Welcome!

Chair’s Corner

Every year we present the Sinsheimer Award to the student who obtains the best grades in 5 quarters of genetics and biochemistry. The award is made possible by a generous donation from Professor Emeritus Robert Sinsheimer, a distinguished molecular biologist and former UC Santa Cruz Chancellor.

This year we faced a dilemma; two students were nearly tied: one had received 3A+’s and 2A’s; the other 4A+’s and 1 A. We decided that the best thing would be to give 2 awards, since the numbers were so close. Much to our surprise, the awardees were identical twins: Cell and Developmental Biology majors Lindsey and Natalie Hohmann. They also tied for another distinction: the highest total cumulative GPA in the entire University with 28 A+’s each! Next stop for the talented twins will be UCSD Pharmacy School, where they will undoubtedly raise the curve to new heights.

It is a privilege and delight to work with such brilliant students! In this edition of our newsletter you will hear about other outstanding scholastic achievements. As we welcome the new kid on the block, Assistant Professor Tony DeTomaso from Stanford, we commemorate the retirement of Dr. Irving Weissman at Stanford in a very different area: allelorecognition in colonial tunicates. Dr. De Tomaos is currently an independent investigator in Stanford’s Stem Cell Institute. He heads a large, widely respected and highly productive laboratory that has gained international recognition for its groundbreaking work on the biology of the colonial ascidian Botryllus schlosseri. Dr. DeTomaso’s work is providing new insights into animal stem cell biology and tissue regeneration.

Morse Named Wilcox Chair in Biotechnology

MCDB Professor Dan Morse is the first scholar appointed to the Wilcox Family Chair in Biotechnology. The Wilcox professorship was established recently with a $700,000 gift from Gary and Susan Wilcox, who are both distinguished UCSB alumni, volunteer leaders, and longtime campus benefactors. Professor Morse’s research is focused on the molecular mechanisms of biomineralization, with additional emphasis on biomolecular materials and biomimetic synthesis of new high-performance compositions. He is also director of the Institute for Collaborative Biotechnologies. “I am humbled and deeply grateful to the Wilcox family and to UCSB for this honor,” said Prof. Morse.

Tony DeTomaso joins MCDB

MCDB is pleased to welcome new Assistant Professor Tony DeTomaso from Stanford University’s Hopkins Marine Station. Dr. DeTomaso received his BS in Biological Sciences from Stanford University in 1987, and his PhD from Washington University (St. Louis). Dr. DeTomaso went on to carry out innovative post-doctoral research with Dr. Irving Weissman at Stanford in a very different area: allelorecognition in colonial tunicates. Dr. DeTomaso is currently an independent investigator in Stanford’s Stem Cell Institute. He heads a large, widely respected and highly productive laboratory that has gained international recognition for its groundbreaking work on the biology of the colonial ascidian Botryllus schlosseri. Dr. DeTomaso’s work is providing new insights into animal stem cell biology and tissue regeneration.

New Stem Cell Endowed Chair for MCDB

UC Santa Barbara has received a $3 million gift from William K. Bowes, Jr. to establish an endowed chair in MCDB for the director of the campus’s Center for Stem Cell Biology and Engineering. The professorship will be named in memory of Bowes’s mother, Ruth Garland, a distinguished physician who was one of the first women to graduate from the Stanford School of Medicine, where she later taught. Garland was born in Santa Barbara and raised in Ojai.

Chemicon Fellowship Awarded

Dr. Sherry Hikita, the Director of the UCSB Laboratory for Stem Cell Biology, has been awarded the Chemicon fellowship. Funded through the generosity of Chemicon, a subsidiary of Millipore Inc., the fellowship provides three years of support. As Director, Sherry will oversee renovation of a new CIRM shared stem cell laboratory facility on the third floor of Bio-2 and continue her studies of human embryonic stem cell differentiation.

Bob Fletcher and Brian Wolf Receive UCSB’s “Citation of Excellence” Award

Two staff members of the life science community were recognized by the University for their outstanding service. Bio-shop Supervisor Bob “Fletch” Fletcher and Life Sciences Computing Group (LSCG) Webmaster Brian Wolf both received the Citation of Excellence Award in 2007 and 2008. They were especially commended for their dedication, hard work and exceptional performance. Bob Fletcher thanks Sally Holbrook, Russ Schmitt, and Bob Felt for composing letters of his nomination. Brian Wolf is especially grateful to Meta Clow, Evelyn Hu, Nancy Kawalek, Hunter Lenihan and Larry Murdock for nominating and endorsing him.

Learn More About MCDB Faculty

Visit the MCDB departmental web site to find out more about our faculty and their research.

www.lifesci.ucsb.edu/mcdb
**Research Highlights**

**Established the first ever ascidian culturing facility at UCSB’s marine laboratory to provide a supplemental source of hand-reared animals. MCDB Professor William Smith has established the first ever ascidian culturing facility at UCSB’s marine laboratory to provide a supplemental source of hand-reared animals.**

**Ciona and Ciona intestinalis**

**Ruoslahti Wins DOD Innovator Award**

Bumham Institute and MCDB Distinguished professor Erkki Ruoslahti was awarded a $3.8 M Innovator Award from the Department of Defense for his development of novel cancer therapies. The Innovator Award supports visionary individuals who have demonstrated creativity, innovative work, and leadership in their field. Professor Ruoslahti established the Vascular Mapping Center, a branch of the Burnham Institute for Biomedical Research at UCSB in 2006. The Center focuses on understanding vascular “zip codes” that are associated with particular vascular beds, including those in tumors. Nanomedicine and drug delivery strategies are being designed to selectively target and destroy tumors.

