

University of California, San Diego



Technology Transfer and
Intellectual Property Services
BIENNIAL REPORT 03-04

University of California, San Diego Technology Transfer Advisory Committee

The UCSD Technology Transfer Advisory Committee (TTAC) is responsible for general oversight of the UCSD Technology Transfer Program. This standing committee is chaired by the vice chancellor of Research and meets periodically to assess UCSD technology transfer policy and guide the direction of the overall program.

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Marine Physical Laboratory*

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and Intellectual Property Services (TechTIPS)*

Geert Schmid-Schoenbein
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Robert Sullivan
Dean, Rady School of Management

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Message from Technology Transfer and Intellectual Property Services

I am happy to report on the technology transfer program at UCSD for fiscal years 2003 and 2004.

Despite a tight financial market during this period, innovation and entrepreneurial spirit and activity remained strong. UCSD received record high numbers of new intellectual property disclosures—over 300 new disclosures in each of the two years, peaking in FY2003 at 322. Although the number of licenses and options granted in each of the two fiscal years was lower than in FY2002, the total number of executed agreements, which reflected our interaction with commercial companies, was each over 600, rising to 699 in FY2004. Such continued interaction will result in improved licensing and collaboration opportunities in the future as the economy and venture investors' confidence recover from the dot.com bubble experience.

FY2004 brought good news that a cancer therapeutic, Erbitux, based on a licensed UCSD technology by ImClone Systems, received marketing approval in Europe and in the U.S. (page 3). Further good news followed in that four companies (Senomyx, Cytokinetics, Renovis, and Dynavax) which started with or benefited from the contributions of UCSD innovations, completed initial public offerings and became listed companies for public trading. Another UCSD startup company, Chimerix, also secured a U.S. government grant of over \$30 million.

TechTIPS provided valuable services to many university programs. We organized IP and startup seminars and workshops, assisted administrative departments on IP negotiations, and participated in activities to enhance UCSD's research and reputation. Please see the related stories concerning the PharmaSTART Consortium (page 7), the Center for Networked Systems (page 8), and IP donations (page 6) for a glimpse of some of our activities.

Our financial position remained strong with meaningful distributions to our innovators and academic units, contributing significantly to the regional economic well-being and the innovative reknown of this great university.

I look forward to continuing work with our innovators and industrial partners. I am confident we will reach new heights in making the fruits of our research activities available for the public good.

Alan S. Paau, M.B.A., Ph.D.
Assistant Vice Chancellor
Technology Transfer and Intellectual Property Services

Innovative Oncology Product Reaches the Market

Snapshot of Erbitux Market:

Colorectal cancer—third most common cancer diagnosed worldwide

U.S.—145,290 new cases diagnosed in 2005¹

Europe—380,000 new cases diagnosed in 2004²

Eighty percent of metastatic colorectal tumors over-express the EGF receptor³

1. *Cancer Facts & Figures 2005*, American Cancer Society, 2005

2. Boyle, P, Ferlay, J. Cancer incidence and mortality in Europe, 2004. *Annals of Oncology* 2005 16(3):481-488

3. Midgely, R, Kerr, D. Colorectal cancer. *Lancet*. 1999; 353: 391-399



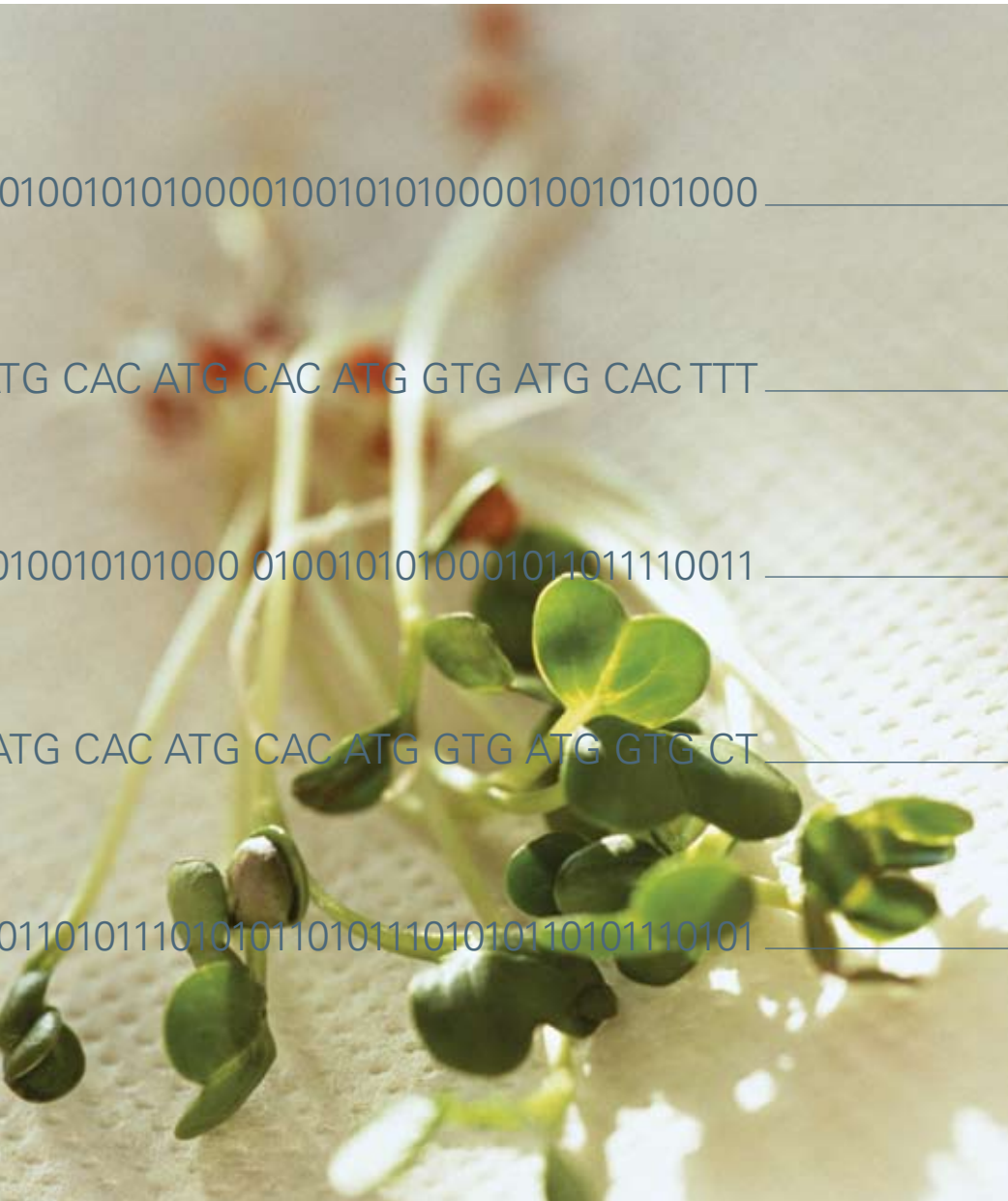
After years of development, 2004 marked the introduction of Erbitux (cetuximab), a clinical product that treats colorectal cancer. Erbitux derives from a monoclonal antibody developed at UCSD in the 1980s by former faculty members, Gordon Sato and John Mendelsohn. The antibody targets and blocks epidermal growth factor receptors (EGFR) on the surface of cancer cells and interferes with these cells' ability to grow and proliferate. In 1993, UCSD granted license rights of this innovation to ImClone Systems (IMCL—NasdaqNM) of New York to develop this cancer therapeutic.

