infectious Disease awarded **Immuven**, a company that develops novel drugs to treat infectious diseases and cancer, a Phase I SBIR totaling more than $297,000. **Immuven** was cofounded by Dr. David Kranz.

- **MC10 Inc.**, a company that develops flexible electronics, raised $18 million in Series C financing. The company and was featured in numerous publications including *TIME Magazine*, *Scientific American*, *The Wall Street Journal*, *The New York Times*, *Businessweek*, and *USA Today* and was recognized as one of *MIT Technology Review*'s 50 Disruptive Companies 2013. Additionally, in conjunction with Reebok, **MC10**'s first product, the CheckLight, became available in June 2013. **MC10 Inc.** was cofounded by Dr. John Rogers.

- **Personify**, a company that provides video conferencing software, launched **Personify Live** for Mac. The company was founded by Drs.Sanjay Patel and Minh Do.

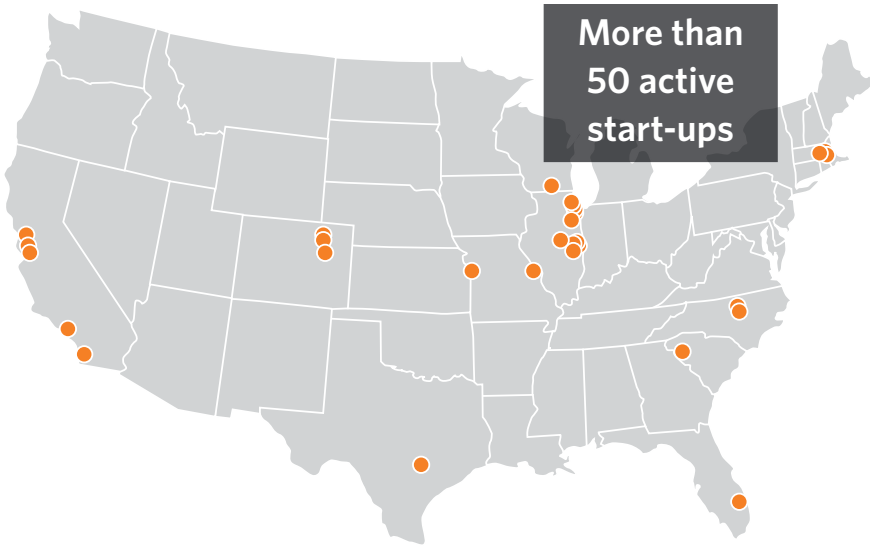
- **Pattern Insight**, a company that brings search and data mining technology to the advanced analysis of engineering and IT data, sold its Log Insight product, team, and technology to VMware Inc. **Pattern Insight** was founded by Yuanyuan Zhou.

- **Semprius**, a company that generates solar power in viable climates, opened its first solar panel factory in Henderson, North Carolina. **Semprius** was also recognized in the field of Energy and Materials as one of *MIT Technology Review*'s 50 Disruptive Companies 2013. **Semprius** was founded by Drs. John Rogers and Ralph Nuzzo.

- **ShareThis**, a company that allows users to share online content from anywhere to anyone, closed on $23 million in Series C financing and acquired Socialize, a start-up whose developer toolkit helps make social apps. Additionally, ShareThis was ranked No. 35 on *Forbes*' List of America's Most Promising Companies. **ShareThis** was cofounded by Dr. David Goldberg.

- **SolarBridge Technologies**, a provider of integrated microinverters for certified AC modules, was chosen by AlwaysOn as a GoingGreen Global 200 winner for the second consecutive year. **SolarBridge Technologies** was founded by Drs. Philip Krein and Patrick Chapman.

### OTM Start-Ups Across the Country



## OTM By The Numbers

**3.1 YEARS**
Average time to issuance for U.S. patents issued this year

**36%**
Percent of U.S. patents issued in FY2013 that are already licensed or optioned

**$550 MILLION**
Raised in capital by companies incubated at the Research Park

**9TH**
Champaign-Urbana's ranking by *theatlanticcities.com* in terms of venture capital per capita

**63**
Number of departments and units that engaged with OTM in FY2013

**10**
Number of mobile apps disclosed to the OTM in FY2013

**8 HOURS**
Shortest time to a non-exclusive license for a start-up working with OTM

**5**
Companies have engaged mentorship teams through the Chicago Innovation Mentors Program

# Engaging with Stakeholders: Partnerships in FY13

## Illinois-Venture-Investor Entrepreneur Forum

The Illinois Venture-Investor-Entrepreneur Forum (IVIE Forum) was created in San Francisco for Illinois alumni and friends who are venture capitalists, private investors, angel investors, or entrepreneurs. IVIE aims to provide the community with an organized means to engage with entrepreneurs on campus who are seeking more intellectual and capital resources to grow the campus' entrepreneurial ecosystem.

IVIE invited OTM to present an overview of recent happenings with University technologies and start-ups. While there, we also met with several venture capital firms. **The event was so well received that we're working with development officers in other units to arrange similar events in different cities.**

Lesley Millar speaking on a panel, Bio 2013

## MTAs and Other Agreements

OTM helped negotiate intellectual property terms for the following sponsored research agreements:

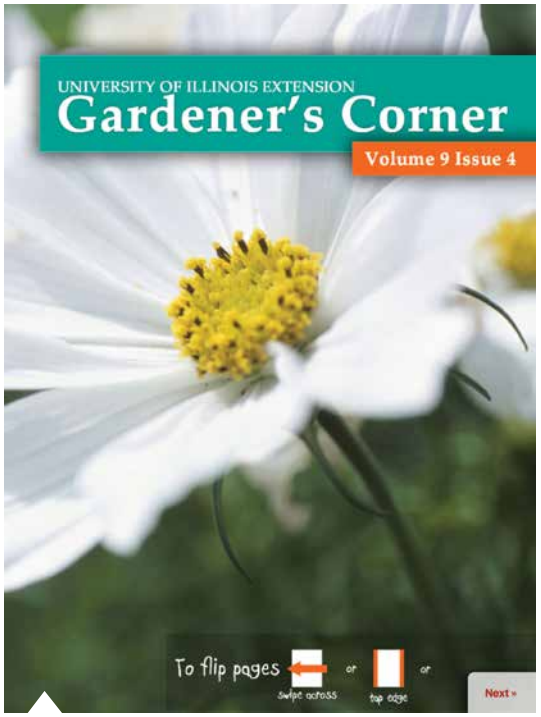
- Google subsidiary **Motorola Mobility** creates mobile devices and wireless accessories. The company signed an R&D agreement, the Multi-University Research Agreement (MURA), with eight leading U.S. universities, including Illinois. The agreement simplifies joint research projects and paves the way for closer cooperation between universities on the development of fundamental new technologies.

