

## Steven B. Lee, Ph. D.

### Professor: Director Forensic Science Program

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#### EDUCATION:

1991-1992	Post-Doc	University of Georgia, Athens- Botany	
Dec. 1990	Ph.D.	University of California, Berkeley- Molecular and Physiological Plant Biology	GPA=3.9
		Dissertation: <u>Molecular Genetics and Evolution of Fungi</u>	
1984 -1985	Fellow	Columbia University- Biological Sciences	GPA=3.7
May 1984	M.S.	New York University- Molecular Biology	GPA=3.8
May 1981	B.S.	State University of New York, Binghamton -Biology	GPA=3.6

#### PROFESSIONAL EXPERIENCE: Over 20 Years of Biological Research, Teaching and Advising

2007-present	<b>Professor, Director of Forensic Science, San Jose State University, San Jose, CA 95192</b> <ul style="list-style-type: none"><li>• Tenured and Promoted to Full Professor August 2007</li><li>• Nominated for the CASA Dean's Outstanding Professor Award for AY 2008-09</li><li>• Conference Director of a 2011 AAFS FSEC held at Santa Clara County Crime Laboratory</li><li>• Selected to teach at Sabbatical Spring 2008 at CA DOJ DNA Laboratory</li><li>• <b>Co-PI on an NSF REU Grant awarded \$215,260.00 from 2007-2010 : NSF DBI 0647160</b></li><li>• <b>Research mentor on an NSF REU Grant awarded 2010-2012 \$322,750.00 : NSF DBI 1004350</b></li><li>• <b>Research mentor on an Howard Hughes Medical Institute Grant : \$1,300,000.00 from 2008-2012</b></li><li>• PI for CAC scholarships for 2007-Present Forensic Science Student Scholarships <b>\$24,000.00</b></li><li>• Mentored 12 student research projects leading to 20 presentations supported by grants- <b>\$59,800.00</b></li><li>• Serving as Co-PI for an MS student on the impact of DNA in the criminal justice system</li><li>• Four manuscripts published, two more in preparation.</li><li>• Serving as Chair of the CASA Professional Leaves Committee (F2008)</li><li>• Served as Chair of the Student Opinions of Teaching Effectiveness Committee (F06-S07)</li><li>• Enhanced <b>10 fold growth from 23 to over 200 forensic science majors</b> (2003-2011)</li></ul>
2003-2007	<b>Associate Professor, Director Forensic Science: San Jose State University, San Jose, CA , 95192</b> <ul style="list-style-type: none"><li>• Leading the development of an interdisciplinary degree program in Forensic Science</li><li>• Establishing intra, inter-college and inter-campus research and teaching collaborations</li><li>• Submitted 22 grant proposals to support forensic science research and teaching.</li><li>• <b>12 grants funded for a total of \$304,042.00.</b></li><li>• Facilitated <b>donations in excess of \$500,000.00</b> in equipment, computers, supplies and support</li><li>• Established a Forensic Science Seminar Series ongoing with over 40 speakers</li><li>• Advisor for the SJSU Forensic Science Student Group- Recipients of service and research awards</li><li>• 80% of FS grads (20/25) are working in crime labs, biotech, investigations or grad schools</li></ul>
2007-2009	<b>Forensic DNA Project Consultant, Biomatrix, San Diego, CA</b> <ul style="list-style-type: none"><li>• R&amp;D consultant on the implementation and use of new products</li><li>• Leading an international consortium on evaluation of a new matrix for storage and collection</li><li>• Research led to 4 presentations at national and international forensic science meetings</li><li>• Appointed to the Scientific Advisory Board 2011</li></ul>
2006-2008	<b>Forensic DNA Training Consultant, CA Department of Justice</b> <ul style="list-style-type: none"><li>• Designed and delivered new Forensic DNA courses</li><li>• Developed materials on SNPs, forensic phenotype profiling, and DNA databases</li></ul>
2006-2007	<b>Molecular Biology Exam Blue Ribbon Panelist : American Board of Criminalistics</b> <ul style="list-style-type: none"><li>• Provide technical expertise in the development of an ABC Molecular Biology Certification exam</li><li>• Assist in developing lists of questions, study guides and job descriptions for the specialty</li></ul>
2005-2006	<b>Forensic Project Consultant, Trace Genetics</b> <ul style="list-style-type: none"><li>• Provided technical expertise and support for proprietary forensic product development</li><li>• Designed validation and testing outlines</li><li>• Proposed market entry plans including alpha and beta phases of product development</li></ul>

- 2004-2009 R&D Consultant: MiraiBio, Hitachi Software Engineering, South San Francisco**
- Forensic Science application and technical support
  - Multiplex liquid SNP array and fluorescent STR scanning support
  - Technical specs development, demos and training for DNA Software
    - SNP typing using Masterplex GT
    - Smartnote bioinformatics tools
    - Delivering seminars and posters on Bioinformatics and Forensic DNA
- 2000-2004 Director of R&D: MiraiBio Inc., Hitachi Software Engineering, Alameda, CA 94502**
- R&D accomplishments during my tenure:**
- Microarrays and Bead based arrays:
    - Developed proprietary surface chemistry for cDNA and oligos
    - Coordinated testing of microarray spotting optimization
    - Immunoassay Bead Array Validation study completed
    - Bead array studies led to publications and sales of the Luminex 100 and software.
  - Bioinformatics and Imaging
    - Initiated and led a team of 10 labs to test and develop SNP typing software
    - Computer software analysis on human DNA quantification published
    - Publication of 12 application notes and 2 peer reviewed articles
    - Spearheaded the implementation of web conferencing tools for software training and sales
  - Grants
    - Completed NIJ subcontract grant 2001 on forensic sexual assault grant with UNTHS
    - \$1,000,000 federal and state funding submitted in 2002
    - Interagency NIAID biodefense grant submitted with Los Alamos National Laboratory
    - Subcontract grant funded for \$150,000.00 to develop SNP typing with UNTHS
    - Research on Alu microarrays for paternity testing supported a Phase II SBIR with Reliagene
    - Student BBEI matching grant funded from 2001-2003
- 2001-2008 Adjunct Professor: Chemistry, Florida International University, Miami, Florida**
- Developed and delivered an on line course on Forensic DNA- STR typing in 2001 and 2003
  - Produced DNA course materials for posting on the web
- 1997 Instructor: Genetics of Forensic DNA Typing, Environmental Biology, UC Davis, Davis, CA**
- Organized and delivered an intensive 2 week laboratory genetics course
  - Academically approved for college credit and certified by POST
- 1996-present Visiting Scholar, Department of Plant and Microbial Biology, University of California, Berkeley**
- Delivered seminars for advanced graduate students and post docs in careers seminars
  - Collaborations with Mycologists on Image Explorer leading to photograph publication
- 1996-present Adjunct Assistant Professor, Biology, San Francisco State University**
- PI on National Science Foundation REU program (96-98)
  - Delivered 2 week courses on DNA technology from extraction to sequencing
  - Mentored 5 undergraduates and 1 graduate student
- 1995-1999 Member Technical Working Group on DNA Analysis Methods (TWGDAM now SWGDAM) Federal Bureau of Investigation**
- Invited participation in a federally funded national forensic scientist group
  - Participation in inter-laboratory studies on forensic DNA typing methods
  - Established collaborations with the FBI on STR implementation
  - Participated in meetings of the DNA Advisory Board QA Standards for forensic DNA laboratories
- 1995-present Member mtDNA Quality Assurance Oversight Committee Department of Defense, Armed Forces DNA Identification Laboratory (AFDIL)**
- Conduct annual inspections of the DOD mtDNA typing facility
  - Provide feedback on QA measures and audit procedures

- 1994-2000**      **Assistant Laboratory Director, Research and Development  
California Department of Justice Laboratory, Richmond, CA (CA DOJ -formerly at Berkeley, CA)**
- Supervised a group of 5 scientists in forensic DNA research
  - Mentored 15 student interns (see student section)
  - Led a team that developed and validated a robotic assisted extraction and STR analysis
  - American Society of Crime Laboratory Director Laboratory Accreditation Board Certified
  - Assisted the leadership team in re-accreditation by ASCLD-LAB in 1998
  - Served on the BFS QA Technical Advisory Group
  - Developed and delivered RFLP and STR hands-on training on the ABI 310 and 377 platforms
- 1992-1996**      **Assistant Professor Biology (92-94), Affiliate Assistant Professor Biology(94-96)  
Department of Biological Sciences, University of Northern Colorado, Greeley, CO (UNC)**
- PI on NSF research grant for Molecular Evolution of Oomycetes
  - Mentored 8 BA, 2 MS and 2 PhD students.
- 1990-1991**      **Postdoctoral Research Associate, Botany: University of Georgia, Athens**
- PI on NSF research grant for Molecular Evolution of Oomycetes
  - Established external funding from biotechnology sector to support workshops

**HONORS and AWARDS: 26 Scholarships, Teaching and/or Research Awards**

- 2011      **Selected as Guest Lecturer at University of Leicester, Chemistry Summer CSI Program**
- 2011      **Committee to Enhance Equity and Diversity Student Organization Service Award to FS students**
- 2010      **Nominated by the California Association of Criminalists to the US President's National Science  
and Technology Council Interagency Working Groups on Forensic Science**
- 2008      Nominated by students for the CASA Outstanding Professor Award
- 2007      Tenured and Promoted to Full Professor, 08/24/07
- 2007      Sabbatical at the CA DOJ DNA Laboratory Approved for Spring 2008
- 2006      A. Biasotti Most Outstanding Research Presentation Award, CAC 08/24/06
- 2006      Promoted to Fellow of Criminalistics of the American Academy of Forensic Sciences 02/20/06
- 2006      Elected to the Molecular Biology Certification Blue Ribbon Panel of the American Board of Criminalistics
- 2005      Invited Speaker Stanford Genome Technology Club, Stanford University School of Medicine
- 2004      Invited Keynote Speaker Edward-Teller Education Center Teacher Scientist program, LLNL
- 2001      Invited Keynote Speaker for Bio-Link Summer Fellows Teachers Forum, City College of SF
- 1998      Unit Citation of CA DOJ DNA Laboratory Management team member
- 1997      ASCLD/LAB inspector training successfully completed
- 1995-present      Selected to serve on the AFDIL mtDNA QA committee
- 1993 & 1994      Selected to serve on NSF-DEB REU Site Grant Program Panel
- 1993      Academic Excellence Faculty Advisor Award - selected by biology honor student- UNC
- 1992      Academic Excellence Faculty Advisor Award - selected by biology honor student- UNC
- 1992      Burlington Northern Faculty Award Candidate - elected by students- UNC
- 1990      Best Research Poster, Mycological Society of America
- 1989-1990      Mycological Society of America (MSA), Research Fellowship
- 1989-1990      Graduate Research Fellowship, UC Berkeley
- 1989      UC Biotechnology Research and Education Award, UC Berkeley
- 1989      Outstanding Graduate Student Instructor, UC Berkeley
- 1987      Inter campus Travel Award, UC Berkeley
- 1986&1988      Educational Improvement Awards, UC Berkeley
- 1985-1988      USDA National Graduate Fellowship, UC Berkeley
- 1984-1985      Faculty Fellowship, Columbia University, NY, NY
- 1982-1984      Teaching Fellowship, New York University
- 1978-1981      N.Y.S. Regents Scholarship awarded for attendance at SUNY Binghamton

**PROFESSIONAL AFFILIATIONS:**

- 2004-2008      National Science Teachers Association- Member
- 1995-present      California Association of Criminalists- Full Member
- 1994-present      American Academy of Forensic Sciences: Fellow of Criminalistics
- 1989-present      American Association for the Advancement of Science

**PUBLICATIONS: 35 Publications, 1 re submitted, 2 in prep**

- Lee, SB, Clabaugh, KC, Silva, B, Odigie, KO, Fourney, RM, Stevens, J, Carmody, GR, Coble, MD, Loreille, O, Scheible, M, Parsons, TJ, Pozder, A, Eisenberg, AJ, Budowle, B, Taha Ahmad, Russell W. Miller, Amy B. McGuckian, Julie Conover-Sikorsky and Cecelia A. Crouse. 2011. Assessing a novel room temperature DNA storage medium for forensic biological samples. *Forensic Science International Genetics*. 16 February 2011 (Article in Press DOI: 10.1016/j.fsigen.2011.01.008)
- Lee, SB, CA Crouse, MC Kline. 2010. Optimizing storage and handling of DNA extracts. Invited chapter in the special Issue of *Forensic Science Reviews: Assessment and preparation of biological specimens for DNA analysis*. *Forensic Science Reviews* 22:131-144
- Davis, Michael, Clarissa Trogdon, Linda Le, Kimberly Clabaugh, Marissa Meininger, Michael D. Coble, Odile Loreille, Melissa Scheible, Rachel Demara, Sohela de Rozieres, Martin Latterich, Rolf Muller, Steven B. Lee. And Greg Hampikian 2011. The PCR enhancer STRboost™ overcomes inhibitors in STR and mitochondrial microsequencing reactions. *Forensic Science International Genetics*. In preparation.
- Lee, SB and KA Roberts. 2008. Room temperature storage and stabilization of forensic source DNA samples. *Emerging Technologies in Forensic Science*. 01/08 p 8-10.
- Lee, SB. 2006. Forensic DNA testing. In *McGraw-Hill 2006 Yearbook of Science and Technology*. ISBN 0071462058. McGraw-Hill. 448pp, DOI: 10.1036/0071462058
- Lee, SB. 2005. Teaching Strategies in Undergraduate Forensic Science and DNA: New Approaches to Content, Assessment and Practice. *Canadian Journal of Police and Security Services*. 3(2):27-36.
- Taylor, J. and S. Lee. 2004. Black bread mold figure 3.32c Published in *Biology Patterns and Processes of Life*. ISBN0-920008-05-4. JM LeBel Publishers, Dallas, TX. P.69
- Lee, SB. 2002. Biodefense: Science Steps Up to Protect the Public from Bioterror. *Drug Discovery and Development*. Dec. 2002. p 12. Invited Editorial.
- Budowle, B, W. Hudlow, S Lee, and L Klevan. 2001. Using a CCD Camera Imaging System as a recording device to Quantify Human DNA by Slot Blot Hybridization. *Biotechniques*. 30:680-685.
- Worley, J. W., S.B. Lee, M. Ma, A. Eisenberg, and E.S. Mansfield. 1997. Fluorescent Imaging in Human Identity Testing. *Biotechniques*. 23:148-153
- Butler, JM, Jia Li, Joseph Monforte, Christopher Becker, and Steven Lee. 1997. Rapid and Automated Analysis of Short Tandem Repeat Loci Using Time-of-Flight Mass Spectrometry. . [Proceedings of the Seventh International Symposium on Human Identification](http://www.promega.com/geneticidproc/ussymp8proc/28.html). ISBN1-882274058-X. <http://www.promega.com/geneticidproc/ussymp8proc/28.html>
- Post, S, S. Lee, T. Moretti, J. Robertson, and B. Budowle. 1997. Comparison of Fluorescence Detection of the Geneprint Powerplex STR System by Optical Scanners and DNA Sequencers. [Proceedings of the Seventh International Symposium on Human Identification](http://www.promega.com/geneticidproc/ussymp7proc/0716.html). ISBN1-882274058-X. pp. 107-115. <http://www.promega.com/geneticidproc/ussymp7proc/0716.html>
- Lee, SB, M. Buoncristiani, J. W. Schumm, and D. Wingeleth. 1996. Comparison of Short Tandem Repeat (STR) detection using silver, fluorescence and matrix assisted laser desorption/ionization time-of-flight mass spectrophotometry (MALDI-TOF-MS). [Proceedings of the Sixth International Symposium on Human Identification](http://www.promega.com/geneticidproc/ussymp6proc/lee.htm). ISBN 1-882274-55-5 p104-111. <http://www.promega.com/geneticidproc/ussymp6proc/lee.htm>
- Micka, K.A., C.J. Sprecher, A.M. Lins, C.T. Comey, B.W. Koons, C Crouse, D. Endean, K. Zold, S.B. Lee, N. Duda, M Ma and J.W. Schumm. 1996. Validation of Multiplex Polymorphic STR Amplification Sets Developed for Personal Identification Applications. *Journal of Forensic Sciences*. 41: 582-590.
- Rusk, S. and S.B. Lee. 1995. Design of PCR primers for amplifying nuclear ribosomal DNA from slime molds. *Mycologia*. 87:140-143.
- Giberson, R.T., R.S. Demaree, S.B. Lee and M. Lee. 1995. Days can be converted to hours, minutes or even seconds when using microwave technology in the Lab. *Microscopy Today*. 95:14-15.

- Giberson, R.T., R.S. Demaree, S.B. Lee and M. Lee. 1995. Microwave Technology in the laboratory: Fixation of Tissue for the SEM and Extraction of DNA from blood, hair, semen and fingernails. TieLine 19:128-133.
- Spiegel, FW, S.B. Lee, and S.A. Rusk. 1995. Eumycetozoans and molecular systematics. Canadian Journal of Botany. 73:S738-S746.
- Lee, S.B., M. Ma, J.M. Worley, C. Sprecher, A.M. Lins, J.W. Schumm and E.S. Mansfield. 1995. Microwave extraction, rapid DNA quantitation and Fluorescent detection of amplified short tandem repeats. Proceedings of the Fifth International Symposium on Human Identification. ISBN 1-882274-54-7. pp 137-145.
- Boback S. and S.B. Lee. 1994. Improved Resolution of *Phytophthora Spp.* Multiplex PCR products utilizing high quality Agarose Gel Matrices. Resolutions. 10(2):4
- Lennon, P.A. , C.A. Cooper, I.F. Salkin and S.B. Lee. 1994. Ribosomal DNA Internal Transcribed Spacer Polymorphisms as a tool for distinguishing human fungal pathogens in the taxa Lomentospora, Scedosporium and Pseudallescheria. J. Clin. Microbiol. 32:2413-2416.
- \*Worley, J.N., M. Ma. S.B. Lee, A.M. Lins, J.W. Schumm, and E.S. Mansfield. 1994. Rapid Genetic Typing on the FluorImager: Human DNA Quantitation, RFLP, D1S80, and Short Tandem Repeat (STR) Analysis. Proceedings of the Fifth International Symposium on Human Identification. ISBN 1-882274-54-7. pp 109-117.
- Lee, S.B., T.J. White, and J. W. Taylor. 1993. Detection of Phytophthora species by oligonucleotide hybridization to amplified ribosomal DNA spacers. Phytopathology. 83:177-181.
- Lee, S.B., and J.W. Taylor. 1993. Uniparental Inheritance and Replacement of Mitochondrial DNA in *Neurospora tetrasperma*. Genetics 134:1063-1075.
- Goodwin D.C., and S.B. Lee. 1993. Rapid microwave mini-prep of total genomic DNA from fungi, plants and protists for PCR. Biotechniques. 15: 438-444.
- Min, L. and S.B. Lee. 1993. Detection of Phytophthora species by Multiplex PCR. Phytophthora Newsletter. Volume 19: 14-15.
- Lee, S.B., and J.W. Taylor. 1992. Phylogeny of five fungal-like protocistan *Phytophthora* species inferred from the internal transcribed spacers of ribosomal DNA. Molecular Biology and Evolution. 9:636-653
- Lee, S.B. and J.W. Taylor. 1991. Molecular Phylogeny of *Phytophthora* species. Phytophthora Newsletter. 17:24-25.
- Lee, S.B., T.J. White, and J.W. Taylor. 1991. Detection of Phytophthora species by oligonucleotide hybridization to PCR amplified ribosomal DNA. Phytophthora Newsletter. 17:26-27.
- Lee, S.B., and J.W. Taylor. 1990. Isolation of DNA from Fungal Mycelia and Single spores. In PCR Protocols-A Guide to Methods and Applications. M. Innis, D. Gelfand, J. Sninsky, and T. White (Eds.) Academic Press, San Diego, Ca. Chapter 34. pp. 282-287.
- White, T. J., T. Bruns, S. Lee, and J. Taylor. 1990. Amplification and Direct Sequencing of Fungal Ribosomal RNA Genes for Phylogenetics. In PCR Protocols-A Guide to Methods and Applications. M. Innis D. Gelfand, J. Sninsky, and T. White (Eds.) Academic Press, San Diego, Ca. Chapter 38. pp. 315-322. **Note- Most cited scientific publication from UC Berkeley (see**
- Lee, S.B. 1990. Molecular Evolution of Fungi: Mitochondrial DNA Inheritance in *Neurospora tetrasperma*; Phylogeny and Identification of *Phytophthora spp.* using rDNA. Dissertation. University of California at Berkeley. 143 pp.
- Lee, S.B., M.G. Milgroom and J.W. Taylor. 1988. A rapid, high yield mini-prep method for isolation of total genomic DNA from fungi. Fungal Genetics Newsletter. 35:23-24.
- Koerner, T.J., A. M. Myers, S. Lee and A. Tzagoloff. 1987. Isolation and Characterization of the Yeast Gene Coding for the alpha Subunit of Mitochondrial Phenylalanyl-tRNA Synthetase. J. Biol.Chem. 262:3960-3966.

- Levine, W.G. and S.B. Lee. 1983. Effect of glutathione on the metabolism of N,N-dimethyl-4-aminoazobenzene. Drug Metab. Dispos. 11:239-243.
- Levine, W.G. and S. Lee. 1983. Cytosolic factors that alter the metabolism of N,N-dimethyl-4-aminoazobenzene by rat liver microsomes. Biochem.Pharmac. 32: 3137-3144.
- CONTRIBUTED PAPERS, ABSTRACTS AND WORKSHOPS Over 100 papers, abstracts and workshops**
- Lee SB. 2011. 2011 American Academy of Forensic Sciences Forensic Science Educators Conference. Conference Director. San Jose State University and Santa Clara County Crime Laboratory. July 14-16<sup>th</sup>, 2011.
- Lee SB. 2011. Advances in Room Temperature Storage and Amplification of Challenging Forensic Samples. Invited talk at BODE East, Amelia Island Plantation, Amelia Island Florida, May 9-13<sup>th</sup> 2011.
- Lee SB. 2011. Advances in Room Temperature Storage and Amplification of Challenging Forensic Samples. Invited talk at BODE West, San Diego Hilton, April 10-14, 2011.
- Lee, SB. 2011. Bio Sample Storage in the 21st Century and beyond The Cold War is OverGet S.M.A.R.T. (Sample Management At Room Temperature). Commercial Workshop held at the Feb. 2011 AAFS Meeting in Chicago.
- Erica Dinero, Clarissa Trogdon and Steven. B. Lee 2011. Optimizing DNA Storage at Room Temperature: Teflon Tubes Vs. Polypropylene Tubes. Poster accepted for Presentation at the Feb. 2011 AAFS Meeting Chicago, IL.
- Baker, Breeana, Clarissa Trogdon and Steven B. Lee. 2011 Analysis of N-4 STR Repeat Slippage with Amplification Enhancer on Low-quantity DNA Samples. Poster accepted for Presentation at the 2011 AAFS Meeting to be held in Chicago, IL.
- Lee, SB, Bill Armaline, Ed Huffine and Mary Juno. 2010. Role of Forensic DNA in Human Rights, Mass Disaster and War Crime Investigations. Poster Presented at the 2010 American Society of Criminology meeting in SF, CA
- Clarissa Trogdon, Phil Nhan, Clara Wang and SB Lee. 2010. Enhancement Strategies for Overcoming PCR Inhibitors. Poster presented at the 21st International Symposium on Human Identification held October 2010 in San Antonio Texas.
- Buban, Lauren, John Jermaine, Clarissa Trogdon and Steven. B. Lee. 2010 The Recovery of DNA on Improvised Incendiary Devices (Molotov Cocktails) Utilizing Various Fire Suppression Techniques. Oral paper delivered at the Spring CAC meeting in Oakland, CA.
- Lee, SB and J. Shewale. 2010. Advances in Forensic DNA Analysis. Workshop held February 2010 at the American Academy of Forensic Sciences meeting in Seattle WA.
- Clara Wang, Clarissa Trogdon, Linda Le, Marissa Meinenger, Steven B. Lee. 2010. Comparison of different amplification reagents for Alleviating Inhibitory Effects of Indigo Dye in PCR Abstract accepted for a poster presentation for the upcoming American Academy of Forensic Sciences meeting to be held February 2010 in Seattle, WA.
- Bethea, A, Trogdon, C, Le, L, and Lee, SB. 2009. Utility of Amplification Enhancers in the Analysis of Mixed DNA Samples. Poster presented at the 20th International Symposium on Human Identification held October 2009 in Las Vegas, NV. Poster presented at the 2009 Society for the Advancement of Chicano and Native American Scientists meeting.
- Clarissa Trogdon, Linda Le, Steven Lee. 2009. Overcoming PCR Inhibition of Low Quantity and Low Quality Samples with Amplification Enhancers. Poster presented at the 20th International Symposium on Human Identification held October 2009 in Las Vegas, NV.
- Allie Paul, Clarissa Trogdon, Linda Le and Steven Lee. 2009. Comparison of DNA storage in Sample Matrix and Teflon Tubes. Poster presented at the 20th International Symposium on Human Identification held October 2009 in Las Vegas, NV.

- Clarissa Trogon 2009. Overcoming PCR Inhibition of Low Quantity and Low Quality Samples with Amplification Enhancers. Oral seminar delivered at the California Association of Criminalists Meeting held October 2009 in San Jose, CA.
- Pijanowski, L, Lee, SB and Barloewen. 2009. Evaluation and Validation of PrepFiler Forensic DNA Extraction Kit. Poster presentation at the 2009 Society for the Advancement of Chicano and Native American Scientists meeting.
- K. Sekiguchi, N. Mizuno, H. Nakahara, K. Fujii, T. Kitayama, S. Miyasaka, Y. Ogawa, K. Kasai, H. Fukushima, H. Asamura, Y. Fukuma, K. Nagasaki, H. Yoshida, Steven B. Lee. 2009. Evaluation of a New DNA Extraction Kit for Degraded Skeletal Remains. Poster presented at the AAFS meeting held in Denver, CO.
- Le, L, Clabaugh, KC, Chang, A, Meinenger, M, Coble, MD, Loreille, O, Scheible, M, Demara, R, Muller, R, deRozières, S, Kline, M, and Lee, SB. 2008. Recovering DNA profiles from low quantity and low quality forensic samples. Poster presented at the 19<sup>th</sup> International Symposium on Human Identification held October 2008 in Hollywood, LA. and a Poster presented at the 2008 Society for the Advancement of Chicano and Native American Scientists meeting and 2009. Poster presented at the AAFS meeting in Denver CO.
- Meinenger, MRD, Barlowewen, B, Jones, J, and Lee, SB. 2008. Evaluation of purification columns for forensic DNA extraction. Poster presented at the 19<sup>th</sup> International Symposium on Human Identification held October 2008 in Hollywood, LA. and a Poster presented at the 2008 Society for the Advancement of Chicano and Native American Scientists meeting and 2009. Poster presented at the AAFS meeting in Denver CO.
- Sekiguchi, K, Mizuno, N, Nakahara, H, Fujii, K, Kitayama, T, Miyasaka, S, Ogawa, Y, Kasai, K, Fukushima, H, Fukuma, Y, Nagasaki, K, Yoshida, H, Lee, SB. 2008. Evaluation of a DNA extraction kit on degraded skeletal remains. Poster presented at the 19<sup>th</sup> International Symposium on Human Identification held October 2008 in Hollywood, LA.
- Muller, R, Muller-Cohn, J, Fourney, RM, Coble, MD, Kline, MC, Parsons, T, Eisenberg, AJ, Budowle, B, Roberts, KA, and Lee, SB. Optimizing Collection, Shipping, and Storage of Forensic Biological Samples. Lee delivered an oral presentation at the 2008 American Academy of Forensic Sciences meeting held in Washington DC. Published in the Proceedings of the American Academy of Forensic Sciences. Volume 14. pp. 89-90. <http://www.aafs.org/pdf/2008ProceedingsWashingtonDC.pdf>
- Kimberly Clabaugh, Brie Silva, Kingsley Odigie, Ron Fourney, Jesse Stevens, George Carmody, Mike Coble, Odile Loreille, Melissa Scheible, Margaret Kline, Thomas Parsons, Arijana Pozder, Arthur Eisenberg, Bruce Budowle and Steven B. Lee. 2007 and 2008 Storage of DNA samples at ambient temperature using DNA-SampleMatrix. Poster presented at the 18<sup>th</sup> Annual International Symposium on Human Identification. held October, 2007. Hollywood, CA. <http://www.promega.com/geneticidproc/ussymp18proc/abstracts/Abstract48Clabaugh.pdf>  
Also presented as an oral presentation at the Fall 2007 California Association of Criminalists Meeting held in Berkeley, CA October 2007, the American Academy of Forensic Sciences February 2008 meeting held in Washington DC. Published in the Proceedings of the American Academy of Forensic Sciences. Volume 14. page 51 - <http://www.aafs.org/pdf/2008ProceedingsWashingtonDC.pdf> and the Spring 2008 California Association of Criminalists meeting held May 2008 in San Diego, CA.
- Arturo Aguilar, Kimberly Clabaugh, Anthony Carter, Sudhir Sinha and Steven B. Lee. 2007 and 2008. Development of a male DNA Screening Assay using Y Alu Derived sequences for detection on the FMBIO III plus. Poster presented at the 18<sup>th</sup> Annual International Symposium on Human Identification. held October, 2007. Hollywood, CA. <http://www.promega.com/geneticidproc/ussymp18proc/abstracts/Abstract84Aguilar.pdf>  
Poster presentation at the 2007 Society for the Advancement of Chicano and Native American Scientists meeting held Kansas City, MO, October 11-14, 2007. Also presented as an oral presentation at the Fall 2007 California Association of Criminalists Meeting held in Berkeley, CA October 2007 and the American Academy of Forensic Sciences February 2008 meeting held in Washington DC. Published in the Proceedings of the American Academy of Forensic Sciences. Volume 14. page 44- <http://www.aafs.org/pdf/2008ProceedingsWashingtonDC.pdf>

- Kingsley Odigie, Lynne Burley, Ian Fitch and Steven Lee. 2007 and 2008. Repair of damaged DNA using commercially available enzymes. Poster presented at the 18<sup>th</sup> Annual International Symposium on Human Identification. held October, 2007. Hollywood, CA.  
<http://www.promega.com/geneticidproc/ussymp18proc/abstracts/Abstract38Odigie.pdf>  
 Poster presentation at the 2007 Society for the Advancement of Chicano and Native American Scientists meeting held Kansas City, MO, October 11-14, 2007. Also presented as an oral presentation at the Fall 2007 California Association of Criminalists Meeting held in Berkeley, CA October 2007 and the American Academy of Forensic Sciences February 2008 meeting held in Washington DC. Published in the Proceedings of the American Academy of Forensic Sciences. Volume 14. page 53-54.  
<http://www.aafs.org/pdf/2008ProceedingsWashingtonDC.pdf>
- R. Muller, J. Muller-Cohn and SB Lee. 2007 Optimizing DNA Stabilization and Storage of Forensic DNA Samples using polymers. Poster presented at the 18<sup>th</sup> Annual International Symposium on Human Identification. Held October, 2007. Hollywood, CA.  
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- Hirofumi Fukushima, Steven B. Lee, Yoshiya Fukuma, Masamitsu Nakamura, Hiroaki Yoshida and Takahiko Kasuga. 2007. Overview of a lab support system for managing data from DNA. Poster presented at the 18<sup>th</sup> Annual International Symposium on Human Identification. Held October, 2007. Hollywood, CA  
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#### **GRANT EXPERIENCE and DONATION FACILITATED:**

##### **GRANTS:**

- Research Mentor March 2010. NSF REU Grant RUMBA** with Dr. Julio Soto, Dr. Cleber Ouverney, Dr. Miri Van Hoven of Biology at SJSU. Funded \$322,750.00 NSF DBI 1004350
- PI March 2011. CAC Scholarships for Forensic Science Students at SJSU. Funded \$5000.00** for AY 2011-2012.
- Co-PI 2010 NIJ Forensic Science Research Grant with UCSC 2.6 million (CO PI submitted 04/10-Pending)**
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- PI March 2010. CAC Scholarships for Forensic Science Students at SJSU. Funded \$5000.00** for AY 2010-2011.
- PI: February 2010- 2010-2012 CSUPERB Programmatic Course Development Grant on Forensic Biometrics with Mary Juno and Dr. LPierce (Anthropology) – Funded \$15,000.00**
- PI: June 05, 2009. CSUPERB Programmatic Development Proposal “Fluorescence Applications in Molecular Biology and Forensic Science Course Development” Funded \$15,000.00** for 06/30/09-01/31/11.
- PI March 2009. CAC Scholarships for Forensic Science Students at SJSU. Funded \$5000.00** for AY 2009-2010.
- PI: 04/05/2008: CSUPERB Entrepreneurial Joint Venture Matching Grant Program: Optimizing DNA stabilization and storage of forensic DNA samples using polymers: \$25,000.00 (Matching funds facilitated (\$34,800.00) : Total award= \$59,800.00. Funded July 2008 – July 2009.**
- Research Mentor Participant: 04/22/08:** Four-year program called Support for Curriculum and Research, Inquiry-Based Enhancement (SCRIBE)- Howard Hughes Medical Institute Science Education Grant to SJSU Biology: Dr. Julio Soto. \$1,300,000.00. Funded 2008-2012.
- PI March 2008. CAC Scholarships for Forensic Science Students at SJSU. Funded \$5000.00** for AY 2008-2009.
- PI March 2008. Development of Forensic Science Interdepartmental, intercampus, and interagency student resources University Planning Council Grant SJSU. Funded for 0.2 FTE release time AY 2008-2009.**

**PI March 2008. Recovering DNA profiles from low quantity and low quality forensic samples. CASA Small Research Grant. Funded \$500.00 for AY 2008-2009.**

**PI: March 2008. CSUPERB Travel Grant.** Support to attend and present at the 2008 CAC meeting **Funded \$500.00.**

**PI March 2007. \_CAC Scholarships for Forensic Science Students at SJSU. Funded \$4200.00** for AY 2007-2008.

**Co-PI February 2007 NSF REU Grant RUMBA** with Dr. Julio Soto and Dr. Cleber Ouverney of Biology at SJSU. Funded \$215,260.00. NSF DBI 0647160

**PI: October 18, 2006. CSUPERB Travel Grant.** Support to attend and present at the 2007 American Association of Forensic Science Meeting in San Antonio, TX. **Funded \$1000.00.**

**Co-PI August 17, 2006.** with Dr. Julio Soto and Dr. Cleber Ouverney of Biology at SJSU. **National Science Foundation REU RUMBA** Renewal Grant. Funded **\$204,600.00** for 03/01/07-02/28/2010.

**PI: July 01, 2006. NIJ/NFSTC Forensic Biology Research and Training Consortium (FBRTC). Funded \$50,000.00** for 07/01/06-06/30/07. The main goal of the consortium grant is to create a research and educational network in forensic biology.

**PI: June 30, 2006. CSUPERB Curriculum and Development Proposal: Advanced Forensic Biotechnology Course Development. Funded \$15,000.00** for 06/30/06-06/30/07.

**PI: May 10, 2006. CAC Scholarships for Forensic Science Students at SJSU. Funded \$4200.00** for AY 2006-2007.

**PI: December 8, 2005. Participant. Included as a Participant on an NSF REU Grant RUMBA Biology at San Jose State University. Funded student stipend for summer research and \$1800.00 in supplies in 2006.**

**PI: November 10, 2005. SJSU CASA Lottery Grant.** Forensic Science Seminar Series support. **Amount awarded: \$1,800.00 for 1/2005-08/2006.**

**PI: April 3, 2005. CSUPERB Advanced Forensic Biotechnology course development.** \$15,000.00. Not funded.

**PI: March 25<sup>th</sup>, 2005 California Association of Criminalists Endowment Application for Student Scholarships - 5** undergraduate fellowships in forensic science to support tuition, fees and graduate school applications. Submitted 03/25/05 Total Requested \$5500.00. Not funded.

**PI: March 20, 2005. Proposal for Equipment support and Student Stipends,** Submitted to MiraiBio Inc. Total requested = \$6700.00. **Funded for Delivery, installation and maintenance of a laser-scanning instrument for forensic DNA research.**

**PI: March 6, 2005: CSUPERB Travel Grant** Support for student volunteer coordination for reduced registration fees for the California Association of Criminalists meeting to be held in Oakland, CA. Submitted 03/06/05 Total Requested = \$482.50 Not funded

**PI: 01/05: Junior Faculty Career Development Grant.** SJSU (0.2FTE) **Funded \$4000.00** release time to develop an interdepartmental, intercampus, interagency forensic science-training program and to write a proposal. 01/01/05-06/30/05. A grant was submitted to NIJ/NFSTC on Dec 03, 2005 and was funded.

**PI: October 2004. CSUPERB Travel Grant.** Support for a student to attend and present at the 15th International Human ID Symposium. **Funded at \$700.00**

**PI: 04/2004: Facilitated commitment by Lawrence Livermore National Laboratory for \$10,000.00 match** to a CSUPERB grant. 4/04. Grant will be resubmitted (see below).

**PI: 05/2004: CSU Awards for Research, Scholarship or Creative Activity. Validation and population genetics of Y chromosome multiplexes for criminal profiling. 05/04 Funded for \$5000.00.**

**PI: 04/05/2004: CSUPERB Curriculum and Development Proposal: Forensic Biotechnology Program Development for students and teachers. \$15,000.00.** Submitted 04/05/04 (Matching funds facilitated \$24,884.00). Not Funded.

**PI: 04/05/2004: CSUPERB Entrepreneurial Joint Venture Matching Grant Program:** Facilitating Biotechnology contributions for Forensic DNA research and training: **\$25,000.00** Submitted 04/05/04 (Matching funds facilitated (\$110,500.00) Not Funded.

**PI: 04/2004: CAC Training Proposal.** Forensic Science Student Scholarships Amount requested **\$20,000.00**. Submitted 31 March 2004. Not funded.

**PI: 04/2004: CAC Training Proposal.** On-line Forensic Science Seminar Series. Submitted 02-25-04. Amount requested **\$ 10,000.00. Not funded.**

PI: 11/2004: **SJSU CASA Lottery Grant.** Forensic Science Seminar Series support. **Amount awarded: \$1,600.00 for 1/2004-08/2005.**

**Co PI:** 2003. Proposal to the National Institutes of Allergies and Infectious Diseases RFA PAR 03-025: Software Development for Real-time analysis of Multiplexed Assays In High Throughput Diagnostics for Public Health and Biothreat Pathogens. Consortium with Los Alamos National Laboratories, NYS Public Health Dept, U. N. Arizona and Purdue University. **Amount Requested: \$1,002,925.00. Not funded**

PI: 2002: Principal Investigator: Proposal to the Federal Bureau of Investigation Construction and Laboratory Contracts Unit, Broad Agency Announcement # BAA-914497 Interest Area: 5.3 DNA 301:Development of SNP Assays for Human Identification- Title: Development of an automated Y chromosome single nucleotide polymorphisms (Y-SNPS) screening test to enhance speed and efficacy of forensic genetic testing. Amount requested: **\$616,500 Submitted April 2002. Funded as a Subcontract resulting in \$115,000.00 fy 2003 in equipment and supplies for UNTHS.**

PI: 1996. Principal Investigator NSF Research Experiences for Undergraduates Program. Training Undergraduates in Science and Technology. **\$153,000.00** for three years from 5/96-9/98. San Francisco State University. This was a DNA training grant. Topics covered were DNA extraction, PCR amplification, gel electrophoresis (agarose and acrylamide), DNA sequencing and computer data analysis. **Funded.**

PI: 1996-1998: Principal Investigator for donations from Perkin Elmer, AT Biochem and Applied Biosystems for materials and supplies for the NSF REU program. **\$10,000/year** from 1996-1998. Funded.

PI: 1995: Participant on NIJ Crim Bill Funding Grant Proposal. Bring all California crime laboratories up to capability of DNA typing... **\$6,489,168.00** 1996-2001. First and second year funding 1.3 million.

PI: 1993: Principal Investigator NSF Division of Environmental Biology Program. REU Supplement to RUI: Molecular Systematics of the Oomycota. Awarded **\$20,000.00** for 5/93-8/93. Undergrad projects: Stipends, supplies. Funded.

PI: 1993: Principal Investigator NSF Division of Environmental Biology Program. Encouraging Under-represented Student Participation in DNA Workshops. **\$60,000.00** Funded for 5/93-9/95. Undergraduate summer workshops:

PI: 1992. Principal Investigator NSF Division of Environmental Biology Program. Molecular Systematics of the Oomycota. Awarded **\$168,000.00** for three years from 9/92-9/95. Funded

PI: 1992: Principal Investigator for UNC Research Corporation Grant. Awarded **\$28,467.00** for matching funds to NSF grant for faculty release time, refurbishing the laboratory and travel to meetings from 9/92-9/95

PI: 1992: Principal Investigator for UNC Arts and Sciences Graduate Student Grant. Awarded **\$95,704.00** in matching funds to NSF grant for 3 student stipends and tuition waivers 12/92-9/95.

## **DONATIONS**

**PI: January 2011.** Oakland Police Department Crime Laboratory Donation of **\$10,000.00** in molecular biology reagents to support the research and teaching.

**PI: 2010. Facilitated donation from FireEx Forensics, Dr. John DeHaan** of Forensic Science Journals (Approximate value of \$1000.00)

**PI: 2008. Facilitating donation from San Francisco Police Department Crime Laboratory** of Analytical Balances (Pending-value undetermined)

**PI: 2007. Facilitating donation from Lowell Bradford Estate** of a Comparison Microscope and photography equipment (approximate value \$10,000).

**PI: October 2006. Facilitating donation from San Francisco Police Department Crime Laboratory** of a UV Spectrophotometer and Gas Chromatograph. **Funded (value not known).**

**PI: August 2006. Facilitated Donation of a PCR Thermal Cycler TC 480** by Santa Clara County Crime Laboratory **Funded value \$5000.00.**

PI: June, 2006 CASA IES fund **\$10,000.00** to support the forensic science program.

**PI: April 2006** Facilitated donation of Y STR and screening kits from Reliagene. **Funded value=\$5000.00**

**PI: December, 2005.** CA DOJ Donation of **\$10,000.00** in molecular biology reagents to support the CSUPERB grant.

PI: September, 2005. Technical Support for instrument maintenance **\$10,000.00** annually for 3 years commenced S'06 from Provost Carmen Sigler.

PI: September 2005. Operational expenses of **\$8000.00** funded for a single year by CASA

**PI: July, 25 2005. Facilitated donation of field service and equipment support from Applied Biosystems.** **Funded value \$10,000.00.**

**PI. 09/2004: Facilitated Donations of \$145,000.00 molecular biology equipment** to the SJSU Forensic Science research and training laboratory at SJSU- ABI 310 Genetic Analyzer Capillary Electrophoresis unit and an ABI 7700 real time detection system. **Delivered and installed 09/04** from Celera Diagnostics

**PI: 09/2004: Facilitated donations of \$10,000.00** in computers, reagents and consumables to the SJSU Forensic Science research and training laboratory- G3, Dell and consumables from MiraiBio Inc.

**PI: 09/2004: Facilitated donations of \$10,000.00** in reagents and kits from Reliagene, Promega and Applied Biosystems to support forensic science student research and training.

**STUDENTS:** 2 Post-Docs, 1 Research Associate, 2 Ph. D., 9 M.A., 40 B.A./B.S. and 4 HS

<u>Dates</u>	<u>Title</u>	<u>Student</u>	<u>Program</u>	<u>Project</u>
2011	Advisor	Corissa Harris	Student Research Asst	Wearer DNA collection-w GelPak 0
2011	Advisor	Mariela Rivera	Student Research Asst	Handgun Touch DNA collection
<b>2011</b>	<b>Advisor</b>	<b>Jaihao Liang</b>	<b>HS Student Research Asst</b>	<b>Stabilizing Standard DNA storage</b>
2011	Advisor	Kelly Conry	Student Research Asst	Optimizing fluor detection of semen
2011	Advisor	Zeba Khan	Student Research Asst	Fire suppression effects on DNA
<b>2010</b>	<b>Advisor</b>	<b>Lauren Buban</b>	<b>Student Research Asst</b>	<b>Recovery of DNA from Molotovs</b>
2010	Advisor	Erica Dinaro	Student Research Asst	Teflon vs. Polypropylene storage
2010	Advisor	Breeana Baker	Student Research Asst	Stutter calculations w/enhancers
2009	Advisor	Alex Bethea	Student Research Asst	Enhanced mixture amplification
2010	Advisor	Phil Nahn	Student Research Asst	Evaluation of BSA fractions
2009	Advisor	Lauren Pijanowski	Student Research Asst	Comparison of DNA extraction tech
2008-pres	Advisor	Clarissa Trogdon	Student Research Asst	Overcoming PCR inhibition
2008-pres	Advisor	Linda Le	<b>Student Research asst</b>	Recovering DNA profiles
2008-pres	Advisor	Marissa Meinenger	<b>Student Research asst</b>	DNA Column evaluation
2007-pres	Advisor	Kimberly Clabaugh	<b>Student Research asst</b>	Samplematrix DNA storage
2007-pres	Advisor	Arturo Aguilar	<b>Student Research asst</b>	Y alu detection
2007-pres	Advisor	Kingsley Odigie	<b>Student Research asst</b>	DNA repair
2007-pres	Co-Advisor	Milani Fisher	<b>MS Grad Student</b>	Effect of DNA stats
2006-2007	Advisor	Kristy Ballinger	<b>Student Research asst</b>	Y molecular beacon detection
		Courtney Cook	<b>Student Research asst</b>	Zeolite for blood collection

2006	Advisor	Brie Silva	<b>Student Research asst</b>	Storage of blood and saliva on zeolite
2006	Advisor	Erica Villa	<b>Student Research asst.</b>	Development of Y screening assay
2003-2005	Advisor	Jamie Lunkley	<b>Student Research asst</b>	Chemistry of Latent print aging
		Wendy Farell	<b>Student Research asst</b>	QD Check Ink validation
		Keri Smith	<b>Investigator DOI</b>	Comparison of DNA storage methods
		Sal Murillo	<b>Student asst DOI</b>	Forensic DNA from aquatic samples
2002-2003	Advisor-BBEI prog	Danielle Seele	Student asst. SJSU	.Polynesian Y STR population studies
2001	Advisor-BBEI prog	Kenisha Bell	Student assistant	Temperature and humidity monitoring
1998-2000	Co -Advisor	Miacah Pugh	Student assistant	Marketing and reference research
		Bill Hudlow	<b>MS Chem CSU Hayward</b>	Mechanisms of Repeat Slippage
			<b>Sr. Crim CA DOJ DNA</b>	
1999- 2000	Advisor-BBEI prog.	LaSandra Ivy	Student Research Assistant	Camera imaging of DNA
Sum 1998	Co- Advisor with G Sensabaugh	Colette Betters	NSF REU Student Intern	STR primer testing on Yeast DNA samples
Spr98	Advisor	Bonnie Rhee	Student Research Assistant	DNA Technology in Forensics
Fall 97	Advisor	Mavis Hendson	<b>Post Doc volunteer</b>	Magnetic bead DNA isolation for databank blood samples and automation of differentials
			<b>Criminalist-Research</b>	
			CA DOJ DNA Lab	
Sum 1997	Co- Advisor	Shamsah Ebrahim with G Sensabaugh	NSF REU Student Intern	STR & D1S80 primer testing on microbial DNA samples
Sum1996	Advisor	Carmela Thompson	NSF REU Student Interns	STRs from cortical vs trabec bone
		Byron Gainers		Repeat slippage
		Joy Kong		Species testing of FFFL
Sum1996	Advisor	<b>Sonja Brinkop</b>	DOJ DNA Intern	Amplification of STRs from heat treated and fire abused human bone
			<b>MS Forensic Science</b>	
			Strathclyde University	
			Technical Support Hitachi	
			<b>CA DOJ DNA criminalist</b>	
1995-1996	Advisor	<b>Keith Garrison</b>	DOJ DNA Intern	Rapid DNA extraction from bloodstains for RFLP and PCR
			BS Cell and Mol Biol	
			UC Berkeley	
			Technical Support Hitachi	
			<b>PhD UC Davis- Faculty St Mary's</b>	
1995-1996	Advisor	Sherrie Post	DOJ DNA Intern	Comparisons of fluorescent scanners for detection of STRs
			MPH UC Berkeley	
			<b>Crim at Seri</b>	
1995	Advisor	Karen Brown	DOJ DNA Intern	STR analysis on UV abused bloodstains
			MPH UC Berkeley	
1995	Advisor	Jake Brayboy	NASA SHARP Interns via SFSU	STR analysis on fingernail samples
		David Owens		
1994	Advisor	Beth McNamee	<b>JB-UNC Chapel Hill</b>	
			DOJ DNA Intern	
			BA UC Davis	DNA Technology in Forensics
1994	Advisor	Lori Baringer	<b>Harvard Genetics Ph.D.</b>	
			DOJ DNA Intern	
			BA UWy	Extraction of DNA from ancient bone
1993-1996	Major advisor	Antonio Izzo	<b>MA Forensic Anthro UWy</b>	
			M.A. at UNC	Molecular Evolution of Oomycota
1993-1996	Major Advisor	Scott Boback	<b>PhD UC Berkeley</b>	
			M.A. at UNC	Phosphofructokinase gene analysis
1993-1994	Major Advisor	Rick Bortnick, Ph.D.	<b>PhD Auburn Univ.</b>	
			Post-Doc	Morph and Mol. Pop. of Protostelids
Fall 1993	Major advisor	Kristin Young	Undergraduate research	Population analysis of Elk Kelp
Sum. 1993	Major advisor	Dave Droegmueller	<b>PhD program Kansas SU</b>	
		Nikki Kramer	REU Undergrad researchers	REU Molecular Evolution of Oomycota
		<b>Eric Oleyjar</b>	<b>MD</b>	
		Carlos Rodriguez	Medical School	
1992-1995	Co-Major Advisor	Sharyn Rusk	Ph. D.	DNA Evolution of WYSlime Molds
			<b>Faculty Casper College</b>	

1992- 1995	Co-Major Advisor	Patrick Alan Lennon	Ph. D. <b>Faculty SE Okla State</b>	Human fungal pathogen DNA ID
1992-1993	Major Advisor	Kristin O'Connor	B.A. Honors study	DNA Evolution of Monotremes
1992-1993	Committee member	Carol Jacobs-Carre	M.A. PhD CSU	Mycorrhizal population studies
Fall 1992	Co-Major advisor	Min Liu	M.A. independent study <b>Scientist in Denver CO</b>	Multiplex PCR of phytopathogens
Sum. 1992	Major Advisor	Dave Droegmueller	Under grad Research	Evolution of marine
Sum. 1992	Major Advisor	Douglas C. Goodwin	Under grad Research Rec. <b>PhD from Utah SU</b>	Microwave DNA mini-prep
Spr. 1992	Major Advisor	Tim May	UNC On-Site Research	HS Senior Bio Project ascomycetes

### TEACHING EXPERIENCE (\* with laboratory):

Spring 2011	DNA and Crime Internships	Professor	SJSU
Fall 2010	Fluor Applications in Mol Biol and Forensic Science	Professor	SJSU
	Independent Studies	Professor	SJSU
	Internships	Professor	SJSU
Summer 2010	Senior Seminar	Professor	SJSU
Spring 2010	DNA and Crime	Professor	SJSU
	*Criminalistics	Professor	SJSU
	Internships	Professor	SJSU
Fall 2009	The Real CSI	Professor	SJSU
	*Forensic Molecular Biology	Professor	SJSU
	Independent Studies	Professor	SJSU
Spring 2009	DNA and Crime	Professor	SJSU
	*Criminalistics	Professor	SJSU
	Internships	Professor	SJSU
Fall 2008	The Real CSI	Professor	SJSU
	Senior Seminar	Professor	SJSU
Fall 2007	*Introduction to Forensic Science	Professor	SJSU
	Senior Seminar	Professor	SJSU
Spring 2007	*Forensic Molecular Biology	Associate Professor	SJSU
	Internships	Associate Professor	SJSU
Fall 2006	DNA and Crime	Associate Professor	SJSU
	The Real CSI	Associate Professor	SJSU
Spring 2006	Genetics, Law and Society (graduate)	Associate Professor	SJSU
	Criminalistics	Associate Professor	SJSU
	Internships	Associate Professor	SJSU
Fall 2005	Criminalistics	Associate Professor	SJSU
	The Real CSI	Associate Professor	SJSU
Spring 2005	*Introduction to Forensic Science	Associate Professor	SJSU
	Criminalistics	Associate Professor	SJSU
	Internship	Associate Professor	SJSU
Fall 2004	*Introduction to Forensic Science	Associate Professor	SJSU
	Criminalistics	Associate Professor	SJSU
	DNA and Crime	Associate Professor	SJSU
	Internships	Associate Professor	SJSU
Spring 2004	*Introduction to Forensic Science	Associate Professor	SJSU
	Criminalistics	Associate Professor	SJSU
Fall 2003	*Introduction to Forensic Science	Associate Professor	SJSU
	Criminalistics	Associate Professor	SJSU
Spring 2003	*Chemistry of Forensic DNA	Adjunct Professor	FIU
Fall 2001	*Chemistry of Short Tandem Repeats	Adjunct Professor	FIU
1998-1999	STR II- Advanced STR typing	Assistant Lab Director	CADOJDNA
Sum. 1998	*DNA Technology Workshop	Adjunct Asst Prof	SFSU
Fall 1997	Genetics of Forensic DNA Typing	Adjunct Asst Prof	UC Davis extension
Sum. 1997	*DNA Technology Workshop	Adjunct Asst Prof	SFSU

Sum. 1996	*DNA Technology Workshop	Adjunct Asst Prof	SFSU
Sum. 1995	*DNA Technology IV: Sequencing	Adjunct Assistant Professor	UNC
Sum. 1994	*DNA Technology III: Sequencing	Adjunct Assistant Professor	UNC
1996-1997	Intro to D1S80	Assistant Lab Director	CADOJ DNA
1997-2000	Intro to STR typing	Assistant Lab Director	CADOJ DNA
1994-2000	DNA academy-Intro to Forensic DNA-RFLP	Assistant Lab Director	CADOJ DNA
Fall 1993	Principles of Biology	Assistant Professor	UNC
Fall 1993	Biology as a Profession	Assistant Professor	UNC
Sum. 1993	*DNA Technology II: PCR	Assistant Professor	UNC
Spr. 1993	Introduction to Biology	Assistant Professor	UNC
Spr. 1993	*Molecular Genetics	Assistant Professor	UNC
Fall 1992	Principles of Biology	Assistant Professor	UNC
Fall 1992	Foundations of Biological Research	Assistant Professor	UNC
Fall 1992	Biology as a Profession	Assistant Professor	UNC
Sum. 1992	Guest Lecturer for AP Institute section on DNA	Assistant Professor	UNC
Sum. 1992	*DNA Tech. : Sequencing	Assistant Professor	UNC
Spr. 1992	*Principles of Biology	Assistant Professor	UNC
Spr. 1992	*Molecular Genetics	Assistant Professor	UNC
Sum. 1991	*DNA Sequencing Workshop	Instructor	UGA
Spr. 1991	*Polymerase Chain Reaction Laboratory	Instructor	UGA
Fall 1988	Motivating and Advising Students	TA Trainer	UCB
Fall 1989	Diversity and Retention	TA Trainer	UCB
1980-1981	*Botany	Teaching Assistant	SUNYB
Spr. 1988	*Mycology	Teaching Assistant	UCB
Fall 1984	*Biology	Teaching Assistant	Columbia
1983-1984	*Ecological Bot., *Genetics, *Plant Systematics	Teaching Assistant	NYU

**SERVICE:**

**Department, College and University**

- S 09& F10 Member CASA RTP committee**
- F07 Member College Professional Leaves Committee**
- F'06-S'07 Chair University SERB committee
- F'05- Co-chaired the JS Forensic Chemistry Recruitment committee
- F'05 Served on the JS Department Recruitment committee
- F'04-F'05 Served on the JS Department Reunion Committee
- F'05-pres Serve on the Advisory Board of the Administration of Justice Bureau
- F'04 Serve on the JS Department Recruitment committee
- F'04-pres Chair Forensic Science Advisory Board
- F'04-pres Chair Forensic Science Undergraduate Curriculum Committee
- F'03-pres Serve on the JS Scholarship committee
- F'03-S'06 Serve on the College Research and Faculty Development Committee
- F'03-F'06 Serve on the University SERB committee

**Scientific Community**

- 2010 Served as FEPAC Lead Inspector to BS and MS Programs in Forensic Science at Chaminade University.
- 2009 Invited to submit to FS Review special issue on Assessment and preparation of biological specimens for DNA analysis: Optimizing storage and handling of DNA extracts
- 2009 Served as FEPAC Lead Inspector to the MS Programs in Forensic Science at Marshall University.
- 2007-2009 Forensic DNA consultant to Biomatrix, San Diego, CA
- 2006-2009 Forensic DNA consultant to CA Department of Justice, Jan Bashinski DNA Laboratory, Richmond, CA
- 2006 Forensic DNA consultant to Trace Genetics, Richmond, CA.
- 2005 Reviewer of 1 manuscript Clinical Chemistry
- 2005 Invited to scientific advisory board of Biosphere Genetics
- 2004 Invited to Advisory Board of the Administration of Justice Bureau, San Jose State
- 2004 Reviewer of 2 Book Chapters: 1- Handbook of Information Security, 2- Forensics in the Criminal Justice Profession
- 2003 Editorial Advisor, Drug Discovery & Development
- 2002 Selected participant for Science Magazine Proteomics Supplement (Published August 2002)
- 2002 Selected participant for Science Magazine DNA Biochips Supplement (Publication expected Spring 2003)
- 2001 Reviewer for Journal of Forensic Science- 1 manuscript reviewed
- 2001 Selected participant for Science Magazine Microarray Supplement

2000 Reviewer for Mycological Research- 1 Manuscript Reviewed.  
 1999 Reviewer for Biotechniques- 1 manuscript  
 1999 Reviewer for Journal of Forensic Science- 1 manuscript  
 1999 Invited to serve on NIJ grant panel (declined due to conflicts)  
 1998 Reviewer for Journal of Forensic Science  
 1998 Reviewer for International Journal of Legal Medicine  
 1998 TWGDAM Inspection Oakland PD DNA Program  
 1997 Reviewer for Biotechniques - 2 manuscripts  
 1996 Reviewer for Biotechniques- 2 manuscripts reviewed  
 1995 Reviewer for Biotechniques- 1 manuscript reviewed  
 1994 NSF Panel Member - Division of Environmental Biology REU Site Grant Program  
 1994 Reviewer for Mycologia - 1 manuscript reviewed  
 1993 Reviewer for 1 National Science Foundation Systematic Biology Proposal  
 1993 Reviewer for Mycologia - 1 manuscript reviewed  
 1993 Reviewer for Phytopathology - 1 manuscript reviewed  
 1993 Reviewer for Mycological Research - 1 manuscript reviewed  
 1993 Reviewer for Smithsonian - 1 manuscript reviewed  
 1993 NSF Panel Member - Division of Environmental Biology REU Site Grant Program  
 1993 Program Chair and President (Elect) Sigma Xi  
 1992-1994 Mycological Society of America Sustaining Membership Committee  
 1992 Reviewer for 1 National Science Foundation Systematic Biology Proposal  
 1992 Reviewer for Systematic Botany - 1 manuscript reviewed  
 1992-1993 Reviewer for Journal of Clinical Microbiology - 7 manuscripts reviewed  
 1992 Reviewer for Plant Pathology - 1 manuscript reviewed  
 1992 Reviewer for Molecular Ecology - 1 manuscript reviewed  
 1992 Co-Chair Molecular Evolution and Taxonomy Oral Session at the MSA Annual Meeting

### Community at Large

2010 **Saving lives with Forensic Science. Middle School Portola El Cerrito, CA**  
 2009 **Forensic DNA Technology, El Cerrito High School, El Cerrito, CA**  
 2008 **Saving lives with Forensic Science. Middle School Portola El Cerrito, CA**  
 2007 Scientists against Crime day Middle school: Portola, El Cerito CA 12/13/07  
 2007 Scientists against Crime day Elementary school: Kensington CA 12/06/07  
 2006 NSF Teachers Conference- Introduction to SJSU forensic science 08/09/06  
 2006 Seminar on SJSU Forensic Science for Qingdao University Scholars 05/18/06  
 2006 Seminar for Washington elementary 03/17/06  
 2006 CASA winter reception piano playing 12/12/06  
 2006 Leading monthly family dad support groups. Family Specialist- YMCA Berkeley, CA  
 2005 Volunteer Berkeley YMCA Special Events  
 2005 Invited Speaker Stanford Genome Technology Center Club Seminar 10-27-05  
 2005 Scientists against Crime day camp YMCA Berkeley CA  
 2005 Silver Creek High School forensic science laboratory tour  
 2004 Scientists against Crime seminar for 3<sup>rd</sup> grade class, Kensington CA  
 2004 Instructor of Fingerprints and Presumptive tests as a part of a MonteVista High School Forensics Day  
 Co-sponsored by Chemistry at SJSU  
 2004 Silver Creek High School forensic science laboratory tour  
 2004 Berkeley YMCA Special Events Volunteer  
 2004 Keynote Speaker Edward Teller Education Center Teacher/Scientist Dinner, LLNL (09/24/04)  
 2002-03 Berkeley YMCA Campaign Captain Volunteer  
 2001 Keynote Speaker at Summer Fellows Forum of Bio-Link held at UC Berkeley  
 2001 Laney College Biotech Curriculum Advisory Board member  
 2000 Speaker on Microarray DNA Technology, Cal State Hayward Seminar  
 2000 Speaker on Microarray, Bioinformatics technology, San Francisco State University  
 1999 Appearance before CA State Senate on Forensic DNA databank law  
 1998 Speaker on Forensic DNA Technology, St. Mary's High School  
 1998 Panel Participant for Northern California Biotechnology Consortium Curriculum Development  
 1997 Speaker on DNA Technology in Forensics at Contra Costa College  
 1997 Speaker on DNA Technology in Forensics at University of San Francisco  
 1996 Speaker on DNA in Forensics at CSU Stanislaus Undergraduate Faculty Enhancement Dinner  
 1995 Monte Vista High School BioTech night speaker  
 1995 Volunteer Cardiovascular training (Alternate Saturdays) and Childwatch- YMCA Berkeley  
 1993 Faculty Advisor for the UNC Ultimate Frisbee Club

1993 Advisor for NSF Alliance for Minority Participation (AMP) Grant  
1993 Science Fair Judge- Ft. Lupton CO  
1992-1993 Sound Mind Sound Body Program Conditioning Spa UNC Students with improved GPA get discounts  
1992 Interviewed for NPR Radio Program - Army DNA Dog tags

**REFERENCES:** References available on request

# Memorial Sloan-Kettering Cancer Center Summer Volunteer, % Albert Einstein College of Med., Hosp. for Joint Diseases, + Held concurrently, \* Transfer to UCB based on USDA fellowship, \*\*= Armed Forces Institute of Pathology, \*\*\*= Federal Bureau of Investigation