The FDA approved Erbitux for patients with advanced, EGFR-expressing colorectal cancer that has spread to other parts of the body. It can be used in combination with an approved colorectal chemotherapy, irinotecan, in patients that have developed resistance to prior chemotherapy treatment or alone if the patients cannot

tolerate irinotecan. ImClone Systems co-promotes Erbitux with its marketing partners, Bristol-Myers Squibb (BMJ-NYSE) in the U.S. and in Canada, and with Merck KGaA in Europe. In the first calendar year on the market, BMJ reported \$261 million in sales, mostly in the U.S. for Erbitux, with first quarter 2005 sales at \$87 million, compared to \$17 million during the same period in 2004. In Europe, Merck KGaA reported EUR 77 million (US\$96 million) in the first year of sales.

Erbitux is a powerful weapon in the fight against cancer. ImClone Systems is actively seeking additional approval to treat other types of cancer with this novel therapeutic.

Erbitux is a registered trademark of ImClone Systems Incorporated.



“ . . . Senomyx completed its initial public offering and their publicly traded stock has more than doubled in value in less than a year.”

UCSD Startup Tastes Success

Senomyx Inc. (SNMX-NasdaqNM), a La Jolla biotech company founded in 1999, has evolved from a fledgling startup to a publicly traded company. The company has license rights to certain UCSD innovations that arose from Professor Charles Zuker's taste receptor research. UCSD Professors Zuker and Roger Tsien, are co-founders of the company and also serve on the company's Scientific Advisory Board.

Using proprietary taste receptor-based assays and screening technologies, the company discovers and develops novel flavor enhancers and taste modulators for the packaged food and beverage industry. With the goal of improving the nutritional profile of consumer products while maintaining or enhancing taste, Senomyx's current programs focus on the development of flavors, flavor enhancers, and taste modulators in the savory, sweet, salt, and bitter taste areas.

In June 2004, Senomyx completed its initial public offering and its publicly traded stock has more than doubled in value in less than a year. Most recently in March 2005, four of its flavor enhancers obtained Generally Recognized As Safe (GRAS) determinations from the expert panel of the Flavor and Extract Manufacturers Association (FEMA). The company expects commercial product sales in 2006. Senomyx enjoys global reach through its collaborations with four of the world's leading packaged food and beverage companies: Campbell Soup Company, The Coca-Cola Company, Kraft Foods Global, Inc., and Nestlé SA.

Industry Patent Donations Enhance UCSD Research

During FY2003 and FY2004, TechTIPS worked with UCSD External Relations in the private sector to acquire underutilized intellectual property to enhance UCSD research. The intellectual property, mainly patents donated by industry partners, enabled new research initiatives and follow-on IP licensing. In addition to the gifted patents, research awards were provided to aid UCSD's efforts to develop these IP assets.

SAIC donated a portfolio of video conferencing patents for Professor Sheldon Brown's research in the Center for Research and Computing in the Arts (CRCA). The award will further the development of a multi-user, multi-location virtual environment that utilizes various computer vision and remote sensing technologies to create a shared world. Simultaneous, multiple users at a single site will interact with other multi-user sites. Since receiving this donation, TechTIPS has licensed the underlying patents to a third party resulting in additional funding for CRCA and the UCSD campus.

The Boeing Company donated a portfolio of optical sensing patents for Dr. Janet Shields' research in the Marine Physical Lab at Scripps Institution of Oceanography (SIO). The three donated patents have been licensed by TechTIPS to two different companies, creating a funding source to support continuing research by Dr. Shields.

A portfolio of patents relating to a non-adhesive wound dressing and previously donated to UCSD by Celanese Acetate was successfully licensed to a startup company that is now funding clinical trials of the product in several U.S. sites. The clinical trial is supervised by Dr. Gerit Mulder, director of the UCSD Wound Treatment and Research Center.