- The U.S. Department of Energy's **Joint Center for Energy Storage Research (JCESR)** is a major research partnership that integrates government, academic, and industrial researchers from many disciplines to overcome critical scientific and technical barriers and create new breakthrough energy storage technology. The $120 million energy storage hub, led by Argonne National Laboratory, is part of a collaboration of public and private entities that brings together the most advanced energy storage research programs in the United States.

- The **International Centre for Advanced Materials (ICAM)** is a research collaboration between BP, the University of Manchester, the University of Cambridge, Imperial College London, and the University of Illinois at Urbana-Champaign. It is supported by a $100-million, 10-year investment from BP.

Illinois and 17 other universities have endorsed a **Model Inter-Institutional Agreement (Model IIA)** that aims to simplify and encourage research and collaboration between universities. The Model IIA is a template that was created as a common starting point for patent negotiations between university co-owners.

Winners of the 2013 Delta Team Award for their work on Share The Vision. From left: Nicole Nair, Donna Wilm, Heather Jones, and Tracy Hunter




Screenshot from the Gardener's Corner mobile app

## Resources for Faculty

The OTM negotiated agreements to bring two new resources to faculty last year:

- **KeraFAST** is a life science research products company that provides an online marketplace allowing the research community to find and purchase each others' materials through an e-commerce catalog. Illinois is among 40 participating institutions.

- **Addgene** is a non-profit organization that simplifies plasmid sharing. The company operates a plasmid repository for the research community and has a library of published plasmids for use in research and discovery. By linking plasmids with articles, scientists can find data related to the materials they request.

## Advisory Committee

The Office of Technology Management's Advisory Committee (OTMAC) meets quarterly, and its purpose is to:

- Advise on OTM strategy to ensure the goals of the Office are aligned with the University's mission.

- Ensure OTM practices are in concert with the University of Illinois' standing as a preeminent public university and that commercialization goals sustain and enhance the University's quality in research and economic development.

- Provide input and guidance on best uses of the University's share of the royalty income received by the Office.

- Recommend "best practices" for intellectual property policy and commercialization initiatives at the University of Illinois.

- Act as a conduit to and from faculty and staff and help develop support within the University community for all aspects of technology and knowledge transfer at University of Illinois.

Several members of the OTM Advisory Committee

### ADVISORY COMMITTEE 2013–2014

| Faculty Name | College/Department |
|---|---|
| Vikram Adve | Engineering/CS |
| Michael Biehl | Vet Med |
| Isacc Cann | ACES/LAS/School of MCB/IGB |
| Lizanne Destefano | Education/Quantatative and Evaluative Methods |
| Greg Girolami | LAS/Chemistry |
| Carl Gunter | Engineering/CS |
| Gaines Hall | FAA/Architecture |
| Elizabeth Hsiao-Wecksler | Engineering/Administration |
| Fatima Husain | AHS/Speech and Hearing |
| Patricia Jones, Chair | Beckman Institute |
| Victor Jongeneel | NCSA/IGB |
| Wynne Korr | School of Social Work |
| David Lipari | Engineering/Administration |
| Paul Magelli | Business/IBC |
| Lane Martin | Engineering/MATSE |
| Jim Morrissey | LAS/Medicine/Biochemistry |
| Rob Pennington | NCSA |
| Michael Philpott | Engineering/MechSE |
| Jennifer Quirk | IGB |
| Beth Sandore Namachchivaya | Library |
| James Shriner | Education/Special Education |
| Molly Tracy | Engineering/Administration |
| Fei Wang | LAS/School of MCB |

# Leveraging Resources: Successful Program in FY13

## Illinois Becomes an NSF I-Corps Site

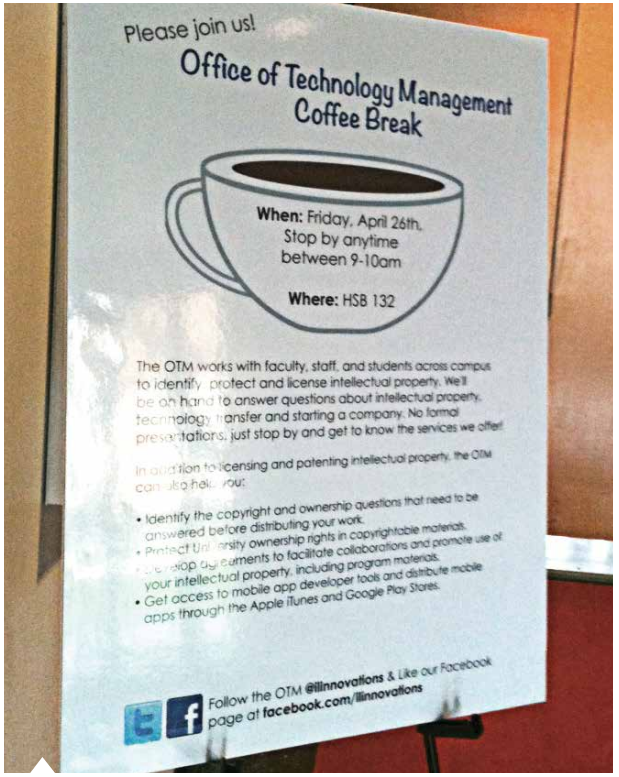
The University of Illinois has been selected as **one of ten NSF I-Corps Sites**. This program enables academic institutions to catalyze teams whose technology concepts are likely candidates for commercialization. I-Corps Sites provide infrastructure, advice, resources, networking opportunities, training, and modest funding to enable groups to transition their work into the marketplace or into becoming I-Corps Team applicants. With the support and mentorship of the Sites, teams will learn first-hand about entrepreneurship and explore the transition of their ideas, devices, processes, or other intellectual activities into the marketplace.