**UCSB Awarded $2.6 M Grant for Stem Cell Lab**

Santa Barbara is one of 17 institutions in the state to be awarded a grant by the California Institute for Regenerative Medicine (CIRM) to construct laboratory facilities for stem cell research. The grant, written by MCDB Chair Dennis Clegg and NRI Associate Director Lincoln Johnson, will be used to support the design and development of a shared laboratory to expand existing stem cell studies and to stimulate new investigations of the biology and engineering of stem cells at UCSB and other nearby research institutions on the central coast. The lab will be located in the Bio 2 building and directed by Dr. Sherry Hilfka.

**Unusual Materials Properties in Squid Beak**

MCDB Professor Herb Waite and colleagues have discovered unique materials strategies employed by the Humboldt squid in the makeup of its razor sharp beak. As reported in the journal Science, the tip of the beak is stronger and stiffer than any synthetic polymer, but stiffness is graded from tip to base. The findings may have applications in the design of novel synthetic materials consisting of mechanically mismatched materials.

**Scientists Find Clues to Nervous System’s Origins**

UCSB scientists have discovered significant clues to the evolutionary origins of the nervous system. The discovery came about through study of the genome of Amphimedon queenslandica, a sea sponge and member of a group considered to be among the most ancient of all animals. This research, led by Ken Kosik, is highly interdisciplinary and includes EEMB Professor Todd Oakley as well as computer scientists, biologists, and neuroscientists.

**UC Santa Barbara Awarded $2 Million for Alzheimer’s Research**

UCSB has been awarded nearly $2 million from the Larry L. Hillblom Foundation for innovative research in Alzheimer’s disease. The grant will support an interdisciplinary investigation of the microtubule associated protein tau, which makes up the neurofibrillary tangles that are found in the brains of Alzheimer’s patients. The research effort will be led by MCDB Professor Kenneth Kosik, co-director of UCSB’s Neuroscience Research Institute and Harriman Professor of Molecular, Cellular, and Developmental Biology. Other members of the team are MCDB Professor Stuart Feinstein, Frank Doyle, Omar Saleh, and Linda Petzold. Prof. Kosik will head the Larry L. Hillblom Center for Neurodegeneration Research at UC Santa Barbara, which will exist for the duration of the four-year, $1.970,291 project.

**New Tool Set**

**Integrated Microscopy Facility Gets New Tool Set**

The UCSB Integrated Microscopy Facility, jointly operated by MCDB and the Neuroscience Research Institute, has some powerful new technology for imaging cells. An NIH instrumentation grant, authored by Psychology Professor (and MCDB affiliated faculty) Ben Reese has funded the purchase of a $600,000 Olympus Multi-Photon laser scanning Fluoview 1000 microscope. This versatile new instrument is designed for high-resolution imaging deep within thickly sliced or living specimens. The Facility, run by Dr. Brian Matsumoto, has also added a new Olympus DSU spinning disk confocal microscope to its armamentarium. The facility is now gearing up for another national-level microscopy course in February, with continued support from Olympus, Inc.

**Santa Barbara Supermarket of Sea Squirt**

**Ascidians (also known as tunicates or sea squirts) are an emerging model system for the study of evolution and gene regulatory networks, chordate evolution and comparative physiology, but they present unique experimental challenges, including dependence of researchers on wild-caught animals. MCDB Professor William Smith has established the first ever asidian culturing facility at UCSB’s marine laboratory to provide a supplemental source of Ciona (C. intestinalis and C. savignyi) adults for research laboratories. Lead by Dr. Erin Newman-Smith, the Ascidian Stock Center is generating a set of stable transgenic animals that carry tissue-specific fluorescent proteins that will allow novel insights into the developmental biology of prechordates and chordates.**

**Deep Sequencing Comes to UCSB**

A new half-million dollar high throughput DNA sequencer, purchased by UCSB’s Neuroscience Research Institute (NRI), is now up and running at UCSB. This next generation DNA sequencing device uses a massively parallel, high throughput methodology to allow large-scale genomic sequencing, gene expression profiling, and other analyses. Manufactured by Applied Biosystems, the new instrument is many times faster than earlier models, and includes a computer cluster to handle the massive amounts of data generated. The study of human embryonic stem cells is among the most important ways the sequencer will be applied. “This is a rather novel use for the instrument,” according to MCDB professor Kenneth S. Kosik, M.D., Harriman Chair in Neuroscience Research and co-director of the NRI. “This instrument will serve as the cornerstone of genomics research here at UCSB. It allows us to do state-of-the-art work.” The new instrument was paid for with funds from the Larry L. Hillblom Foundation, philanthropist Gus Hillblom, and the University.