Although the Jobs Act of 2004 significantly reduced the incentives for further industry IP donations, TechTIPS was able to leverage technologies and create value for the university with research support from the existing donations and revenue from subsequent licenses.

“. . . TechTIPS was able to leverage technologies and create value . . .”



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Pharmastart: Bridging the Gap Between Lab Bench and Bedside

One of the greatest limitations in bringing potential therapeutic candidates to the marketplace is the lack of funding to take these candidates from the discovery/research stage of development into clinical testing. The PharmaSTART consortium, with UCSD, UC San Francisco, UC Berkeley, Stanford Medical School, and SRI International as its member institutions, is an innovative approach to try to bridge the gap between bench and clinic. The program helps researchers to define the pre-clinical tests necessary to move their therapeutic candidates towards testing in humans and also identifies resources to fund implementation of the tests.

Representatives from UCSD School of Medicine and from TechTIPS, are active in the PharmaSTART steering committee and in directing the course of the program. This program is an implementation of UCSD's vision of the Collegium of Integrated Life Sciences (COILS) and an ideal complement to the initiatives in the TransMed Program, Institute of Molecular Medicine, and Clinical Investigators Institute that aim to bring innovative therapies to the marketplace to benefit patients.

<http://www.pharmastart.org/>
<http://invent.ucsd.edu/TransMed/index.html>

Deep Ocean Collaboration with British Petroleum

Scripps Institution of Oceanography began collaborating with British Petroleum in 2004 to survey the ocean floor through various technologies developed at UCSD. Professor John Orcutt (geophysics) leads this joint project which uses a wide variety of surveying techniques such as electromagnetics, fiber optics, acoustics, autonomous underwater vehicles, and ocean bottom seismographs, to improve understanding of the seabed and the processes that shape it. Many of these surveying

techniques are developed and perfected at SIO. This three-year, \$3-million collaboration illustrates SIO's partnership strategy to work closely with private sector areas where there are mutual interests. TechTIPS assisted the SIO Office of Contract and Grant Administration in crafting the intellectual property terms for the research agreement. IP resulting from this agreement will be managed and licensed by TechTIPS.



Center for Networked Systems Launches with Industry Partners

The Center for Networked Systems (CNS), launched in July 2004, is a partnership between networked system technology providers and operators and networking researchers at UCSD. The partnership will provide training to solve critical technical problems recognized by both industry and academia. Professor Andrew Chien of the Department of Computer Science and Engineering heads this new center at the Jacobs School of Engineering. TechTIPS, working with the Office of Contract and

Grant Administration, provided guidance on intellectual property and policy issues for the membership agreements to industry partners. The membership includes the top five leaders in networking, including Qualcomm, who are contributing \$9 million over the next three years to a new center for computer networking at UCSD. TechTIPS will manage both the intellectual property arising out of CNS and the interactions with industry related to licensing new IP.



IP Disclosures

The basis of a UCSD intellectual property portfolio starts with an invention or copyright disclosure from our researchers. These disclosures are the foundation for seeking statutory protection and licensing of protected rights for commercialization to serve the university's missions. In the last two fiscal years, IP disclosures from UCSD innovators have averaged over 300 per year—a landmark not previously achieved at UCSD. In FY2003 and FY2004, TechTIPS received 322 and 314 disclosures, respectively.



Figure 1: Licenses of Inventions and Copyrights FY1995–2004

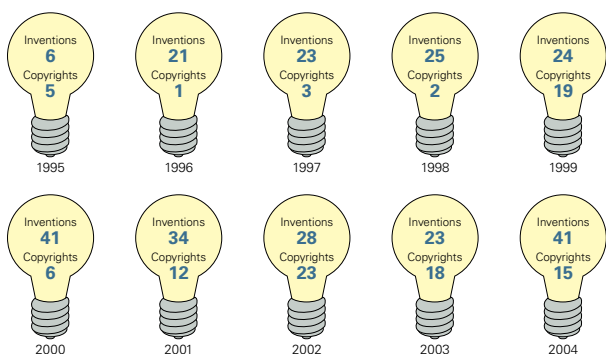


Table 1: Patent Activities FY1995–2004

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Filings										
U.S. Provisional	–	–	–	–	60	55	74	75	127	144
Non-Provisional	107	70	94	96	87	87	76	86	45	44
International	0	4	11	40	37	22	40	41	69	94
TOTAL FILED	107	74	105	136	184	164	190	202	241	282
Patents Issued										
U.S. Issued	14	27	30	36	40	58	59	42	51	50
International Issued	1	1	3	41	51	33	36	39	69	79
TOTAL ISSUED	15	28	33	77	91	91	95	81	120	129

Agreements

TechTIPS total agreement activity continued to climb in FY2003 and FY2004, making UCSD innovations increasingly accessible to serve the public. A total of 619 agreements were executed in FY2003, compared to 592 in FY2002. In FY2004, total agreements reached 699. This number included licenses, options, letters of intent (LOI), confidential disclosure agreements (CDA), material transfer agreements (MTA), and other administrative agreements. The number of licenses and options secured

by companies decreased from the peak in FY2002 as a result of the bursting dot.com bubble. The number of LOIs and CDAs remained relatively high, suggesting that potential industrial partners continued to show interest in UCSD innovations despite the lack of financial resources to secure long-term license rights to our technologies. These potential partners may yet become licensees as they regain financial strength from the equity market.

