



Blake's Life So Far...

You can call me Blake...just Blake.

No need for the formal

Mr. or Professor Barron.

To get to know me better, please find below the description of my life that was published when I was SBCC's Faculty Lecturer of the Year in 2013-2014. This is the highest honor bestowed on an SBCC faculty member for their diligent dedication to teaching and the SBCC college community. I am thoroughly honored and humbled to have earned this award. There is some information at the end about more recent activities and projects since that time.

I LOVE teaching...it was what I was always supposed to do and it is easy to come to work in the classroom everyday or teach online from my dinner table with the amazing students we have at SBCC.

Blakely (Blake) Barron was raised, together with his taller "little" brother Matt, by his loving and devoted parents, Paul and Neva Barron in Ventura County. It is from watching his parents work so hard that Blake learned his work ethic. While he was born in Fort Sill, Oklahoma (in an army hospital as his father was returning from Vietnam) he grew up entirely in Southern California. Blake's passion for understanding the natural world stems from an innate curiosity about the wonders of nature, his childhood experiences playing in the dirt, adventures in Boy Scouts and family vacations. Fond thoughts of explorations in the outdoors dominate Blake's childhood memories. Tucked in the corner of a window in one of his middle school classrooms, he vividly remembers watching an orb weaver spider spin a web over and over again and pondering what it would be like to be an arachnid. Hiking, camping, swimming and reading were and still are among his favorite activities. Recently, Blake has developed a keen interest in nature photography which he hopes will help to increase his effectiveness in the classroom. He has always been a voracious reader and not surprisingly was drawn into the worlds of science fiction and fantasy. As a self-described science geek, Blake spent plenty of time in the nerdy worlds of Dungeons and Dragons and computers. He was excited when

his parents got him one of the earliest home computers, a TI-99/4A, with a whopping 16K of memory! A fascination with technology, data collection and analysis was born.

He is a proud graduate of the public education system in California from elementary school to the University of California, Santa Barbara. During high school Blake was fortunate to have some very effective and committed science teachers. Some of his abilities as an instructor today come from this early exposure to innovative teaching. He has always been attracted by the sea and after graduating Moorpark High School in 1986 he washed up on the beaches near UCSB.

While working toward his undergraduate degree, Blake worked many hours each week as a part-time waiter and continued to do so through the beginning of his graduate school experiences. He remembers and therefore understands the daily struggles our students face balancing the requirements of classes, work and an active social life. In 1991, Blake earned his Bachelor of Arts in Physiology and Cell Biology from UC Santa Barbara.

As Blake was completing his undergraduate degree at UCSB, he started working in the lab of Dr. Peter M. Collins. The Collins lab was focused on various aspects of reproductive physiology from studies of gonadal function in primates to the hormonal regulation of seasonal reproduction in fish. This experience would lead Blake to continue at UCSB for his graduate studies. Questions about how our environment shapes the animal world had pervaded Blake's thoughts for years. His research included early work on the Japanese Medaka (*Oryzias latipes*) which was primarily focused on understanding how environmental variations such as photoperiod and temperature influence the neuroendocrine systems that regulate reproduction. Companion seasonal studies of Pacific rockfish focused on changes in the neuroendocrine and endocrine factors regulating specific phases of reproductive function and growth. The centerpiece of this work was a seasonal study of grass rockfish (*Sebastes rastrelliger*) aimed at obtaining specific endocrine correlates of rockfish reproduction. This was the first such study on this species and the first comprehensive work on the integrated responses of the neuroendocrine

and gonadal systems to seasonal changes in any rockfish species. Additionally, this was the first study to identify four different molecular variants of Gonadotropin-Releasing Hormone, GnRH, in a single species of fish, including the first identification of a previously unknown novel GnRH form. Blake gained a greater appreciation for the value of international collaboration as some of this work involved scientists in Southeast Asia. Blake participated in several international scientific conferences and performed collaborative research at the Oregon National Primate Research Center and the University of Victoria in Canada.

