September, 2021

CURRICULUM VITAE

ASIM K. BEJ, Ph.D.
Professor, Department of Biology
Affiliate Faculty, Department of Forensic Sciences
The University of Alabama at Birmingham (UAB)
1300 University Boulevard, CH 464, Birmingham, AL 35294
Phone: (205) 934-9857; Fax: (205) 975-6097; E-mail: abej@uab.edu
Department of Biology Bej-webpage: www.uab.edu/cas/biology/bej
Senior Scientist, UWIRC Microbiome Center, UAB School of Medicine

EDUCATION AND POSITIONS:

1983-1988	Ph.D., University of Louisville, Louisville, KY, Biology/Molecular Genetics (*Dr. Michael H. Perlin, Dissertation Advisor*)
1980-1982	M.Sc., University of Calcutta, Calcutta, India, 1982, Zoology (Major), Insect Neuroendocrinology (specialization)
1976-1980	B.Sc. (Honors)., Univ. of Calcutta, Calcutta, India, Zoology (Major), Physiology (Minor), Botany (Minor)
1988-1991	Post-doctorate in Environmental Microbiology and Microbial Molecular Genetics, University of Louisville, Louisville, KY, (*Dr. Ronald M. Atlas, Mentor, Ret. 2017*)
1991-1997	Assistant Professor, Dept. Biology, UAB, Molecular Microbiology
1997-2003	Associate Professor, Dept. Biology, UAB, Molecular Microbiology
2003-Present	Professor, Dept. of Biology, UAB, Molecular Microbiology
1996-Present	Affiliate Faculty, Department of Justice Sciences (JS), UAB
2016-2020	Co-Director, Genetics & Genomics Sciences Undergraduate Program, UAB

ACADEMIC HONORS AND AWARDS:

2014 President's Award for the Excellence in Teaching, UAB College of Arts and Sciences
2010 Dean's Award for the Excellence in Teaching, UAB College of Arts and Sciences
2010 Member of the Antarctic Scientific Research Expedition Team - NASA Exobiology; United States Antarctic Program, *McMurdo Dry* Valleys[GE]
2008 Member of the Antarctic Scientific Research Expedition Team – Tawani[WEB]/NASA Antarctic Scientific Expedition, International Polar Year (IPY), *Novolazarevskaya & Maitri*[WEB] Stations[GE]; *Lake Untersee*[GE]
2007 Honorary Member, The Golden Key International Honour Society, UAB Chapter
2002 NASA Summer Faculty Fellowship, NASA MFSC, Huntsville, AL

RESEARCH INTERESTS:

Microbial Pathogens, Gut Microbiome, and Extremophiles

- **Microbial Pathogens:** Antibiotic resistance and gene regulatory circuits, comparative genomics, and rapid diagnosis.
- **Microbiome:** Gut microbiome, metabolism, and disease
- **Extremophiles:** Metagenomics of extremophiles in polar ecosystems.

RESEARCH PUBLICATIONS (*Peer-reviewed*):

1. Hakim JA, Green GB, Watts SA, Crowley MR, Morrow CD, Bej AK. 2021. Microbial Composition and Genes for Key Metabolic Attributes in the Gut Digesta of Sea Urchins *Lytechinus variegatus* and *Strongylocentrotus purpuratus* Using Shotgun Metagenomics. *Current Issues in Molecular Biology*. Sep;43(2):978-95.

2. Green GB, Hakim JA, Chen JW, Koo H, Morrow CD, Watts SA, Bej AK. 2021. The Gut Microbiota of Naturally Occurring and Laboratory Aquaculture *Lytechinus variegatus* Revealed Differences in the Community Composition, Taxonomic Co-Occurrence, and Predicted Functional Attributes. *Applied Microbiology*. Sep;1(2):201-24.

3. Hakim JA, Schram JB, Galloway AW, Morrow CD, Crowley MR, Watts SA, Bej AK. 2019. The Purple Sea Urchin *Strongylocentrotus purpuratus* Demonstrates a Compartmentalization of Gut Bacterial Microbiota, Predictive Functional Attributes, and Taxonomic Co-Occurrence. *Microorganisms* 7(2):35.

4. Hakim JA, Morrow CD, Watts SA, Bej AK. 2019. High-throughput amplicon sequencing datasets of the metacommunity DNA of the gut microbiota of naturally occurring and laboratory aquaculture green sea urchins *Lytechinus variegatus*. *Data in brief*. 2019 Oct 1;26:104405.

5. Koo H, Hakim J, Morrow C, Crowley M, Andersen D, Bej A. 2018. Metagenomic Analysis of Microbial Community Compositions and Cold-Responsive Stress Genes in Selected Antarctic Lacustrine and Soil Ecosystems. *Life*. 8(3):29.

6. Koo H, Hakim JA, Morrow CD, Andersen DT, Bej, AK, 2018. Microbial Community Composition and Predicted Functional Attributes of Antarctic Lithobionts Using Targeted Next-Generation Sequencing and Bioinformatics. *In: Methods in Microbiology: Microbiology of Atypical Environments.* Edited by Volker Gurtler, Jack T. Trevors, Volume 45, Pages 243-290, Elsevier Publishing, The Netherlands (ISBN: 978-0-12-814604-0).

7. Tools.Koo H, Mojib N, Hakim JA, Hawes I, Tanabe Y, Andersen DT, Bej AK. 2017. Microbial Communities and Their Predicted Metabolic Functions in Growth Laminae of a Unique Large Conical Mat from Lake Untersee, East Antarctica. *Frontiers in Microbiology*. 8: 1347. PMID 28824553

8. Koo H, Hakim JA, Morrow CD, Eipers PG, Davila A, Andersen DT, Bej AK. 2017. Comparison of two bioinformatics tools used to characterize the microbial diversity and predictive functional attributes of microbial mats from Lake Obersee, Antarctica. *Journal of Microbiological Methods.* PMID 28655556

9. Koo H, Hakim JA, Powell ML, Kumar R, Eipers PG, Morrow CD, Crowley M, Lefkowitz EJ, Watts SA and Bej AK. 2017. Metagenomics approach to the study of the gut microbiome structure and function in Zebrafish *Danio rerio* fed with a gluten formulated diet. *Journal of Microbiological Methods* 135, 69-76.

10. Hakim JA, Koo H, Kumar R, Lefkowitz EJ, Morrow CD, Powell ML, Watts SA, and Bej AK. 2016. The gut microbiome of the sea urchin, *Lytechinus variegatus*, from its natural habitat demonstrates selective attributes of microbial taxa and predictive metabolic profiles. *FEMS Microbiology Ecology*, 92(9), fiw146.

11. Koo H, Strope BM*, Kim EH*, Shabani AM*, Kumar R, Crowley MR, Andersen DT and Bej AK. 2016. Draft Genome Sequence of *Janthinobacterium* sp. Ant5-2-1 Isolated from a Proglacial Lake Podprudnoye in Schirmacher Oasis of East Antarctica. *Genome Announcements*, 4(1), e01600-15, PMID: 26798103. *(*=Undergraduates)*

12. Koo H and Bej AK. 2016. Metagenomic data of the bacterial community in coastal Gulf of Mexico sediment microcosms following exposure to Macondo oil (MC252). *Data in Brief*, 6, pp. 89-93.

13. Koo H, Hakim JA, Fisher PRE*, Grueneberg A, Andersen DT and Bej AK. 2016. Distribution of cold adaptation proteins in microbial mats in Lake Joyce, Antarctica: Analysis of metagenomic data by using two bioinformatics tools. *Journal of Microbiological Methods*, 120, pp. 23-28, PMID: 26578243. *(*=Undergraduate)*

14. Hakim JA, Koo H, Dennis LN, Kumar R, Ptacek T, Morrow CD, Lefkowitz EJ, Powell ML, Bej AK and Watts SA. 2015. An abundance of Epsilonproteobacteria revealed in the gut microbiome of the laboratory cultured sea urchin, *Lytechinus variegatus*. *Frontiers in Microbiology*, 6(1047), PMID: 26528245

15. Koo H, Mojib N, Huang JP, Donahoe RJ and Bej AK. 2015. Bacterial community shift in the coastal Gulf of Mexico salt-marsh sediment microcosm in vitro following exposure to the Mississippi Canyon Block 252 oil (MC252). *3Biotech*, 5(4), pp. 379-392, PMCID: PMC4522729

16. Koo H, Mojib N, Thacker RW, Bej AK. 2014. Comparative analysis of bacterial community-metagenomics in coastal Gulf of Mexico sediment microcosms following exposure to Macondo oil (MC252). *Antonie Van Leeuwenhoek* 106:993–1009.

17. Koo H, Basu MK, Crowley M, Aislabie J, Bej AK. 2014. Draft Genome Sequence of *Pseudomonas* sp. Strain Ant30-3, a Psychrotolerant Bacterium with Biodegradative Attribute Isolated from Antarctica. *Genome Announcement* 2(3). pii: e00522-14. doi: 10.1128/genomeA.00522-14.

18. Koo H, Mojib N, Huang JP, Donahoe RJ, Bej AK. 2014. Bacterial community shift in the coastal Gulf of Mexico salt-marsh sediment microcosm in vitro following exposure to the Mississippi Canyon Block 252 oil (MC252). *3Biotech* (Published Online First, July 10, 2014) (doi:10.1007/s13205-014-0233-x)

19. Koo H, Ptacek T, Crowley M, Swain AK, Osbornn JD, Bej AK, Andersen DT. 2014. Draft Genome Sequence of *Hymenobacter* sp. Strain IS2118 Isolated from a Freshwater Lake in Schirmacher Oasis, Antarctica Reveals Diverse Genes for Adaptation to Cold Ecosystems. *Genome Announcement* 2(4), e00739-14

20. Huang, JP, Swain, A, Andersen, DT, Bej, AK. 2014. Bacterial diversity within five unexplored freshwater lakes interconnected by surface channels in East Antarctic Dronning Maud Land (Schirmacher Oasis) using amplicon pyrosequencing. *Polar Biology* 37:359-369.

21. Filippova SN, Surgucheva NA, Kulikov KK, Sorokin VN, Akimov AV, Bej AK, McKay C, Andersen D, Galchenko VF. 2013. Detection of Phage Infection in the Bacterial Population of Lake Untersee (Antarctica). *Microbiology* 82:383–386.

22. Huang JP, Swain A, Ravindra R Andersen DT, Bej AK. 2013. Bacterial diversity of the rock-water interface in an East Antarctic freshwater ecosystem, Lake Tawani(P)†. *Aquatic Biosystems* 9:4-12.

23. Mojib N, Farhoomand A*, Andersen DT, Bej AK. 2013. UV and cold tolerance of a pigment-producing Antarctic *Janthinobacterium* sp. Ant5-2. *Extremophiles* 17:367-378. *(*=Undergraduate)*

24. Trevors JT, Elsas JD, Bej AK. 2012. The Molecularly Crowded Cytoplasm of Bacterial Cells: Dividing Cells Contrasted with Viable but Non-culturable (VBNC) Bacterial Cells. *Current Issues in Molecular Biology* 15:1-6.

25. Huang J, Mojib N, Rakesh R. Goli**, Watkins S*, Waites K, Ravindra R, Andersen DT, and Bej AK. 2012. Antimicrobial activity of PVP from an Antarctic bacterium, *Janthinobacterium* sp. Ant5-2, on multi-drug and methicillin-resistant *Staphylococcus aureus*. *Natural Products and Bioprospecting* 2(3):104-110. (*=*Undergraduate*; **=High School)

26. Gangwar M, Waters AM*, Bej G*, Bej AK, Mojib N. 2013. Detection of Total and Pathogenic *Salmonella* in Shellfish Using Real-time Multiplexed PCR Assay Targeting *invA* and *spvB.* *Food Analytical Methods* 6(3):922-932. (*=*Undergraduate*)

27. Trevors JT, Bej AK, Mojib N, van Elsas JD, and Overbeek LV. 2012. Bacterial gene expression at low temperatures. *Extremophiles* 16:167-176.