## I-Start Funding

EnterpriseWorks also offers the I-Start Entrepreneur Assistance Program. I-Start is a matching award program that targets University of Illinois researchers with strong potential to commercialize technologies through new company formation. **I-Start offers new University of Illinois entrepreneurs a suite of first-year professional services,** including business development, business formation, SBIR application, and assistance with both bookkeeping and marketing. EnterpriseWorks can refer entrepreneurs to service providers who offer services at rates that match the funding level.

**The program has awarded funding to 31 companies total, 12 of those during Fiscal 2013. Recent clients include:**

- **Aptimmune Biologics**: a company that specializes in the development and application of prophylactic measures against viral diseases of swine
- **Phi Optics**: a company that develops disruptive technology aimed at displacing conventional optical microscopy in numerous applicable industries
- **eText**: a company that provides a cost-effective, flexible, device-agnostic, and accessible way of delivering textbooks online



OTM Coffee Break, at the UI Springfield campus


Steve Wille speaks with students at the Innovation LLC orientation

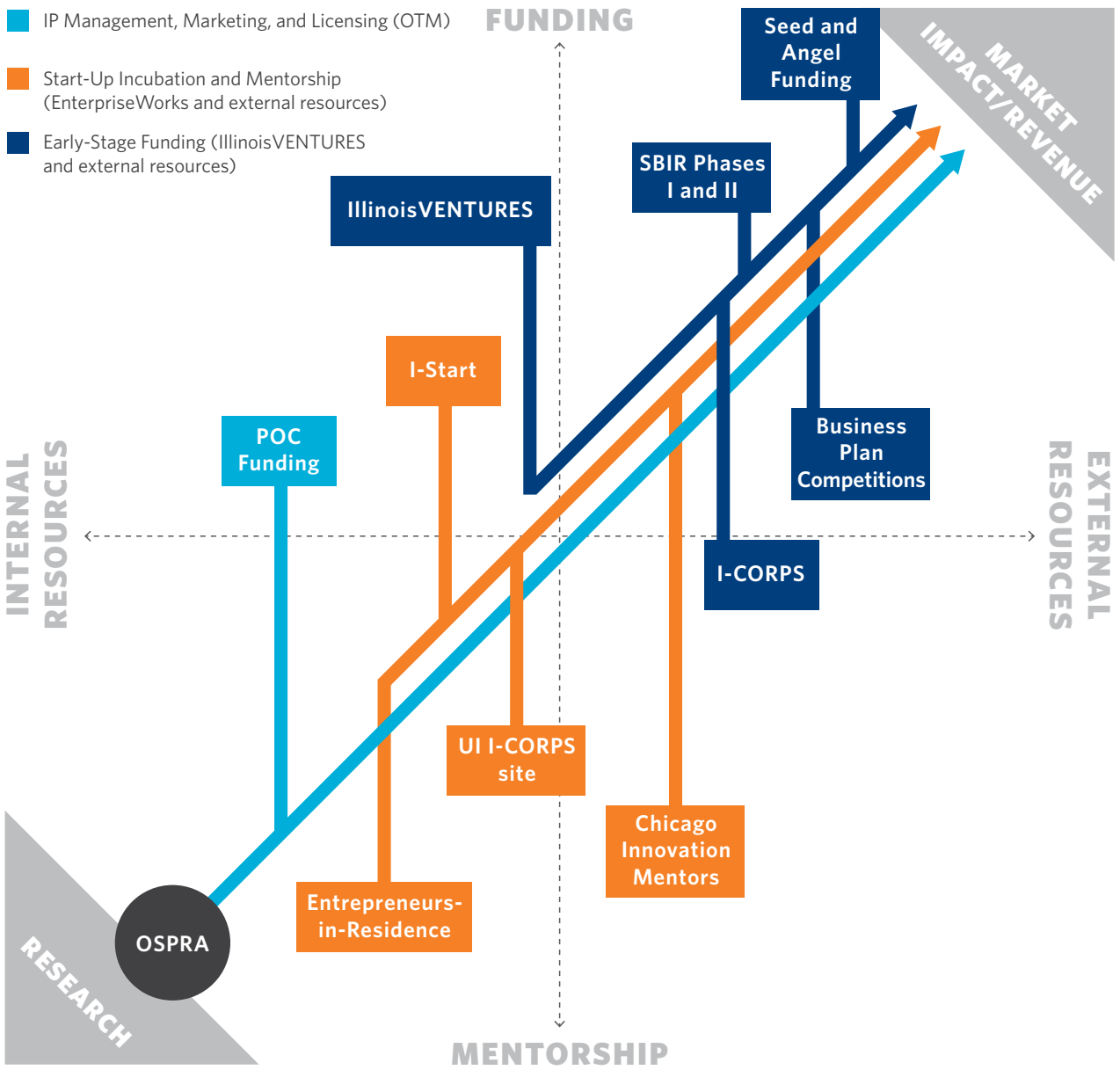

Lisa Dhar (right) mingling at Innovation Celebration


The 2013-2014 intern team

## The Resource Matrix

The University supports or provides access to a spectrum of resources that enable UI research to reach the marketplace. These resources include internal and external programs that span the spectrum from free mentorship to early-stage start-up funding.

Every innovation follows a unique path to market impact, and so the University has developed this system of resources to support innovators with different needs at different stages of the commercialization process. The specific programs an innovator chooses to access will vary depending on the needs of the technology and the intention of the innovator.