Figure 2: Tech Transfer Agreements FY1995–2004

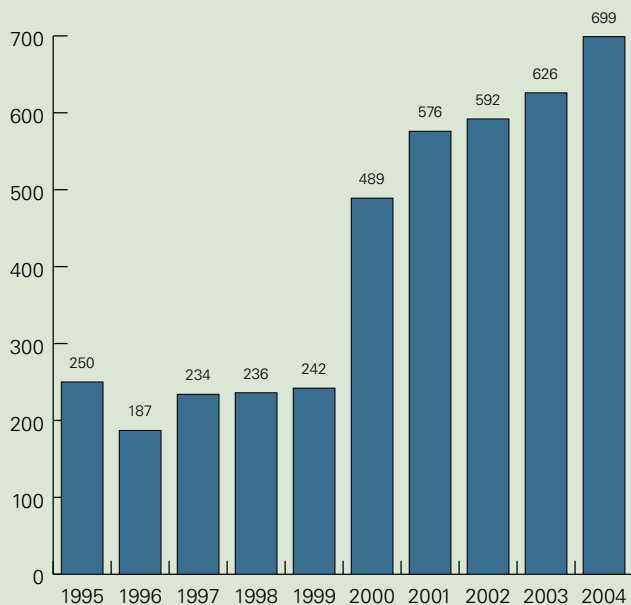
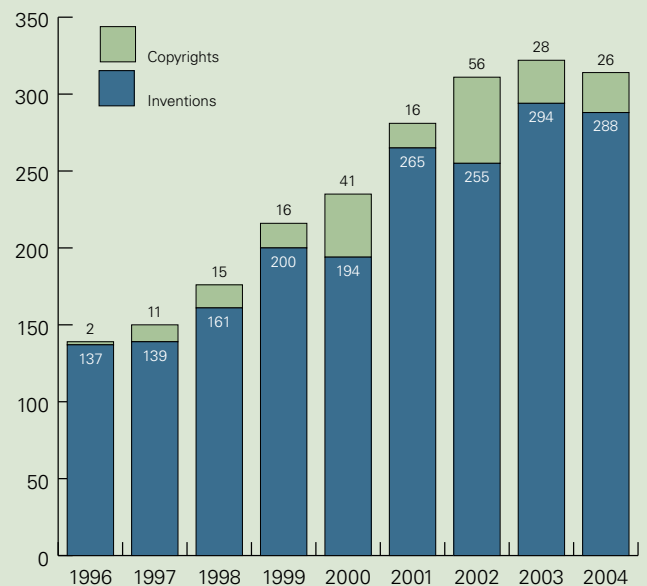


Figure 3: Intellectual Property Disclosures FY1995–2004



SELECTED STARTUP HIGHLIGHTS

Despite the tight financial market, entrepreneurial spirit in San Diego remained high. In the two fiscal years, fourteen licenses were granted to new startup companies using UCSD innovations as their founding technologies. Selected startup companies are listed below.

FY2003

AnalgesiX, based in San Diego, was formed from research developed by Professors Edward A. Dennis (chemistry and biochemistry) and Tony Yaksh (anesthesiology and pharmacology). The company received funding from Forward Ventures and is developing potent new drugs for pain management and inflammation for diseases such as arthritis, cancer, and atherosclerosis. Together with a matching grant from the UC Discovery Program, the company provided over \$900,000 of research support to UCSD.

Beijing Unicorn Bio-Agricultural Technology Co., Ltd., a wholly owned subsidiary of California Phar-Med, Inc., is based on transgenic plant technologies research by Professors Martin Yanofsky (biological sciences), Julian Schroeder (biological sciences), and researcher Mark Hildebrand (SIO). The company has exclusive rights for the use of the technologies in China to alter the performance of selected plant species. In collaboration with the China Academy of

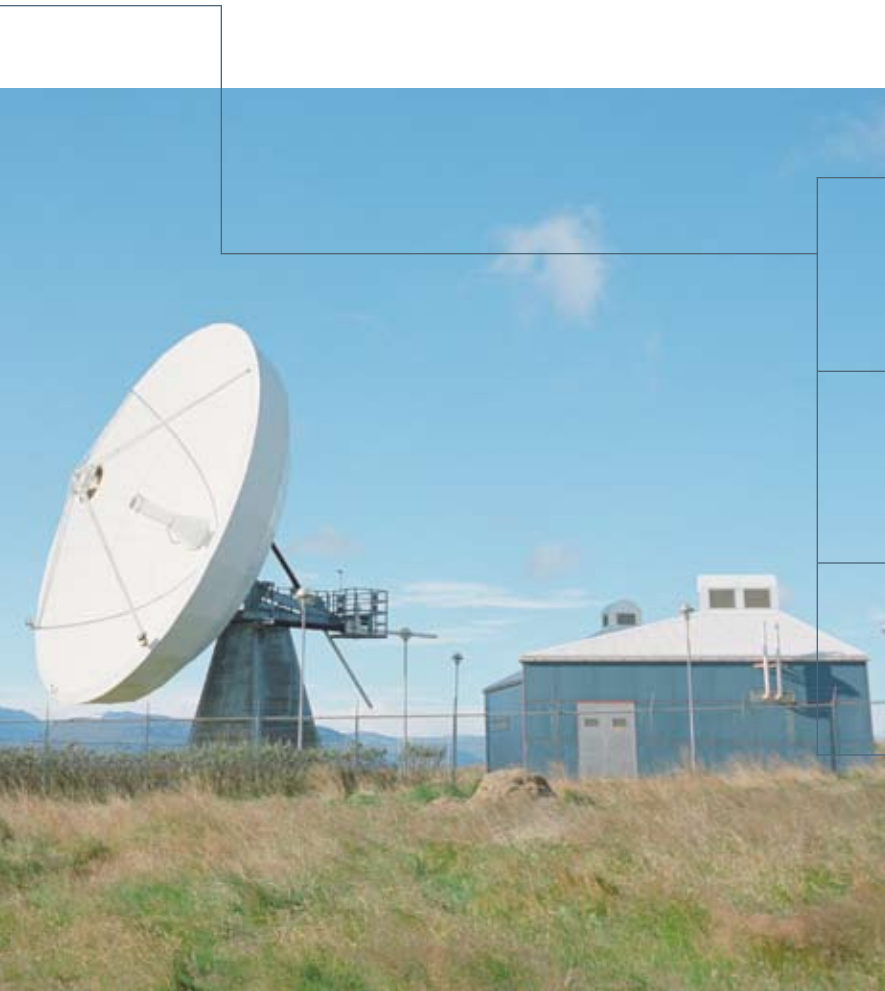
Agricultural Sciences, one of the most prestigious research institutions on agriculture in China, Beijing Unicorn has made significant progress in its R&D efforts, with promising field results in several plant varieties. UCSD transgenic plant technologies promise to significantly impact the country's agricultural production and to help feed this growing nation.

Exsar, Inc., based in Monmouth Junction, New Jersey, is a drug discovery company with licensed technology from the research of Professor Virgil Woods, Jr. (medicine). The company has a unique profiling system that creates an exact fingerprint of drug-protein interaction at the molecular level, which is used to develop potential compounds with the greatest likelihood of efficacy and safety.

OcuSense, Inc., based in Los Angeles, is commercializing a lab-on-a-chip test that is intended for point-of-care use by eye care practitioners for dry eye syndrome. The company

licensed an osmometer technology from the research of UCSD graduate student Benjamin Sullivan (bioengineering). OcuSense technology, based on a key pathogenic biomarker, represents an opportunity to significantly increase diagnosis rates, and provide physicians with tools to prescribe therapies and track patient outcomes.

UCY Medical, a wholly owned subsidiary of California Phar-Med, Inc., is based on a *Non-Adherent Cellulose Acetate Wound Dressing* technology licensed from UCSD. The company holds worldwide exclusive rights for this technology and recently completed clinical trials in the U.S. for the treatment of diabetic foot ulcers. UCY Medical is submitting a pre-market notification or 510(k) to the FDA for commercial distribution of this new product, which is expected in early 2006. The company plans to seek approval for sale in other countries and markets and has already developed significant clinical trial and manufacturing experience in China.



SELECTED STARTUP HIGHLIGHTS

FY2004

Amphimed, Inc., based in San Diego, is focused on the development of unique non-invasive devices for vascular imaging, pain relief, infection prevention, and cardiovascular diagnostics. Founders include Dr. Bala Pandi and the inventors of the technologies licensed from UCSD, Tien Lee, M.D. and Jane Wu, M.D.

Avicule, Inc., based in San Diego, was founded in 2004 with a licensed molecular transport technology from Professor Murray Goodman (chemistry). The company is developing new transport molecules that can enhance drug delivery for therapeutics with poor bioavailability.

BioVax, headquartered in San Diego, is developing proprietary vaccines for the treatment of various cancers including prostate, breast, and lung cancer. The company licensed its founding technology from the research of Dr. Boris Minev (Rebecca and John Moores UCSD Cancer Center) on synthetic vaccines for cancer immunotherapy.

GlyPort, Inc., based in Monrovia, California, was founded in 2003 from several licensed

technologies developed by Professor Yitzhak Tor (chemistry). Using the proprietary glycoside modification technology, the company is developing novel drug delivery systems that transform existing drugs into more effective therapeutics with lower toxic side effects.

NetSift, Inc. was founded to develop content processing technology focused on high-speed networking and security. Company founders include Sumeet Singh, a former UCSD graduate student in network systems and Professor George Varghese (computer science and engineering). Headquartered in San Diego, NetSift raised Series A financing in June 2004 from Enterprise Partners Venture Capital. In June 2005, NetSift was acquired by Cisco Systems for approximately \$30 million in cash and options, and will become part of Cisco's Internet Systems Business Unit.

Pulsar Diagnostics, in Los Angeles, is commercializing a broad diagnostic technology based on a novel, nanoscale mechanism designed to remove the inherent biases associated with genomic and proteomic-based assays in order to improve genetic testing.

The company licensed its founding technology from the research of Professor Michael Heller (bioengineering). It is focused on developing a second generation FISH test for cancer genotyping, and expects to broaden its commercial activities into other diagnostic and reagent markets.

Zacharon Pharmaceuticals, based in La Jolla, is focused on the discovery and development of a new class of pharmaceuticals that work through glycan neutralization. Glycans are cell signaling and adhesion molecules for treating diseases that have eluded conventional strategies. Zacharon has a revolutionary technology platform aimed at the discovery of new drugs for treating diseases related to glycans and has discovered and licensed first-in-class glycan-neutralizing agents that block recurrence of breast cancer growth and metastasis. The company was founded by Dr. Charles Glass (cellular and molecular medicine) and Professor Jeffrey Esko (cellular and molecular medicine) and based on discoveries from Professor Esko's lab.



IP Protection

UCSD's technology transfer program continues as a major contributor to the UC system patent activity. The number of patent applications filed and issued grows parallel to the continued growth in campus research funding and associated activities. In FY2003, 241 patent applications were filed and 120 patents were issued, of which 51 were issued in the U.S. In FY2004, 282 patent applications were filed and 129 patents were issued, of which 50 were issued in the U.S.

Community Outreach and Partnering

To promote awareness of intellectual property issues and value, and to promote interactions with UCSD researchers and relevant industry sectors, TechTIPS actively organized and participated in many educational and outreach ventures. Selected examples from July 1, 2002 to June 30, 2004 follow.

JUL 2002	Life Science Innovators Roundtable. Presentations by Professors David Kleinfeld, Julie Mitchell, Douglas Greer, and M. Geoff Rosenfeld.	MAR 2003	Life Science Innovators Roundtable. Presentations by Professors Paul A. Insel and Craig Levin.	DEC 2003	Breakfast with TechTIPS—High Tech Industry at the UCSD Faculty Club. Presentation by Professor Jan Talbot.
AUG 2002	Life Science Innovators Roundtable. Presentations by Professors Michael Karin and Michael David.		Material Transfer Agreements Workshop at UCSD. Presentations by Office of Contract and Grant Administration and TechTIPS.	JAN 2004	UCSD TechTIPS @ Puget Sound. Presentations by TechTIPS and UCSD startup, Inologic Inc. Sponsored by Woodcock Washburn and Silicon Valley Bank.
SEPT 2002	Physical Science Innovators Roundtable. Presentation by Professors Jay S. Siegel, Mohan Trivedi, and Sergei Krashennikov.	APR 2003	Life Science Innovators Roundtable. Presentations by Professors Murray Goodman, Marcos Intaglietta, Emmanuel Theodorakis, and Michael Karin.	FEB 2004	Life Science Innovators Roundtable. Presentations by Professors Terence Hwa, Michael Karin, David Feifel, and Andrew Greaves.
OCT 2002	Intellectual Property Seminar at the Center for Magnetic Recording Research. Presentations by Morrison & Foerster and TechTIPS.	JUN 2003	Physical Science Innovators Roundtable. Presentations by Professors Martin Paulus, Lawrence Frank, Truong Nyguen, Lu Sham, Bernardo G. Mindlin, and Michael Heller.	MAR 2004	MIT Club of San Diego Mixer with UCSD TechTIPS at UCSD. Presentations by UCSD licensee Omnifix Inc. and Professor David Feifel.
	Agricultural Biotechnology Symposium and Showcase— <i>New Genetic Approaches to Flowering in Ornamentals and Crops</i> at the Salk Institute. Co-organized by San Diego Center for Molecular Agriculture, Division of Biological Sciences, Salk Institute, and TechTIPS.		Biotechnology Industry Organization Annual Convention in Washington, D.C. TechTIPS staff members participated in the Partnering Forum.		Physical Science Innovators Roundtable. Presentations by Professors Sungho Jin, Douglas Palmer, Shaya Fainman, and Andrew Kahng.
JAN 2003	Life Science Innovators Roundtable. Presentations by Professors R.K. Mittal and Richard Boland.	SEP 2003	Intellectual Property Seminar on Inter-Institutional and Multi-Center Agreements at the UCSD Faculty Club. Presentations by Gray Cary Ware & Freidenrich and TechTIPS.		UCSD TechTIPS @ Sand Hill Road. Presentations by TechTIPS and UCSD licensee Omnifix, Inc. Sponsored by Heller Ehrman Venture Law Group and Silicon Valley Bank.
	Software and Copyrights Intellectual Property Seminar at the San Diego Supercomputer Center. Presentation by Brown Martin Haller and McClain.		BioBootcamp 2003, at the Institute of the Americas. Presentations by UCSD faculty entrepreneurs, venture capitalists, successful CEOs, and TechTIPS. Co-sponsored by RCT Bioventures, PriceWaterhouse Coopers, and Wilson, Sonsini, Goodrich & Rosati.	APR 2004	CONNECT Financial Forum at the Sheraton Harbor Island. TechTIPS staff assisted in planning the event.
FEB 2003	Physical Science Innovators Roundtable. Presentations by Professors Sadik Esener, Rene Cruz, and Saleh Al-Harthi.	OCT 2003	Intellectual Property Seminar— <i>Avoiding IP Pitfalls in Academic Research</i> at the Fung Auditorium, Powell-Focht Bioengineering Hall. Presentations by Morrison & Foerster LLP and TechTIPS.		Breakfast with TechTIPS—Life Science Industry at the UCSD Faculty Club. Presentation by Professor Michael Sailor.
	"An Evening with UCSD TechTIPS" at UCSD. Presentations by Professors Salvatore Albani, Richard Gallo, Karl Hostetler, Richard Kornbluth, and Farid Saljouque. Organized with Stanford University Graduate School of Business Alumni Association.		Agricultural Biotechnology Symposium and Showcase— <i>Plant Manufactured Pharmaceuticals</i> at the Salk Institute. Co-organized by San Diego Center for Molecular Agriculture, Division of Biological Sciences, and TechTIPS.		Intellectual Property Seminar with the Von Liebig Center for Entrepreneurism and Technology Advancement at the Y.C. Fung Auditorium, Powell-Focht Bioengineering Hall. Presentation by Enterprise Partners Venture Capital.
		NOV 2003	LARTA Project T2: A Technology Transfer Conference at the Millennium Biltmore Hotel, Los Angeles. Presentations by TechTIPS and UCSD startup companies.	MAY 2004	Intellectual Property Seminar, What Constitutes an Invention, at the Center for Molecular Genetics Auditorium. Presentations by Fish & Richardson, PC, and TechTIPS.

Welcome

Representatives from the following organizations and groups visited TechTIPS to share experiences.

