

TechTIPS

Technology Transfer & Intellectual Property Services' newsletter for updates on licensing, patents, and other intellectual property matters.

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Save the Date!

Third Biennial UCSD Innovators' Showcase – October 17, 2006, 6:00 pm - 9:00 pm, Birch Aquarium at Scripps.



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10/12/06–TechTIPS Dialogue Series

9/28/06–UCSD \$50K Entrepreneurship Competition

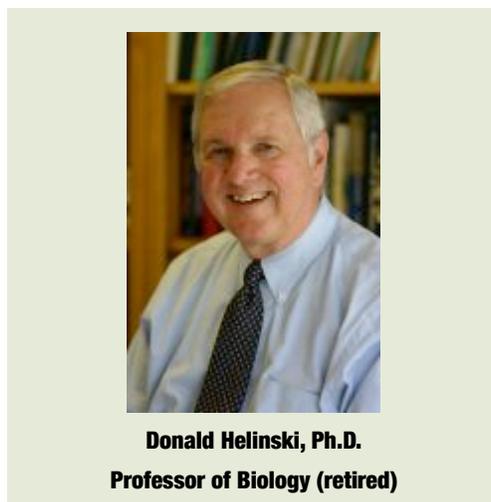
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Lighting Up Molecular Biology

Professor Donald Helinski joined the university during its infancy in 1965 as associate professor in biology. In the intervening years as the campus has grown and attained national prominence in science and research, Helinski's academic career and contributions have flourished as well. In addition to his research and teaching responsibilities, Helinski was Chair for the Department of Biology and several other programs including the NIH Microbial Physiology Study Section, UC Systemwide Biotechnology Research and Education Program; was Associate Dean, Natural Sciences; and, since 1994, was Research Professor. As a well-respected teacher and mentor, he will continue to have an impact through the knowledge he has shared with his former students and colleagues.

During his 40+ years at the university, Professor Helinski was a contributor to the birth of biotechnology, for example, serving on the NIH Recombinant DNA Advisory Committee in the late 1970's. Along with his fellow researchers, in the early 1980's, he developed a tool that is still widely used today in life science research. This tool, firefly luciferase, developed by Professor Donald Helinski

and his former collaborator the late Professor Marlene (DeLuca) McElroy and their research groups, allows the detection of biological activity.



Donald Helinski, Ph.D.
Professor of Biology (retired)

In nature, fireflies contain luciferase, an enzyme that catalyses a light-emitting reaction used to startle predators. Researchers today use recombinant luciferase in a wide variety of biological assays. Professors Helinski and McElroy were able to clone and express regions of DNA that encode the enzyme with bioluminescence-producing activity. As stated in US Patent No. 5,583,024 (issued December 10,

1996), "This invention makes possible the isolation of a bioluminescent reporter molecule, luciferase, useful in virtually all biological assays, and additionally permits the molecular construction of dual-function hybrid molecules." Subsequently, two additional patents on this technology were issued, US Patent No. 5,674,713 (October 7, 1997) and US Patent No. 5,700,673 (December 23, 1997).

This practical tool, with far reaching impact, is licensed to several companies and is sold worldwide. From laboratory research to useful new products, this technology is an excellent example of how research can be translated into marketable products that will continue to facilitate new discoveries about gene regulation and function.

Donald Helinski earned his Ph.D. at Case Western Reserve University and held a postdoctoral fellowship at Stanford University. He serves on the editorial boards of Plasmid and Genetic Engineering. Professor Helinski is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, the European Molecular Biology Organization and the American Academy of Microbiology.

(Helinski continued on page 2)

Events

Third Biennial UCSD Innovator Showcase:

October 17, 2006 – Chancellor Fox will present an award recognizing a distinguished UCSD faculty inventor during the third biennial UCSD Innovator Showcase. This event promotes the innovative culture across campus while enhancing university-industry relations, by invitation only.

http://invent.ucsd.edu/events/showcase_06/index.htm

- Birch Aquarium at Scripps 6pm - 9pm
- Inquiries to 858.822.1053

TechTIPS Dialogues:

TechTIPS, in conjunction with CalIT2, is presenting a series of town hall meetings for CalIT2 researchers. These meetings are informal Q and A discussions about the functions of technology transfer at the university and how the office can assist researchers with protecting and marketing their innovations.