# Fiscal 2013 Summary

**181** Disclosures

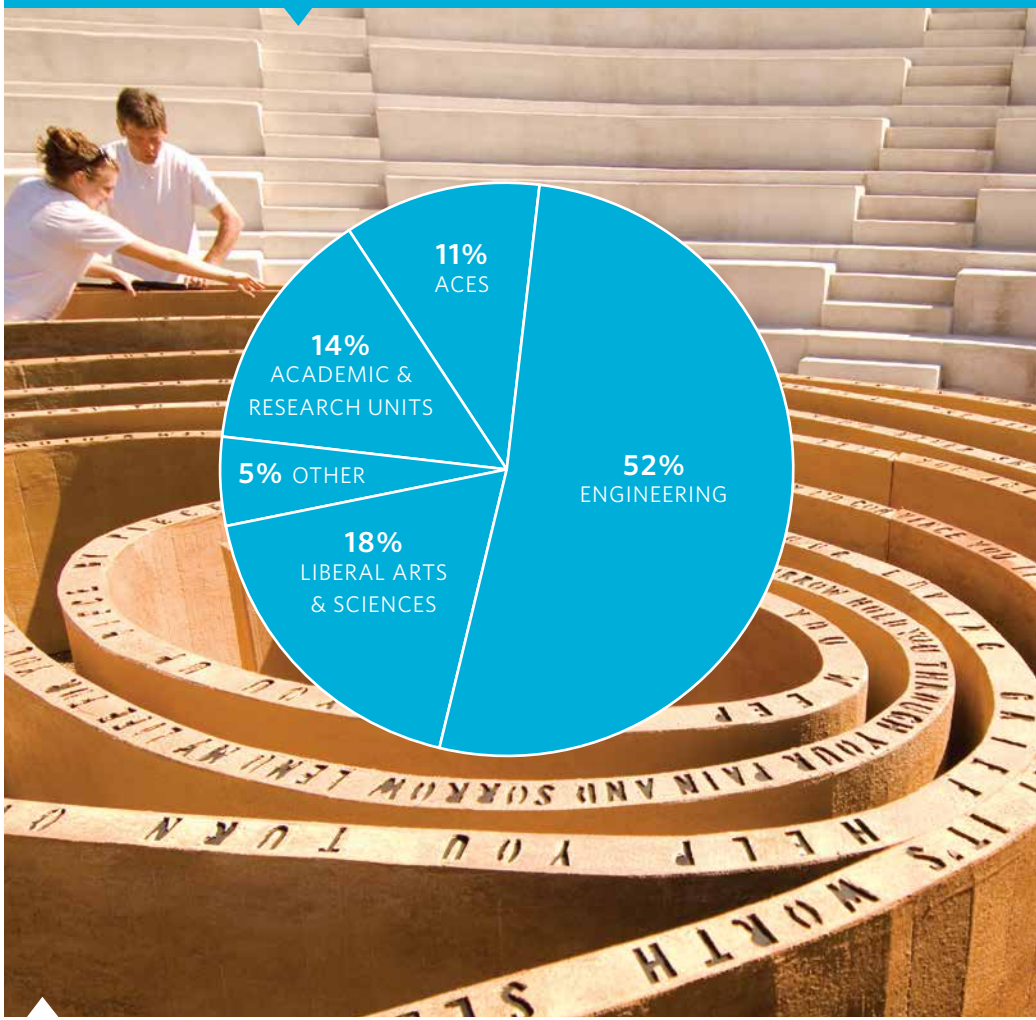
**191** U.S. Patent applications filed

## Urbana Fiscal 2013 - Colleges, Departments & Units

| College/Department/ Unit | Disclosures | U.S. Patent Applications Filed | U.S. Patents Issued | Licenses & Options |
|---|---|---|---|---|
| **Campus Total** | **181** | **191** | **72** | **46** |
| **College of Agricultural, Consumer, & Environmental Sciences** | **30** | **18** | **4** | **13** |
| Agricultural & Biological Engineering | 2 | 2 | | |
| Agricultural & Consumer Economics | 1 | | | |
| Animal Sciences | 4 | 3 | 1 | 7 |
| Cooperative Extension | 3 | | | |
| Crop Sciences | 8 | 5 | | 3 |
| Food Science & Human Nutrition | 12 | 7 | 3 | 2 |
| Information Technology & Communications Services | 2 | | | |
| Natural Resources & Environmental Sciences | | 2 | | 1 |
| **College of Education** | **1** | | | |
| Education Policy | 1 | | | |
| **College of Engineering** | **107** | **127** | **55** | **17** |
| Aerospace Engineering | 4 | 3 | 2 | 1 |
| Bioengineering | 21 | 19 | 1 | 1 |
| Civil & Environmental Engineering | 6 | 9 | 1 | |
| Computer Science | 17 | 6 | 3 | 2 |
| Coordinated Science Lab | 2 | 3 | 3 | |
| Electrical & Computer Engineering | 38 | 51 | 29 | 8 |
| General Engineering | | | 1 | |
| Information Trust Institute | 2 | | | |
| Materials Research Lab | 10 | 10 | | 1 |
| Materials Science & Engineering | 18 | 35 | 15 | 5 |
| Mechanical Science & Engineering | 16 | 15 | 6 | 2 |
| Micro & Nanotechnology Lab | 11 | 14 | 4 | |
| Nuclear, Plasma & Radiological Engineering | 3 | 7 | 2 | 1 |
| Physics | 11 | 11 | 4 | 1 |
| Technology Entrepreneur Center | 1 | | | |
| Theoretical & Applied Mechanics | | | 1 | 1 |
| **College of Fine & Applied Arts** | **3** | | **1** | |
| Architecture | 1 | | | |
| Art & Design | 1 | | 1 | |
| College of Fine & Applied Arts Administration | 1 | | | |
| **College of Liberal Arts & Sciences** | **44** | **55** | **20** | **15** |
| Astronomy | 1 | | | |
| Biochemistry | 6 | 7 | 2 | 3 |
| Biophysics & Computational Biology | 5 | 2 | | |
| Cell & Developmental Biology | | | | 1 |
| Chemical & Biomolecular Engineering | 12 | 15 | 3 | 3 |
| Chemistry | 21 | 42 | 16 | 8 |
| English | 1 | | | |
| Entomology | 1 | | | |
| Microbiology | | | 1 | |
| Molecular & Integrative Physiology | 1 | | 1 | 1 |
| Plant Biology | 1 | | | |
| Psychology | 3 | 1 | | |
| School of Chemical Sciences | 1 | | | 1 |

| College/Department/Unit | Disclosures | U.S. Patent Applications Filed | U.S. Patents Issued | Licenses & Options |
|---|---|---|---|---|
| **College of Media** | **1** | | | |
| WILL | 1 | | | |
| **College of Medicine** | **2** | **1** | **1** | |
| College of Medicine Administration | 1 | | 1 | |
| Medical Information Science | 1 | 1 | | |
| **College of Veterinary Medicine** | **2** | **2** | | **2** |
| Pathobiology | 1 | 1 | | 2 |
| Veterinary Clinical Medicine | 1 | 1 | | |
| **Academic & Research Units** | | | | |
| Advanced Digital Sciences Center | | 1 | | |
| Beckman Institute for Advanced Science & Technology | 22 | 27 | 25 | 7 |
| Illinois Informatics Institute | 1 | 1 | | |
| Institute for Genomic Biology | 17 | 11 | 5 | 10 |
| International Programs & Studies | | | | |
| Labor & Employment Relations (School of) | | 1 | | |
| National Center for Supercomputing Applications | 3 | | | 2 |
| Prarie Research Institute | | | | |
| Illinois State Geological Survey | 2 | 2 | | |
| Illinois Sustainable Technology Center | 1 | | | 1 |
| **Non-Academic & Administrative Units** | | | | |
| Campus Recreation (Division of) | 1 | | | |
| CITES | 1 | | | |
| Facilities & Services | 1 | | | |
| Intercollegiate Athletics (Division of) | 1 | | | |
| Office of Corporate Relations | | 1 | | |
| Office of the Vice President of Research | 1 | | | |
| Office of the Vice Chancellor for Student Affairs | 1 | | | |
| Public Affairs | 1 | | | |

## Disclosures by College




Students at the KCPA amphitheater constructing fingerprint sculpture for Art for Public Places course at the University of Illinois at Urbana-Champaign. PHOTO: UI PUBLIC AFFAIRS

Note: Due to the large amount of interdisciplinary research on campus, inventions are often associated with more than one college, department, or unit. As a result, the numbers reported in the table may be counted multiple times, once for each associated college or unit. For the same reason, the totals for each college may be smaller than the sum of their departments.

# Royalties & Royalty Distribution

$4.91M
Total Revenue

PHOTO: UIUC PUBLIC AFFAIRS

## Royalties and Royalty Distribution

**Royalties Earned: $4,913,573**
- Non-University Share: $168,911
- Patent Expenses Reimbursement: $1,419,772
- Net Available for Distribution: $3,440,740

**Actual Distributions**
- Inventors Share: $787,880
- University Share
  - *Unit/College: $1,362,000*
  - *OTM Cost Recovery: $829,876*

Note: "Actual Distributions" do not match the "Net Available for Distribution" in any one year because of the time lag between the date many are received and the date actual distributions are made.

### Top Three Royalty Generating Technologies

**Native Oxide:** A semiconductor technology used in laser printers, fiber optic communications, microelectronic devices, and more

**Soft Red Winter Wheat:** Wheat lines being produced on farms across the Eastern U.S.

**Data Mining for Source Code Analysis:** A software suite that helps identify and remove defects in source code.

# Start-Ups

6
Start-Ups

## 4D Teleport

4D Teleport's multimedia networking technologies lower the cost of deploying distributed multi-modal multimedia applications while increasing their flexibility and scalability. 4D Teleport's technology platform reduces the time to design and implement applications where synchronization between streams and the minimization of end-to-end delays is vital. 4D Teleport Technologies, Inc is based on research from cofounder Klara Nahrstedt of the College of Engineering. The company is located in Savoy, IL. http://4dteleport.com

## Glucosentient

GlucoSentient detects drug molecules, contaminates, and adulterants using personal glucose meters. Glucosentient's technology transforms the personal glucose meter into a device that is capable of quantitatively and conveniently detecting other non-glucose targets. GlucoSentient is based on the research of founder Yi Lu of the College of Liberal Arts and Science, the College of Engineering, and the Beckman Institute for Advanced Science and Technology. The company is located in Champaign, IL. http://glucosentient.com

## Stempar Sciences

StemPar Sciences develops cancer drugs that attack solid tumors by simultaneously disrupting their source of energy and their ability to repair chemotherapy- and radiation-induced DNA damage. The company concentrates on the differences in the metabolic pathways of malignant and healthy cells that render caner cells vulnerable to new modes of attack by exploiting a metabolic pathway that is disrupted in many major types of cancer. StemPar Sciences' therapeutics are based on compounds designed by professors from multiple universities, including Paul Hergenrother of the College of Liberal Arts and Sciences. The company is located in San Francisco, CA. http://stempar.com

## Aptimmune Biologics

Aptimmune Biologics specializes in the development and application of prophylactic measures against viral diseases of swine. It focuses on bringing effective prophylaxis against Porcine Reproductive and Respiratory Syndrome (PRRS) virus to the market. Aptimmune is based on research from founder Federico Zuckermann of the College of Veterinary Medicine. The company is located in Champaign, IL. http://www.aptimmune.com

## Phi Optics

Phi Optics develops optical imaging systems through its Quantitative Phase Imaging (QPI) platform. The company targets applications in life sciences, medical diagnostics, nanotechnology, and semiconductor testing. Phi Optics technology combines the traditional modalities of a light microscope with the real-time 3D topography capabilities of QPI, offering a significant advantage for applications that require low-cost, fast, and accurate imaging of nanostructures. Phi Optics is based on research from founder Gabriel Popescu of the College of Engineering. The company is located in Champaign, IL.

## Serionix

Serionix develops high performance technologies for water and air purification. Using fibrous activated carbon and ion-exchange materials, Serionix purification is differentiated by rapid rates of contaminant uptake, well-defined selectivity for targeted chemicals, and potential for low-cost production. Serionix's technologies are based on the research of James Economy of the College of Engineering. The company is located in Champaign, IL. http://serionix.com

# Patents

72
U.S. Patents issued

**36% of the OTM's U.S. patents issued in FY2013 are already licensed or optioned.**

| Patent No. | Inventors | Departments | Title | Licensed/ Optioned |
|---|---|---|---|---|
| 7,470,701 | Matthew Meitl, Etienne Menard, John Carlisle, Tae-Ho Kim, Dae-Hyeong Kim, John Rogers, Won Mook Choi | Beckman Institute, Materials Science & Eng | Printable Flexible and Stretchable Diamond for Thermal Management | |
| 8,217,381 | Andrew Carlson, Yonggang Huang, Hanqing Jiang, Heung Cho Ko, Yugang Sun, Matthew Meitl, John Rogers, Won Mook Choi, Dahl-Young Khang, Etienne Menard, Zhengtao Zhu, Mark Stoykovich, Keon Jae Lee, Ralph Nuzzo | Beckman Institute, Chemistry, Materials Science & Eng | Controlled Buckling Structures in Semiconductor Interconnects and Nanomembranes for Stretchable Electronics | L |
| 8,218,152 | Adam Zysk, Daniel Marks, Simon Schlachter, Stephen Boppart | Beckman Institute, Electrical & Computer Eng | Group Refractive Index Reconstruction with Broadband Interferometric Confocal Microscopy | L |
| 8,221,179 | Sung-Jin Park, Clark Wagner, James Eden | Electrical & Computer Eng, Physics | Method of Making Arrays of Thin Sheet Microdischarge Devices | O |
| 8,222,988 | Paul Braun, Varun Verma, Victor Elarde, Erik Nelson, James Coleman | Beckman Institute, Electrical & Computer Eng, Materials Science & Eng | Porous Device for Optical and Electronic Applications and Method of Fabricating the Porous Device | L |
| 8,227,020 | George Miley | Nuclear, Plasma, & Radiological Eng (NPRE) | Dislocation Site Formation Techniques | |
| 8,230,215 | Jason Haas, Yih-Chun Hu | Electrical & Computer Eng | Method for Allocating Multiple Authentication Certificates to Vehicles in a Vehicle-to-Vehicle Communication Network | |
| 8,236,914 | Jeffrey Moore, Scott White, Douglas Davis, Nancy Sottos, Stephanie Potisek | Aerospace Engineering, Beckman Institute, Chemistry, Materials Science & Eng | Self-Assessing Mechanochromic Materials | |
| 8,236,929 | Fangyi Zhu, Philip Shane, Munir Cheryan, Aniket Kale | Food Science & Human Nutrition | Method and System for Production of Zein and/or Xanthophylls Using Chromatography | |
| 8,237,538 | Hui Zhang, Paul Braun, Xindi Yu | Beckman Institute, Materials Science & Eng | Porous Battery Electrode for a Rechargeable Battery and Method of Making the Electrode | L/O |
| 8,241,706 | James Economy, Jian Ku Shang, Rongcai Xie, Zhongren Yue | Materials Science & Eng | High Surface Area Ceramic Coated Fibers | |
| 8,266,413 | Wen-Mei Hwu, Ronald Barnes | Coordinated Science Lab | Processor Architecture for Multipass Processing of Instructions Downstream of a Stalled Instruction | |
| 8,268,637 | Meng Lu, Brian Cunningham | Electrical & Computer Eng, Micro and Nanotechnology Lab | Label-Free Biosensors Based Upon Distributed Feedback Laser | |
| 8,269,029 | Richard Masel, Zheng Ni, Qingmei Chen | Chemical & Biomolecular Eng | Water Repellent Metal-Organic Frameworks, Process for Making, and Uses Regarding Same | L |
| 8,269,431 | Han Wui Then, Nick Holonyak, Gabriel Walter, Milton Feng | Electrical & Computer Eng | Method and Apparatus for Producing Linearized Optical Signals | |
| 8,273,052 | Edward Damiano, Firas El-Khatib | Mechanical Science and Engineering (MechSE) | Fully-Automated Control System for Type 1 Diabetes | |

| Patent No. | Inventors | Departments | Title | Licensed/ Optioned |
|---|---|---|---|---|
| 8,283,090 | Jeffrey Moore, Joseph Lyding, Larry Markoski | Beckman Institute, Chemistry, Electrical & Computer Eng | Electrochemical Cells Comprising Laminar Flow Induced Dynamic Conducting Interfaces, Electronic Devices Comprising Such Cells, and Methods Employing Same | L |
| 8,293,271 | Kyekyoon (Kevin) Kim, Hyungsoo Choi | Electrical & Computer Eng | Encapsulated Materials and Methods for Encapsulating Materials | |
| 8,299,211 | Zuojun Lin, Philip Best, Thomas Garcia, Ren-Shiang Chen | Medical Molecular & Integrative Physiology | Peptides and Regulation of Calcium Channels | |
| 8,300,228 | Joseph Geddes, Daniel Marks, Stephen Boppart | Beckman Institute, College of Medicine, Electrical & Computer Eng | Matched Pulse Stimulated Raman Scattering | |
| 8,301,390 | David Goldberg, Alexis Thompson, Todd Martinez, Duane Johnson, Kumara Sastry | Chemistry, General Engineering, Materials Science & Eng | Quantum Chemistry Simulations Using Optimization Methods | |
| 8,305,682 | Haohua Tu, Stephen Boppart | Beckman Institute, Electrical & Computer Eng | Optical Frequency Up-Conversion of Femtosecond Pulses into Targeted Single Bands in the Visible and Ultraviolet | |
| 8,307,414 | Haiyun Luo, Nathanael Thompson | Computer Science | Method and System for Distributed, Localized Authentiaction in the Framework of 802.11i | |
| 8,308,940 | Steve Granick, Liang Hong | Materials Science & Eng | Chromatography Devices and Methods | |
| 8,310,128 | Jingyan Dong, Deepkishore Mukhopadhyay, Placid Ferreira | Mechanical Science and Engineering (MechSE) | High Precision Silicon-On-Insulator MEMS Parallel Kinematics Stages | |
| 8,318,983 | Suk Joong Lee, Eric Gillis, Martin Burke, David Knapp, Kaitlyn Gray | Chemistry | System for Controlling the Reactivity of Boronic Acids | L |
| 8,324,409 | Todsapon Thananattanachon, Tom Rauchfuss | Chemistry, Institute for Genomic Biology | Efficient Method for Preparing 2,5-Dimethylfuran | |
| 8,331,615 | Yasutaka Furukawa, Jean Ponce | Beckman Institute, Computer Science | Match, Expand, and Filter Technique for Multi-View Stereopsis | L |
| 8,334,976 | Kimani Toussaint, Paul Carney, Santosh Tripathi, Brynmor Davis | Beckman Institute, Electrical & Computer Eng, Mechanical Science and Engineering (MechSE) | Second-Order Nonlinear Susceptibility of a Nanoparticle Using Coherent Confocal Microscopy | |
| 8,338,308 | Lynford Goddard, Weibin Qiu | Electrical & Computer Eng, Micro and Nanotechnology Lab | Method of Plasma Etching GA-Based Compound Semiconductors | |
| 8,338,601 | Eric Gillis, Martin Burke, David Knapp | Chemistry | Slow-Release of Organoboronic Acids in Cross-Coupling Reactions | L |
| 8,342,120 | Kyekyoon (Kevin) Kim, Hyungsoo Choi, Philip Heil | Electrical & Computer Eng | Apparatuses and Methods for Applying One or More Materials on One or More Substrates | |
| 8,343,878 | Lynford Goddard, Weibin Qiu | Electrical & Computer Eng, Micro and Nanotechnology Lab | Method of Plasma Etching Ga-Based Compound Simiconductors | |
| 8,344,107 | Munir Cheryan | Food Science & Human Nutrition | Method and System for Corn Fractionation | |
| 8,344,108 | Munir Cheryan | Food Science & Human Nutrition | Method and System for Corn Fractionation | |
| 8,344,333 | Meng Lu, Stephen Schulz, Anusha Pokhriyal, Brian Cunningham | Electrical & Computer Eng, Physics | Multi-Color Fluorescence Enhancement from a Photonic Crystal Surface | |
| 8,351,053 | Muhammed Taher Abu Saif, Won Mo Kang | Mechanical Science and Engineering (MechSE) | Apparatus and method for In Situ Testing of Microscale and Nanoscale Samples | |

| Patent No. | Inventors | Departments | Title | Licensed/ Optioned |
|---|---|---|---|---|
| 8,357,518 | Roderick Mackie, Satish Nair, Isaac Cann, Yejun Han, Dylan Dodd | Animal Sciences, Biochemistry, Institute for Genomic Biology | Thermostable Enzyme Mix for Hydrolysis of Mannan Containing Polysaccharides | |
| 8,362,220 | Scott Daly, John Abelson, Gregory Girolami, Yu Yang, Navneet Kumar, Do Young Kim | Chemistry, Materials Science & Eng | Metal Complex Compositions and Methods for Making Metal-Containing Films | O |
| 8,362,699 | Jason Readle, Andrew Price, Clark Wagner, James Eden, Sung-Jin Park | Electrical & Computer Eng | Interwoven Wire Mesh Microactivity Plasma Arrays | L |
| 8,367,035 | Jang-Ung Park, Coskun Kocabas, Seong Kang, Moonsub Shim, John Rogers | Beckman Institute, Materials Science & Eng, Physics | Methods of Making Spatially Aligned Nanotubes and Nanotube Arrays | |
| 8,367,416 | Juewen Liu, Yi Lu | Beckman Institute, Chemistry | Nucleic Acid Based Fluorescent Sensor for Mercury Detection | |
| 8,372,601 | William Metcalf, Wilfred (Willem) van der Donk, Benjamin Circello, Jun Zhang, Svetlanaa Borisova | Chemistry, Institute for Genomic Biology, Microbiology | Compositions and Methods for the Synthesis of Rhizocticins | |
| 8,372,636 | Michele Kieke, David Kranz, Eric Boder, Karl Dane Wittrup | Biochemistry, Chemical & Biomolecular Eng, Chemistry | Yeast Cell Surface Display of Proteins and Uses Thereof | L |
| 8,378,003 | Mark Clark, Manish Kumar, Julie Zilles | Civil & Environmental Eng | Highly Permeable Polymer Membranes | |
| 8,383,697 | Jeffrey Moore, Scott White, Crhistopher Britt, Nancy Sottos, James Henderson, Gerald Wilson, Benjamin Blaiszik, Mary Caruso | Aerospace Engineering, Beckman Institute, Chemistry, Materials Science & Eng, Theoretical & Applied Mech | Systems for Self-Healing Composite Materials | L |
| 8,384,892 | Brian Cunningham | Electrical & Computer Eng | Surface Enhanced Raman Spectroscopy on Optical Resonator (E.G., Photonic Crystal)Surfaces | |
| 8,387,443 | Craig Prater, Kevin Kjoller, William King, Jonathan Felts | Beckman Institute, Mechanical Science and Engineering (MechSE) | Microcantilever with Reduced Second Harmonic While in Contact with a Surface and Nano Scale Infrared Spectrometer | L |
| 8,394,584 | Gregory Timp, Winston Timp, Andrew Feinberg, Utkur Mirsaidov | Electrical & Computer Eng | Detecting and Sorting Methylated DNA Using a Synthetic Nanopore | L |
| 8,394,706 | Shawn Mack, Heung Cho Ko, Yugang Sun, Matthew Meitl, Etienne Menard, Zhengtao Zhu, Keon Jae Lee, Ralph Nuzzo, John Rogers, Dahl-Young Khang | Beckman Institute, Chemistry, Materials Science & Eng | Printable Semiconductor Structures and Related Methods of Making and Assembling | L |
| 8,398,550 | Marko Orescanin, Michael Insana, Kathleen Toohey | Beckman Institute, Bioengineering, Mechanical Science and Engineering (MechSE) | Techniques to Evaluate Michanical Properties of a Biologic Material | |
| 8,404,558 | James Eden, Sung-Jin Park, Kwang Kim | Electrical & Computer Eng | Arrays of Microcavity Plasma Devices in Sapphire (AI2O3) with Self-Patterned Electrodes | L |
| 8,406,525 | Andrew Wagner, John Wright, Allen Yang, Yi Ma | Beckman Institute, Electrical & Computer Eng | Recognition Via High-Dimensional Data Classification | L |
| 8,409,621 | Kyekyoon (Kevin) Kim, Hyungsoo Choi, Young Choy | Beckman Institute, Electrical & Computer Eng | Microparticles | |
| 8,409,800 | Juewen Liu, Yi Lu | Beckman Institute, Chemistry | Nucleic Acid Based Fluorescent Sensor for Copper Detection | |
| 8,415,461 | Mehmet Veysel Yigit, Yi Lu, Abhijit Mishra, Gerard Wong | Beckman Institute, Materials Science & Eng | Amphiphilic Substances and Functionalized lipid Vesicles Including the Same | |