2003	Catholic Pontification University, Rio de Janeiro, Brazil. Jose Pimenta Buena, Jr.	AUG 2003	University of Pittsburgh Nova Scotia, Canada Economic Development Group	MAR 2004	University of Hawaii—Regents Task Force on Technology Transfer Economic Development Study Group from Weihai, China and Shandong University
JAN 2003	Representatives from the Consulate of Sweden Japan Economic Research Institute	OCT 2003	South East England Development Agency Economic Development Study Group from Amsterdam, the Netherlands	MAY 2004	City University of Hong Kong
MAR 2003	Economic Development Study Group from Osaka, Japan	FEB 2004	Tai-Chung Foundation of Science and Technology, Taiwan	JUN 2004	Italian Ministry of Health Asia Bio Cluster Project, Eli Lilly Asia
MAY 2003	Lawrence Livermore National Laboratory		Nara Institute of Science and Technology, Japan		Biotechnology Business Development Study Group from Genoma Espana

Sharing Experience

TechTIPS staff are invited to participate and make presentations about UCSD's technology transfer program model with many professional groups and organizations. These forums raise awareness of UCSD and its technology transfer program, and provide more opportunities for the exchange of ideas on IP management.

JUL 2002	Intellectual Property Conference—PUC, Rio de Janeiro, Brazil	FEB 2003	Association of University Technology Managers Annual Meeting, Orlando	FEB 2004	Taiwan/U.S. Biotechnology Forum—Roles of Research Institutions in the Knowledge Economy, Del Mar
SEPT 2002	Economic Development Agency Annual Conference, San Diego	APR 2003	University of California—Licensing Forum, San Francisco		Daystar Capital Partners—Technology Presentation, Pasadena
OCT 2002	ZGL Life Science Park, Beijing, China	JUN 2003	University of California—Licensing Forum, Oakland	MAR 2005	Day of Molecular Medicine: The China/California Connection—A Biomedical Alliance, La Jolla
	University of Maryland Law Seminar—Access to Genetic Information, Baltimore	JUL 2003	Association of University Technology Managers Western Regional Meeting, Santa Fe		Law Seminars International: Running the Race with Biotechnology—From Start to Finish, La Jolla
NOV 2002	University of California—Licensing Forum, Oakland	AUG 2003	European Biotechnology Conference, Basel, Switzerland		Licensing Executive Society Seminar, San Diego
	Barnett International Education Seminars—IP Strategy, San Diego	SEPT 2003	Licensing Executive Society Annual Meeting, San Diego	MAY 2005	Federal Laboratory Consortium Technology Partnership Annual Conference, San Diego
DEC 2002	Association of University Technology Managers Advanced Topics Workshop, Miami	OCT 2003	Technology Management Conference—Riksumeiken University, Japan		San Diego BioPharmaceutical Conference, La Jolla
			University of California—Licensing Forum, Oakland	JUN 2005	NorthStar Conference: From Discovery to Drugs—IP Strategy, San Francisco
		NOV 2003	IBF Biotech Investors Conference, San Francisco		China Business Opportunities—China Science Consul Dong, San Diego
		DEC 2003	Intellectual Property and Entrepreneurship Conference, Catholic Pontification University, Rio de Janeiro, Brazil		

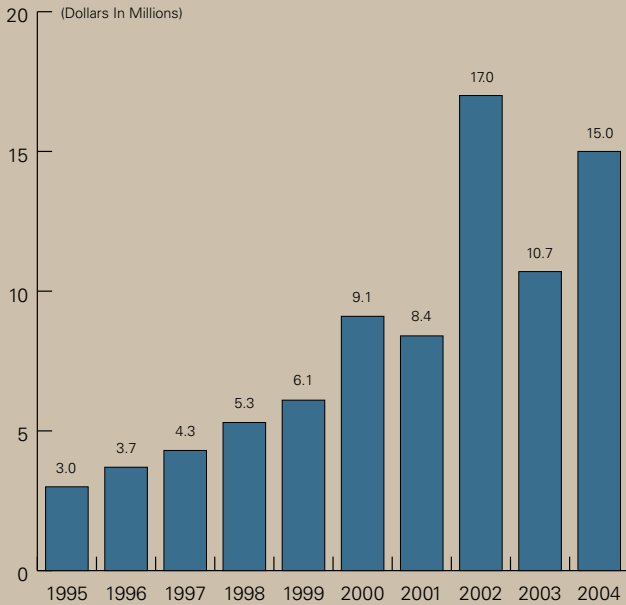
Income

UCSD intellectual property income decreased in FY2003 to \$10.7 million compared to \$17 million in FY2002 (which included one-time income of \$5.5 million from a legal settlement.) In FY2004, IP income rebounded to \$15.1 million, reflecting a partial recovery of licensing activity for this period. For a detailed categorical breakdown of total income, please refer to the appendix.

The majority of licensing income is from license issue fees, license maintenance,

and milestone fees and royalties. The university's primary mission is to transfer technology for the public good. With a fair and equal-access approach, TechTIPS licensed to both large and small companies that are best able to commercialize the innovations. When licensing to cash-strapped startup companies, TechTIPS often received equity in lieu of upfront fees to lower the entry barriers to these small companies.

Figure 4: Total Income from Intellectual Property Management FY1995–2004



Expenses

UCSD's technology transfer program incurred unusually high total expenditures of \$12.2 million and \$11.6 million for FY2003 and FY2004, respectively. Approximately one-third of expenditures were incurred for patent prosecution, of which approximately

60 percent were reimbursed by licensees through licensing agreements. Extraordinary expenses, which include litigation costs for a specific dispute that arose from interactions of selected UCSD researchers with a company and not from licensing

activities, comprised one-half of the total expenditures in FY2003, and comprised one-quarter of the total expenditures in FY2004. A detailed categorical breakdown of total expenses is in the appendix.