In graduate school, Blake was given the opportunity to not only be a Teaching Assistant for three different biology courses, but also to lecture for one semester for an upper division vertebrate reproduction course while his major advisor was on sabbatical. These rich experiences kindled a fiery interest in teaching. Blake earned his Master of Arts in Biological Science with an emphasis in Comparative Physiology in 1996 with the knowledge that, while research was indeed fascinating, a career focused on teaching was his desired goal.

Blake reflects on the period when he was finishing graduate school as one of the luckiest times in his life. As one of his last T.A. positions at UCSB was ending, Blake was exceedingly fortunate to be hired by the Department of Biological Sciences at Santa Barbara City College in 1996. Initially he taught BMS 108, Human Physiology and then Biology 100, Concepts of Biology as an adjunct faculty member. Between 1998 and 1999, Blake married his lovely wife Janet, purchased his first new car and was hired as a full-time tenure-track professor at SBCC.

The past 17 years at SBCC have been tremendously fulfilling for Blake. With wonderful mentors in his department and around campus, Blake has learned to be the best teacher he can while simultaneously he has experienced great personal growth. Much of his professional development comes from the opportunities Blake had to teach a range of fourteen different majors and non-majors courses in the Biological Sciences Department. This diversity has provided Blake with a breadth of knowledge that he can continually integrate and share with students. In service to the needs of his fairly large and diverse department, Blake has been both Biomedical Sciences Coordinator and Biology 100 Coordinator.

Blake enjoys being involved in multiple aspects of our campus culture. After briefly serving on the Honors Advisory Committee and Student Services Committee, Blake jumped in the deep end of the committee assignment pool. He had the privilege of doing the important and sometimes difficult work performed by the Academic Senate when he was elected by the Sciences Division in ???. He currently serves as Department Chair for Biological Sciences and has previously served as co-chair. The STEM Transfer Program Faculty Workgroup is one of his favorite current committees as they develop strategies and pedagogy to facilitate student success in Science, Technology, Engineering and Mathematics (STEM) courses and increase the number of students majoring in STEM fields. As a member of the Student Learning Outcomes (SLO) Workgroup he hopes we can further transform the SLO mandate into a more meaningful and useful process.

Blake was very proud to serve as the lead coordinator to write and guide the A.A. in Liberal Arts: Biomedical Sciences Emphasis degree through the campus and chancellor's office approval processes. This now approved degree has increased the options for our students and significantly expanded the number of students earning Associate of Arts degrees in our department at SBCC.

There is a true sense of community at SBCC. Blake has collaborated with and/or mentored many SBCC faculty and staff on a variety of other specific projects within the Department of Biological Sciences and across the SBCC campus. It is always a joy to welcome new, highly qualified faculty and staff to our campus and to help evaluate our on-going efforts on behalf of our students. Blake has chaired or been a member of many faculty and staff hiring and evaluation committees including the Biological Sciences Lab Coordination Team (LCT).

He is a member of the One Planet faculty program initiated by Dr. Adam Green to integrate sustainability issues into the curriculum across the campus. As a college level human sexuality educator, Blake was thrilled to participate in a group meeting during summer 2010 with many local sexual health educators. This engaging group discussion helped to increase the effectiveness of teaching of this vital subject to college students. This is one example of the many opportunities that Blake's colleagues have encouraged him to take advantage of to become a better teacher.

In 2011-12 Blake was honored to earn a SBCC Faculty Excellence Award.

Santa Barbara City College is #1 because our students are the focus. Blake is most proud to be the Faculty Advisor for the Biology Club since Fall 2008. We have all been impressed by the level of dedication to service and exploration exemplified by the devoted student members of the SBCC Biology Club. Thanks goes out to the campus for supporting the Bio Club with their bake sale and car wash fundraisers. Every year the "Bio-Clubbers" are involved in a variety of activities from local elementary school biology education presentations to SCUBA classes to tidepooling and hiking trips to our annual adventurous camping excursion. It is clear from the Facebook posts to the SBCC Biology Club group that these students are not just interested in camping and hiking, but enthusiastic about the process and progression of science.