- October 12: "Everything You Always Wanted to Know about Disclosing Your New Inventions (but Were Afraid to Ask)"
- November 9: "The Patent-filing Process: Much Better than Going to the Dentist"
- December 7: "Copyright, Trademark and Open-source Issues: Finding a Happy (Digital) Medium"
- January 11: "Permissible Consulting and Start-ups: How to Get Involved with Businesses without Ending Up on the Front Page of the San Francisco Chronicle"

UCSD \$50K Entrepreneurship Competition: Kickoff September 28

The Triton Innovation Network (TIN), a UCSD-based student organization is organizing the first annual \$50k Entrepreneurship Competition. For students interested in competing in this event, it is a great chance for you to engage in the involvement with the innovative culture of UCSD. For those who believe you have the quality and discipline to work in a team to drive technological and innovative ideas toward new development, this is a great opportunity for you.

UCSD TechTIPS is one of the sponsors of the competition and will match the prize awarded if a UCSD invention is used for the business plan.

For more information please visit:

<http://www.ucsd50K.com/frontend/index.html>

2006 Taipei International Invention Show & Technomart

UCSD TechTIPS participated in the 2006 Taipei International Invention Show & Technomart to promote the transfer of several display technologies that may improve the image quality of LCDs for television and computer monitor uses. This international showcase was held in early September 2006.



One of the technologies that TechTIPS promoted at the showcase is a software solution by pre-processing images prior to their display on screen. The novel algorithm prefilters the data using motion information before they are sent to the screen by splitting each frame into blocks of perception significance, determining the motion vector of every block, calculating the scaled gradient magnitude of each block, then applying the Richardson-Lucy algorithm to those blocks that exceed certain gradient-magnitude threshold. The end result is improved image display on LCD screens with less blur.

The second technology is an engineering process, tradenamed TackyDot(R), that provides an improved hardware solution to image displays. It provides a dry powder process that allows for precise placement and patterning of micron-sized phosphor particles for LCD backlighting to enhance image contrast. The new process is environmentally friendly and produces no detectable corrosive or toxic decompositional by-products.

Helinski (continued)

Prior to his recent retirement, Professor Helinski's research efforts were focused on the genetic and biochemical basis of stable maintenance of plasmids in bacteria. This October, Professor Helinski will receive the 2006 Outstanding Innovation Award presented by Chancellor Marye Anne Fox based on his contributions to life science research at the Third Biennial UCSD Innovators' Showcase to be held at the Birch Aquarium at Scripps.

The Molecular Biology Section of UCSD's Division of Biological Sciences provides the basic scientific knowledge applicable to all areas of biology. The Section's focus is on studies of mammalian cells and microbial organisms at the genetic and biochemical levels, and centers on some of the underlying mechanisms that mediate biological processes such as gene regulation, and cell growth-differentiation, development, and death.

Disclosing Inventions to TechTIPS

Making a disclosure of a new innovation to TechTIPS is a relatively easy process. You can download the disclosure form (one for inventions and a different one for copyright materials), send us an email or simply call us (858-534-5915) to send you an electronic or a hard copy.

Invention Disclosure Form:

http://invent.ucsd.edu/downloads/forms/Form_Disclosure_Invention.pdf

Copyright Disclosure Form:

http://invent.ucsd.edu/forms/form_disclosure_copyright1005.doc

While preparing the form, please feel free to append the disclosure form with any manuscripts, meeting abstracts, grant proposals, and/or the latest data (text, tables, figures in any medium) so we may properly assess your new innovation.

Please return the completed form electronically (invent@ucsd.edu) or hard-copy (if an electronic copy is sent, please send the disclosure, with executed signature page, to Mail Code 0910).

Record Establishment

TechTIPS' Disclosure Management Group will assign the disclosure a "case number" or a "docket number" with designations indicating that the intellectual property (i) originates from work at the San Diego campus; (ii) whether it discloses an "invention" or a "copyright" material; (iii) the fiscal year the disclosure is made; and (iv) a serial number indicating the timing of the disclosure received by TechTIPS. A typical docket number for a San Diego disclosure will appear as SDYYYY-XXX with "SD" signifying "San Diego campus", "YYYY" indicating the fiscal year the disclosure is made, and "XXX" the serial number indicating the sequence of disclosure received by this office.

Inventors will receive a notice that we have received the disclosures with the case number and the name of the assigned licensing officer. Please provide this case number when contacting us about your disclosure, which will allow us to better assist you with your questions regarding the invention.

Inventor Portal

UCSD inventors are able to access the status of their invention and copyright disclosures online. Using the TechTIPS Inventor Portal, you will be able to check on patent prosecution progress, along with the marketing and licensing status of your disclosures. If you have not received your user id and password and would like to use the portal, please send an email request to invent@ucsd.edu.



The following are US patents that were issued during FY2006 to UCSD researchers.

Division of Biological Sciences

- 6,998,517 Martin Yanofsky, et al.
Control of fruit dehiscence in Arabidopsis by indehiscent1 genes
- 6,929,925 Charles Zuker, et al.
Assay for sensory modulators using a sensory cell specific G-protein beta subunit

Division of Physical Sciences

- 6,987,193 Trevor McMorris, et al.
Illudin analogs useful as antitumor agents
- 7,042,570 Michael Sailor et al.
Porous thin film time-varying reflectivity analysis of samples
- 6,933,384 Roger Tsien, et al.
Synthetic molecules for labeling histidine-rich proteins
- 7,005,511 Roger Tsien, et al.
Fluorescent protein variants and methods for making same
- 7,022,826 Roger Tsien, et al.
Non-oligomerizing fluorescent proteins
- 7,041,821 Roger Tsien, et al.
Synthetic molecules for labeling histidine-rich proteins

Jacobs School of Engineering

- 7,036,014 Mihir Bellare, et al.
Probabilistic signature scheme
- 7,014,742 Sadik Esener, et al.
Positioning of organic and inorganic objects by electrophoretic forces, including for microlens alignment
- 7,006,028 Ian Galton
Digital background cancellation of digital to analog converter mismatch noise in analog to digital converters
- 6,987,027 Sungho Jin
Microscale vacuum tube device and method for making gene
- 7,068,582 Sungho Jin
Read head for ultra-high-density information storage media and method for making the same
- 7,062,743 Andrew Kahng, et al.
Floorplan evaluation, global routing, and buffer insertion for integrated circuits
- 6,963,875 Regan Moore, et al.
Persistent archives
- 7,049,579 Sadik Esener, et al.
Manipulation of live cells and inorganic objects with optical micro beam arrays
- 7,052,812 Sadik Esener, et al.
Three-dimensional optical data storage in fluorescent dye-doped photopolymer
- 7,068,874 Sadik Esener, et al.
Microfluidic sorting device

School of Medicine

- 6,989,146 Salvatore Albani, et al.
Stress proteins and peptides and methods of use thereof
- 6,930,101 Dennis Carson, et al.
Thiazolopyrimidines useful as TNF.alpha. Inhibitors
- 6,946,132 Dennis Carson, et al.
Vaccine compositions and methods useful in inducing immune protection against arthritogenic peptides involved in the pathogenesis of rheumatoid arthritis
- 6,951,845 Dennis Carson, et al.
Method for treating allergic lung disease
- 7,009,043 Lawrence Goldstein, et al.
Plus end-directed microtubule motor required for chromosome congression
- 7,053,119 Michael Karin, et al.
Methods for identifying and using IKK inhibitors
- 6,908,918 Michael Kelner, et al.
Antitumor agents
- 6,996,429 George Ozaki, et al.
Apparatus and method for detecting flinch response to nociceptive agents
- 7,005,274 Robert Terkeltaub, et al.
Methods and compositions for diagnosing and treating arthritic disorders and regulating bone mass
- 7,056,506 Judith Varner
Method for detecting and inhibiting angiogenesis



*Launching
Technology*

SPRINGBOARD

Through Entrepreneurship

What is Springboard?

Springboard provides free assistance for life science and high tech companies in all stages of development, including concept, start-up, challenge and opportunity.

Entrepreneurs accepted into the program spend 3 to 8 weeks in coaching sessions with one of CONNECT's Entrepreneurs-in-Residence. Upon completion of this process, the entrepreneur is invited to make a presentation of their business model to a select group of experts. This group will usually include a venture capitalist, seasoned entrepreneur with domain expertise, accountant, corporate and patent attorneys, marketing professional, and an executive from a successful company in the same industry. The panel of experts is tailored to the individual needs of each company. The goals of the

panel presentation are to provide the entrepreneur with candid recommendations for the refinement of their business plan and to help identify next steps to achieve the company's goals. Following the panel presentation, the entrepreneur meets with their Entrepreneur-in-Residence to identify next steps, incorporate the feedback from the panel, and implement a strategic plan for the next six to twelve months.

Since its launch in 1993, over 250 companies have completed the program. Over 50% of those companies are still in business, and have secured more than \$620 million in funding.

How to apply or refer companies to Springboard:

The online application form is available at www.connect.org/programs/springboard

For questions, please contact:

Michael Coleman
Springboard Director
CONNECT
858.964.1309
mecoleman@connect.org

About CONNECT

CONNECT is the globally recognized public benefits organization fostering entrepreneurship and innovation in the San Diego region by catalyzing, accelerating, and supporting the growth of the most promising technology and life science businesses.

New Companies Formed in FY2006

In FY2006 there were a total of 18 companies that were formed with licensed UCSD technologies. To date, over 100 companies have been formed with licensed technologies from the TechTIPS office.

10SPOT, Inc. – formed with a portfolio of 13 technologies from the Jacobs School of Engineering.

AnalgesixS, LLC – formed with technologies from the research of Edward Dennis (Chemistry & Biochemistry).

Andora – formed with technologies from the research of Seth Cohen (Chemistry & Biochemistry).

Awarepoint – formed with technologies from the research of Anthony Acampora (Electrical & Computer Engineering).

Biophoennx – formed with technologies from the research of Steve Dowdy (Cellular & Molecular Medicine).

Biostretch Med, Inc. – formed with technologies from the research of Ravinder Mittal (Medicine).

Discovery Advance, LLC formed with a portfolio technologies from research in the physics department.



Epiphany Biosciences – formed with technologies from the research of Karl Hostetler (Medicine).

Inhibex – formed with technologies from the research of Geert Schmidt-Schonbein (Bioengineering).

Jacksonville Timucuan, LLC – formed with portfolio of 5 technologies from the Jacobs School of Engineering.

Noble Molecules – formed with technologies from the research of Ajit Varki (Medicine).

Progenetor – formed with technologies from the research of Kenneth Chien (Institute of Molecular Medicine).

Psynomics, Inc. – formed with technologies from the research of John Kelsoe (Psychiatry).

Quanlight, Inc. – formed with technologies from the research of Charles Tu (Electrical & Computer Engineering).

RedXDefense – formed with technologies from the research of William Trogler, and Michael Sailor (Chemistry & Biochemistry).

Scoperta Materials, Inc. – formed with technologies from the research of Kenneth Vecchio (Mechanical & Aerospace Engineering).

Video Process Technologies (later acquired by Broadcast International Inc.) was formed with technologies from the research of Truong Nguyen (Electrical & Computer Engineering).

Welken Wireless, LLC – formed with technologies from the research of Anthony Acampora (Electrical & Computer Engineering).



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