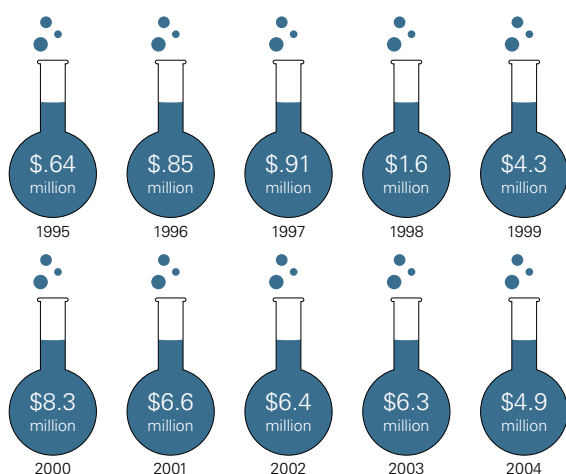
Research Impact

UCSD's technology transfer program continued to have a positive impact on the university research environment. TechTIPS distributed intellectual property income to support research by providing incentives in the form of inventor/author share of income for faculty retention and recruitment.

In addition to the mandatory distributions of income, TechTIPS negotiated additional funding for research when appropriate. In FY2003 and FY2004, the total research impact was estimated to be \$6.3 million and \$4.9 million respectively. These estimates include distributions to researchers

and authors, research laboratories and academic departments, and non-profit IP co-owners, copyrights, tangible research materials, and sponsored research pledges as a result of licenses and matching grants from the UC Discovery Grant Program.

Figure 5: Estimated Research Impact FY1995–2004



Mandatory Distributions

In FY2003 and FY2004, TechTIPS distributed over \$4 million and over \$5 million, respectively. Distributions were made to inventors, joint titleholders, participating academic units for research support, and the UC State General Fund Pool in accordance with the UC systemwide patent

policy and UCSD campus guidelines. Invention income distribution is based on income received in the prior fiscal year. Copyright income and tangible research materials income is based on income received in the same fiscal year (Table 2).

Table 2: Mandatory Distributions of IP Management Income FY1995–2004

	1995*	1996*	1997*	1998	1999	2000	2001	2002	2003	2004	TOTALS
Inventor/Author Share	\$643,705	\$848,778	\$907,112	\$1,171,430	\$2,512,878	\$1,597,695	\$2,154,601	\$2,097,659	\$4,055,993	\$2,666,558	\$18,656,405
Joint Titleholders Share	13,178	11,413	46,882	38,359	94,221	59,635	196,770	633,082	303,719	295,219	1,692,479
Research Labs/ HAU#/ Department Share	–	–	–	451,008	345,741	980,352	928,614	1,990,384	1,003,550	1,267,438	6,967,088
State General Fund Share†	252,930	243,952	299,023	1,081,503	235,872	730,140	(411,621)	1,519,149	(1,218,547)	1,007,431	3,739,832
Total Distributions	\$909,813	\$1,104,143	\$1,253,017	\$2,742,300	\$3,188,712	\$3,367,822	\$2,868,364	\$6,240,274	\$4,144,715	\$5,236,646	\$31,055,804

* Inventions Only

Home Academic Unit

† FY01 and FY03 show credit

APPENDIX

INCOME

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	TOTALS
Invention	\$2,204,002	\$2,389,128	\$2,901,369	\$3,057,487	\$4,042,919	\$5,476,522	\$5,627,139	\$7,240,086	\$6,367,907	\$11,472,540	\$50,779,099
Copyright	-	-	-	11,649	74,223	83,581	46,083	202,503	156,608	314,268	803,043
Tangible Research Materials	-	-	-	-	-	647,401	595,253	1,122,889	474,311	405,074	3,244,928
Legal Cost Reimbursement	761,687	1,287,424	1,377,230	2,259,994	2,028,760	2,848,046	2,032,033	2,898,996	3,677,680	2,896,168	22,068,018
Extraordinary Income†	-	-	-	3,000,000	-	-	55,779	5,552,353	-	-	8,608,132
Total Income	\$2,965,689	\$3,676,552	\$4,278,599	\$8,329,130	\$6,145,902	\$9,055,550	\$8,356,287	\$17,016,827	\$10,676,506	\$15,088,050	\$85,503,220

† Extraordinary income includes nonrecurring items such as legal settlements.

EXPENSE

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	TOTALS
Patent Prosecution	\$1,297,086	\$1,679,763	\$2,092,643	\$2,750,577	\$2,154,597	\$3,503,079	\$3,104,498	\$3,832,578	\$4,026,056	\$4,645,062	\$29,085,939
Copyright	-	-	-	5,000	2,500	7,500	5,000	937	2,901	60	23,898
Campus Operations	380,773	519,248	699,279	689,296	892,006	1,213,967	1,386,222	1,696,395	1,981,436	2,263,301	11,721,923
UCOP & OTT Assessment	473,215	426,701	513,131	650,648	472,203	438,171	602,743	862,383	901,692	877,272	6,218,159
Extraordinary Expenses*	-	163,795	35,924	40,865	397,190	220,594	3,915,960	2,992,514	6,566,816	2,789,449	17,123,107
State General Fund	252,930	243,952	299,023	1,081,503	235,872	730,140	(411,621)	1,519,149	(1,218,547)	1,007,246	3,739,647
Total Expense	\$2,404,004	\$3,033,459	\$3,640,000	\$5,217,889	\$4,154,368	\$6,113,451	\$8,602,802	\$10,903,956	\$12,260,354	\$11,582,390	\$67,912,673
Net Income	\$ 561,685	\$ 643,093	\$ 638,599	\$3,111,241	\$1,991,534	\$2,942,099	\$ (246,515)	\$ 6,112,871	\$ (1,583,848)	\$ 3,505,660	\$17,590,547

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





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