28. Mojib N, Andersen DT, Bej AK. 2011. Structure and function of a cold shock domain fold protein, CspD, in *Janthinobacterium* sp. Ant5-2 from East Antarctica. *FEMS Microbiolology Letters* 319:106-114.

29. Mojib N, Nasti TH, Andersen DT, Attigada VR, Hoover RB, Yusuf N, Bej AK. 2011. The antiproliferative function of violacein-like purple violet pigment (PVP) from an Antarctic *Janthinobacterium* sp. Ant5-2 in UV-induced 2237 fibrosarcoma. *International Journal of Dermatology* 50:1223-1233.

30. Panicker G, Mojib N, Nakatsuji T. Aislabie J, Bej AK. 2010. Occurrence and distribution of *capB* in Antarctic microorganisms and study of its structure and regulation in the Antarctic biodegradative Pseudomonas sp. 30/3. *Extremophiles* 14:171-183.

31. Mojib N, Philpott R, Huang J, Neiderweis M, Bej AK. 2010. Antimycobacterial activity of pigments isolated from Antarctic bacteria. *Antonie Van Leeuwenhoek: Journal of Microbiology* 98:531-540.

32. Panicker G., Mojib N., Aislabie .A., Bej AK. 2010. Detection, expression and quantitation of the biodegradative genes in Antarctic microorganisms using PCR. *Antonie Van Leeuwenhoek*: *Journal of Microbiology* 97(3):275-287.

33. Rizvi AV and Bej AK. 2010. Rapid Detection of *Vibrio parahaemolyticus* in Shellfish and Gulf of Mexico Water Using Multiplexed Real Time PCR with SYBR Green™ I. *Antonie Van Leeuwenhoek*: *Journal of Microbiology*. 98(3):279-290.

34. Pikuta EV, Hoover RB, Bej AK, Marsic D, Whitman WB, Krader P. 2009. *Spirochaeta dissipatitropha* sp. nov., an alkaliphilic, obligately anaerobic bacterium, and emended description of the genus Spirochaeta Ehrenberg 1835. *International Journal of Systematic and Evolutionary Microbiology* 59:1798-1804.

35. Olson, JB, Harmody DK, Bej A., McCarthy PJ. 2007. *Tsukamurella spongiae* sp. nov., a novel actinomycete isolated from a deep-water marine sponge. *International Journal of Systematic and Evolutionary Microbiology* 57:1478-1481.

36. Pikuta EV, Marsic D, Itoh T, Bej AK, Tang, J, Whitman, EB, Ng, JD, Garriott, OK, and Hoover, RB. 2007. *Thermococcus thioreducens* sp. nov., a novel hyperthermophilic, obligately sulfur-reducing archaeon from a deep-sea hydrothermal vent. *International Journal of Systematic and Evolutionary Microbiology* 57:1612-1618.

37. Ward LN and Bej AK. 2006. Detection of *Vibrio parahaemolyticus* in shellfish by use of multiplexed real-time PCR with TaqMan fluorescent probes. *Applied and Environmental Microbiology* 72:2031-2042.

38. Rizvi AV, Panicker G, Myers ML, Bej AK. 2006. Detection of pandemic *Vibrio parahaemolyticus* O3:K6 serovar in Gulf of Mexico water and shellfish using real-time PCR with Taqman fluorescent probes. *FEMS Microbiology Letters* 262:185-192.

39. Panicker G, Aislabie J, Bej AK. 2006. Analysis of Aggregative behavior of *Pseudomonas* sp. 30-3 isolated from Anatrctic soil. *Soil Biology and Biochemistry* 38:3152-3157.

40. Pikuta EV, Hoover RB, Bej AK, Marsic D, Whitman WB, Krader PE, Tang J. 2006. *Trichococcus patagoniensis* sp. nov., a facultative anaerobe that grows at -5 °C, isolated from penguin guano in Chilean Patagonia. *International Journal of Systematic and Evolutionary Microbiology* 56(Pt 9):2055-2062.

41. Panicker G and Bej AK. 2005. Real-time PCR detection of *Vibrio vulnificus* in oysters: comparison of oligonucleotide primers and probes targeting *vvhA*. *Applied and Environmental Microbiology* 71:5702-5709.

42. Pikuta EV, Marsic D, Bej A, Tang J, Krader P, Hoover RB. 2005. *Carnobacterium pleistocenium* sp. nov., a novel psychrotolerant, facultative anaerobe isolated from permafrost of the Fox Tunnel in Alaska. *International Journal of Systematic and Evolutionary Microbiology* 55: 473−478.

43. Aislabie J, Bej AK, Ryburn J, Lloyd N, Wilkins N. 2005. Characterization of *Arthrobacter nicotinovorans* HIM, an atrazine-degrading bacterium, from agricultural soil New Zealand. *FEMS Microbiology Ecology* 52:279−286.

44. Panicker G, Call DR, Krug ML, Bej AK. 2004. Detection of pathogenic *Vibrio* spp. in shellfish using multiplexed PCR and DNA-microarray. *Applied and Environmental Microbiology* 70:7436−7444.

45. Panicker G, Vickery MC, Bej AK. 2004. Multiplex PCR detection of clinical and environmental strains of *Vibrio vulnificus* in shellfish. *Canadian Journal of Microbiology* 50:911−922.

46. Kaufman GE, Blackstone GM, Vickery MC, Bej AK, Bowers J, Bowen MD, Meyer RF, DePaola A. 2004. Real-time PCR quantification of *Vibrio parahaemolyticus* in oysters using an alternative matrix. *Journal of Food Protection*.67:2424−2429.

47. Panicker G, Myers ML, Bej AK. 2004. Rapid detection of *Vibrio vulnificus* in shellfish and Gulf of Mexico water using real-time PCR. *Applied and Environmental Microbiology* 70(1):498-507.

48. Pikuta EV, Hoover RB, Bej AK, Marsic D, Detkova EN, Whitman WB, Krader P. 2003. *Tindallia californiensis* sp. nov., a new anaerobic, haloalkaliphilic, sporeforming acetogen isolated from soda Mono Lake in California. *Extremophiles* 7:327-334.

49. Pikuta EV, Hoover RB, Bej AK, Marsic D, Whitman WB, Cleland D, Krader P. 2003. *Desulfonatronum thiodismutans* sp. nov., a new alkaliphilic, litho-autotrophic sulfate-reducing bacterium from soda Mono Lake, California. *International Journal of Systematic and Evolutionary Microbiology* 53:1327-1332.

50. Myers ML, Panicker G, Bej AK. 2003. Detection of newly emerged pandemic *Vibrio parahaemolyticus* O3:K6 pathogen in pure cultures and seeded Gulf waters using PCR. *Applied and Environmental Microbiology* 69:2194-2200.

51. Hoover RB, Pikuta EV, Bej AK, Marsic D, Whitman WB, Tang J, Krader P. 2003. *Spirochaeta americana* sp. nov., a new halo-alkaliphilic, obligately anaerobic spirochete, isolated from soda Mono Lake in California. *International Journal of Systematic and Evolutionary Microbiology* 53:815-821.

52. Lee CY, Panicker G, Bej AK. 2003. Multiplex PCR detection of microbial pathogens in shellfish using Covalink NH®-based DNA probe hybridization. *Journal of Microbiological Methods* 53:199-209.

53. Kaufman GE, Bej AK, Bowers J, DePaola A. 2003. Oyster-to-oyster variability in the levels of *Vibrio parahaemolyticus*. *Journal of Food Protection* 66:125-129.

54. Bej AK. 2003. Molecular-based methods for the detection of microbial pathogens in the environment. *Journal of Microbiological Methods* 53:193-140.

55. C. Brasher, G. Panicker, A.K. Bej. 2002. Evaluation of PCR amplification-based detection of heat-killed *Escherichia coli* and cell-free DNA in shellfish. *Molecular Biology Today* 3:85-90.

56. Kaufman GE, Myers ML, Pass CL, Bej AK, Kaysner CA. 2002. Molecular analysis of *Vibrio parahaemolyticus* isolated from human patients and shellfish during Pacific Northwest outbreaks. *Letters in Applied Microbiology* 34:155-161.

57. Panicker G, Aislabie J, Saul D, Bej AK. 2002. Cold tolerance of *Pseudomonas* sp. 30-3 isolated from oil-contaminated soil, Antarctica. *Polar Biology* 25:5-11.

58. Carroll JW*, Mateescu MC, Chava K, Colwell RR, Bej AK. 2001. Response and tolerance of toxigenic *Vibrio cholerae* O1 to cold temperatures. *Antonie van Leeuwenhoek: Journal of Microbiology* 79:377-384. (*=*Undergraduate*)

59. Bej AK, Saul D, Aislabie J. 2000. Cold tolerance of alkane-degrading bacteria isolated from soil near Scott Base, Antarctica. *Polar Biology* 23:100-105.

60. Horton AJ, Hak KM*, Steffan RJ, Foster JW, Bej AK. 2000. Adaptive response to cold temperatures and characterization of cspA in Salmonella typhimurium LT2. *Antonie van Leeuwenhoek: Journal of Microbiology* 77(1):13-20. (*=*Undergraduate*)

61. Vickery MC, Harold N, Bej AK. 2000. Cluster analysis of AP-PCR generated DNA fingerprints of *Vibrio vulnificus* isolates from patients fatally infected after consumption of raw oysters. *Letters in Applied Microbiology* 30:258-262.

62. Bryan PJ, Steffan RJ, Foster JW and Bej AK. 1999. Adaptive Response to cold temperatures in *Vibrio vulnificus*. *Current Microbiology* 38:168-175.

63. Bej AK, Patterson DP*, Brasher CW, Vickery MC, Jones DD, Kaysner CA. 1999. Detection of total and hemolysin-producing *Vibrio parahaemolyticus* in shellfish using multiplex PCR amplification of *tl*, *tdh*, and *trh.* *Journal of Microbiological Methods* 36:215-225. *(*=Undergraduate)*

64. Vickery MCL, Smith AL, DePaola A, Jones DD, Steffan RJ, Bej AK. 1998. Optimization of the arbitrarily-primed polymerase chain reaction (AP-PCR) for intra-species differentiation of *Vibrio vulnificus*. *Journal of Microbiological Methods* 33:181-189.
65. Brasher CW, DePaola A, Jones DD, Bej AK. 1998. Detection of microbial pathogens in shellfish with multiplex PCR. *Current Microbiology* 37:101-107.

66. Mahbubani MH, Scheafer F, III, Jones DD, Bej AK. 1998. Detection of *Giardia* in Environmental Waters Using Immunomagnetic-PCR Amplification Methods. *Current Microbiology* 36(2):107-113.

67. Jeffreys AG, Hak KM*, Steffan RJ, Foster JW, Bej AK. 1998. Growth, survival and characterization of *cspA* in *Salmonella enteritidis* following cold shock. *Current Microbiology* 36:29-35. (*=*Undergraduate*)

68. Bej AK, Smith AL III, Vickery MCL, Jones DD, Mahbubani MH. 1997. Detection of viable *Vibrio cholerae* in shellfish using PCR. *Food Testing & Analysis* 2(6):16-21.

69. Bej AK, Ng WY, Morgan S, Jones DD, Mahbubani MH. 1996. Detection of viable *Vibrio cholerae* by reverse transcriptase-polymerase chain reaction (RT-PCR). *Molecular BioTechnology* 5:3-10.

70. Bej AK, Southworth J, Law R*, Jones, DD and Mahbubani, M. 1996. Detection of *Salmonella typhimurium* in chicken using polymerase chain reaction. *Food Testing & Analysis* 1(4):12-15. (*=*Undergraduate*)

71. Lett P, Southworth J, Jones DD and Bej AK. 1995. Detection of pathogenic *Escherichia coli* in artificially contaminated ground beef using multiplex polymerase chain reaction. *Food Testing & Analysis* 1(3):34-38.

72. Lee KJ, Elton TS, Bej AK, Watts SA and Watson RD. 1995. Molecular Cloning of a cDNA encoding putative molt inhibiting hormone from the blue crab, *Callinectes sapidus*. *Biochemical and Biophysical Research Communications* 209(3):1126-1131.

73. Bej AK, Mahbubani MH, Boyce MJ*, Atlas RM. 1994. Polymerase Chain Reaction (PCR) based Detection of *Salmonella* spp. in Oysters. *Applied and Environmental Microbiology* 60:368-373. (*=*Undergraduate*)

74. Karem KK, Foster J and Bej AK. 1994. Adaptive Acid Tolerance Response (ATR) in *Aeromonas hydrophila*. *Microbiology* 140:1731-1736.

75. Jones DD, Law R* and Bej, AK. 1993. Detection of *Salmonella* spp. in Contaminated Oysters Using Polymerase Chain Reaction and Gene Probes. *Journal of Food Science* 58:1191-1197. (*=*Undergraduate*)

76. Molin S, Boe L, Jensen LB, Kristensen CS, Givskov M, Ramos JL and Bej AK. 1993. Suicidal Genetic Elements and Their Use in Biological Containment of Bacteria. *Annual Reviews in Microbiology* 47:139-166.

77. Bej AK and Mahbubani MH. 1992. Application of Polymerase Chain Reaction in Environmental Microbiology. *PCR Methods and Applications* 1(3):151-159, 1992.

78. Bej AK, Molin S, Perlin M and Atlas R. 1992. Maintenance and killing efficiency of conditional lethal constructs in *Pseudomonas putida*. *Journal of Industrial Microbiology*10:79-85.

79. Mahbubani MH, Bej AK, Perlin MH, Shafer F III, Jakubowski W and Atlas RM. 1992. Differentiation of *Giardia duodenalis* from other*Giardia* spp. based on Polymerase Chain Reaction and Gene Probe Methods*. Journal of Clinical Microbiology* 30(1):74-78.

80. Atlas RM, Sayler G, Burlage RS and Bej AK. 1992. Molecular Approaches for Environmental Monitoring of Microorganisms. *BioTechniques* 12(5):706-717.

81. Bej AK, Mahbubani MH and Atlas RM. 1991. Amplification of Nucleic Acids by Polymerase Chain Reaction (PCR) and Other Methods and Their Applications. *Critical Reviews in Biochemistry and Molecular Biology* 26(3/4):301-334, 1991.

82. Bej AK, Mahbubani MH and Atlas RM. 1991. Detection of viable *Legionella pneumophila* in water using PCR and gene probe methods. *Applied and Environmental Microbiology* 57(2):597-600.

83. Mahbubani MH, Bej AK, Miller R, DiCesare JL, Haff L and Atlas RM. 1991. Detection of bacterial mRNA using PCR. *Biotechniques* 10:48-49

84. Bej AK, DiCesare JL, Haff LH and Atlas RM. 1991. Detection of *Escherichia coli* and *Shigella* spp. in water by using PCR and gene probes for *uid*. *Applied and Environmental Microbiology* 57:1013-1017.

85. Bej AK, McCarty S and Atlas RM. 1991. Detection of coliform bacteria and *Escherichia coli* by multiplex PCR: Comparison with defined substrate and plating methods for water quality monitoring. *Applied and Environmental Microbiology* 57:2429-2432.

86. Bej AK and Perlin MH. 1991. Apparent Maintenance in *Ustilago violacea* Mitochondria of Exogenously-Introduced DNA sequences. *Gene* 98:135-140.

87. Bej AK, Mahbubani MH, DiCesare JL and Atlas RM. 1991. PCR-Gene probe detection of microorganisms using filter-concentrated samples. *Applied and Environmental Microbiology* 57:3529-3534.

88. Bej AK, Perlin MH and Atlas RM. 1991. Effect of Introducing Genetically Engineered Microorganisms on Soil Microbial Community Diversity. *FEMS Microbiology Ecology* 86:169-176.

89. Atlas RM, Horowitz A, Krichevsky M and Bej AK. 1991. Response of Microbial populations to Environmental Disturbance. *Microbial Ecology* 22:249-256.

90. Mahbubani MH, Bej AK, Perlin MH, Shafer III F and Atlas RM. 1991. Detection of *Giardia* by Polymerase Chain Reaction and Gene Probe Methods and Differentiation of Live from Dead Cysts. *Applied and Environmental Microbiology* 57(12):3456-3461.

91. Perlin MH, Bej AK, Jacob R and Will OH III. 1990. Introduction and maintenance of prokaryotic DNA in*Ustilago violacea*. *Journal of Industrial Microbiology* 5:355-364.

92. Aislabie J, Bej AK, Hurst H, Rothenburger S and Atlas RM. 1990. Microbial degradation of quinoline and methylquinolines. *Applied and Environmental Microbiology* 56(2):345-351.

93. Bej AK, Steffan RJ, DiCesare J, Haff LH and Atlas RM. 1990. Detection of coliform bacteria in water by polymerase chain reaction and gene probes. *Applied and Environmental Microbiology* 56(2):307-314

94. Bej AK, Mahbubani MH, Miller R, DiCesare J, Haff LH and Atlas RM. 1990. Multiplex PCR amplification and immobilized capture probe for detection of bacterial pathogens and indicators in water. *Molecular and Cellular Probes* 4:353-365.

95. Mahbubani MH, Bej AK, Miller R, DiCesare J, Haff LH and Atlas RM. 1990. Detection of *Legionella* by using polymerase chain reaction and gene probe methods. *Molecular and Cellular Probes* 4:175-187.

96. Bej AK and Perlin MH. 1989. Transformation of *Ustilago violacea* with a prokaryotic plasmid containing *Hygromycin* B resistance gene. *Gene* 80:171-176.

97. Bej AK and Perlin MH. 1989. Preparation of Protoplast of *Ustilago violacea* for Transformation and Pulse-field Electrophoresis. *Biotechniques* 7(8):7-9.

98. Bej AK, Perlin MH and Atlas RM. 1989. Model suicide vector for containment of genetically engineered microorganisms. *Applied and Environmental Microbiology* 54(10):2472-2477.

99. Atlas RM, Bej AK, Steffan RJ and Perlin MH. 1989. Approaches for monitoring and containing genetically engineered microorganisms released into the environment. *Journal of Hazardous Waste and Hazardous Material*. 6(2):137-144.

100. Steffan, J. Goksøyr, A. K. Bej, and R.M. Atlas. 1988. Recovery of DNA from soils and sediments. *Applied and Environmental Microbiology* 54(12):2908-2915.

101. Bej AK and Perlin MH. 1988. Apparent transformation and maintenance in basidiomycete mitochondria of a plasmid bearing the hygromycin *(hyg)*B gene. *Genome* 30 (Suppl.1):300.

102. Nanda DK, Chaudhuri PS and Bej AK. 1984. Effect of desiccation on the ventral nerve cord-neurosecretory system of tropical earthworm, *Metaphire peguana* (Rosa, 1890). *Proceedings if Indian Academy of Science* (Anim. Sci.), 93(1):43-47.

103. Nanda DK and Bej AK. 1984. Influence of camphor over the brain neuroglandular elements of *Periplaneta americana* (Dictyoptera, Blattidae). *Acta Biologica Cracoviensia* (Zoologia), 26:113-118.

RESEARCH PUBLICATIONS (*Non-peer reviewed*):

1. Huang JP, Hoover RB, Swain A, Murdock C, Anderson DT and Bej AK. 2010. Comparison of the microbial diversity and abundance between the freshwater land-locked lakes of Schirmacher Oasis and the perennially ice-covered Lake Untersee in East Antarctica. *Proceedings of International Society for Optical Engineering, Instruments, Methods and Mission for Astrobiology (SPIE),* 7819, 78190W.

2. Mojib N.*, Huang J.*, Hoover R.B. and Bej A.K. 2009. Diversity of bacterial communities in the lakes of Schirmacher Oasis, Antarctica. *Proceedings of International Society for Optical Engineering, Instruments, Methods and Mission for Astrobiology (SPIE)*, 7441, 74410J. (*Equal author contribution)

3. Mojib N, Huang J, Hoover RB, Pikuta EV, Storrie-Lombardi M, Sattler B, Andersen D and Bej AK. 2009. Diversity of bacterial communities in the lakes of Schirmacher Oasis, Antarctica. *Proceedings of International Society for Optical Engineering, Instruments, Methods and Mission for Astrobiology,* Volume 7441.

4. Mojib N, Hoover RB and Bej AK. 2008. Diversity and cold adaptation of microorganisms isolated from the Schirmacher Oasis, Antarctica. *Proceedings of International Society for Optical Engineering, Instruments, Methods and Mission for Astrobiology* Vol. 7097 70970K-1.

5. Pikuta EV, Detkova EN, Bej AK, Marsic D, Hoover RB. 2003. Anaerobic halo-alkaliphilic bacterial community of athalassic, hypersaline Mono Lake and Owens Lake in California. *Proceedings of International Society for Optical Engineering, Instruments, Methods and Mission for Astrobiology V*, Volume 4859, P. 130-144.

6. Carroll JW and Bej AK. 1999. Adaptive nature of waterborne microbial pathogens in cold temperatures. *99th Proceeding of Mississippi Water Resources Conference*, 40-43.

7. Bej AK, Brashar F, Jones DD. 1998. Application of arbitrarily-primed polymerase chain reaction (AP-PCR) for the detection of *Vibrio parahaemolyticus* in shellfish. *28th Proceeding of Mississippi Water Resources Conference,* p. 242-245.

8. Smith AL, Vickery MCL, Bej AK. 1998. Development of DNA fingerprints for selected shellfish-borne microbial pathogens using arbitrarily primed polymerase chain reaction (AP-PCR). *28th Proceeding of Mississippi Water Resources Conference,* p.42-47.

9. Vickery MCL, Southern BD, Foster JW, Bej AK. 1998. Urea-dependent acid tolerance response (ATR) in *Helicobacter pylori*. *28th Proceeding of Mississippi Water Resources Conference,* p. 222-226.

10. McCarty S, Bej AK, Perlin MH and Atlas RM. 1992. Defined substrate technology and polymerase chain reaction - gene probe for the detection of total coliform and *Escherichia coli* in water. *Proceedings of the Water Quality Technology*, American Water Works Association.

11. Atlas RM, Bej AK, McCarty S, DiCesare J and Haff L. 1991. Monitoring Microbial Pathogens and Indicator Microorganisms in Water by Using Polymerase Chain Reaction and Gene Probes. *In* Jack R. Hall, G. Douglas Glysson (eds.), *Monitoring Water in the 1990's: Meeting New Challenges, ASTM STP 1102*. American Society for Testing and Materials, Philadelphia, PA.

12. DiCesare JL, Haff LA, Mahbubani MH, Bej AK, Miller R and Atlas RM. 1990. Detection of *Legionella* in environmental samples using PCR. *Amplifications: A Forum for PCR Users* 4:16-21.

EDITED BOOK: *Polar Microbiology*: *The Ecology, Biodiversity and Bioremediation Potential of Microorganisms in Extremely Cold Environments*. 2009. Edited by: Asim K. Bej, Jackie Aislabie and Ronald M. Atlas, CRC Press, Boca Raton, FL **(**ISBN: 978-1-4200-8384-2).

BOOK CHAPTERS *(Invited)*

1. Hakim JA, Koo H, van Elsas JD, Trevors JT and Bej AK. 2016. CRISPR-Cas system: A new paradigm for bacterial stress response through genome rearrangement. *In Stress and Environmental Regulation of Gene Expression and Adaptation in Bacteria*. Frans J. de Bruijn (Editor). Wiley-Blackwell Publishers, 2 Volume Set, p. 146.

2. Koo H, Hakim JA and Bej AK. 2016. Metagenomic analysis of microbial cold-stress proteins in polar lacustrine ecosystems. *In Stress and Environmental Regulation of Gene Expression and Adaptation in Bacteria.* Frans J. de Bruijn (Editor). Wiley-Blackwell Publishers, pp. 837-844

3. Trevors JT, Bej AK, van Elsas JD. 2012. Hypothesized micro-environments for the origin of microbial life on Earth, In Genesis: Origin of Life on Earth and Planets, COLE Series Book, Seckbach, J. & R. Gordon, (Eds.). Dordrecht, Springer and Verlag, the Netherlands.

4. Mojib N, Trevors JT, Bej AK. 2011. Microbial biodegradative genes and enzymes in mineralization of non-metal pollutants. In *Microbial Bioremediation of Non-metals: Current Research*, Chapter 11, Anna-Irini Koukkou (ed.), Horizon Scientific Press, Norwich, United Kingdom.

5. Bej AK. 2010. *Vibrio* In *Molecular Detection of Human Bacterial Pathogens*, Chapter 104, Dongyou Liu (ed.), CRC Press, Boca Raton, FL.

6. Bej AK and Mojib N. 2009. Cold Adaptation in Antarctic Biodegradative Microorganisms. In: *Polar Microbiology: The Ecology, Biodiversity and Bioremediation Potential of Microorganisms in Extremely Cold Environments*. Asim K. Bej., Jackie Aislabie, Ronald M. Atlas (eds.). CRC Press Taylor & Francis. Chapter 6, pp.159-175.

7. Bej AK. 2009. *Vibrio* In *Molecular Detection of foodborne pathogens,* Chapter 35, Dongyou Liu (ed.), CRC Press, Boca Raton, FL.

8. Bej AK. 2004. Detection of microbial nucleic acids by polymerase chain reaction in aquatic samples. In: *Molecular Microbial Ecology Manual,* A.D.L. Akkermans, J.D. van Elsas, F.J. Bruijn (eds.), 2nd edition. Kluwer Publishers, The Netherlands.

9. Bej AK. 1999. Detection of microbial nucleic acids by polymerase chain reaction in aquatic samples. In: *Manual for Molecular Microbial Ecology,* A.D.L. Akkermans, J.D. van Elsas, F.J. Bruijn (eds.), Kluwer Publishers, The Netherlands.

10. Bej AK and Toranzos G. 1997. PCR Amplifications Technology in Environmental Samples: Current Status and Future Perspective. In: *PCR Amplifications in the Environmental Samples*, Gary R. Toranzos (ed.), Technomic Publications, N.Y., pp. 1-16.

11. Bej AK. 1996. Nucleic Acid Hybridizations: Principles and Strategies. In: *Nucleic Acid Analysis: Principles and Bioapplications*, C. Dangler (ed.), John Wiley and Sons, Inc., N.Y., Chapter 1, pp. 1-28.

12. Bej AK and Mahbubani MH. 1996. Current Development and Applications of Nucleic Acid Technology in the Environmental Sciences. In: *Nucleic Acid Analysis: Principles and Bioapplications*, C. Dangler (ed.), John Wiley and Sons, Inc., N.Y., Chapter 10, pp. 231-274.

13. Bej AK. 1995. Polymerase Chain Reaction (PCR) Amplification of DNA Recovered from Aquatic Environment. 1995. In: *Nucleic Acids in the Environment: Methods and Applications*, J.T. Trevors and J.D. vanElsaas, (eds.), Springer-Verlag, Berlin, Heidelberg, Germany, Chapter 10, pp. 179-218.

14. Atlas RM and Bej AK. 1994. Polymerase Chain Reaction. In: *Methods for General and Molecular Bacteriology*, P. Gerhardt (Editor-in-Chief), R.G.E. Murray, W.A. Wood, and N.R. Kraig (Editors), ASM Press, Washington, D.C., Chapter 19, pp. 418-435.

15. Bej AK and Mahbubani MH. 1994. Thermostable DNA Polymerases for *in vitro* DNA Amplifications. In: *PCR Technology: Current Innovations*, H. Griffin and A. Griffin (eds.), Academic Press, CA, Chapter 25, pp. 219-237.

16. Mahbubani MH and Bej AK. 1994. Application of PCR method in Clinical Microbiology. In: *PCR Technology: Current Innovations*, H. Griffin and A. Griffin (eds.), Academic Press, CA, Chapter 31, pp. 327-339.

17. Bej AK and Mahbubani MH. 1994. Application of PCR method in Environmental Microbiology. In: *PCR Technology: Current Innovations*, H. Griffin and A. Griffin (eds.), Academic Press, CA, Chapter 32, pp. 327-339.

18. Jones DD and Bej AK. 1994. Applications of Polymerase Chain Reaction (PCR) in Food Microbiology. In: *PCR Technology: Current Innovations*, H. Griffin and A. Griffin (eds.), Academic Press, CA, Chapter 33, pp. 341-365.

19. Bej AK and Mahbubani MH. 1994. Detection of Microbial Pathogens in the Gastrointestinal tract by PCR and Gene Probe Methods. In: *PCR-Based Diagnostics in Infectious Diseases*, G.D. Ehrlich and S.J. Greenberg (eds.), Blackwell Scientific Publishing, MA, Chapter 30, pp. 418-435.

20. Bej AK, Mahbubani MH and Atlas RM. 1993. Detection and molecular serogrouping of *Legionella pneumophila* by polymerase chain reaction amplification and restriction enzyme analysis. In: *Legionella: Current Status and Emerging Perspective*. J.M. Barbaree, R.F. Breiman, A.P. Dufour (eds.), pp. 173-174, Amercian Society for Microbiology, Washington, D.C.

21. Bej A and Mahbubani MH. 1993. Genetically Engineered Microbes: Monitoring & Containing. In: *Handbook of Hazardous Materials*, Morton Corn (Editor-in-Chief), Academic Press, San Diego, CA, pp. 309-319.

22. Atlas RM, and Bej AK. 1990. Detection of Bacterial Pathogens in Environmental Water Samples by Using Polymerase Chain Reaction and Gene Probe. In: M. Innis, D. Gelfand, J. Sninsky, and T. White (eds.), *A Guide to Methods and Applications: A Laboratory Manual*. Chapter 49, p. 399-406, Academic Press, Orlando, Fl.

23. Bej, AK 1989. Detection of Bacterial Pathogens Using PCR and Gene Probes. In: B. Roohk and A.J. Karpoff (eds.), *Introducing Biology*, 3rd Edition. Kendall/Hunt Publ. Co. Dubuque, Iowa.

24. Bej AK. 1989. Monitoring Genetically Engineered Microorganisms in the Environment. In: B. Rhook and A.J. Karpoff (eds.), *Introducing Biology*, 3rd Edition. Kendall/Hunt Publ. Co., Dubuque, Iowa.

FUNDED EXTRAMURAL GRANTS AND CONTRACTS:

Title: Composition and function of microbial communities in microbial mats in freshwater ecosystens in Antarctica using metagenomics approach and Bioinformatics tools.
Investigator(s): PI: A.K. Bej
Agency: Tawani Foundation

Title: Analysis of biodegradative microbial population and their genes in Deepwater Horizon oil contaminated water and sediments of coastal Alabama.
Investigator(s): PI: Dr. A.K. Bej.
Agency: BP Gulf Research Initiative-Marine Environmental Sciences Consortium

Title: Study of the response of oil-degrading bacteria as a consequence of Deepwater Horizon Spill.
Investigator(s): Elizabeth Gardner **(PI)** and Asim K. Bej **(Co-PI**)

Agency: Gulf Oil Spill Pilot Grant Application, UAB.

Title: Development of an isothermal nucleic acid test with lateral flow detection for *Vibrio vulnificus.*
Investigator(s): PI: Dr. A.K. Bej.
Agency: Mississippi Alabama Sea Grant Consortium/NOAA

Title: Rapid and quantitative detection of *Vibrio vulnificus* and *V. parahaemolyticus* in shellfish using species-specific phage-displayed peptide ligands.
Investigator(s): PI: Dr. A. K. Bej
Grant Agency: NOAA/National Sea Grant College program

Title: Evaluation and applications of methodologies for rapid detection and elimination of *Vibrio vulnificus* and *V. parahaemilyticus* in shellfish.
Investigator(s): PI: Dr. A. K. Bej
Grant Agency: NOAA/National Sea Grant College program

Title: Cold-induced hybernation of marine vibrios in the Gulf of Mexico: A study of cell to cell communication and dormancy in *Vibrio vulnificus.*
Investigators: PI: Dr. John W. Foster (USA); **Co-PI: Dr. A.K. Bej (UAB)**
Grant Agency: Alabama Center for Estuarine Studies (ACES)

Title: Field applications of multiplex PCR to monitor microbial contamination in shellfish in the Gulf of Mexico.
Investigator(s): PI: Dr. A. K. Bej
Grant Agency: Mississippi Alabama Sea Grant Consortium, Department of Commerce and National Oceanographic and Atmospheric Administration (NOAA)

Title: Monitoring viral contamination in shellfish in Mobile Bay by using multiplex RT-PCR amplification methods.
Investigator(s): PI: Dr. A. K. Bej
Grant Agency: NOAA/National Sea Grant College program

Title: Rapid detection of microbial pathogens in shellfish using arbitrarily primed polymerase chain reaction (AP-PCR).
Investigator(s): PI: Dr. A. K. Bej
Grant Agency: NOAA/National Sea Grant College program

Title: Development of polymerase chain reaction-based detection of pathogenic strains of *Vibrio vulnificus* in shellfish.
Investigator(s): PI: Dr. A. K. Bej, **Co-PI's:** Drs. D. Jones, A. DePaola (FDA), D. Cook (FDA)
Grant Agency: (NOAA)/National Sea Grant College program

Title: Isolation of DNA promoters induced by environmental stimuli and their use in the construction of improved biocatalysts for environmental remediation.
Investigator(s): PI: Dr. RJ Steffan, Manager, Genetic Engineering, Envirogen Inc., N.J.
Co-PI: Dr. A. K. Bej
Grant Agency: National Science Foundation Small Business Innovation Research (NSF-SBIR).

Title: Genetic Construction of the Nuclease Genes from *Staphylococcus aureus* and *Serratia mercescens* and Optimization of Their Intracellular Lethal Expression.
Investigator(s): PI: Dr. A.K. Bej
Grant Agency: GX Biosystems Inc., USA & Denmark

Title: Development of a Multiplex PCR Method for Detection of *Salmonella* and *Vibrio* spp. from Contaminated Shellfish.
Investigator(s): PI: Dr. A.K. Bej, **Co–PI:** Dr. D.D. Jones
Grant Agency: NOAA/National Sea Grant College program

Title: Development of a Method for Controlling the Molt Cycle of the Blue Crab, *Callinectes sapidus*.
Investigator(s): PI: Dr. R.D. Watson, **Co–PIs:** Drs. A.K. Bej and S.A. Watts
Grant Agency: NOAA/National Sea Grant College program
Title: Arbitrarily-primed Polymerase Chain Reaction for the Identification of Degradative Bacteria.
Investigator(s): PI: Dr. Robert J. Steffan, Vice President, Envirogen Inc., N.J. **Co-PI:** Dr. K. Bej
Grant Agency: Department of Defense Small Business Innovation Research (DoD/SBIR)

Title: Development of Polymerase Chain Reaction (PCR)–Gene probe Based Detection of Microbial Pathogens From Seafood.
Investigator(s): PI: Dr. A.K. Bej, **Co–PI:** Dr. D.D. Jones
Grant Agency: NOAA/National Sea Grant College program

Title: Development of a Rapid Detection Method and Characterization of a Gene from *Corynebacterium jeikeium*, a Causative Agent of Bacterial Endocarditis."
Investigator(s): PI: Dr. A. K. Bej
Grant Agency: American Heart Association

Title: Genetic Construction of the Nuclease Genes from *Staphylococcus aureus* and *Serratia mercescens* and Optimization of Their Intracellular Lethal Expression.
Investigator(s): PI: Dr. A.K. Bej
Granting Agency: GX Biosystems Inc., USA & Denmark

Title: Development of a Multiplex PCR Method for Detection of *Salmonella* and *Vibrio* spp from Contaminated Shellfish.
Investigator(s): PI: Dr. A.K. Bej, **Co–PI:** Dr. D.D. Jones.
Grant Agency: NOAA/National Sea Grant College program

Title: Detection of Microorganisms in WRT Water Samples by Polymerase Chain Reaction.
Investigator(s): PI: Dr. A.K. Bej, **Co–PI:** Dr. J.J. Gauthier.
Grant Agency: NASA – ion Electronics, Huntsville, AL.

Title: Conditional Suicide Systems for Containment of Genetically Engineered Microorganisms.
Investigator(s): PI: A. K. Bej
Grant Agency: UAB Faculty Research Grant

U.S. AND INTERNATIONAL PATENTS:

- US8956669 (02/17/2015) *University of Alabama at Birmingham Research Foundation*
- US5834233 (11/10/1998) *GX Biosystems, A/S, Denmark (joint)*
- EP0635061B1 (2000) *GX Biosystems, A/S, Denmark (joint)*
- US5298392 (03/13/1994) *Hoffmann-La Roche, Inc. U.S.A. (joint)*
- US5298392 (1990) *Hoffmann-La Roche, Inc. U.S.A. (joint)*

RESEARCH COLLABORATIONS:

Active:

- Casey Morrow, PhD, Department of Cell, Developmental and Integrative Biology Director, UAB Microbiome Resource, UAB (Sea Urchin and Zebrafish gut microbiome; Microbial diversity in polar ecosystems)web
- Stephen Watts, PhD, Biology, UAB (Sea Urchin and Zebrafish gut microbiome)web
- Dale T. Andersen, PhD, SETI Institute, CA (Microbial diversity in polar ecosystems)web
- Ashit K. Swain, M.Sc., Ph.D., Geological Survey of India, Polar Studies Division, Indiaweb

Past:

- Nathalie A. Cabrol, PhD, The SETI Institute Carl Sagan Center and NASA Ames Research Center, CA (Planetary Sciences, Astrobiology, Exploration)web
- Ian Hawes, PhD, Gateway Antarctica, Univ of Canterbury, Christchurch, NZ (Polar ecosystem)web
- Jackie Aislabie, PhD, Landcare Research, NZ (Polar ecosystems)
- Valery F Galchenko, PhD, Winogradsky Institute of Microbiology, Russia (Antarctic extremophiles)
- Vladimir Akimov, PhD, G.K. Skryabin Institute of Biochemistry and Physiology of Microorganisms, Russian Academy of Sciences, Russia (Antarctic extremophiles)
- Angelo DePaola, PhD, US FDA, Dauphin Island Seafood Lab, AL (Seafood safety)
- Charles A. Kaysner, MS, AAM, US FDA, Bothell, WA (Seafood safety)
- Robert J. Steffan, PhD, Envirogen, Inc., NJ (Environmental bioremediation)
- Rita R. Colwell, PhD, University of Maryland, MD (*Vibrio* cold adaptation)
- John W. Foster, PhD, Univ of South Alabama, AL (Acid adaptation: *Vibrio, Aeromonas*)
- Richard B. Hoover, B.S., NASA, Huntsville, AL (Exytremophiles in Polar ecosystems)
- Elena Pikuta, PhD, NSSTC/UAH, AL (Exytremophiles in Polar ecosystems)
- Daniel D. Jones, PhD, Biology, UAB (Microbiological food safety)
- R Douglas Watson, PhD, Biology, UAB, (Gulf of Mexico Blue crab seafood)
- Julie B. Olson, PhD, Univ of Alabama, Tuscaloosa, AL (Microbial taxonomy)
- Rona Donahoe, PhD, Univ of Alabama, Tuscaloosa, AL (Microbial ecology: GoM oil spill)
- Elizabeth Gardner, PhD, UAB Forensic Science, AL (Microbial ecology: GoM oil spill)

POFESSIONAL COMMITTEES AND REVIEW PANELS:

Journal Editorial Board (peer-reviewed):

Current:

- *Journal of Microbiological Methods* (*JMM*). Elsevier, The Netherlands, 2000-Present.
- *Microorganisms* (MDPI AG), Basel, Switzerland, 2019-present

- *Trends in Bacteriology* (*TIB*). Herbert Open Access Journal (HOAJ), Bedfordshire, United Kingdom. 2013-Present.

Past:

- *Critical Reviews in Microbiology* (*CRM*). Taylor and Francis, New York. 1992-2010.
- *Molecular Biology Today*, Caister Academic Press, Norfolk, U.K. 2000-2002.
- *Current Issues in Molecular Biology*. Caister Academic Press, Norfolk, U.K. 2002-2006.
- *Journal of Food Protection*. International Association for Food Protection. 2007-2009.

Guest Editor on Special Issue:

Journal of Microbiological Methods. Invited Guest Editor. Special Thematic Issue entitled "*Detection of Microbial Pathogens using Molecular Methods*." 53(2):139-285, 2003. http://www.journals.elsevier.com/journal-of-microbiological-methods/special-issues

Journal manuscripts peer-reviewed:

- *Applied and Environmental Microbiology*
- *Antonie van Leeuwenhoek*
- *Alabama Academy of Science*
- *BioTechniques*
- *Bioscience*
- *Critical Reviews in Microbiology*
- *Current Issues in Molecular Biology*
- *Encyclopedia of Life Sciences, John Wiley*
- *and Sons.*
- *FEMS Microbiology Letters*
- *FEMS Immunology and Medical Microbiology*
  FEMS Microbial Ecology
- *Food Microbiology*
- *Frontiers in Microbiology*
- *Genes to Cell*
- *Infection and Immunity*
- *International Journal of Astrobiology*
- *Journal of Microbiological Methods*
- *Journal of Microbial Release*
- *Journal of Food Science*
- *Journal of Heredity*
- *Journal of Air, Water and Soil Pollution*
- *Journal of Food Protection*
- *Journal of Air, Water and Soil Pollution*
- *Journal of Applied Microbiology*
- *Letters in Applied Microbiology*
- *Microbes and Infection*
- *Molecular and Cellular Probes*
- *Molecular Biology Today*
- *Molecular Ecology*
- *Nature Biotechnology*
- *PLOS One*
- *PCR Methods and Applications*
- *Polar Biology*
- *Progress in Biophysics and Molecular Biology*
- *Trends in Bactreriology*
- *Universitas Scientiarum*
- *MDPI Microorganisms*
- *MDPI Pathogens*

Research grant panels/External reviewer:

- National Science Foundation (Life in Extreme Environment program; Microbial Genetics Program; Polar Programs.
- National Science Foundation, Polar Post-Doc Program
- National Institute Allergy and Infectious Disease Programs (NIAID/NIH)
- NASA Post-doctoral Research Program: Oak Ridge Associated Universities (ORAU)
- American Institute of Biological Sciences: U.S. Military Infectious Disease Program
- Mississippi Alabama Sea Grant Program
- South Carolina Sea Grant Consortium

- California Sea Grant Consortium
- Florida Sea Grant College Program
- North Carolina Sea Grant Program
- Oregon Sea Grant Consortium
- National Sea Grant College Fund, University of Puerto Rico Sea Grant College Program
- Academy of Finland, ARKTIKO Academy Programme, Arctic Research Proram
- The Italian Programma Nazionale di Ricerche in Antartide (Antarctic Division),
- FONDECYT: Chilean National Science and Technology Commission, Chilean Antarctic Program
- National Sea Grant College Program
- National Oceanic and Atmospheric Administration
- USDA Small Business Award Program (USDA/SBIR)
- U.S. Department of Agriculture (USDA), Microbial Ecology Grant
- Canadian Research Council (CSRE)
- Canada Killam Program
- Idaho Board of Education Grant
- Marine and Freshwater Biomedical Sciences Center, Oregon State University
- Canadian Water Network
- Gordon and Betty Moore Foundation
- BARD Research Fund, BARD College, NY
- Ministry of Earth Sciences (MoES), India and Research Council of Norway (RCN

Colloquium panel member *(invited)*:

- American Academy of Microbiology, Washington, D.C. "Global Issues in Microbiological Water Quality for the Next Century" a colloquim arranged by Dr. Timothy Ford and Dr. R.R. Colwell. 1995. The Meeting was held at Equador, South America. *Participated in the New Emerging Technology Panel*. *Colloquium Report:* A Global Decline in Microbiological Safety of Water: A Call for Action, (1995)

- American Academy of Microbiology, Washington, D.C. "Re-Evaluation of Microbial Water Quality: Powerful New Tools for Detection and Risk Assessment." Amelia Island, FL. 2000. Arranged by Dr. Joan Rose, Dr. D.J. Grimes, Dr. R.R. Colwell. *Participated in the New Emerging Technology Panel.* Colloquium Report: Reevaluation of Microbial Water Quality: Powerful New Tools for Detection and Risk Assessment (2001)

- *National Marine Pathogen Plan Workshop: Organized by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, and National Seafood Inspection Laboratory. Biloxi, Mississippi. Arranged by Dr. D.J. Grimes. Participated in the viral and microbial detection and technology panel. (2000)*

PUBLISHED ABSTRACTS AND PRESENTATIONS:

1. Joe Hakim, Hyunmin Koo, Stephen Watts, Casey Morrow and Asim Bej. 2017. The core gut microbiome and associated predicted functional profiles of the sea urchin *Lytechinus variegatus*. UAB Darwin Day

2. Joe Hakim, Hyunmin Koo, Stephen Watts, Casey Morrow and Asim Bej. 2017. Predictive metagenomics based on 16S rRNA gene data in the context of the sea urchin gut ecosystem. UAB Gut Microbiome Core Symposium.

3. Hyunmin Koo, Dale Andersen and Asim Bej. 2016. Lake Untersee microbial ecosystems. Antarctic meeting (June 5-9, 2016) at NASA AMES Research Center, Moffett field, California.

4. Hyunmin Koo, Dale Andersen and Asim Bej. 2016. Microbial diversity and predictive functions in decadal growth layers of large conical microbial mats in Lake Untersee, Antarctica Graduate School Research Day (March 10-11, 2016) at UAB.

5. Hyunmin Koo, Nazia Mojib, Dale Andersen and Asim Bej. 2016. Microbial diversity and predictive functions in decadal growth layers of large conical microbial mats in Lake Untersee, Antarctica. Third annual Southeastern Biogeochemistry Symposium (March 11-13, 2016) at University of Tennessee, Knoxville, Tennessee.

6. Hyunmin Koo, Joe Hakim, Stephen Watts, Casey Morrow and Asim Bej. 2016. Effects of gluten enriched diet on gut microbiome of laboratory cultured zebrafish, *Danio rerio*. Ninety-third annual meeting of the Alabama Academy of Science, Inc. (February 17-19, 2016) at University of North Alabama, Florence, Alabama.

7. Hyunmin Koo, Dale Andersen and Asim Bej. 2016. Microbial distribution in decadal growth layers of large conical microbial mats in Lake Untersee, Antarctica attributes proxies for ancient stromatolites Ninety-third annual meeting of the Alabama Academy of Science, Inc. (February 17-19, 2016) at University of North Alabama, Florence, Alabama.

8. Joe Hakim, Hyunmin Koo, Stephen Watts, Casey Morrow and Asim Bej. 2016. The gut microbiota and their predicted metagenome in naturally occurring sea urchins. Graduate Student Research Days.

9. Joe Hakim, Hyunmin Koo, Stephen Watts, Casey Morrow and Asim Bej. 2016. The gut microbiome of sea urchin, *Lytechinus variegatus*. Alabama Academy of Science – University of North Alabama. UAB Microbiome Resource Workshop.

10. Joe Hakim, Hyunmin Koo, Stephen Watts, Casey Morrow and Asim Bej. 2016. Using PICRUSt to predict functional attributes of distinct microbial communities in the sea urchin gut environment.

11. Hyunmin Koo, Dale Andersen and Asim Bej. 2015. Microbial Succession in Decadal Growth Layers of Large Conical Microbial Mats in Lake Untersee, Antarctica, Attributes Proxies for Ancient Stromatolites US-Korea Conference (UKC) (July 29-August 1, 2015) at Atlanta, Georgia.

12. Hyunmin Koo, Dale Andersen and Asim Bej. 2015. Microbial Diversity of an Antarctic Perennially Ice-covered Lake Untersee Ecosystem Representing Unique Conical Mats that are Analogous to Archean Stromatolites. 115th General Meeting of the American Society for Microbiology (ASM) (May 30-June 2, 2015) at New Orleans, Louisiana.

13. Hyunmin Koo, Joe Hakim, Stephen Watts, Casey Morrow and Asim Bej. 2015. Comparison of the gut microbiome composition of Zebrafish, *Danio rerio*, fed with gluten and gluten-free diets. Ninety-second annual meeting of the Alabama Academy of Science, Inc. (March 11-13, 2015) at University of West Alabama, Livingston, Alabama.

14. Joe Hakim, Hyunmin Koo, Stephen Watts, Casey Morrow and Asim Bej. 2015. The gut microbiota of the sea urchin, *Lytechinus variegatus*, manifests selective attribute following feeding with a formulated standard reference diet. Darwin Day (February 12, 2015) at UAB.

15. Joe Hakim, Hyunmin Koo, Stephen Watts, Casey Morrow and Asim Bej. 2015. The gut microbiota of the sea urchin, *Lytechinus variegatus*, manifests selective attribute following feeding with a formulated standard reference diet. Microbiome Resource Workshop (January 26, 2015) at UAB.

16. Joe Hakim, Hyunmin Koo, Stephen Watts, Casey Morrow and Asim Bej. 2014. Gut microbiome of Sea Urchin, *Lytechinus variegatus.* 91th Annual Conference of the Alabama Academy of Science.

17. Joe Hakim, Anil Habib, Hyunmin Koo, Jonathan Huang, and Asim Bej. 2013. The chemotherapeutic potential of pigments isolated from Antarctic bacteria on cancer cells. UAB Expo, 2013

18. Anil Habib, Joe Hakim, Hyunmin Koo, Jonathan Huang and Asim Bej. 2013. Detecting invasive copepod-specific taxonomic gene in an Antarctic perennially ice-covered freshwater ecosystem, Lake Joyce. UAB Expo, 2013.

19. Hyunmin Koo, Nazia Mojib, Jonathan P. Huang, Erika Rantschler, and Rona J. Donahoe, and Asim K. Bej. (2013) Effect of macondo oil (MC252) on the bacterial diversity of salt marsh sediments of the coastal Alabama using bacterial tag-encoded FLX amplicon pyrosequencing (bTEFAP). 90th Annual Conference of the Alabama Academy of Science, Samford University, Birmingham, AL (March 21-22) (2nd place winner).

20. Kaquanta Barlow and Haley Mabrey, Jonathan Huang and Asim K. Bej. 2012. Study of the antimicrobial effect of a pigment extracted from an Antarctic bacterium on a broad range of gram-positive bacteria. (March 20-22, 2012), UAB Expo 2012 (Awarded Honorable Mention).

21. Haley Mabrey, Kaquanta Barlow, Jonathan Huang and Asim K. Bej. 2012. Study of the antimicrobial effect of a pigment extracted from an Antarctic bacterium on a broad range of gram-positive bacteria. (March 20-22, 2012), Ninetieth annual meeting of the Alabama Academy of Science, Inc., Samford University, Birmingham, AL, annual meeting of the Alabama Academy of Science, Inc., Samford University, Birmingham, AL.

22. Hyunmin Koo, Jonathan Huang and Asim K. Bej. 2012. Microbial responses to MC252 in Gulf of Mexico sediments using bTEFAP and bioinformatics tools. (February 26, 2013), Graduate School Research Day at UAB, Birmingham, AL

23. Hyunmin Koo, Jonathan Huang and Asim K. Bej. 2012. Effect of Macondo oil (MC 252) on the bacterial diversity of salt marsh sediments of the coastal Alabama using bacterial Tag-encoded FLX Amplicon Pyrosequencing (bTEFAP) (February 15, 2013) First annual meeting “Darwin Day” at UAB, Birmingham, AL.

24. Jonathan P. Huang, Dale T. Andersen and Asim K. Bej. 2012. Study of microbial diversity in a newly discovered East Antarctic freshwater Lake Tawani and surrounding lakes using

next-generation deep sequencing. NASA Astrobiology Science Conference, (April 16-20, 2012), Atlanta, GA.

25. Jonathan P. Huang, Dale T. Andersen and Asim K. Bej. 2012. Study of the microbial diversity using next-generation sequencing on microbial mats in Lake Joyce, Antarctica. Eighty-ninth annual meeting of the Alabama Academy of Science, Inc.,(February 23-24, 2012), Tuskegee University, Tuskegee, AL.

26. Jonathan P. Huang, Dale T. Andersen and Asim K. Bej. 2011. The antimicrobial effect of a pigment PVP isolated from an Antarctic bacterium Ant 5-2 on MDR strains of Staphylococcus aureus". One-hundred and eleventh annual meeting of the American Society of Microbiology (May 20-May 24, 2011), New Orleans, Louisiana.

27. Jonathan P. Huang, Dale T. Andersen and Asim K. Bej. 2011. Microbial diversity in calcified mats from a perennially ice covered Lake Joyce in McMurdo Dry Valley, Antarctica". Fifty-eighth annual meeting of the Association of Southeastern Biologists Meeting (April 13-16, 2011), Huntsville, AL.

28. Jonathan P. Huang, Dale T. Andersen and Asim K. Bej. 2011. Investigation of the microbial diversity in calcified mats from a perennially icecovered Lake Joyce in McMurdo Dry Valley, Antarctica". Eighty-eighth annual meeting of the Alabama Academy of Science, Inc., (March 2-4, 2011), Jacksonville State University, Jacksonville, AL.

29. Jonathan P. Huang and Asim K. Bej. 2011. The antimicrobial effect of a pigment PVP isolated from an Antarctic bacterium Ant 5-2 on MRSA and MDR strains of Staphylococcus aureus". Graduate School Research Day at UAB (February 23-25, 2011), Birmingham, AL.

30. Amin Farhoomand, Nazia Mojib and Asim Bej. 2010. Cloning and Sequencing of a Purple Violet Pigment Biosynthetic Genes from an Antarctic Bacterium Ant5-2. UAB Expo, Birmingham, AL (Spring 2010).

31. Samantha S. Watkins, Jonathan P Huang, and Asim K Bej. 2010. The Antimicrobial Effect of FOY Pigment Isolated from an Antarctic Bacterium Ant 342. UAB Expo, U AB, Birmingham, AL (Spring 2010)

32. Itoro E. Obot, Jonathan Huang, and Asim Bej. 2010. "Microbial Diversity in a Freshwater Lake L47 located at the Schirmacher Oasis of East Antarctica" UAB Expo, UAB, Birmingham, AL (Spring 2010)

33. Nazia Mojib and Asim K Bej. 2010. PVP- A Potent Broad Spectrum Anticancer Drug Isolated From An Antartic Bacterium Ant5-2. Hudson Alpha Institute for Biotechnology Spring Meeting, Huntsville, AL (Spring 2010)

34. Jonathan Huang, Nazia Mojib, Rachel Philpott, Michael Neiderweis, and Asim Bej, 2010. Study of the Effectiveness of FOY, a Pigment Extracted from an Antarctic Isolate Ant 342 as a Potential Anti-Mycobacterium Agent. Hudson Alpha Institute for Biotechnology, Huntsville, AL (Spring 2010)

35. Jonathan Huang, Nazia Mojib and Asim K. Bej. 2010. The antimicrobial effect of the pigment PVP isolated from an Antarctic bacterium Ant5-2 on multiple drug resistant strains of *Staphylococcus aureus*." by Southeastern Branch of ASM Conference. Montgomery, AL (Fall 2010).

36. Jonathan P. Huang, Richard B. Hoover*, Dale Andersen, and Asim K. Bej. 2010. Study of the microbial diversity of a newly discovered East Antarctic freshwater lake, L27C, and of a perennially ice-covered Lake Untersee. SPIE Conference, San Diego, CA (Fall 2010).

37. Jonathan Huang and Asim K. Bej. 2010. Study of microbial diversity in a newly discovered East Antarctic freshwater lake L27C using culture-independent and culture-dependent methodologies. Alabama Academy of Science, Huntsville, AL (Spring, 2010).

38. Nazia Mojib and Asim K Bej. 2010. Ant5-2- A novel Antarctic bacterium provides clue of life processes in extreme cold environment to potent antimicrobial and anticancer agent" UAB Graduate Student Research Day, UAB, Birmingham, AL (Spring 2010).

39. J.P. Huang and A.K. Bej. 2010. Study of microbial diversity in a newly discovered East Antarctic freshwater lake L27C using culture-independent and culture-dependent methods. UAB Graduate Student Research Day, UAB, Birmingham, AL (Spring 2010).

40. N. Mojib, J. Huang, R.B. Hoover, E.V. Pikuta, M. Storrie-Lombardi, B. Sattler, D. Andersen, A.K. Bej. 2009. Diversity of bacterial communities in the lakes of Schirmacher Oasis, Antarctica. SPIE, Vol 7221, August 2009, San Diego, CA.

41. S.P. Palladino, N. Mojib, J. Huang, R. B. Hoover and A.K. Bej. 2009. Isolation and characterization of pigmented bacteria from frozen ice of an ice-cave in Antarctic Schirmacher Oasis." (Poster # P98) Association of Southeastern Biologists Meeting, (April 1-4, 2009), Birmingham, AL

42. J. Huang, N. Mojib, R.B. Hoover and A.K. Bej. 2009. The chemotherapeutic and antimicrobial potentials of pigments isolated from Antarctic bacteria. (Abstract#T138) Association of Southeastern Biologists Meeting (April 1-4, 2009), Birmingham, AL

43. N. Mojib, T.H. Nasti, N. Yusuf, R. B. Hoover and A. K. Bej. 2009. Violacein-like purple violet pigment (PVP) isolated from an Antarctic bacterium, *Janthinobacterium* sp., induces apoptosis in murine skin cancer cells" (Abstract #143) Association of Southeastern Biologists Meeting (April 1-4, 2009), Birmingham, AL.

44. N. Mojib, R.B. Hoover and A.K. Bej. 2009. The expression of the CspD and EPS and their adaptive role in *Janthinobacterium* sp. isolated from a pro-glacial lake P9 located at the Schirmacher Oasis of East Antarctica." (Abstract# 137) Association of Southeastern Biologists Meeting (April 1-4, 2009), Birmingham, AL.

45. N. Mojib, A.K. Bej, R. Hoover. 2008. Diversity and cold adaptation of microorganisms isolated from the Schirmacher Oasis, Antarctica. SPIE, Vol. 7097, Sept 2008, San Diego, CA.

46. N. Mojib and A. K. Bej. 2008. Study of differentially expressed proteins in Antarctic bacteria at cold temperature." Journal of Alabama Academy of Science Vol.79, No.2, April 2008.

47. E.V. Pikuta, E.N. Detkova, A.K. Bej, D. Marsic; R.B. Hoover. 2003. Anaerobic halo-alkaliphilic bacterial community of athalassic, hypersaline Mono lake and Owens Lake in California. SPIE, Vol. 4859, September 2003, San Diego, CA.

48. G. Panicker and A.K. Bej. 2003. Detection of Total and Pathogenic *Vibriio vulnificus* using PCR and Oligonucleotide Microarrays. International Association for Food Protection, New Orleans, LA.

49. G. Panicker, D. Call, A.K. Bej. 2003. Detection of total and clinical strains of *Vibriio vulnificus* Using PCR and Oligonucleotide-Array hybridization. International Association for Food Protection (IAFP), New Orleans, LA.

50. Gitika Panicker and Asim K. Bej .2003. Detection of *Vibriio vulnificus* in Gulf of Mexico water and shellfish using molecular methods. 80th Annual Meeting of Alabama Academy of Science, Jacksonville State University, AL.
51. Amy Rizvi and Asim K. Bej. 2003. Rapid detection of *Vibrio parahaemolyticus* in Gulf of Mexico water using real-time PCR. 80th Annual Meeting of Alabama Academy of Science, Jacksonville State University, AL.

52. Panicker, G., A.K. Bej. 2003. Rapid detection of *Vibrio vulnificus* in Gulf water and shellfish using real-time PCR. 103rd American Society for Microbiology, Washington, D.C.

53. Bej, A.K., G. Panicker, C-Y Lee, D.R. Call. 2003. Detection of pathogenic bacteria in shellfish using multiplex PCR followed by Covalink™NH and DNA-array hybridizations. 103rd American Society for Microbiology, Washington, D.C.

54. Pikuta E.V., R.B. Hoover, D. Marsic, A. Bej, J. Tang, D. Cleland. 2003. Psychrotrophic and psychrotolerant anaerobic bacteria from Patagonia and the permafrost Tunnels of Fox, Alaska. 103rd American Society for Microbiology, Washington, D.C.

55. Panicker, G., J. Aislabie, D. Saul and A.K. Bej. 2002. Cold adaptation and biodegradation of aromatic hydrocarbons by Antarctic microorganisms. American Society for Microbiology, Salt Lake City, Utah

56. Bej, A.K. and M.L. Myers. 2002. Rapid growth and identification of a differentially expressed protein in an opportunistic pathogen, *Corynebacterium jeikeium*, following serum induction. American Society for Microbiology, Salt Lake City, Utah.

57. Myers, M.L. and A.K. Bej. 2002. Detection of pathogenic *Vibrio parahaemolyticus* 03:K6 in Gulf water using conventional and real-time PCR. American Society for Microbiology, Salt Lake City, Utah.

58. Blankinship, L. and A.K. Bej. 2002. Application of subtraction hybridization approach to identification of genetic elements in pandemic strains of *Vibrio parahaemolyticus* 03:K6 serotype. Alabama Academy of Science, Livingston, AL.

59. Myers, M.L. and A.K. Bej. 2002. Real-time PCR detection of *Vibrio parahaemolyticus* 03:K6. Alabama Academy of Science, Livingston, AL.

60. Panicker, G., and A.K. Bej. 2000. Adaptation to cold and subzero temperatures in *Pesudomonas fluorescens* 30-3 isolated from Antarctica. 77th Alabama Academy of Science, Birmingham, AL.

61. Mateescu, M., and A.K. Bej. 2000. Cold tolerance in Vibrio cholerae. 77th Alabama Academy of Science, Birmingham, AL.

62. Kaufman, G., and A.K. Bej. 2000. Adaptive response to cold temperatures in *Vibrio vulnificus*. 77th Alabama Academy of Science, Birmingham, AL.

63. Myers, M.W., and A.K. Bej. 2000. Serum-induced proteins promotes rapid growth for *Corynebacterium jeikeium*. 77th Alabama Academy of Science, Birmingham, AL.

64. Carroll, J.W., and A.K. Bej. 1999. Growth, survival and tolerance of toxigenic Vibrio cholerae O1 to cold temperatures. 76th Alabama Academy of Science, Athens, AL.

65. Myers, M., and A.K. Bej. 1999. Rapid detection of *Corynebacterium jeikeium* using PCR. 76th Alabama Academy of Science, Athens, AL.

66. Carroll, J.W. and A.K. Bej. 1999. Adaptive nature of waterborne microbial pathogens in cold temperatures. 99th Mississippi Water Resources Conference, Raymond, MS.

67. Pass, C.L., W. Burkhardt III, K.R. Calci, A. DePaola and A.K. Bej. 1999. Occurrence and distribution of *Vibrio vulnificus* in Gulf Coast oysters using multiplex PCR amplification of cth and viuB. 99th Annual Meeting for American Society for Microbiology, Chicago, IL.

68. Bryan, P.J. and A.K. Bej. 1998. Adaptive cold tolerance response (CTR) in *Vibrio vulnificus*. 98Th Annual Meeting for American Society for Microbiology, Atlanta, Georgia.

69. Bej, A.K., F. Bashar and D.D. Jones. 1998. Application of arbitrarily–primed polymerase chain reaction (AP–PCR) for the detection of *Vibrio parahaemolyticus* in shellfish. Mississippi Water Resources Conference, Jacksonville, Mississippi.

70. Vickery, M.C.L., B.D. Southern, J.W. Foster and A.K. Bej. 1998. Urea–dependent acid tolerance response (ATR) in *Helicobacter pylori*. Mississippi Water Resources Conference, Jacksonville, MS.

71. Vickery, M.C.L., D.D. Jones and A.K. Bej. 1998. Examination of the genetic diversity of clinical and environmental isolates of *Vibrio parahaemolyticus* using AP–PCR DNA fingerprinting and cluster analysis. 98th Annual Meeting for American Society for Microbiology, Atlanta, Georgia.

72. Horton, A.G., R.J. Steffan, J.W. Foster and A.K. Bej. 1998. Growth, survival and characterization of *cspA* in *Salmonella typhimurium* LT2. 98th Annual Meeting for American Society for Microbiology, Atlanta, Georgia.

73. McCarthy, S., A.K. Bej, B. Barkhardt, A. DePaola. 1997. Detection of Microbial pathogens in seafood using multiplex PCR. 97th Annual Meeting for American Society for Microbiology, Miami Beach, FL.

74. Bej, A.K., N. Harold, M.C.L. Vickery, C. Brasher, A. Jeffreys, D.D. Jones, A. DePaola, D.W. Cook. 1997. Use of PCR to determine genomic diversity and distribution of siderophore-mediated iron acquisition genes in clinical and environmental isolates of *Vibrio vulnificus*. 97th Annual Meeting for American Society for Microbiology, Miami Beach, FL.

75. MCKee, G., C. Brasher, M. Vickery, A. Jeffreys, D. Jones, A. K. Bej. 1997. Detection of total and virulent *Salmonella* in shellfish using multiplex PCR amplification of *hns, invA* and *spvB*. 97th Annual Meeting for American Society for Microbiology, Miami Beach, FL.

76. Patterson, D., M.C.L. Vickery, C. Brasher, A.K. Bej, C.A. Kaysner. 1997. Detection of total and virulent *Vibrio parahaemolyticus* in shellfish using multiplex PCR amplification of *tl, tdh* and *trh*. 97th Annual Meeting for American Society for Microbiology, Miami Beach, FL.

77. Jeffreys, A., R. Steffan, J. Foster, A.K. Bej. 1997. Cold-shock response in *Salmonella typhimurium*. 97th Annual Meeting for American Society for Microbiology, Miami Beach, FL.

78. Sailus, J., S. Rogers, J.W. Hicks, and A.K. Bej. 1996. Stability of DNA from buccal swabs-study of a simple collection medium for DNA databanks. American Academy of Forensic Sciences, 48th Annual Meeting, Nashville, TN.

79. Smith, A.L., M.C.L. Vickery, and A.K. Bej. 1996. Optimization of arbitrarily-primed polymerase chain reaction (AP-PCR) fingerprints for shellfish-borne microbial pathogens. Mississippi Water Resources Conference, Jackson, MS.

80. Vickery, M.C.L., D.D. Jones, A. DePaola, D.W. Cook, and A.K. Bej. 1996. Identification of virulent strains of *Vibrio vulnificus* from DNA fingerprints generated using arbitrarily-primed polymerase chain reaction. Mississippi Water Resources Conference, Jackson, MS.

81. Vickery, M.C.L., A.L. Smith, A. DePaola, D.W. Cook, D.D. Jones, A.K. Bej. 1996. Optimization of arbitrarily-primed polymerase chain reaction parameters for maximum fingerprint reproducibility in the detection microbial pathogens in shellfish. 96th General Meeting for American Society for Microbiology, New Orleans, Louisiana.

82. Southworth, J.W., S. Molin, and A.K. Bej. 1996. Construction of a model conditional lethal system using bacterial lethal genes for the controlled release of *Escherichia coli* and Pseudomonas putida KT2442 in the environment. 96th General Meeting for American Society for Microbiology, New Orleans, Louisiana.

83. Smith, A.L., M.C.L. Vickery, D.D. Jones, A.K. Bej. 1996. Use of arbitrarily-primed polymerase chain reaction for the rapid detection of *Salmonella typhimurium*. 96th General Meeting for American Society for Microbiology, New Orleans, Louisiana.

84. Bej, A.K., M.C.L. Vickery, A.L. Smith, and J.W. Foster. 1996. Urea-independent acid tolerance response (ATR) in *Helicobacter pylori*. 96th General Meeting for American Society for Microbiology, New Orleans, Louisiana.

85. Bej, A.K., W. Ng, A. Smith, M.A.R. Chowdhury, and R.R. Colwell. 1996. Characterization and gene expression of the viable but non-culturable state of *Vibrio cholerae*. 96th General Meeting for American Society for Microbiology, New Orleans, Louisiana.

86. Chi-Ying Lee, D.D. Jones, and A.K. Bej. 1995. Detection of *Salmonella* and *Vibrio* spp. in artificially contaminated shellfish using polymerase chain reaction. 72nd Annual Meeting of the Alabama Academy of Science, Birmingham, AL.

87. Southworth, J.W., and A.K. Bej. 1995. Use of dual conditional lethal systems for the containment of genetically engineered microorganisms. 72nd Annual Meeting of the Alabama Academy of Science, Birmingham, AL.

88. Gwin, W., and A.K. Bej. 1995. Effect of amplicon size on the PCR-based detection of biocide-treated *Salmonella* spp. 72nd Annual Meeting of the Alabama Academy of Science, Birmingham, AL.
89. Wee-Yao Ng, W. Gwin, Chi-Ying Lee, and A.K. Bej. 1995. Detection of viable but non-culturable *Salmonella typhimurium* in shellfish using polymerase chain reaction. 72nd Annual Meeting of the Alabama Academy of Science, Birmingham, AL.

90. Wee-Yao Ng, and A.K. Bej. 1995. Generation of viable but non-culturable state in *Salmonella typhimurium*. 72nd Annual Meeting of the Alabama Academy of Science, Birmingham, AL.

91. Tugusheva, M., J. Gaudet, A.K. Bej, E.S. Becvar, and R.J. Steffan. 1995. Arbitrarily-primed polymerase chain reaction (AP-PCR) for analysis of degradative bacteria. 95th General Meeting for American Society for Microbiology, Washington, D.C.

92. Morgan, S., D.D. Jones, and A.K. Bej. 1995. Detection of viable and non-viable *Vibrio cholerae* in artificially contaminated shellfish using polymerase chain reaction. 95th General Meeting for American Society for Microbiology, Washington, D.C.

93. Vickery, M., A. K. Bej, S. Morgan, D.D. Jones, A. DePaola, and D.A. Cook. 1995. Analysis of DNA fingerprints between virulent and environmental isolates of *Vibrio vulnificus* using arbitrarily primed polymerase chain reaction. 95th General Meeting for American Society for Microbiology, Washington, D.C.

94. Southworth, J.W., K. Nobles, S. Molin, and A. K. Bej. 1995. Construction of model conditional lethal system for *Escherichia coli* and Pseudomonas putida 2442 using double lethal genes. 95th General Meeting for American Society for Microbiology, Washington, D.C.

95. Mahbubani, M. Wee-Yao Ng, and A.K. Bej. 1995. Detection of endocarditis-causing *Corynebacterium jeikeium* and *Staphylococcus aureus* by Multiplex polymerase chain reaction. 95th General Meeting for American Society for Microbiology, Washington, D.C.

96. Ng, Wee–Yao, R.M. Law, and A.K. Bej. 1994. Cloning and characterization of a cold-inducible gene from *Salmonella typhimurium*. 71th Annual Meeting of the Alabama Academy of Science, Inc., Troy State University, AL 36082

97. Graves, Sharon, Wee–Yao Ng, S. Molin, and A.K. Bej. 1994. Biological containment of genetically engineered microoganisms using a conditional suicide system. 71 Annual Meeting of the Alabama Academy of Science, Inc., Troy State University, AL 36082.

98. Lett, Patrick W., D.D. Jones, and A. K. Bej. 1994. Molecular serogrouping of pathogenic *Escherichia coli* using arbitrarily primed polymerase chain reaction (AP-PCR). 71 Annual Meeting of the Alabama Academy of Science, Inc., Troy State University, AL 36082.

99. Brewer, Ann M., Wee–Yao Ng, and Asim K. Bej. 1994. Rapid and sensitive detection of *Corynebacterium jeikeium* – a causative agent for bacterial endocarditis. 71 Annual Meeting of the Alabama Academy of Science, Inc., Troy State University, AL 36082.

100. Beasley, Lynn, A.K. Bej, and D.D. Jones. 1994. Detection of multiple microbial pathogens in artificially contaminated oyster meat using PCR. 71 Annual Meeting of the Alabama Academy of Science, Inc., Troy State University, AL 36082.

101. Southworth, Jon and Asim Bej. 1994. Cloning and characterization of part of the *uid* gene from *Shigella* spp. and the use of PCR for detection of indicator microbial pathogens in water. 71 Annual Meeting of the Alabama Academy of Science, Inc., Troy State University, AL 36082.

102. Law, Robert M., D.D. Jones, and A. K. Bej. 1994. Rapid and improved detection of *Salmonella* spp. in artificially contaminated chicken. 71 Annual Meeting of the Alabama Academy of Science, Inc., Troy State University, AL 36082.

103. Beasley, L., D.D. Jones, and A.K. Bej. 1994. A rapid method for detection and differntiation of KP+ and KP- *Vibrio parahemolyticus* in artificially contaminated shellfish by *in vitro* DNA amplification and gene probe hybridization methods. 94th General Meeting of American Society for Microbiology (ASM), Las Vegas, Nevada.

104. Lett, P., D.D. Jones, and A.K. Bej. 1994. Multiplex PCR DNA amplification and gene probe method for species–specific simultaneous detection of enteropathogenic toxigenic, enterohemorrhagic, and enteroinvasive *Escherichia coli* in artificially contaminated ground beef. 94th General Meeting of American Society for Microbiology (ASM), Las Vegas, Nevada.

105. Ng, W–Y., S. Molin, and A.K. Bej. 1994. Intracellular expression of the *Staphylococcus aureus* nuclease gene (*snuc*) in *Escherichia coli* and other enterobacteriaceae. 94th General Meeting of American Society for Microbiology (ASM), Las Vegas, Nevada.

106. Graves, S. and A.K. Bej. Use of polymerase chain reaction (PCR) in distinguishing live *Salmonella typhimurium* from biocide–treated dead cells in water. 94Th General Meeting of American Society for Microbiology (ASM), Las Vegas, Nevada.

107. Southworth, J. and A.K. Bej. 1994. Species–specific identification of *Escherichia coli* by polymerase chain reaction (PCR) for monitoring drinking water quality. 94th General Meeting of American Society for Microbiology (ASM), Las Vegas, Nevada.

108. Mahbubani, M, F.W. Schaeffer III, and A.K. Bej. 1994. Purification and detection of *Giardia* cysts in environmental waters by immunomagnetic separation and PCR DNA amplification.94th General Meeting of American Society for Microbiology, (ASM), Las Vegas, Nevada.

109. Law, R., J. Southworth, and A.K. Bej. 1994. Isolation of cold inducible gene, *cspS*, from *Salmonella typhimurium*. 94th General Meeting of American Society for Microbiology (ASM), Las Vegas, Nevada.

110. Jones, D.D. and A.K. Bej. 1994. Evaluation and comparison of methods for purification of target DNA from shellfish for polymerase chain reaction (PCR) DNA amplification. 94th General Meeting of American Society for Microbiology (ASM), Las Vegas, Nevada.

111. Chava, K., and A. K. Bej. 1993. Adaptive Cold Tolerance Response (CTR) in *Vibrio cholerae*. 70th Annual Meeting of the Alabama Academy of Science, Inc., Huntsville, AL.

112. Wee-Yao, Ng, and A. K. Bej. 1993. Intracellular Expression of pSa Nuclease gene in *Escherichia coli*. 70th Annual Meeting of the Alabama Academy of Science, Inc., Huntsville, AL.

113. Law, R., A. K. Bej, and D. D. Jones. 1993. Polymerase Chain Reaction-Based Detection of *Salmonella* spp. in Chicken meat. 70th Annual Meeting of the Alabama Academy of Science, Inc., Huntsville, AL.

114. Graves, S., and A. K. Bej. 1993. Application of PCR in Distinguishing Dead and Live Bacterial Cells. 70th Annual Meeting of the Alabama Academy of Science, Inc., Huntsville, AL.

115. Perry, A., and A. K. Bej. 1993. Detection of *Corynebacterium jeikeium* in Blood by PCR Method. 70th Annual Meeting of the Alabama Academy of Science, Inc., Huntsville, AL.

116. Patel., P., R. A. Angus, and A. K. Bej. 1993. Simple Repetitive DNA Sequences Associated with Heterogametic Sex in Mosquito Fish. 70th Annual Meeting of the Alabama Academy of Science, Inc., Huntsville, AL.

117. Cook, K., M. Mahbubani, A. Bej, and J. J. Gauthier. 1993. Extraction of DNA from Bacteria for Use as Template in the Polymerase Chain Reaction by Five Rapid Methods. 93rd General Meeting of American Society for Microbiology, Atlanta, GA.

118. Wilson, M. E., M. C. Roman, A. K. Bej, C. Atkinson, and J. J. Gauthier. 1993. Use of Polymerase Chain Reaction and Conventional Plating to Characterize Microbial Populations During Development of a Water Recovery System for Space Station Freedom. 93rd General Meeting of American Society for Microbiology, Atlanta, GA.

119. Jones, D. D., R. Law, and A. K. Bej. 1993. A Rapid Method for Purification of target DNA from Biological and Environmental Samples for Polymerase Chain Reaction (PCR) DNA Amplification. 93rd General Meeting of American Society for Microbiology, Atlanta, GA.

120. Bej, A. K. and D. D. Jones. 1993. Detection of *Salmonella* spp., Vibrio cholerae, and V. vulnificus from artificially Contaminated Shellfish by Multiplex Polymerase Chain Reaction and Gene probes. 93rd General Meeting of American Society for Microbiology, Atlanta, GA.

121. Perry, A. J. and A. K. Bej. 1993. Use of Polymerase Chain Reaction (PCR) for Endocarditis. 93rd General Meeting of American Society for Microbiology, Atlanta, GA.

122. Bej, A. K. and D. D. Jones. 1993. Species-Specific Detection of *Shigella* spp. Using Multiplex polymerase Chain Reactions (PCR) and Gene Probes. 93rdGeneral Meeting of American Society for Microbiology, Atlanta, GA.

123. Karem, K. L., J. Foater, and A. K. Bej. 1992. Adaptive acid tolerance response (ATR) in *Aeromonas hydrophila*. 92nd General Meeting of American Society for Microbiology, New Orleans, LA.

124. Bej, A.K., M. H. Mahbubani, and R. M. Atlas. 1992. Detection of genus *Salmonella* using polymerase chain reaction (PCR) methods. 92nd General Meeting of American Society microbiology, New Orleans, LA.

125. Bej, A. K., M. H. Mahbubani, and R. M. Atlas. 1992. Detection and molecular serogrouping of *Legionella pneumophila* by PCR amplification and restriction enzyme analysis. International Symposium on Legionella, Orlando, FL.

126. Bej, A. K. 1991. Detection of waterborne microbial pathogens by PCR-gene probe methods from concentrated water samples. Annual Meeting of the Southeastern and South Carolina Branches of the American Society for Microbiology, Atlanta, GA.

127. Bej, A. K. 1991. Effectiveness of conditional lethal systems in *Escherichia coli* and peudomonads for the containment of genetically engineered microorganisms. Annual Meeting of the Southeastern and South Carolina Branches of the American Society for Microbiology, Atlanta, GA.

128. Atlas, R.M., S.C. McCarty, and A.K. Bej. 1991. PCR-gene probe methods for monitoring water quality. 91st Annual Meeting of American Society of Microbiology, Dallas, Texas.

129. Mahbubani, M.H., A.K. Bej, M. Perlin, F. Schaefer, and R.M. Atlas. 1991. Detection of viable *Legionella* and *Giardia* using PCR and gene probes. 91st Annual Meeting of American Society of Microbiology (ASM), Dallas, Texas.

130. Bej, A.K., M.H. Mahbubani, and R.M. Atlas. 1991. Bacterial detection using PCR and colorimetric gene probe methods. 91st Annual Meeting of American Society of Microbiology (ASM) Dallas, Texas.

131. McCarty, S., A.K. Bej, M.H. Perlin and R.M. Atlas. 1990. Defined substrate technology and polymerase chain reaction - gene probe for the detection of total coliform and

Escherichia coli in water. Proceeding of the Water Quality Technology Conference, AWWA, San Diego, California.

132. Mahbubani, M.H., A.K. Bej, M.H. Perlin and R.M. Atlas. 1990. Detection of Giardia by using polymerase chain reaction (PCR) and gene probe methods. ASM Meeting on Biotechnology, Chicago, Illinois.

133. Atlas, R.M., A. Bej, M. