

The background of the cover is a light cream color. On the left side, there is a complex, abstract pattern of thin, overlapping lines in shades of blue and yellow. These lines form a shape that resembles a stylized 'L' or a corner, with the lines curving and intersecting to create a sense of depth and movement. The lines are most dense near the top-left and bottom-left corners and become more sparse as they extend towards the right.

TECHNOLOGY TRANSFER OFFICE FY2013 ANNUAL REPORT

**A BETTER WAY OF LIFE
UC SAN DIEGO
INNOVATIONS**

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Message from the

ASSISTANT VICE CHANCELLOR



I am pleased to report another productive year for the technology transfer program at the University of California, San Diego for the fiscal period from July 1, 2012 to June 30, 2013.

The university's strong research reputation continues to be bolstered by the diverse innovation portfolio that originates from UC San Diego faculty and researchers. Such innovations were central to the 670-plus agreements that were negotiated and executed by the Technology Transfer Office (TTO) in FY2013. These include administrative, letter, option, license, inter-institutional, inter-office, confidentiality, and outgoing material transfer agreements (MTA). Outgoing MTAs comprise the majority with 278 agreements.

TTO entered into 76 licensing agreements (49 inventions and 27 copyrights/trademarks) in FY2013, with 15 newly formed companies adding to the 200-plus start-ups founded with UC San Diego technology. The office experienced increased patent activity with 177 foreign patents issued, over 100 more than FY2012, making this a banner year. Additional gains were seen in revenue received: \$26.597 million, a 35-percent increase over the \$19.6 million of FY2012.

To build on this record of achievement, TTO this year introduced the Express License program and worked with the Office of Contract and Grant Administration to launch the electronic Material Transfer Agreement submission and tracking process. TTO continues to review internal business processes to increase efficiencies, provide wider access to technology transfer information, and foster even greater collaboration with a wide array of partners.

This year's report highlights three UC San Diego licensees and startups who have recently received approval from the US Food and Drug Administration. As you will read, Lymphoseek, Procysbi, and TearLab exemplify the value of TTO's mission to promote and facilitate the transfer of UC San Diego innovations for the benefit of the University community and the public.

Our mission has taken on new importance with the FY2013 launch of UC San Diego's first-ever Strategic Planning process and its emphasis on expanding the university's impact on society and ensuring the greatest impact from public investment in UC research. As we prepare to observe the 20th anniversary of TTO's 1994 founding this fall, we are reaffirming our commitment to UC San Diego's entrepreneurial spirit, culture of innovation, and robust community engagement.

We welcome your feedback and continued support of the UC San Diego technology transfer program.

Sincerely,

Jane C. Moores, Ph.D.
Assistant Vice Chancellor, UC San Diego Technology Transfer Office

Jacobs School of Engineering (101)

Vahid Ataie
Homer Ayana
Bernd Bandemer
Lawrence Bernstein
Christina Boucher
Joao Canhita
Tuck Boon Chan
Zack Ching-Yang Chen
Amy Chiang
Michael Chu
Peter Chung
Jeff Compton
Jie Dai
Mauricio De Oliveira
Hannes Dikel
Sarah Esper
Stephen Foster
Jo Frabetti
Jeffrey Friesen
Eric Gallegos
Arindam Ganguly
Jeff Gole
Nicholas Gomez
Greg Grover
Arpit Gupta
Sohmyung Ha
Muhammad Hassan
Vanessa Herrera
Wei Hu
Tina Huang
Cathleen Hughes
Peggy Ip
Matthew Jacobsen
Jingjing Jiang
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Kiarash Kiantaj
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Youngjin Kim
Young-Han Kim
Yun Soung Kim
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Gilbert Lam
Matthew Lave
Chung Sang John Lee
Alexander Liberman
Darren Lipomi
Yu-hsin Liu
Mark Lorente
Shachar Lovett
Danyong Lu
Weiyi Lu
Raffi Marachelian
Thomas McGee
Sarah Meiklejohn
William Mellette
Marcela Mendoza Martinez

Natalie Mendez
Mark Mercola
Patrick Mercier
Haronid Moncivais
Jaeyun Moon
Joshua Ng
Dung Hoang Nguyen
Phuc Nguyen
Jason Oberg
Aoife O'Mahony
Saam Ostovari
Soyeon Park
Anand Patel
Alexandra Pogue
Adam Printz
Xin Qu
Phil Rios
Roy Ronen
Jessica Schmidt
Taylor Semingson
Elaine Skowronski
June Snedecor
Junlan Song
Youngjun Song
Nikolaus Sonnenschein
Stitt John
Justin Tantiogloc
Chris Thomas
Randy Van
Jean Wang
Lele Wang
Mingxun Wang
John Warner
Tyler Watson
Shih-Hung Weng
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School of Medicine (82)

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Justin Brown
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Sharon Chandler
Yunhui Chang
Sun Choo
Xitong Dang
Tiliang Deng
Lawrence Eichehnfield
Limin Fu
Ken Fujimura
Richard Garfein
Christopher Gregg
Gregory Hannum
Mary Jo Harbert
Randolph Hastings
Eva Hellqvist
Heather Hofflich
Matan Hofree
Andrew Hollands
Derek Juang
Alexander Kauffman
Don Kikkawa
Yacov Koffler
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Dieu Lao
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Steffen Lindert
Michael Linn
Cayla Mason
Daniel McDonald
Joanne McNelis
Mia Miller
Yukiko Miyamoto
Kevin Murphy
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Yumiko Muto
Anna Di Nardo
Jason Nathanson
Vishal Nigam
Brenda Nuyen
Aaron Overland
Fei Peng
Xuchu Que
Dan Ran
Wade Rich
Eric Roeland
Elsa Sanchez-Lopez
William Sandborn
Bernd Schnabl
Andrew Schork
Ekihiro Seki
Sanford Shattil
John Paul Shen
Carol Shostak
Shiv Shukla
Gina Sosinsky

Paul Steinbach
Matthew Taylor
Kathryn Thornberry
Wenyong Tong
Katherine Whipple
Matthew Wieduwilt
Sitao Wu
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Jing Yang
Shawn Yost
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Division of Physical Sciences (28)

Ethan Cho
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Robert Haushalter
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Franklin H J Kenter
Nicolas Kosa
Yuelong Li
Jerry Lin
David Meyer
Jennifer Michaud
Stephanie Moyerman
Christian Perez
Gabriel Ramirez
Candace Seu
Robert Swift

Mohit Tiwari
Siming Wang
Jeff Wereszczynski
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John Whitaker
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Division of Biological Sciences (11)

Albert Chan
Robert Clubb
Felix Hauser
Michael Jung
Amy Ma
Maho Niwa Rosen
William Partlo
Gentry Patrick
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Jun Zhang

Scripps Institution of Oceanography (10)

Julie Cerrato
Robert Glatts
Jennifer Hull
Dominick Mendola
Robert Monroe
Rick Reynolds
Dariusz Stramski
Jan Tatarkiewicz
Maria Vernet
Keshia Whitehead

Skaggs School of Pharmacy and Pharmaceutical Sciences (7)

Geoffrey Chang
Rupak Doshi
Caroline de Gracia Lux
Jihoon Kim
Mathieu Lessard-Viger
Tuan Nguyen
Wangzhong Sheng

UC San Diego Library (6)

Van Thanh Chu
Esme Cowles
Matt Critchlow
Longshu Situ
David Trujillo
Huawei Weng

Academic Affairs (1)

Steven Tan

Division of Social Sciences (1)

Gail Heyman

The Technology Transfer Office welcomes all first time UC San Diego innovators. We are pleased to provide you with our services to help you unlock the potential of your research.

START UP PROFILES

Hera Therapeutics, Inc

Hera Therapeutics, Inc. was founded in 2012 by CEO Karl Hostetler, Ph.D., Professor of Medicine Emeritus at UC San Diego, with technology that resulted from research funded by the National Institutes of Health (NIH) and the Veterans Administration Research Foundation. The company focuses on small molecule antivirals for unmet medical needs. Recently, Dr. Hostetler and his team (Dr. James Beadle and Dr. Nadeida Valiaeva) synthesized and evaluated a new family of antiviral compounds. One of these compounds is an antiviral drug which NIH considers to be "highly active" against the human papillomavirus (HPV), including HPV-16 and HPV-18. These subtypes are high-risk cancer-causing strains responsible for 70% of cervical cancers globally. Because there is no approved antiviral treatment for HPV, it constitutes one of the largest unmet medical needs in virology.

Hera Therapeutics is moving this clinical development compound toward Phase I clinical trials in cervical intraepithelial neoplasia (CIN) and high-risk HPV infections. Additionally, the company is pursuing new avenues for treatment of other HPV infections of the genital tract. Hera Therapeutics also has other compound assets licensed from UC San Diego targeted at AIDS and other viruses for preclinical development and possible partnering.

Solstice Biologics

Solstice Biologics is a San Diego biotechnology startup founded in 2012 on technology developed by Steven Dowdy, Ph.D., Professor of Cellular and Molecular Medicine at UC San Diego and a Howard Hughes Medical Institute investigator from 1994 to 2012. Dr. Dowdy and his team focused on solving the problem of targeting and delivery of nucleic acid therapeutics. Their UC San Diego-licensed technology utilizes an RNA interference (RNAi) prodrug that can enter into cells as short interfering RiboNucleic Neutrals (siRNAs) and is intracellularly converted into active siRNAs. This technology may prove to be a key development in microRNA and RNAi therapies.

RNAi halts the translation from DNA to proteins at a genetic level, but siRNA delivery has remained the rate-limiting step for therapeutic development. Solstice Biologics hopes to change this by developing RNAi prodrugs to address problems with targeting and delivery of RNAi therapeutics. Top-tier venture capital investor venBio and Aeris Capital have committed up to \$18 million in Series A Funding.



Karl Hostetler
President & CEO, Professor of Medicine Emeritus
Director, San Diego VA Medical Center Endocrinology Clinic
Associate Member, Moores Cancer Center

Hera Therapeutics, Inc.

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Sungho Jin
Distinguished Professor
Director, Materials Science & Engineering Program

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Steven Dowdy
Professor, Cellular & Molecular Medicine
Molecular Cell Biology Track Leader

Solstice Biologics

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Nasseo, Inc

Nasseo, Inc. is a medical device company that is developing next generation implants that integrate groundbreaking nanotube implant technology originally developed between UC San Diego's Bioengineering & Materials Science Departments and the Bio-Implant Laboratory at Lund University in Sweden. This nanotechnology licensed by Nasseo is backed by over \$1.5 million in grant funding from the US Army and industry leaders, 10+ years of R&D, and 15+ prestigious scientific publications detailing large animal and repeatable data studies.

In pre-clinical studies, the nanotube implant technology has shown stronger bonding, faster healing, and reduced inflammation and bacterial aggregation benefits by altering the implant surface at the molecular level with a uniform patterning of optimized structures. Nasseo's first product, the TiArray Dental Implant System, received FDA clearance on September 16, 2013 and the company is preparing to conduct clinical trials that investigate the anti-inflammatory, anti-bacterial, and soft tissue adhesion benefits of the nanotube technology.

Nasseo is led by Dr. Garrett Cale Smith (Co-Founder, CEO) who contributed to developing the nanotube technology at UC San Diego with principal inventor Sungho Jin and by Kayvon Pourmirzaie (Co-Founder, COO) who is a fellow UC San Diego Bioengineering alumnus. Nasseo is guided by a team of advisors and clinicians that include internationally renowned experts in the fields of bioengineering, biomaterials, nanofabrication, oral surgery, regulatory processes, dental/orthopedic sales and marketing, and business development.

MAKING THE MiP™ ROBOT

Making the MiP™ Robot

The MiP™ Robot reveal at the Consumer Electronics Show (CES) 2014 was a culmination of a six-year partnership between UC San Diego Coordinated Robotics Lab and WowWee® Group Limited, the consumer robotics company best known for their RoboSapien™ products.

The MiP™ (Mobile Inverted Pendulum) Robot has since been featured on ABC, CBS, Engadget, MSN, Popular Science, The Verge, Yahoo, and various other popular news outlets enchanting the tech community with its advanced design and affordable price. Operating similarly to a Segway, using a system of accelerometers and gyroscopes developed with the UC San Diego Coordinated Robotics Lab, the robot is self-balancing, spatially aware, and able to dynamically assess its surroundings resulting in the company's trademark fusion of technology and personality.

"Its organic nature is particularly engaging: When it stands it gently sways back and forth; when pushed, it takes a step back to regain its balance. In a very real way, the dynamics of MiP™ mimic life"

Thomas Bewley, Director of the Coordinated Robotics Lab at UC San Diego

WowWee® has created an accessible product for all ages which utilizes both hand gestures and Bluetooth-connected smart devices for control. Up to ten units can be connected simultaneously to one device and instructed to use tracking modes, dance, roam freely, perform tricks, play pre-developed games, and more right out of the box.

However, the MiP™ is not simply a toy. The company hopes to captivate software and hardware developers with the ability to integrate with Arduino boards, an open source electronics prototyping platform, and a wealth of documentation. The resultant product blurs the line between advanced robotics and a consumer product.

"The partnership between WowWee® and UC San Diego is going to yield some amazing and dynamic products in the years to come," said WowWee USA President Peter Yanofsky. "We are very excited to be on the cutting edge of this ideation and execution, beginning with the amazing MiP™."

Looking to the future, UC San Diego Coordinated Robotics Lab and WowWee® will be collaborating on future product lines which will bring innovation and robotics to the public.

Want one? At the time of publication, the MiP™ Robot is available from leading retailers, including Best Buy.



Thomas R. Bewley

Ph.D., Professor of Mechanical & Aerospace Engineering,
Director of Coordinated Robotics Lab
Faculty-Affiliate, CalIT2. Officer, U.S. Air Force.

WowWee USA Inc.

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FDA UPDATES

Procysbi



Cystinosis is a rare autosomal recessive inherited disorder caused by the intra-lysosomal accumulation of the amino acid cystine and is diagnosed within the first two years of life. Without treatment, disease progression will result in end-stage kidney failure by the end of the first decade of life. Eventually eyes, muscles, skin, endocrine, respiratory, and nervous systems all exhibit dysfunction and in some cases multiple organ failure and premature death. The current lifelong treatment for cystinosis is cysteamine, which must be taken every six hours, day and night, and is associated with unpleasant side effects including body odor, nausea, vomiting, and abdominal pain.

UC San Diego's Drs. Ranjan Dohil and Jerry Schneider, through research sponsored by the Cystinosis Research Foundation, undertook a series of studies to better understand the pharmacokinetics of cysteamine and also how targeting the delivery of cysteamine to the small intestine would eventually alter the efficacy of the drug by diminishing intra-lysosomal cystine depletion. The data was used to develop a prolonged-release formulation of cysteamine, which patients take every twelve hours and is associated with fewer side effects. This finding culminated in a Phase III clinical trial by Raptor Pharmaceuticals, which licensed the intellectual property to enable development of a drug that provides consistent therapeutic levels for at least twelve hours. As a result, patients are more compliant with therapy and potentially less likely to develop end-organ failure.

The new gastric acid-resistant delayed and extended release cysteamine bitartrate (PROCYSBI®) was approved by FDA and EMA in 2013. The inventors believe that PROCYSBI® provides patients with an improved quality of life with less social stigma, physical discomfort, and less frequent dosing. Through a partnership with Raptor Pharmaceuticals, the company hopes to increase accessibility to the PROCYSBI® by offering financial assistance plans to eligible nephropathic cystinosis patients who apply.

The development of this new formulation is now being explored for treatment of other diseases. Preliminary data from a multicenter study in France has yielded promising results for the treatment of Huntington's Disease and enrollment was recently completed for a placebo-controlled, NIH funded, multicenter study for Non-Alcoholic fatty Liver Disease.

Ranjan Dohil
Professor of Clinical Pediatrics



Jerry Schneider
Professor Emeritus, Pediatrics



Raptor Pharmaceutical Corp.
5 Hamilton Landing, Suite 160
Novato, CA 94949
<http://procysbi.com/>

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Fax: 1-415-382-8002
Email: info@raptorpharma.com

Lymphoseek

TearLab

Lymphoseek®, developed by Navidea from UC San Diego licensed technology, is the first and only receptor-targeted lymphatic mapping agent approved by FDA in more than 30 years. This novel and effective radiopharmaceutical imaging agent is specifically designed to assist doctors in locating lymph nodes for the diagnostic evaluation of cancers.

Navidea received FDA approval of Lymphoseek for use in patients with breast cancer or melanoma on March 13, 2013. The approval for use in sentinel lymph node detection in the United States with head and neck cancer is pending. If the supplementary indication is approved, Lymphoseek would be the only FDA-approved agent for sentinel lymph node detection. European approval is in progress.

The Lymphoseek molecule, invented by Dr. David Vera of the UC San Diego School of Medicine, offers surgeons a new tool to accurately identify and remove lymph nodes draining from a primary tumor while in the operating room. The ability to rapidly locate and biopsy lymph nodes provides vital information in ascertaining if the cancer is localized to the site of the primary tumor or if it has spread and enables surgical management to be personalized specifically to each patient's cancer burden and stage of disease.

With approximately 235,000 new cases of breast cancer and 76,000 new cases of melanoma diagnosed in the United States within the last year alone, this receptor-targeted mapping agent offers surgeons a modern method with increased accuracy and reliability. "Tilmanocept (Lymphoseek) is just as accurate as current techniques, simple to use, takes less time to find lymph nodes and is cleared faster from the body. This could standardize the process of lymph node mapping and make the process easier, particularly for less experienced surgeons," said Anne Wallace, MD, Chief of Plastic Surgery at UC San Diego Health System and Director of Breast Care Unit at UC San Diego Moores Cancer Center.

In addition, the Phase 3 study in head and neck cancer has shown that patients who relied on Lymphoseek required the removal of far fewer lymph nodes than with the "gold standard" of nodal dissection. Also, UC San Diego is conducting a randomized study to address the issue of injection site pain between Lymphoseek and radiolabeled sulfur colloid in lymphatic mapping procedures. Preliminary observations from surgeons suggest that patients may experience fewer problems in pain associated with injection of Lymphoseek.

Last August the Centers for Medicare & Medicaid Services approved reimbursement for Lymphoseek, streamlining the billing and reimbursement process to benefit individuals most in need. Navidea Biopharmaceuticals, formally known as Neoprobe Inc, currently markets and manages Lymphoseek. Lymphoseek is available in the United States exclusively through Cardinal Health.



David R. Vera

Ph.D., Professor of Radiology
Co-Director, UC San Diego In Vivo Cancer & Molecular Imaging Center.

Navidea Biopharmaceuticals

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Local: 1-614-793-7500

Fax: 1-614-793-7522

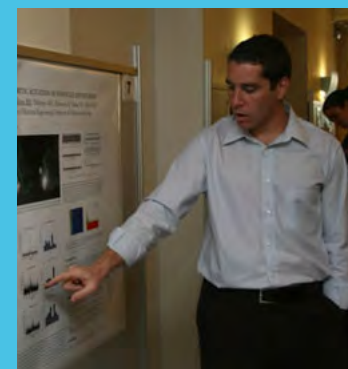
Email: info@navidea.com

Dry Eye Disease affects millions worldwide and is one of the top reasons for visiting an optometrist. Regular symptoms include irritation of the eyes, blurred vision, sensitivity to light, and difficulty wearing contact lenses. The American Optometric Association suggests the usage of artificial tears, tear conservation, increasing tear production, or prescription eye drop to mitigate symptoms, but offers no way to quantitatively monitor the severity of the disease. Current assessments rely upon medical visits and the doctor's discretion.

In order to improve the lives of those impacted by this condition, UC San Diego researcher Benjamin Sullivan set out to redefine the diagnosis and treatment standards. Through his research at UC San Diego, Sullivan co-founded TearLab Corporation (NASDAQ:TEAR) and serves as the company's Chief Scientific Officer. Their flagship product, the TearLab Osmolarity System, was the first objective and quantitative test for diagnosing and managing Dry Eye patients.

By focusing on the ability to monitor and quantify levels of Dry Eye Disease, Sullivan has enabled customizable therapies to optimize management of each patient's unique symptom severity. TearLab generates an Osmolarity number that correlates with a "severity scale" to provide essential information for treatment. Using only 50-nanoliters of tears, and requiring no anesthesia, the TearLab Osmolarity System offers a significant advancement in the diagnosis and management of Dry Eye Disease.

This medical device was approved by the FDA (510k) in April of 2009 with Clinical Laboratory Improvement Amendments (CLIA) in December 2011. After CLIA approval, TearLab has been cleared for wider distribution.



Benjamin Sullivan

Ph.D., Co-Founder and Chief Scientific Officer. Former Student, Michael Heller Lab

TearLab Corp

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Fax: 1-855-812-0540

To send an email, visit <http://tearlab.com/contact>

OUTREACH AND PARTNERSHIPS

SELECTED EVENTS:

July 2012

- Department of Neurosciences Faculty Meeting
- Meeting the Challenges of Conflicts of Interest Seminar, CONNECT
- 2012 Summer Science & Innovation Camp, Institute of Americas
- Alexia Pharmaceuticals Meeting, BIOCOM
- CONNECT Commercialization Council
- The Indus Entrepreneurs (TiE) Southcoast
- Scripps Institution of Oceanography Venture Working Group
- BIOCOM Open House
- Patents & Patent Searching, UC San Diego Library

August 2012

- MIT Enterprise Forum Social
- Origins of Venture Capital Seminar, CONNECT
- Licensing Executive Society (LES) Chapter Meeting
- Translational Research Seminar, UCSD School of Medicine
- California Institute for Regenerative Medicine (CIRM) Meeting (Palo Alto)

September 2012

- Ethics in Science and Technology Meeting, CONNECT
- BIOCOM Meeting
- KIAT Technology Commercialization Training Program, Global CONNECT
- New Faculty Orientation
- Tigris Ventures Open House
- Association of Corporate Counsel In-House Counsel Day, Thomas Jefferson School of Law
- Division of Biological Sciences Retreat
- Oxbridge Biotech Roundtable: What Drives the Biotech Industry - \$ or Innovation

October 2012

- CONNECT Commercialization Council
- Tech Coast Angels Quick Pitch Competition
- How to Optimize Detection of Under Reported Royalties, Licensing Executive Society (LES)
- Lab to Market: Business Model and Opportunity Analysis, Rady School of Management
- Licensing Executive Society (LES) Annual Meeting (Toronto)

*Blue text indicates active TTO participation/organization
**Black Text indicates attendance

- Patenting & Record Keeping, Division of Biological Sciences
- New Copyright Disclosure Meeting, UCI
- Southern California Clean Energy Technology Acceleration Program - IP Webinar
- Graduate Student Seminar Series, Department of Bioengineering
- WBT Innovation Marketplace
- Intellectual Property Managers Meeting, UCOP
- Innovation and IP Lecture, Mechanical and Aerospace Engineering
- TriNet Challenge, Scripps Institution of Oceanography
- Patents & Patent Searching, UC San Diego Library
- Stem Cells on the Mesa, Sanford Consortium of Regenerative Medicine
- Industry Connections Workshop, UCSD Post Doctoral Association

November 2012

- Intellectual Property and Licensing: Importance of Contracts in IP Workshop
- Milestone or Not a Milestone: The Adverse Effects of Undefined Terms Meeting, Licensing Executive Society

December 2012

- BIOCOM Meeting
- Most Innovative New Product Awards, CONNECT
- Innovation Centers Teleconference, City of San Francisco
- Licensing Executive Society (LES) Chapter Meeting
- Scripps Institution of Oceanography Venture Working Group

January 2013

- Clinical and Translational Research Institute Overview Meeting
- IP Basics Presentation, Rady School
- Stojan Radic Lab Tour for Miramar Ventures
- Triton Innovation Network (TriNet) Challenge Conference
- The Indus Entrepreneurs (TiE) - Dr. Gil Amelio Seminar
- The Future of Patent Law Remedies, SDIPLA
- California Biomedical Industry Report Overview, Cambridge Healthcare Institute
- Canadian Consulate Dinner

- DistribuTECH 2013
- Patents & Patent Searching, UC San Diego Library
- BioPath Meeting, Division of Biological Sciences

February 2013

- Advancing to Industry Presentation, SD Post Doctorate Consortium
- Scripps Institution of Oceanography Venture Working Group
- BioPath Meeting, Division of Biological Sciences
- Commercializing Microfluidic Cell Analysis Meeting, LES
- Selecting a Non-Traditional Dosage Form, BIOCOM CRO
- UCSD Extension IP and Licensing Class Presentation
- CONNECT Commercialization Council
- AUTM Annual Meeting (San Antonio, TX)

March 2013

- CONNECT: Bench to Bar
- Department of Bioengineering: Senior Design Class
- LES Chapter Meeting: Bargaining Power in a Licensing Negotiation: Application of Game Theory
- Kyoto Symposium: Exit Strategies
- MBA Technology Commercialization Class Seminar, SDSU
- Scripps Institution of Oceanography Venture Working Group
- Introduction to Venture Capital Seminar, CONNECT
- Science Speed Round Seminar, UC San Diego
- America Invent Act Presentation by Fish & Richardson

April 2013

- UC System - Wide Technology Transfer Forum
- Southern California Clean Energy Technology Acceleration Program, Von Liebig Center
- Translational Oncology Symposium, Moores Cancer Center
- Algae Biofuels Leadership Conference, BioFuels Digest
- "First Inventor to File" Seminar, Perkins Coie & UC San Diego Technology Transfer Office
- Patents & Patent Searching, UC San Diego Library
- 2013 Jacobs School of Engineering Research Expo
- BIO International Convention
- Innovative Methods and Devices for Personal Health, TiE South Coast
- Food & Fuel for the 21st Century Symposium
- BIO International Convention
- Innovative Methods and Devices for Personal Health
- UC Intellectual Property Managers (IPM) Meeting (UC Santa Cruz)

May 2013

- UC Material Transfer Agreement Forum (UC Irvine)
- Rady School of Management Pitch Fest
- University - Foundation Relations Meeting
- BioPath Seminar, Division of Biological Sciences
- TEDx UCSD: Innovation & Tradition
- IP Matters in Every Deal, Licensing Executive Society (LES)

June 2013

- UCSD Core Bio Services: 13th Annual Vendor Show
- CalBio Success Redefined
- TTO Best Practices: E-Systems
- Connect with CONNECT

SELECTED VISITORS:

July 2012

- Ngee Ann Polytechnic - Technology Development and Innovation Office (Singapore)
- EMD Millipore

August 2012

- Tigris Ventures
- IPXI - Patent Trade and Exchange

September 2012

- Russian Delegation: Incentives for Research and Development

October 2012

- Morrison Foerster
- Pfizer
- Jianjsu University

January 2013

- Yeungnam University, South Korea
- Roche
- West Health Wireless

March 2013

- Novo Nordisk
- IPR/Technology Transfer and Commercialization Delegation from Eastern Europe

April 2013

- Raisoni Group of Institutions (RGI), India
- Joint Research Committee, Sanofi
- Zhejiang Province Delegation

May 2013

- National Security Agency
- Becton, Dickinson and Company
- National Institutes of Health - National Institute of Neurological Disorders and Stroke

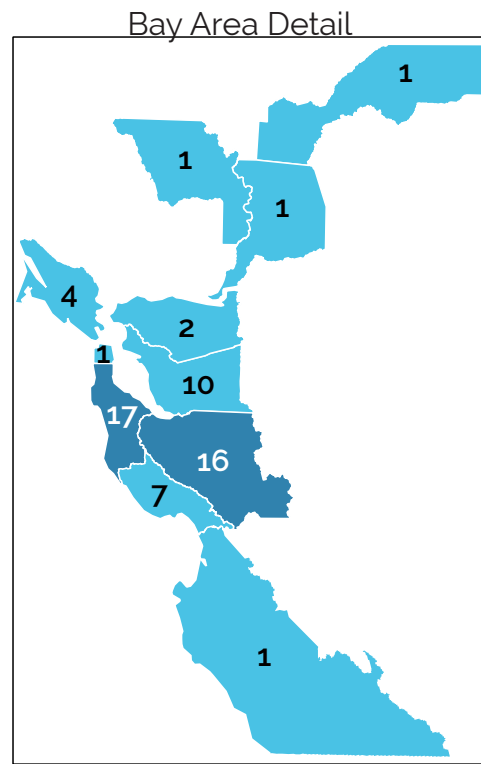
June 2013

- GlaxoSmithKline
- International Union for Science & Technology Innovation - Beijing Municipal Science & Technology Commission

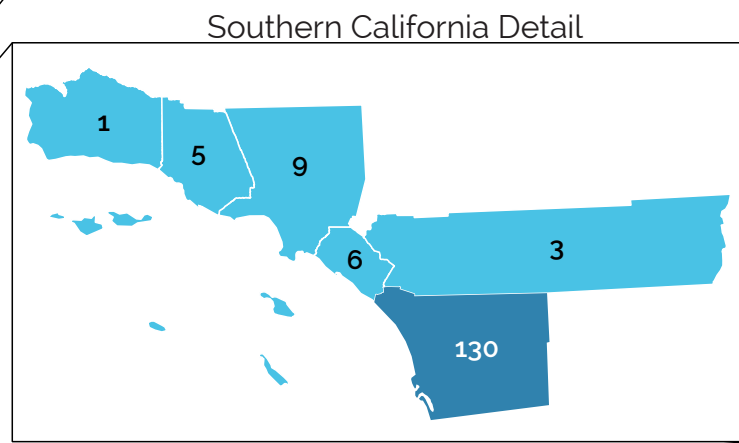
*Blue text indicates active TTO participation/organization
**Black Text indicates attendance

LOCAL, NATIONAL, & GLOBAL IMPACT

Active Statewide Licenses

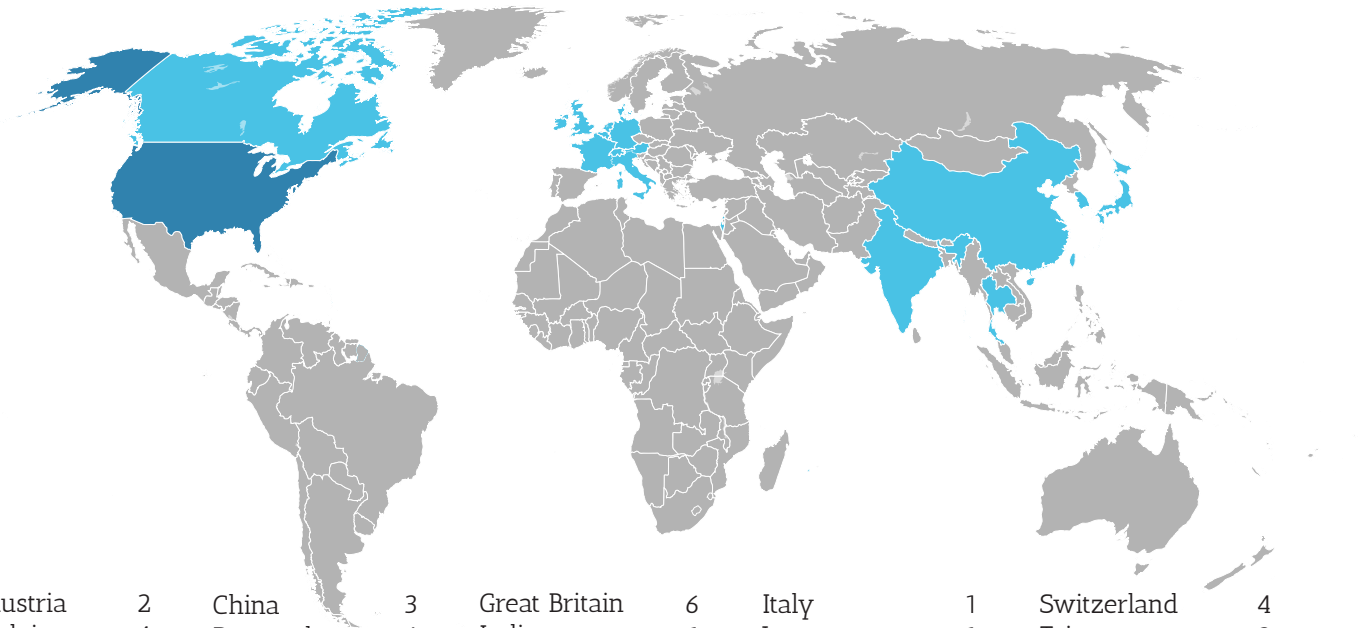
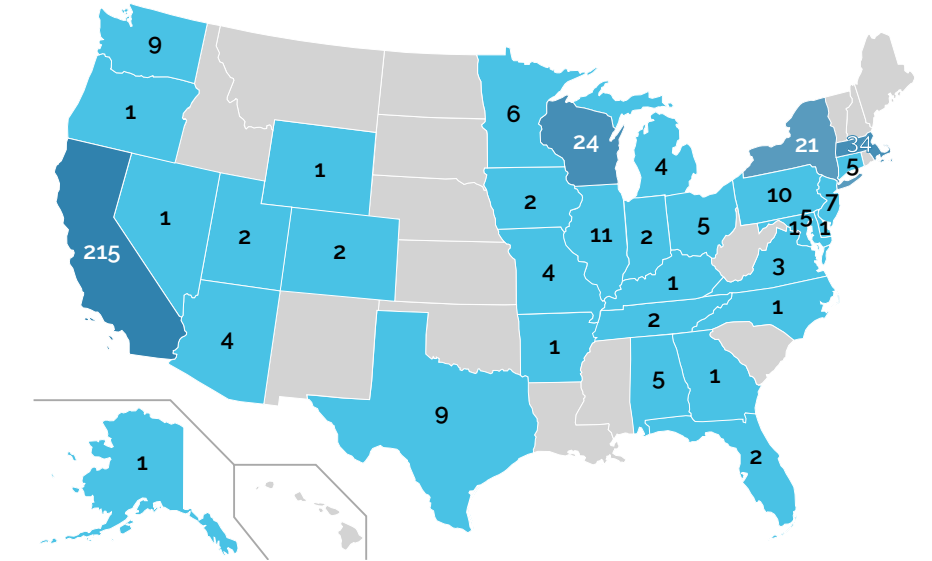


Alameda County	10
Contra Costa County	2
Los Angeles County	9
Marin County	4
Monterey County	1
Orange County	6
Placer County	1
Riverside County	3
Sacramento County	1
San Diego County	130
San Francisco County	1
San Mateo County	17
Santa Barbara County	1
Santa Clara County	16
Santa Cruz County	7
Ventura County	5
Yolo County	1



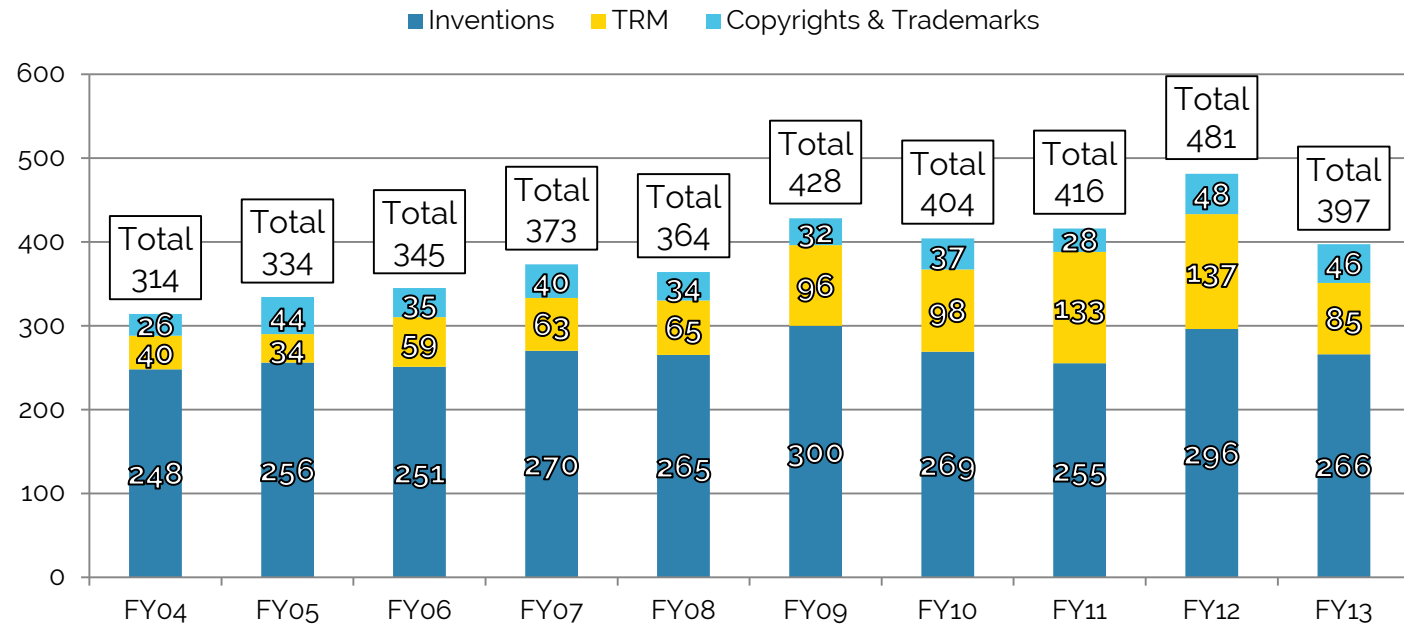
Active National & Worldwide Licenses

AK	1	MI	4
AL	5	MN	6
AR	1	MO	4
AZ	4	NC	1
CA	215	NJ	7
CO	2	NV	1
CT	5	NY	21
DC	1	OH	5
DE	1	OR	1
FL	2	PA	10
GA	1	TN	2
IA	2	TX	9
IL	11	UT	2
IN	2	VA	3
KY	1	WA	9
MA	34	WI	24
MD	5	WY	1



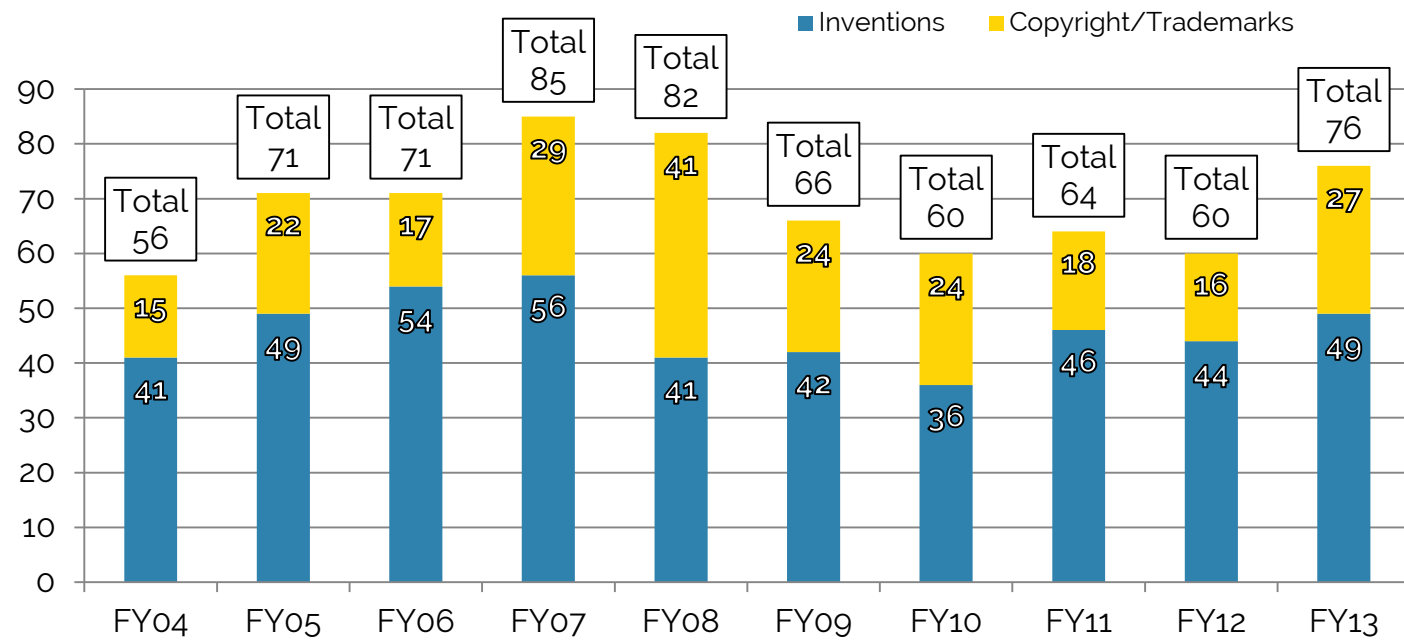
Austria	2	China	3	Great Britain	6	Italy	1	Switzerland	4
Belgium	4	Denmark	4	India	1	Japan	1	Taiwan	2
Bermuda	1	France	3	Ireland	1	Netherlands	3	Thailand	2
Canada	2	Germany	4	Israel	3	South Korea	2	United States	403

Innovations Reported



Innovations comprised Copyrights & Trademarks, Inventions, and Tangible Research Materials (TRM). TRMs represent a wide range of tangible properties including: cell lines; plasmids; and mice. The campus generates a large number of disclosed innovations annually, recently fluctuating around 400 disclosures a year.

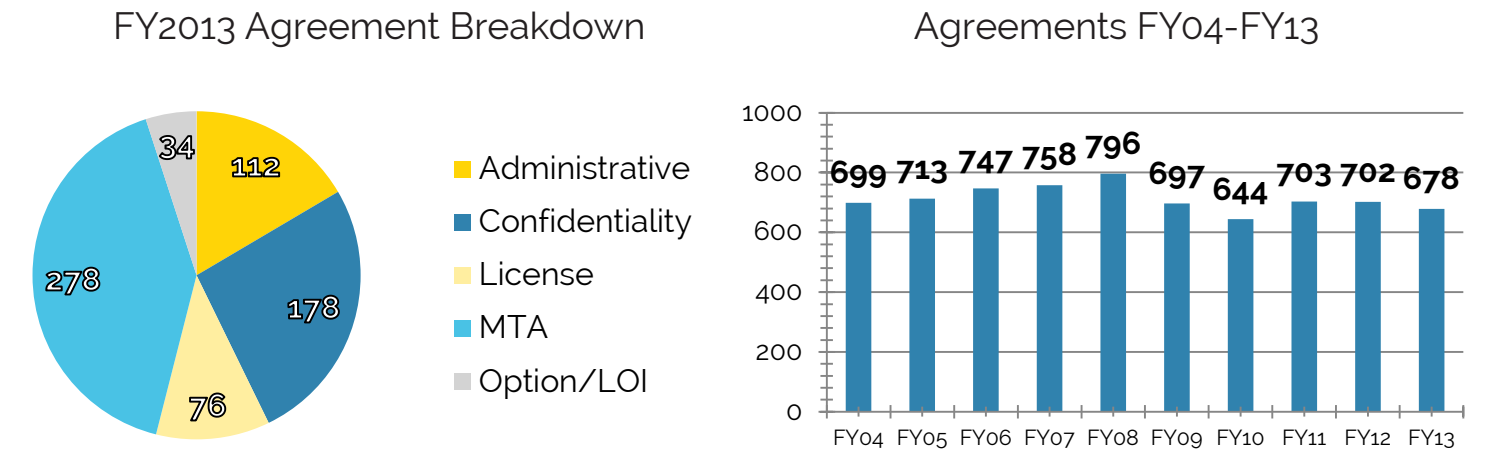
Licenses



*In FY13 the execution date of the license is used to determine the fiscal year of the agreement in order to be consistent with the UCOP Systemwide report. Previously, the effective date of the license was used.

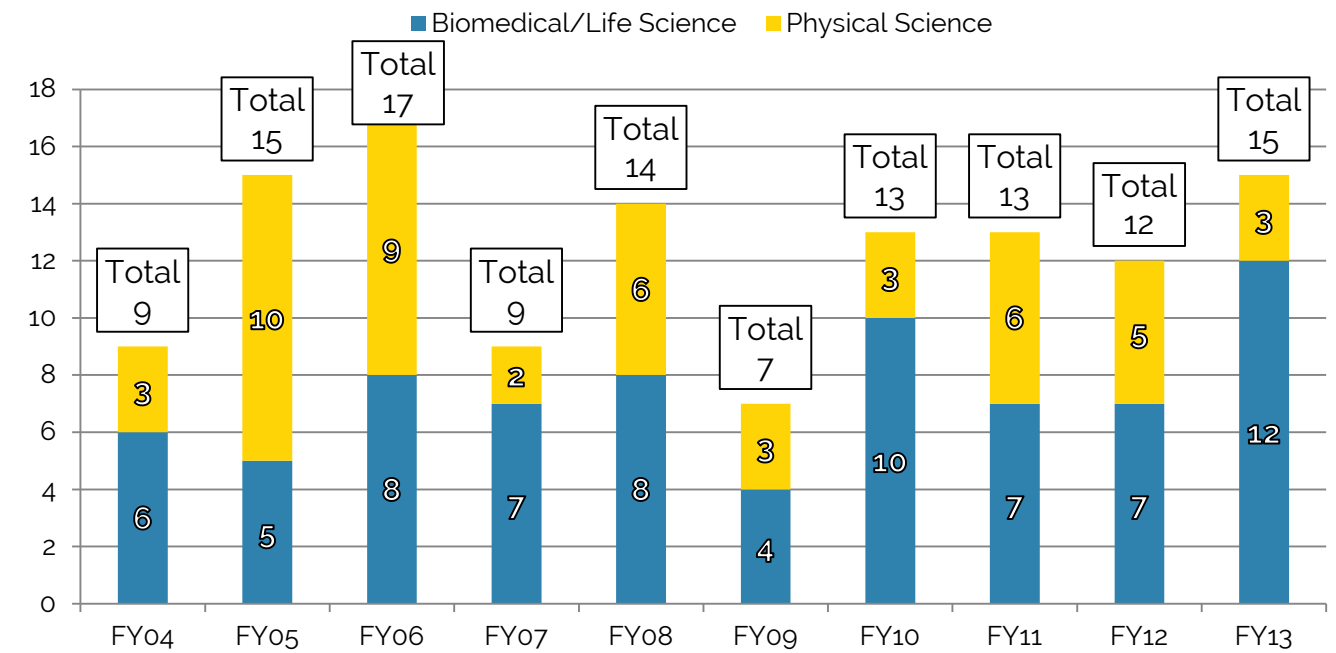
In FY2013, 49 Invention licenses and options and 27 Copyright/Trademark agreements were executed, up from 44 and 16 respectively. This marks a noticeable increase from the previous year reaching a six-year high that is comparable to the ten-year high reached in FY2007.

Agreements



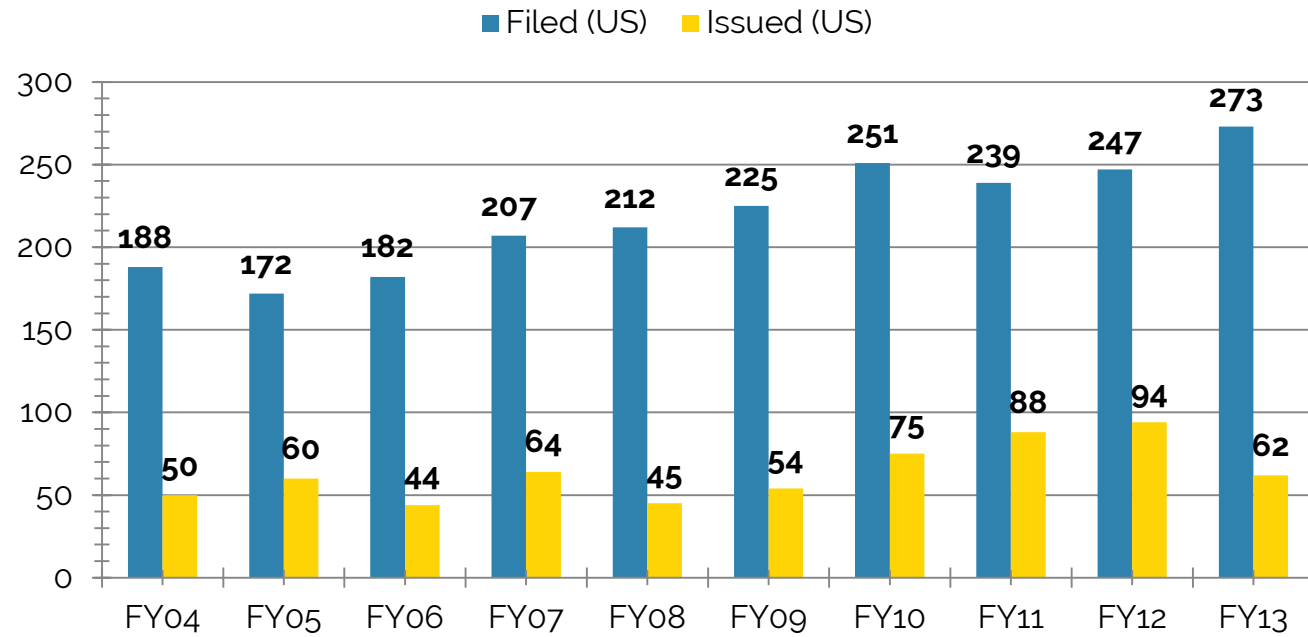
Agreements comprise Administrative, Confidentiality, License, Material Transfer Agreement (MTA), and Option/Letter of Intent. From FY12 to FY13, overall agreements have slightly decreased from 702 to 678 with MTAs continuing to be the largest contributor. Increasing from previous years were Licenses and Confidentiality Agreements which rose to 76 and 178 from 60 and 162 respectively. For the past three fiscal years, the agreements have remained near 700, suggesting stabilization after the economic downturn that began in approximately FY07.

Startups



The entrepreneurial activity of the San Diego region remains robust. UC San Diego faculty, staff, and students continue to drive economic growth through startup companies built upon UC San Diego licensed technologies.

Patent Activity (US)



FY2013 continues to reflect the office's strong patent portfolio. This year the TFO reached a ten-year high of 273 US patents filed.

Patent Filings

PATENT	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
US First Filing*	144	133	147	142	127	152	168	155	173	202
US Secondary filing**	44	39	35	65	85	73	83	84	74	71 [†]
First Foreign Filing***	94	67	89	60	53	61	54	58	75	72
Total Filed	282	239	271	267	265	286	305	297	322	345
US Patents Issued	50	60	44	64	45	54	75	88	94	62
Foreign Patents Issued	79	87	148	62	116	97	39	46	70	177
Total Patents Issued	129	147	192	126	161	151	114	134	164	239

*US first filings are typically provisional filings, and some US utility filings.

**US secondary filings are conversions, continuations (includes divisionals, continuations-in-part), and refiled provisional patents.

***First foreign filings are Patent Cooperation Treaty (PCT) filings.

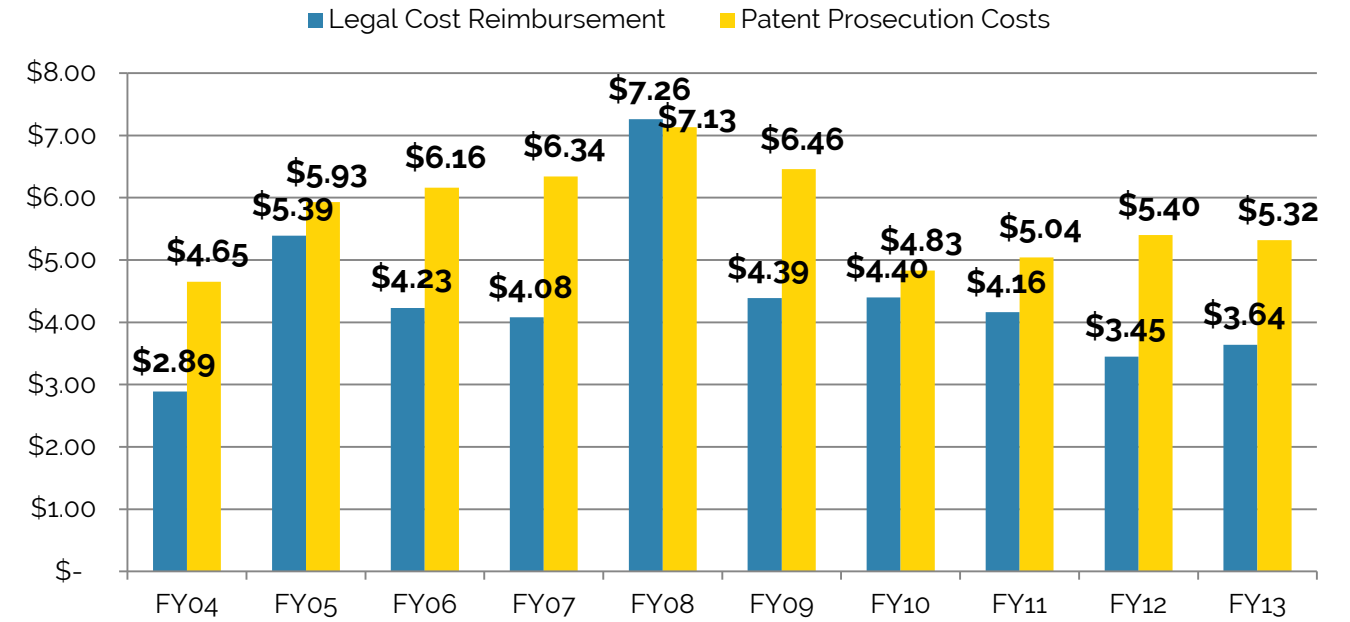
Note: Foreign National Stage and U.S. National Stage filings are not included in the table above. Starting in FY11 Foreign patents issued include individual countries in the EP where patents were validated.

[†]This amount is reported as 155 in the UC Systemwide Report primarily due to differing definitions in what constitutes a First Filing.

Some totals may change from year-to-year due to post fiscal year-end adjustments.

Patent Prosecution Costs & Reimbursements

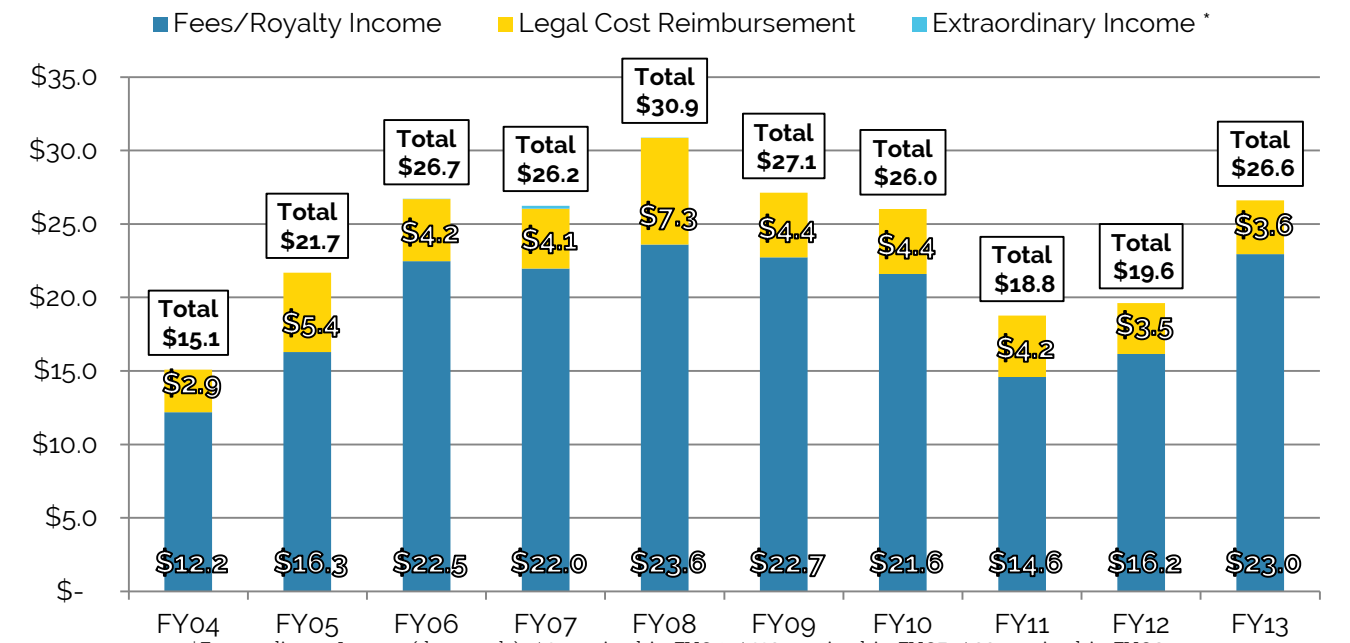
(in millions)



In FY2013, patent prosecution costs accounted for approximately 40% of total expenses. This year (see p. 23) approximately 68% of the patent costs were reimbursed through invention licensing-agreements, down slightly from the ten-year average of 76%. Typically reimbursements are recorded in a year following that in which the costs were incurred.

TFO Income

(in millions)



*Extraordinary Income (thousands): \$1 received in FY06; \$193 received in FY07; \$23 received in FY08

The two primary components of income comprise Fees/Royalties and Legal Cost Reimbursements. TFO Income increased significantly from FY12 primarily due to an increase of 6.8 million in Fee/Royalty Income. This resulted in a total income increase of approximately \$7 million up to \$26.6 million.

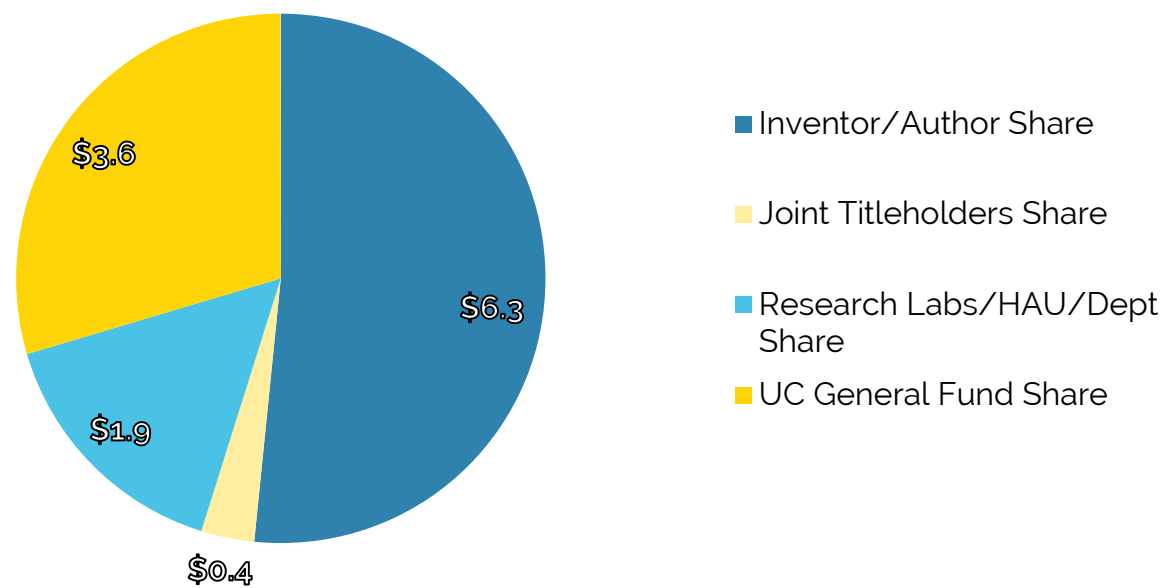
Mandatory Distributions of IP Management Income FY2004-2013 (in thousands)

The Technology Transfer Office distributed approximately \$12.1 million of intellectual property income in FY2013, a \$2.7 million increase from FY2012. Distributions were made to inventors/authors, joint co-owners of intellectual property, participating academic units for research support, the campus fund, and UC General Fund in accordance with University of California and UC San Diego's guidelines. Invention and copyright income distributions are based on income received in the prior fiscal year (FY2012). Material Transfer Agreement (MTA) income distribution to the research laboratories is based on income received in the same fiscal year (FY2013).

	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	Total (FY04-13)
Inventor/Author Share	\$2,654	\$3,727	\$6,192	\$8,667	\$8,609	\$9,553	\$9,142	\$8,829	\$5,752	\$6,257	\$69,382
Joint Titleholders Share	\$295	\$77	\$393	\$127	\$398	\$432	\$466	\$335	\$403	\$394	\$3,320
Research Labs/HAU*/Dept Share	\$1,126	\$1,215	\$1,747	\$2,227	\$2,299	\$2,404	\$2,279	\$2,275	\$1,506	\$1,882	\$18,960
UC General Fund Share	\$1,007	\$2,658	\$3,382	\$2,611	\$3,470	\$2,570	\$2,744	\$1,022	\$1,736	\$3,592	\$24,792
Total Distributions	\$5,082	\$7,677	\$11,714	\$13,632	\$14,776	\$14,959	\$14,631	\$12,461	\$9,397	\$12,125	\$116,454

* HAU = Home Academic Unit

Mandatory Distributions of IP Management Income FY2013 (in millions) Breakdown



IP Management Income & Expense FY2004-2013 (in thousands)

The majority of the TTO's licensing income is from license fees (issue, maintenance, and milestone) and earned royalties. With a primary mission to transfer technology for public benefit, the TTO provides fair and equal access to all available technologies and licenses to both large and small entities that are best able to develop and commercialize these UC San Diego Innovations.

	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	Total (FY04-13)	
Income	Invention	\$11,473	\$15,496	\$21,842	\$21,423	\$22,694	\$22,235	\$20,968	\$14,048	\$15,575	\$22,072	\$187,826
	Copyright	\$314	\$214	\$311	\$219	\$318	\$236	\$359	\$347	\$415	\$782	\$3,515
	Tangible Research Material	\$405	\$578	\$310	\$329	\$586	\$255	\$281	\$200	\$171	\$105	\$3,220
	Legal Cost Reimbursement	\$2,896	\$5,396	\$4,234	\$4,080	\$7,261	\$4,396	\$4,403	\$4,164	\$3,454	\$3,638	\$43,923
	Extraordinary Income *	\$0	\$0	\$1	\$193	\$23	\$0	\$0	\$0	\$0	\$0	\$218
	Total Income	\$15,088	\$21,684	\$26,699	\$26,244	\$30,882	\$27,122	\$26,011	\$18,759	\$19,615	\$26,597	\$238,702
Expense	Patent Prosecution	\$4,645	\$5,931	\$6,162	\$6,336	\$7,124	\$6,464	\$4,833	\$5,036	\$5,410	\$5,319	\$57,260
	Copyright	\$0	\$4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4	\$8
	TTO Campus Operations	\$2,264	\$2,273	\$2,691	\$2,732	\$2,738	\$3,079	\$2,912	\$3,070	\$3,297	\$3,599	\$28,655
	Other Admin Department Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$354	\$238	\$254	\$846
	UCOP & OTT Assessments	\$877	\$892	\$879	\$461	\$65	\$65	\$375	\$65	\$45	\$45	\$3,769
	Extraordinary Expenses **	\$2,789	\$459	\$57	\$205	\$18	\$3	\$0	\$0	-	\$18	\$3,549
	UC General Fund ***	\$1,007	\$2,658	\$3,382	\$2,611	\$3,470	\$2,570	\$2,744	\$1,022	\$1,736	\$3,592	\$24,792
	Total Expense	\$11,582	\$12,217	\$13,171	\$12,345	\$13,415	\$12,181	\$10,864	\$9,547	\$10,726	\$12,831	\$118,879

NET INCOME	\$3,506	\$9,467	\$13,528	\$13,899	\$17,467	\$14,941	\$15,147	\$9,212	\$8,889	\$13,766	\$119,823
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* Extraordinary income includes nonrecurring items such as legal settlements and /or one-time payments.

** Extraordinary expenses includes unbudgeted expenses for litigation and settlement.

*** UC General Fund was previously called State General Fund.

**** Before conversion to funding streams initiative, General Fund expense was paid in the year after revenue was received.

Note: Some totals may change from year-to-year due to post fiscal year-end adjustments.

TTO Campus Support FY2004-2013 (in thousands)

	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	Total (FY04-13)
Research Labs/HAU*/Dept Share	\$1,126	\$1,215	\$1,747	\$2,227	\$2,299	\$2,404	\$2,279	\$2,275	\$1,506	\$1,882	\$18,960
UCOP General Fund Share **	\$1,007	\$2,658	\$3,382	\$2,611	\$3,470	\$2,570	\$2,744	\$1,022	\$0	\$0	\$19,464
SD General Fund***	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,736	\$3,591	\$5,327
Campus Admin Overhead Charge (ASSA)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$354	\$238	\$254	\$846
Chancellor's Share of IP Income****	-\$568	\$4,248	\$5,197	\$2,878	\$6,158	\$2,753	\$3,260	-\$2,227	\$1,228	\$5,234	\$28,161
TOTAL SUPPORT	\$1,565	\$8,121	\$10,326	\$7,716	\$11,927	\$7,727	\$8,283	\$1,424	\$4,708	\$10,961	\$72,758

* HAU = Home Academic Unit

** Formerly called State General Fund

*** Prior to FY12 the Gen Fund was forwarded to UCOP and later after allocations returned to SD. In FY12 and beyond the funds stay on Campus.

**** Chancellor's Share of IP Income = Net Income less payments to Inventor/Authors, Joint Holders and Research Shares.

An abstract graphic on the right side of the page, consisting of a dense, intricate web of thin, overlapping lines in shades of blue and yellow. The lines originate from the right edge and spread out towards the left, creating a sense of depth and movement. The background is a solid, light yellow color.

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