On July 31, 2003 his son Eli was born, which also happened to be Blake's birthday. Six years later Lucas was born into their clan. As with many fathers, Blake now sees the world through the fresh eyes of his sons. He has a greater appreciation for the wonders of the human brain

as he observes his children grow and explore the world.

Blake's teaching philosophy is characterized by high expectations for both himself and his students tempered with compassionate consideration of the diversity of our students and recognition of both their fears and potential. Blake suggests that instructors should "challenge and entertain your students at the same time. Most students are eager to learn so set the bar for your students high and then give them specific support and learning techniques to help them build the rungs of their own ladder to greater understanding. There is a difference between a teacher teaching and a student learning. Just because you think you have taught a concept to a student does not mean they have actually learned it. Ask them – many times." As primates, humans are social critters. Our survival and ability to thrive is predicated on our establishing effective relationships, staying connected and helping each other.

Blake looks forward to many more years of adventure, discovery and fun at SBCC!

Students - feel free to email me anything you would like about yourself so I can get to know you better too.

❖ HONORS AND EDUCATION

Faculty Lecturer of the Year, 2013-14, Santa Barbara City College

Lecture Title: *Sex, Drugs and Rock & Roll: Sensations & Rhythms of Life*

This award is earned based upon a faculty member's excellence in teaching, counseling, or librarianship as well as their overall service to Santa Barbara City College. It is considered the highest honor bestowed on SBCC faculty by their peers.

Faculty Excellence Award, 2011-12, Santa Barbara City College

M.A., Biological Science, 1996, University of California, Santa Barbara

Emphasis: Comparative Physiology

B.A., Physiology and Cell Biology, 1991, University of California, Santa Barbara

❖ TEACHING POSITIONS AND ACADEMIC APPOINTMENTS

Professor, Biological Sciences, Full-Time, Tenured

Santa Barbara City College, Fall 1999 – present

See below for list of courses taught, professional and committee activities

Department Chair, Biological Sciences

Santa Barbara City College, Fall 2011 – Spring 2014

Lead, coordinated and facilitated all aspects of the operation and administration of a large scientific teaching department with 13 full-time tenure-track faculty, 16 part-time adjunct faculty and over 10 full-time and half-time staff with thousands of students in about 40 different courses per semester.



Several years over by various rankings

**Biological Sciences Instructor, Full-Time, Temporary Contract
Santa Barbara City College, Fall 1998 - Spring 1999**

Adjunct Instructor, Santa Barbara City College, Fall 1996 - Spring 1998

Adjunct Instructor, Moorpark College, Spring 1998

Course instructed:

Biology 1, Principles of Biology, 4.0 units

This is a general education lecture and laboratory course for non-majors which is designed as an introduction to cell structure & function, molecular biology, Mendelian and population genetics, physiology, ecology and evolution.

Teaching Assistant, UC Santa Barbara, Fall 1991 - Spring 1997

Courses instructed: (each course was taught twice per year)

Biology 23, Human Reproductive Physiology and Development, 4.0 units

This is a large, lower division course for non-majors which emphasizes the basic functions of human reproduction, descriptive embryology, teratogenesis, and parturition.

Zoology 156, Reproduction, 4.0 units

This is an upper division course for all Biology and pre-med majors which focuses on the clinical and comparative aspects of the reproductive biology of vertebrates.

While a teaching assistant for these courses, I was responsible for course design, text and lecture topic selection, exam preparation and grading, course reader preparation, enrollment, budget management, and lecturing.

Mentor, Young Scholars Mentorship Program, UCSB, 1995 - 1998

Taught physiological concepts and provided research experiences in Dr. Collins' laboratory for six advanced high school students through a Summer Sessions program initiated by Dr. Miriam Polne-Fuller at the Marine Science Institute, UCSB. This research was presented at annual undergraduate research symposia.

Lecturer, Teachers As Marine Scientists Program, UCSB, 1996

Performed lectures on fish biology and physiology to junior high and high school science teachers through the Teachers As Marine Scientists Program. I participated in the design of innovative lesson plans and experiments to be used in the teachers' home classrooms.

Laboratory Supervisor, Collins' Laboratory, UCSB, 1991 - 1998

Responsible for the training and supervision of undergraduate researchers in Dr. Collins' laboratory including day-to-day advising of undergraduate research projects, data collection and statistical analysis, training in laboratory safety, and supervision of specific technical protocols. I individually supervised over 25 undergraduate researchers during this time.

❖ **SANTA BARBARA CITY COLLEGE RESEARCH, COMMITTEES AND ACADEMIC ACTIVITIES**

• I have maintained my commitment to curriculum development and new and effective teaching techniques and best practice at a variety of levels of our campus. During the last five years, I have served in the following capacities:

• **Making Cross-Disciplinary Connections SOTL Research:** This is an experimental study with Amy Thompson in Physics and Eric Bullock in Chemistry at SBCC. It is now a continuing collaboration between Physics, Chemistry and Biology faculty to develop lecture content and slides for several topics and emphasize connections between physics, chemistry and biology for students. Students see the same ideas applied in three classes in these three different disciplines that Biology Majors are required to take before transfer. We are using some of the same slides and content, but the information is integrated into each class in slightly different ways by each instructor. We are in our first semester of true implementation and solid data collection. This project originated out of our original work at ESCALA over the past few years. This project helped stimulate the passage of an Academic Senate proposal to establish an IRB on the SBCC campus.

• **Attended the International Society for the Scholarship on Teaching and Learning (ISSOTL) Conference in Atlanta, GA in October 2019** as part of the SOTL research team from SBCC in association with the Title III STEM grant, *Removing Barriers to STEM Success*. **Current member of the ISSOTL.**

- **I have been an active participant in the Affective Learning Institute (ALI) at SBCC** over the past three years and have completed all training, developed a research project and earned the ALI Certificate. Participated in the past two ALI Conferences in Long Beach, CA in 2018 and Avila Beach, CA in 2019. The Long Beach ALI Conference included anti-racism training. **I will be presenting initial research data from the above SOTL research at our ALI Conference in Avila Beach, CA this May 2020.**
- **STEM Faculty Mentor (part of Title III grant): I am currently officially mentoring 10 students and unofficially several more.** This program provides a wonderful opportunity for direct one-on-one student to faculty connections. Mentees report that this program has effectively helped struggling students to develop the academic and non-cognitive skills necessary for their success in STEM courses and majors. Many of our mentees in this program report that they would have dropped out of college without the support of the direct contact and relationships developed with their faculty mentors.
- **Attended two different Project Grad LA workshops** for training in non-cognitive skills and communication technique development regarding work with my STEM mentees.
- **Attended and earned the ESCALA Certificate in College Teaching & Learning in Hispanic Serving Institutions (CTL-HSI)** training in Santa Fe, New Mexico with many other SBCC faculty. Completed a pilot research project to earn the certificate.
- **Attended the American Association of Colleges and Universities (AAUC) conference in Washington, D.C. in January 2018** as part of the team from SBCC in association with the Title III STEM grant, *Removing Barriers to STEM Success*.
- **Over the past three years, I have trained and supervised fifteen different student Peer Assisted Learning (PAL tutors). This is a specialized and tailored type of supplementary instruction (SI) for my Biology 102, Animal Biology majors course.** I trained them in basic supplementary instruction/peer assisted learning and group study skills as we continue to develop this engaging and interactive strategy for the Sciences Division. These PAL tutors have been able to provide a significant increase to the number of hours per week of peer instruction provided to students in Bio 102. This has resulted in significantly higher average scores on lab practica and exams for recent Bio 102 class. This project is funded through the Title III grant and this work will continue.
- **Co-Leader of the STEM Student Success Learning Communities project with Matt Kay (SBCC Biology) and Jens Uwe-Kuhn (SBCC Chemistry). This was the very first ASPEN Excellence Grant awarded at SBCC from the ASPEN prize funds. These funds were earned when SBCC was ranked as the number one community college in the nation by the ASPEN Institute in 2013.** This project integrated pedagogical practices that are known to be effective in supporting and strengthening the teaching and learning process and focused on increasing the success rates of students pursuing STEM majors.
- **Co-Leader with Matt Kay and Jens Uwe-Kuhn on the STEM Faculty Fellows project funded through President's Foundation Funds.** This project engaged faculty in the opportunity to link pedagogy with learning outcomes, student experience, and assessment. Fellows met monthly and discussed barriers to student success in their classes and majors with a focus on these topics:
 - reviewed relevant pedagogical research
 - explored best practices for motivating students, organizing courses and providing constructive feedback
 - focused on practices that build competent, confident, comfortable students of science
 - began development of inter-disciplinary references and activities that will emphasize inter-disciplinary application of knowledge and techniques
- **Completed our Cal State Channel Islands STEM/ACCESSO Grant collaboration** to develop undergraduate embedded research opportunities for undergraduates into STEM courses at local community colleges. Several SBCC faculty were involved in this collaboration, but Jim Doohan and I specifically developed lab protocols to train majors Biology students in DNA Barcoding techniques. This collaboration resulted in significant funding from the CSUCI grant for the purchase of requisite new scientific equipment for the Biological Sciences Department at SBCC.
- **Faculty Member, STEM Transfer Program (STP) Workgroup** which began and organized our now annual **Science Discovery Day (SDD)** at SBCC every spring semester, among other STP activities. This grant ended and SDD is now institutionalized and I remain as one of the primary contacts for organizing SDD for Biological Sciences.

- **Current Chair, Lab Coordination Team (LCT), Biological Sciences:** this key committee provides communication and organization between our lab techs and between lab techs and faculty in our department.
- **Member, SBCC Scholarship on Teaching and Learning (SOTL) Faculty Inquiry Group (FIG)**
- **Member, SBCC Peer Assisted Learning (PAL tutors) Science Division Faculty Inquiry Group (FIG)**
- **Member, Removing Barriers to STEM Success; Title III Grant Steering Committee**
- Participated in **ten different SBCC hiring committees** for **full-time** faculty and administrators.
- **Worked closely with and mentored various Sciences Division faculty and staff** in scheduling and utilization of laboratories and laboratory supplies and equipment and the development of specific course curricula and pedagogy.

Since 1999, I have served on a variety of SBCC committees and workgroups including:

- Academic Senator, Sciences Division Representative on the Academic Senate
- Department Chair, Biological Sciences
- STEM Faculty Workgroup
- Faculty Advisor, Biology Club since fall 2008 - this club has been awarded **the SBCC Outstanding Club of the Year twice in the past 4 years** due to the incredible active campus engagement and community service performed by students in the club.
- Biomedical Sciences Coordinator
- Biology 100, Concepts of Biology Coordinator
- Student Services Committee
- Honors Advisory Committee
- Student Learning Outcomes (SLO) Workgroup
- Chair or Member of Many Full-Time, Tenure-Track and Adjunct Faculty Hiring Committees
- Chair or Member of Many Faculty Evaluation Committees
- Chair or Member of five different Full-Time Biology Laboratory Technician Hiring Committees
- Lead coordinator to write and guide the AA in Liberal Arts: Biomedical Sciences Emphasis degree through the campus, CAC and chancellor's office approval processes. This now approved degree has increased the options for our students and greatly expanded the number of students earning AA degrees in our department.
- Chair or Member of the Biological Sciences Lab Coordination Team (LCT). This departmental committee provides communication and organization between our lab techs and between lab techs and faculty in our department.
- Participated in a group meeting during summer 2010 of most of the local Santa Barbara County college level human sexuality educators. This engaging group discussion helped all of us increase the effectiveness of teaching this vital subject to college students. Participants included John and Janice Baldwin from UCSB (Sociology 152), Marian Shapiro from SBCC and Scott McCann (Public Health Department, Santa Barbara County) among others.
- Annually organize a formal Biological Sciences Majors Orientation led by academic counseling staff and Biology faculty to better inform students of the transfer requirements and opportunities for students majoring in Biology and related fields.
- Member of the One Planet faculty that works to incorporate more information and specific class assignments involving the importance of biodiversity and environmental science into our course curricula.
- Collaborated with and/or mentored many SBCC faculty and staff on a variety of other specific projects within the Department of Biological Sciences and across the SBCC campus.

Courses instructed at Santa Barbara City College:

- Biological Science 100, Concepts of Biology, 4.0 units
- This is a general education lecture and laboratory course for non-majors designed as an introduction to fundamental biological concepts including: cell structure and function, genetics, molecular biology, plant and animal biology, physiology, ecology and evolution.
- Biological Science 102, Animal Biology, 5.0 units
- This is a comprehensive lecture and laboratory zoology course for majors that focuses on the evolution, taxonomy, anatomy, physiology and ecological adaptations of animals from protozoa to humans.

- Biological Science 103, Cell Biology Laboratory, 2.5 units
- This is a comprehensive laboratory course for majors that focuses on cell structure and function: molecular architecture, reproduction and growth; mechanisms of genetics; intercellular communication; cell and organ system physiology; life's origin.
- Biological Science 110 and 110H, Natural Science and Natural Science Honors, 5.0 units
- This is a general education lecture and laboratory course for non-majors and honors students designed as an introduction to the physical and chemical principles important to an understanding of biological systems including: forces, matter and light; molecular structure and biochemical reactions; origin of life; bioenergetics; nerve and muscle; biological architecture; modes of locomotion; hearing and vision.
- Biological Science 111: Natural Science Laboratory, 1.0 unit
- Laboratory and field investigations of forces, light and biomaterials; optimal form; bioenergetics; functional design.
- Biological Science 141: Principles of Biology Laboratory, 2.0 Units
- Laboratory investigation of biological principles and techniques of investigation.
- Biological Science 295: Internship in Biology, 1.0 – 4.0 units
- Biological Sciences Department structured, on-the-job experience in a field directly related to the student's area of interest in the biological sciences.
- Biological Science 299: Independent Research in Biology, 1.0 – 4.0 units
- Biological Sciences Department structured, independent, systematic research investigation of a problem in biology. A final report on research conducted is required.
- Biomedical Sciences 100: The Human Body, 4.0 units
- This is a general education lecture and laboratory course for non-majors that focuses on the structure and function of the human body. This course is a non-technical introduction to anatomy, physiology, exercise, fitness and nutrition including laboratory experiments in human physiology and the study of human anatomical materials.
- Biomedical Science 107, Human Anatomy, 4.0 units – online hybrid and traditional formats
- This is a comprehensive lecture and laboratory course that is required for many nursing degrees which focuses on the structure of the human body including the study of cadavers.
- BioMedical Science 108, Human Physiology, 4.0 units
- This is a comprehensive lecture and laboratory course that is required for many nursing degrees which focuses on the integrated functions of the human body's vital systems.
- Biomedical Science 119, Human Dissection, 1.0 unit
- Students in this course are outstanding students from Biomedical Science 107 who perform a complete prosection of a human cadaver.
- Biomedical Science 136, Biology of Human Sexuality, 3.0 units
- This is a general education lecture and laboratory course for non-majors that covers fundamental principles and current research focused on the anatomy and physiology of reproductive systems, hormonal control of reproductive cycles, diversity of sexual responses, evolutionary origins of human sexuality, basic genetics and heredity, early human development, pregnancy, parturition, causes and treatments of infertility, sexually transmitted infections, contraception, age-related changes in sexual function and behavior, sexual dysfunction and comparative sexual behaviors.
- Zoology 122, Animal Diversity, 3.0 units
- This is a non-majors course in zoology which focuses on the physiological adaptations of both invertebrate and vertebrate animals in the context of their ecology and evolution.
- Zoology 123, Animal Diversity Laboratory, 1.0 unit
- This is a non-majors laboratory course in zoology which focuses on the physiological adaptations of both invertebrate and vertebrate animals in the context of their ecology and evolution.

❖ RESEARCH INTERESTS AND EXPERIENCE

My current research interests are entirely in the field of the Scholarship on Teaching and Learning.

General Field of Biological Study: Animal Ecological Physiology, Reproduction and Development

Graduate School Research Focus: The Neuroendocrine Control of Reproduction in Teleost Fish

I developed the Japanese Medaka (*Oryzias latipes*) as a freshwater model system designed to identify the physiological mechanisms involved in mediating the effects of specific proximate environmental cues on reproductive status in teleost fish. My research on the medaka was primarily focused on understanding how environmental variations influence the neuroendocrine systems of the hypothalamus and pituitary which in turn affect downstream events in the reproductive

system. This project elucidated previously unknown sex differences in the responsiveness of the reproductive axis to changes in photoperiod and temperature. I performed companion seasonal studies on a marine teleost, the Pacific rockfish (*Sebastes spp.*), designed to identify changes in the neural, neuroendocrine, and endocrine factors regulating specific phases of reproductive function and growth. The centerpiece of this work was a seasonal study of grass rockfish (*Sebastes rastrelliger*) aimed at obtaining specific endocrine correlates of rockfish reproduction. This was the first such study on this species and the first comprehensive work on the integrated responses of the neuroendocrine and endocrine systems to seasonal changes in any rockfish species. Additionally, this was the first study to identify four different molecular variants of Gonadotropin-Releasing Hormone, GnRH, in a single species of fish, including the first identification of a previously unknown novel GnRH form. My research involved international collaborations with some of the leading researchers in the field of fish physiology including Dr. Nancy Sherwood at the University of Victoria, Canada, Dr. A.P. Scott at the Ministry of Fisheries and Agriculture, Lowestoft, England, Dr. Norman Y.S. Woo at the Chinese University of Hong Kong and Dr. Olivier Kah, Biologie Cellulaire et Reproduction, Campus de Beaulieu, France. As a general contribution, an understanding of the seasonal changes in rockfish reproductive activity provided information pertinent to fisheries management, recruitment and the intensive culture of rockfish. This research correlated ecological information with specific physiological parameters aimed at a more comprehensive understanding of the life history of each particular species.

❖ SPECIFIC TECHNICAL EXPERIENCE

- Agarose gel and SDS-PAGE electrophoresis
- Antibody production and hybridoma culture
- Cell separation and centrifugation
- Culture of marine algae (*Chlorella*) and marine zooplankton (rotifers, *Brachionus*)
- Designed, constructed and established maintenance and experimental protocols for a marine microorganism polyculture facility and rockfish culture facility at UCSB
- Designed, constructed, and established maintenance and experimental protocols for a Japanese Medaka (*Oryzias latipes*) breeding colony at UCSB
- Dissection, perfusion fixation and surgical techniques (many different invertebrate and vertebrate species including cadavers)
- Field observations, animal behavior data acquisition and reporting
- High Performance Liquid Chromatography (HPLC)
- Histological preparation and analysis of frozen, plastic and paraffin embedded specimens
- Immunocytochemistry, *in situ* hybridization, Radioimmunoassay (RIA) and ELISA assays
- Light & fluorescent microscopy, morphometric analysis, and photomicrography
- Plasmid Transformation and Polymerase Chain Reaction (PCR)
- Statistical analysis of data (Excel, SBSS, Systat)