| Patent No. | Inventors | Departments | Title | Licensed/ Optioned |
|---|---|---|---|---|
| 8,416,823 | Victor Elarde, James Coleman | Electrical & Computer Eng | Quantum Well Active Region with Three Dimensional Barriers and Fabrication | |
| 8,420,978 | Junghun Chae, Sreeram Appasamy, Uttam Reddy, Kanti Jain | Electrical & Computer Eng | High Throughput, Low Cost Dual-Mode Patterning Method for Large Area Substrates | |
| 8,431,080 | Yingchen Yang, Jonathan Engel, Nannan Chen, Craig Tucker, Chang Liu, Kee Ryu, Saunvit Pandya | Coordinated Science Lab, Electrical & Computer Eng, Micro and Nanotechnology Lab | Soft Microelectromechanical Systems (MEMS) | L |
| 8,431,360 | Suk-jin Ha, Huimin Zhao, William Beeson, Chaoguang Tian, Soo Kim, Jin Choi, Sijin Li, N. Louise Glass, Jing Du, Yong-Su Jin | Chemical & Biomolecular Eng, Institute for Genomic Biology | Methods and Compositions for Improvins Sugar Transport, Mixed Sugar Fermentaion, and Production of Biofuels | |
| 8,440,165 | Xiaoling Yang, George Miley | Nuclear, Plasma, & Radiological Eng (NPRE) | Dislocation Site Formation Techniques | L |
| 8,440,546 | Dahl-Young Khang, Yugang Sun, Matthew Meitl, Etienne Menard, Zhengtao Zhu, Keon Jae Lee, Ralph Nuzzo, John Rogers | Beckman Institute, Chemistry, Materials Science & Eng | Methods and Devices for Fabricating and Assembling Printable Semiconductor Elements | L |
| 8,442,091 | Thomas Spinka, James Eden, Sung-Jin Park, Paoyei Chen, Paul Tchertchian | Electrical & Computer Eng | Microchannel Laser Having MicroIsama Gain Media | |
| 8,442,973 | Mark Cramer, Xuehua Shen:, Bin Tan, Cheng-Xiang Zhai | Computer Science | Real Time Implicit User Modeling For Personalized Search | L |
| 8,445,867 | Paul Simonson, Paul Selvin | Institute for Genomic Biology, Physics | Photobleaching and Intermittency Localization Microscopy | |
| 8,447,373 | Stephen Boppart | Beckman Institute | Apparatus and Method for Measuring a Characteristic of a Composition Reactive to a Magnetic Field | |
| 8,456,086 | Andrew Price, James Eden, Sung-Jin Park, Kwang Kim | Electrical & Computer Eng, Materials Science & Eng | Microcavity Plasma Devices with Non-Uniform Cross-Section Microcavities | L |
| 8,462,037 | Naresh Shanbhag, Andrew Singer | Beckman Institute, Coordinated Science Lab, Electrical & Computer Eng | Method and System Having Adjustable Analog-To-Digital Conversion Levels | |
| 8,469,762 | Ravindra Singh, Kyekyoon (Kevin) Kim, Hyungsoo Choi, Ju Gao | Electrical & Computer Eng | High Intensity Discharge Arc Lamp Using UV-Absorbent Coating | |
| 8,470,532 | Juewen Liu, Yi Lu | Beckman Institute, Chemistry | Aptamer-Based Colorimetric Sensor Systems | L |
| 8,471,471 | James Eden, Kuo-Feng (Kevin) Chen | Electrical & Computer Eng | Electron Injection-Controlled Microcavity Plasma Device and Arrays | L |
| D674,154 | Sung (Cliff) Soo Shin, Samuel Kai-Der Chen | Art and Design | Fire Extinguisher | |

# Chicago

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The Office of Technology Management would like to thank the members of our advisory board for their continued guidance and engagement.

William Beck • Sue Fullman • Didyen Majumdar
Bellur Prabhakar • Brenda Russell • Larry Tobacman
Sol Shatz • Christine Wu

## Interns

We would also like to thank the student interns whose hard work and dedication helps enable so much of our work.

Carson Ingo
Kathleen Broughton
James Gocel
Tassos Konstantinidis
Brian Kunzel
Alexander Schrock
Sagar Nadimpalli
Farnaz Bakhshi
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**Paralegal-Compliance Coordinator** Jane Reid
**Chief Clerk** Liz Schleef
**Patent Coordinator** Sandra Thompson
**Legal Office Manager** Donna Wilm

## Interns (2013-2014)

We would also like to thank the student interns whose hard work and dedication helps enable so much of our work.

**Commercialization Analysts** Donald Bunton, Ji Sun Choi, Courtney Cox, Gabriel Ejezie, Jason Hale, Diego Martin de la Fuente, Ryan Richardson, Mark Scott, Paul VanderVelde, Meredith Walker

**Communications Intern** Bailey Bryant
**Marketing Interns** Drew Bollinger, Alexis Martin
**Contract and Financial Compliance Intern:** Wanjing Li

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Design: Lauren Allen; www.laurenallendesign.com