**MCDB Researchers Develop Cross-Protective Vaccine**

MCDB scientists Douglas Heithoff and Professor Michael Mahan believe their recent research suggests that it might be possible in the not-too-distant future to create a vaccine that might protect against 2,500 strains of Salmonella. In a paper published in the November edition of the journal Infection and Immunity, the researchers detail the path to creating a vaccine that confers protection against multiple strains of bacteria.

**Douglas Heithoff and Mike Mahan developed a new cross-protective vaccine against Salmonella strains.**

**Stem Cell Lab**

UCSB Awarded $2.26 M Grant for Stem Cell Lab

Santa Barbara is one of 17 institutions in the state to be awarded a grant by the California Institute for Regenerative Medicine (CIRM) to construct laboratory facilities for stem cell research. The grant, written by MCDB Chair Dennis Clegg and NRI Associate Director Lincoln Johnson, will be used to support the design and development of a shared laboratory to expand existing stem cell studies and to stimulate new investigations of the biology and engineering of stem cells at UCSB and other nearby research institutions on the central coast. The lab will be located in the Bio-2 building and directed by Dr. Sherry Hilfka.

**Unusual Materials Properties in Squid Beak**

**Squid Beak**

**Scientists Find Clues to Nervous System’s Origins**

UCSB scientists have discovered significant clues to the evolutionary origins of the nervous system. The discovery came about through study of the genome of Amphimedon queenslandica, a sea sponge and member of a group considered to be among the most ancient of all animals. This research, led by Ken Kosik, is highly interdisciplinary and includes EEMB Professor Todd Oakley as well as computer scientists, biologists, and neuroscientists.

**Ruoslahti Wins DOD Innovator Award**

Bumham Institute and MCDB Distinguished professor Erkki Ruoslahti was awarded a $3.8 M Innovator Award from the Department of Defense for his development of novel cancer therapies. The Innovator Award supports visionary individuals who have demonstrated creativity, innovative work, and leadership in their field. Professor Ruoslahti established the Vascular Mapping Center, a branch of the Burnham Institute for Biomedical Research at UCSB in 2006. The Center focuses on understanding vascular “zip codes” that are associated with particular vascular beds, including those in tumors. Nanomedicine and drug delivery strategies are being designed to selectively target and destroy tumors.

**UCSB Awarded $2.6 M Grant for Stem Cell Lab**

Santa Barbara is one of 17 institutions in the state to be awarded a grant by the California Institute for Regenerative Medicine (CIRM) to construct laboratory facilities for stem cell research. The grant, written by MCDB Chair Dennis Clegg and NRI Associate Director Lincoln Johnson, will be used to support the design and development of a shared laboratory to expand existing stem cell studies and to stimulate new investigations of the biology and engineering of stem cells at UCSB and other nearby research institutions on the central coast. The lab will be located in the Bio-2 building and directed by Dr. Sherry Hilfka.

**Unusual Materials Properties in Squid Beak**

MCDB Professor Herb Waite and colleagues have discovered unique materials strategies employed by the Humboldt squid in the makeup of its razor sharp beak. As reported in the journal Science, the tip of the beak is stronger and stiffer than any synthetic polymer, but stiffness is graded from tip to base. The findings may have applications in the design of novel synthetic materials consisting of mechanically mismatched materials.

**Scientists Find Clues to Nervous System’s Origins**

UCSB scientists have discovered significant clues to the evolutionary origins of the nervous system. The discovery came about through study of the genome of Amphimedon queenslandica, a sea sponge and member of a group considered to be among the most ancient of all animals. This research, led by Ken Kosik, is highly interdisciplinary and includes EEMB Professor Todd Oakley as well as computer scientists, biologists, and neuroscientists.
The 18th Annual Undergraduate Research Colloquium Celebrates the Achievements of Students

Honoring outstanding research and creative activities at UCSB is a hallmark of our undergraduates’ educational experiences. The following outstanding MCDB students presented their research at the UCSB Annual Undergraduate Research Colloquium: Christopher Mugler, Isaac Schmale, Mikhail Zusmanovich, Colette Harrington, Benjamin Thomas, Alexander Wallash, Anthony Zandian, Chris Atashian, Alyssa Capuano, Erin Schuyler, Catherine Uy, Liane Miller, Marc Zimmermann, Ryan Christensen, Ashley Alker and Racquel Domingo.

Chancellor’s Award for Excellence in Undergraduate Research Goes to Kyle Jacoby

This award is presented by UCSB Chancellor Henry Yang to an outstanding graduating senior with distinction as an undergraduate researcher. Kyle applied for and received an NSF Grant and worked in MCDB Professor David Low’s lab investigating a phenomenon called contact-dependent growth inhibition (“CDI”). “One of the best undergraduates I’ve ever encountered with regard to his potential to be a stellar research scientist,” said Professor Low. Already, he has made a major contribution to a collaborative research project involving scientists at UCSB and at the Silhavy Laboratory at Princeton University. Kyle began graduate school in molecular and cellular biology this Fall at the University of Washington.

Benjamin A. Thomas receives the Thomas More Storke Award

The campus’s highest student honor, the Thomas More Storke Award for Excellence is bestowed each year to one graduating senior who has demonstrated outstanding scholarship and extraordinary service to the University, its students, and the community. The basic criteria are courage, persistence, and achievement. Nominees must have earned a cumulative GPA of 3.5 or above. This year’s award went to Ben A. Thomas, an honors student majoring in the Biological Sciences with an emphasis in molecular biology. Ben is also the recipient of a Research Grant for Undergraduates from the National Science Foundation. He has been working with Professor David Low on identifying the cellular receptor for contact-dependent growth inhibition (CDI), a phenomenon discovered in Low’s laboratory in which bacteria contact one another and shut down growth and metabolism in a reversible manner. Ben has worked and volunteered in a number of capacities - as a resident assistant in the residence halls, as an outreach volunteer introducing local elementary school children from diverse backgrounds to the disciplines of biochemistry, and serving as president of the Black Pioneer Renaissance Organization, which brings together African American men from the UCSB campus to work on community service projects, hold diversity and academic workshops, and mentor minority youth in the Santa Barbara area.

Award certificates in hand, Lindsey and Natalie Hohmann pose with Professor Robert Sinsheimer at the annual MCDB graduating seniors’ reception.

Identical Twins Lindsey and Natalie Hohmann Receive the Robert L. Sinsheimer Award as well as the Mortar Board Award

Through the generosity of MCDB Professor Robert L. Sinsheimer, a prominent molecular biologist and former UCSC Chancellor, this award was initiated in 1997. It distinguishes the graduating senior with the highest academic performance in genetics and biochemistry. In addition, Lindsey and Natalie have tied in receiving the UC Santa Barbara Dearborn Award, which each year goes to the graduating senior who has the highest total UCSC cumulative GPA in the graduating class. The Hohmann sisters both majored in Cell and Developmental Biology and began attending U.C. San Diego Pharmacy School this Fall.

Dmitriy Kolodin Receives the Colville and Dearborn Award

The Frances Colville and Terry Dearborn Memorial Award is for outstanding academic achievement as an honor student majoring in the sciences. As a Microbiology major Dmitriy conducted research in Professor Dan Morse lab and earned distinction in the major with a project titled ‘Directed Evolution of Silicatelin Modeling of Silica Deposition Vesicles’. He entered Harvard this Fall where he will be pursuing graduate study in molecular immunology.

Allysa Capuano Selected as Stipanich Research Scholar

Through the generosity of the Stipanich family, this award is given every summer to a top MCDB undergraduate. Alyssa researches in Professor Thomas Weimbs lab and is working on a project that will contribute to the understanding of uncontrolled proliferation and renal cyst formation in autosomal-dominant polycystic kidney disease (ADPKD). This disease leads to kidney failure and is one of the most common monogenic inherited human diseases. There is currently no treatment. The Weimbs lab is investigating the functions of polycystin-1 which is affected in 85% of the cases of ADPKD. Alyssa is pursuing a major in Biological Sciences with the goal to attend graduate school.

Benjamin A. Thomas (Biological Sciences B.A.) received UCSB’s highest student honor from Chancellor Henry Yang at graduation.

MCDB NEWS 2008
**Student Achievements**

**Biology Undergraduate Program**
The Class of 2008 was awarded over 320 undergraduate degrees in biological sciences, biochemistry-molecular biology, cell and developmental biology, microbiology, and pharmacology.

[www.lifesci.ucsb.edu/undergrad](http://www.lifesci.ucsb.edu/undergrad)

---

**Cal Johnson receives the Daniel G. Aldrich Jr. Outstanding Senior Award** Cali Else Johnson, who earned a double major in Pharmacology and Biopsychology, received the Daniel G. Aldrich, Jr. Outstanding Senior Award in recognition of her outstanding scholarship and contributions to the campus community. The award was established in memory of Daniel G. Aldrich, Jr., who served as chancellor and professor of soils and plant nutrition at UC Irvine and as acting chancellor at UCSB. Working in Professor Steven Fisher’s lab, Cali studied the molecular events in an inherited form of blindness in humans and worked as a volunteer at St. John’s Medical Center in Oxnard, 40 miles away. Because of her outstanding GPA and her performance in class, Cali was invited to be a Teaching Assistant in an upper division neurobiology course. She was admitted to several top medical schools and in the end had to choose between what many regard as the top two in the country. Rather than move east to attend Johns Hopkins, she decided to remain in California where she now attends the University of California at San Francisco.

---

**David Kohl remembers...**

by David Kohl

When I first arrived at UCSB in 1969, there was no Cheddie Hall, Noble Hall, Givetz Hall, Buchanan Hall or Broida Hall. These names were attached to professors, not property. Vernon Cheddie who was also a Professor of Biology, sat on the 6th floor of the “Administration Building” as Chancellor. I remember Elmer Noble in particular as a senior member of the BioSci Department and a professor of parasitology. It was a wild time, that first academic year. In the midst of the Viet Nam war, UCSB students and many faculty were active in the anti-war movement. I remember a night in 1970 standing in Isla Vista watching the old Bank of America burn to the ground. Last year, I knew my time to retire was approaching when I was assigned to teach my Human Genetics course in Embarcadero Hall, the old Bank of America building.

My first teaching assignment was to share the developmental biology course with my colleague Ed Triplett. Ed gave the first lecture and I was immediately struck with the fact that he drew on the blackboard (yes there really were blackboards in those days) using both hands to reflect bilateral symmetry. Ed and I became great friends, and all of us were tremendously saddened when he passed away this past year after a courageous fight with pancreatic cancer. When I think of the old BioSci Department from those days and look around me today at our Molecular Biology Department, it is really amazing to see the growth and development in this area of UCSB. Only two faculty members from the old days are still around on a regular basis, Ed Orias and Ian Ross. Both are formally retired, but both maintain research programs. Orias, in fact, was recently recognized for his mentorship of so many undergraduates over the years.

For twenty-five of my forty years here, I was privileged to advise a wonderful group of students preparing for professional education in the health field. Yes, I was the pre-med guy. I have stayed in touch with so many of my former advisees, and currently have one of my old pre-dents (David Dart), messing around in my mouth and other pre-medics touching and feeling other parts of my old body. I still get to meet with many students applying for medical and other health professional schools and continue to be so impressed with our students and their sincere motivation to serve others.

The growth in our faculty in molecular biology has been truly inspiring. I still remember when that kid, Stu Feinstein came to UCSB. Believe it or not he is one of our senior faculty members now, a leader in our neurobiology program and still teaching in the introductory series. Other senior faculty Chuck Samuel, Steve Fisher and Dan Morse have received so much international recognition for their scientific achievements. Of course John Carbon, who just shut down his lab this year, continues to be recognized as one of the greatest forces in the development of the entire field of molecular biology. He and Louise Clarke established the first gene library to cover an entire organism (E. coli). We are in the process of recruiting for the Carbon Chair, endowed by friends of John to honor his contributions.

Last week I received my membership card in the Emeritus Club. It will be a true gift to reconnect with some of my old (I guess I’m old now too) colleagues, Phil Laris, Aharon Gibor, Neil Holmes, George Taborsky, Ellis Engelesberg and surely others who I am forgetting. I am so fortunate to have spent forty years associating with such wonderful people as my former and present colleagues on the faculty and in the various administrative posts that I have held. But more than this I will always treasure all of my former students who I have taught and advised. I hope that you will stay in touch by e-mail and let me know how you are doing (kohl@lifesci.ucsb.edu). As Bob Hope (remember him??) used to say.....

“Thanks for the memories!”

---

**STUDENT ACHIEVEMENTS**

**HISTORICALLY SPEAKING**

**The Jean Devlin Memorial Award in Pharmacology Goes to Ryan Cody**

This award is presented to the MCDB graduating senior with the highest overall academic GPA in the core courses of the Pharmacology major. This award was initiated in memory of Jean Devlin, a Pharmacologist who was instrumental in the development of the Pharmacology major at UCSB, the first such major in the nation. Working in Professor Christopher Hayes’s lab, Ryan also earned distinction in the major by researching the effects of pseudo release factors on tmRNA tagging. He plans to attend UCSB, the first such major in the nation. Working in Professor Christopher Hayes’s lab, Ryan also earned distinction in the major by researching the effects of pseudo release factors on tmRNA tagging. He plans to attend UCSB, the first such major in the nation.

**Teaching Assistant Ryan Cody (Center), with Pharmacology Lab Instructors Dr. Douglas Thrower and Dr. Tanja Stoyan.**

---

**Ten MCDB Students Inducted into Phi Beta Kappa this Year**

Founded in 1776, Phi Beta Kappa is generally considered the most prestigious American college honor society, and membership is one of the highest honors that can be conferred on undergraduate liberal arts and science students. Congratulations go to: Maribel Munoz, Michael Beccarelli, Michael Chanco, Jeremy Demaarntin, John Feusier, Cassandra Kaiser, Christopher Mugler, Dora Friedman, Dmitriy Kolodin, and Jessica Reader for having been selected in 2008.

---

**MCDB NEWS 2008**

**UNIVERSITY OF CALIFORNIA, SANTA BARBARA**
**GRADUATE AWARDS**

**State College in Olympia, WA.** She is now investigating the regulation of epigenetic mechanisms by studying human DNA cytosine methyltransferases.

**Shipp Family Graduate Fellowship**

This Fellowship is provided, through the generosity of Dr. and Mrs. Joseph Shipp, to support training of biomedical scientists with interests in molecular cell biology related to diabetes research. Diabetes mellitus is a major worldwide problem and more research is needed in this area. Based on academic standing the MCDB faculty selected first year Ph.D. student Adrian “AJ” Giovannone as the first recipient of the Shipp Family Graduate Fellowship in Biology. The fellowship will provide critical funding for the summer so AJ can begin his thesis research centered on the molecular mechanisms of protein secretion, with particular focus on SNARE proteins. These proteins mediate the interaction of secretory vesicles with the plasma membrane and are crucial in the functioning of pancreatic beta cells during the secretion of insulin.

**Rathmann Fellowship**

The Rathmann Fellowship was awarded to Julianne Erickson. After graduating from Harvey Mudd College in 2005, Julianna spent two years at the Stanford Genome Technology Center in Palo Alto, CA, working on sequencing diagnostics for Human Papilloma Virus and Avian Flu. She is currently working in the Feinstein Lab on the Alzheimer’s disease protein Tau.

**Dean’s Fellowship**

This fellowship by the UCSC Graduate Division was awarded to Julia Shimizu, who is a 4th year graduate student with a BS in Biology and Chemistry from Evergreen State College in Olympia, WA. She is now investigating the phenomenon in E. coli known as “contact dependent growth inhibition”.

**Amgen Fellowships**

Provided through the generosity of Amgen, Inc. to assist outstanding doctoral students within the MCDB graduate program, the Amgen Fellowships provide support for research supplies, living expenses and fees. This year’s awards go to Ryan Schaub (Hayes Lab) and to Celeste Holz-Schietlinger (Reich Lab). Ryan graduated from California Lutheran University in 2007, and is now working on cloning RNA pseudouridine synthase and its role in enabling efficient translation termination in E. coli. Celeste graduated with a BS in Biology and Chemistry from Evergreen State College in Olympia, WA. She is now investigating the regulation of epigenetic mechanisms by studying human DNA cytosine methyltransferases.

**Carbon/Clarke Fellowship**

Awarded to an outstanding doctoral student doing research in Biochemistry and Molecular Biology, this fellowship is provided through the generosity of John Carbon and Louise Clarke, emeriti of the MCDB Department. This year’s fellowship went to Adrian J. Giovannone who received a B.S. in Natural Science from Loyola Marymount University in 2000. He is investigating the regulation of intracellular trafficking in the Weimbs Lab.

**Chang Awards for Research in Biochemistry and Molecular Biology**

To promote excellence in Biochemistry and Molecular Biology, the Shing and Sheng-Yung Chang Awards recognize excellence in research by graduate students in the MCDB and BMSE Graduate Programs. Shing and Sheng-Yung are both graduates of MCDB, and are generous donors to the fund. Awards are based on presentation of research in the student-run seminar series, where students present their dissertation work to their peers. Award winners were: Austin Peck (Feinstein Lab) - 5th year (tie), “Impaired Axonal Transport and the Pathogenesis of Tauopathies”; and Dana Moses (Waite Lab) - 5th year (tie), “Structure and Function of Glycera Jaws,” Erkan Kirs (Feinstein Lab) – 4th year, “Effects of site-specific tau phosphorylation upon microtubule binding, assembly and the regulation of microtubule dynamics: Implications for Alzheimer’s and related dementias”; and Nareg Djabrayan (Rothman Lab) – 3rd year, “Analysis of genes involved in the switch from pluripotency to committed differentiation in the C. elegans embryo.”

**Science and Engineering Research Grant (UCSB Graduate Division)**

This grant was awarded to Erica Sommermann (Rothman Lab) and directly supports her research of intestinal development in the nematode C. elegans. Specifically she is studying how the endodermal cell column gives rise to differentiated intestinal cells that are assembled into a single, coherently functioning organ.

**Jean Devlin Fellowship (Graduate)**

This Fellowship was awarded to outstanding graduate students in MCDB with the best qualifying exam. The fellowship was established in honor of Jean M. Devlin who served as the pharmacology lab coordinator for over 25 years, and touched thousands of lives at UCSB. During Jean’s tenure, and with the leadership of Professor Bob Jacobs, UCSB established the first undergraduate major in pharmacology in the country. The fellowship is awarded to Teisha Rowland who is pursuing her Ph.D. in Prof. Denisa Clegg’s lab on projects that aim to improve stem cell culturing and directed differentiation.

**CIRM Training Grant**

The California Institute for Regenerative Medicine (CIRM) was created by the passage of California Proposition 71 in 2004. CIRM provides funding for training the next generation of stem cell researchers in the State of California. This year’s grants are awarded to David Buchholz (Clegg lab) and Nareg Djabrayan (Rothman lab). David received his BS in Biology from Boston College, and is utilizing human embryonic and induced pluripotent stem cells as model systems for the development of the human eye. Retinal pigment epithelial cells derived from stem cells may provide a possible therapy for those afflicted with age-related macular degeneration. Nareg is a 5th year graduate student in Joel Rothman’s Lab and is studying mechanisms that restrict pluripotency in the developing C. elegans embryo.

**Charles A. Storke II Graduate Fellowships**

This award is given to a doctoral student(s) with the highest grade point average in the MCDB core courses. This year two awards were made to Julianna Erickson (Feinstein lab) and Rebekah Ashley (Waite lab). They posted GPAs of 3.66 and 3.72 in challenging courses in protein chemistry, cell biology, signal transduction and development. Rebekah’s is studying the composition of the thread of a local species of mussel, M. californianus with the goal to synthetically mimic this natural glue.

**A Strong Relationship – UCSB and the Camarillo Foundation**

Marc J. and Judy K. Shipp established the first undergraduate major in pharmacology in the country, and with the leadership of Professor Robert Jacobs, UCSB established the first undergraduate major in pharmacology in the country. The fellowship is awarded to Teisha Rowland who is pursuing her Ph.D. in Prof. Denisa Clegg’s lab on projects that aim to improve stem cell culturing and directed differentiation.
Mike Dowler (BA Chemistry '63, Biochemistry '67) was in the first group of doctoral students from the department. After postdoctoral studies with Leslie Orgel in prebiotic chemistry at the Salk Institute, he spent 32 years at San Diego State University. He retired from SDSU in 2003.

Charles Escoffery (BA Zoology '65) went into the Peace Corps to teach 7th and 8th grade Science in Malaysia for three years, after graduating. He has been teaching at Wright Middle School for the last 37 years where he is now the Science Department Chairperson and the Coordinator for Graduate Programs at San Diego State University.

Malcolm Leo (BA Biological Science '66) began working as a director of an art gallery before beginning to produce documentary films. In 1983 he formed his own production company and boasts several television specials dedicated to some of TV’s classic shows, movies, and music, including “Bradymania: A Very Brady Special”, “Happy Days Reunion Special”, “E.T. & Friends: Magical Movie Visit”, Roling Stone – 20 Years of Rock”, and “Disney’s All-American Television”. Leo has also directed several feature films and is currently working on one documenting the life of Jerry Garcia.

Jack Slatyon (BA Biological Science '66) entered the U.S. Army after graduating. He served two years in Vietnam, 7 years in Germany, and several stateside assignments as a health care and hospital administrator. 26 years, 2 Masters degrees, 3 Bronze Star Medals, the Legion of Merit and many more military citations later, Jack retired from the military. After some time as a regional director of assisting living facilities and nursing homes, he has served the state of Texas as Director for State Veterans Cemeteries.

Terry Oleson (BA Biological Science '67) continued on to receive a M.A. in Psychology (CSULB) and a PhD in Psychology (UCI) which he uses in his private practice in West Hollywood. In addition he is the Chair of the Department of Psychology at the California Graduate Institute and enjoys the success of an internationally recognized book on auricular acupuncture, based on research done during his post-doc at UCLA.

Peter Bresler (BA Biological Science '68) graduated from UCLA Medical School and trained as a family physician. He has worked for the Department of Corrections for the past 15 years, and is currently chief physician at Coalinga State Hospital. He has three grown children, the youngest of whom has joined the Peace Corps in Africa after completing her degree at Cal Poly.

Gene Sorkin (BA Cellular and Organismal Biology '72) received his Pharm. D. degree from the University of Utah. After working as a clinical pharmacist at Latter-day Saints Hospital in Salt Lake City in 1986, he moved to Los Angeles and became amax medical correspondent on auricular acupuncture, based on research done during his post-doc at UCLA.

Karen Hasley (BA Zoology '73) attended the University of Califormia, Davis. In 1978, she received a B.A. in Veterinary Science and in 1981, a D.V.M. degree. In 1998, she received a Master of Science in Veterinary Pathobiology, an area of fish science, at the University of Florida. She is currently working as a Veterinary Pathologist in the State of California.

Tad Reynales (MA Biology '73) spent many years studying MSI at UCSD after graduating, and continues working as computing services manager for the College of Engineering at Oregon State University. Tad recently returned to UC System in 2002 as director of the Network and Telecommunications Services for UC Santa Cruz and is currently employed at UC San Diego in the California Institute for Telecommunications and Information Technology.

Dale Graham (BA Biological Sciences '74) has worked for the Federal and Drug Administration for the past 35 years. He currently manages the Houston office of the FDA, and oversees the FDA’s biologics program inspectional activities for Texas, Oklahoma and Arkansas. When not busy cruising the Caribbean with his wife he enjoys sharing his love of science and nature with his grandchildren.

John Hirsch (BA ‘74) attended pharmacy school at University of Colorado where he received his Pharm.D. degree. He practiced clinical pharmacy in New England, Minnesota, Virginia and Pittsburgh. For the past 13 years he has worked in the pharmaceutical industry on the medical side of things. He lives with his wife in Pittsburg, PA.

Paul Kurth (BA ‘74) went on to Al- bany Medical College and graduated in 1978. After graduating from Medical School, Paul returned to Santa Barbara and did a three year internship and residency at Cottage Hospital and County General Hospital and a year fellowship in Cardiology at the Kaiser Sunset Hospital. Paul started a Medical Device company called Pressure Products Medical Supplies Inc and is now working as full time CEO of this company.

Larry Totaro (BA Biological Sciences ‘74) served in the Peace Corps, after graduation teaching high school biology in El Salvador. He later returned to school in South America to receive his Respiratory therapy and has been working at Loma Linda University Medical Center for over 25 years.

Suzanne Hooten (BA Biological Sciences ‘75) rowed with UCSB crew for her last two years at UCSB. She then went on to row with the National Team for three years including the 1976 Olympic Team. Suzanne graduated from Temple University Medical School in 1982 and is practicing as a pediatrician in Roseville, California.

David Lee (BA Biochemistry, Molecular Biology ‘76) currently works as an Associate Professor of molecular microbiology and immunology at the University of California, Irvine. He is also Director of the Graduate Studies for the Pathobiology Graduate Program and teaches advanced undergraduate/basic and advanced graduate courses in Immunology. He earned his PhD in Microbiology in 1990 at University of Virginia, Charlottesville.

John Mahoney (BA Biological Sciences ‘76) manages the Global Support Program Department at LifeScan, which provides worldwide scientific and clinical consultative expertise for Lifescan and Johnson & Johnson. He works with sales, marketing, customer service, regulatory affairs, in addition to a number of worldwide institutional clients. Mahoney has co-authored over 14 scientific articles, abstracts and books chapters and was on the editorial board of Clinical Chemistry.

Gary Peyrot (BA Biochemistry, Molecular Biology ‘76) contin- ued his studies through the pharmacy department at UCSD, achieving his MS degree in Scientific Instrumentation. He presently works as a Field Applications Engineer for Intel.

Carol McCutcheon (BA Biological Sci- ences ‘79) directly entered dental school at the University of Washington and graduated in 1983. Carol has been working as a den- tist in the Bay Area for twenty-four years.

Curtis Edwards (BA Cell Biology ‘79) attended dental school at the University of Washington. He went on to become a general and vascular surgeon which he practiced for seventeen years. He is now semi-retired and is working as a senior FAA medical examiner. Living in Olympia Washington.

Debra Cudnikowski (BA Biological Sciences ‘81) finished her Family Medicine residency training at the University of Virginia, Charlottesville, S.C. and was the Medical Director of the University of Min- nesota’s Student Health Services.

Ken Forbes (BA Physiology, Pharmacology ‘84) managed an air pollution tasting laboratory in Los Angeles primarily looking at emissions from refineries and other heavy industry. He has completed clinical labora- tory training at the University of California, Irvine Medical Center. Forbes is currently an analytical chemist and laboratory manager for Ashland Inc. in the San Francisco Bay Area. He has been managing a Quality As- surance Laboratory for 11 years.

Debra (Alexander) Alimento (BA Biological Sciences ‘85) attended UC Berkeley School of Optometry. She is now in private practice in optometry in Torrance, California.

Darrell Lavin (BA Biology ‘85) is a chiropractor and has had a private practice in Castro Valley, CA since October 1989.

Kelly Svedberg (BA Zoology ‘86) went on to attend the UCSB Graduate School of Education and obtained two NCE teaching licenses in High School Life Sciences. Kelly moved to Charlotte, NC and worked as a Med Tech until 2003. In 2003 Kelly attended East Carolina Univer- sity and achieved a Master of Science in Physician Assistant Studies in 2006.

Tony Smale (BA Biological Sciences, Economics ’87) continued on to San Diego State University, receiving his masters in Public Health in ’89. Tony works for Kaiser Permanente Medical Program as the Planning Director for the Orange County Service Area.

Marjorie Longo (BA Biochemistry, Molecular Bio. ’88) is a full professor in the Department of Chemical Engineering and Materials Sci- ence at UC Davis. Marjorie is also the Chair of the Biophysics Graduate Group, Haynes of Physics.

Dana Vaughan (PhD Biology ‘88) completed her work with Steve Fisher in the early years of the Neuroscience Research Institute. Since graduation she has held faculty positions in Utah and Wisconsin and is now Associate Professor of Biology at University of Wisconsin, Oshkosh. She still maintains a research program on the mammalian visual system.

James Andrews (BA Biology ‘90) worked in a biology lab for several years before attending medical school in Maine. Andrews was awarded a military scholarship to pay for medical school and subsequently did a psychiatry residency and child/adolescent psychiatry fellowship at Tripler Army Medical Center. Hi. He is now fulfilling his Army obligation at Fort Knox, KY.

Elizabeth Whiteman (BA Biological Sciences ’90) went on to ob- tain her MD at the University of Illinois in ’96 and was recently promoted to Associate Professor of Medicine UCLA in 2007. Elizabeth works with elderly patients and also teaches medical students and residents in UCLA.

Troy Zabel (BA Zoology ‘90) attended medical school at UC San Francisco. He completed a residency in internal medicine at University of Colorado and a fellowship in geriatric medicine at UCSF in 1998. He is now in private practice in Denver, Colorado.

John McAuliffe (BS Pharmacology ‘91) went to work for COR Therapeutics, a small biotech company on Oyster Point in South San Francisco, CA to develop a new drug called Integrilin. He had a short stint at Glaxo Wellcome then later worked at Athena Diagnostics in 1998, where he is currently employed. His responsibilities include corporate accounts, sales training, biomedical research, and market segmentation.

Sam Halabo (BA Biology ’92) went on to dental school at Boston University’s School of Graduate Dentistry. He graduated top ten percent of the class in ’96 and proceeded to dental residency at VA hospital. Sam currently runs his own practice in San Diego and was voted one of the best dentists in San Diego.
We Would Like to Hear From You!

Send a brief news story of a personal or professional nature. If you would like us to include your “story” in the next newsletter, email the department at: mcdb-newsletter@fssci.ucsb.edu.

Watch for more alumni news on our website!

Change of Address?

Send an email to the following address to update your contact information: mcdb-newsletter@fssci.ucsb.edu.
C. elegans gonad stained for the apoptosis inhibitor protein ICD-1 (in red); the nuclear envelope is outlined by staining for nucleoporins (green); nuclei are stained with the DNA dye DAPI, by Pradeep Joshi (Rothman lab)

Page 12/13: “Pelican” by Gary Wilcox

Page 15: by Alumni and Friends of the Department 2008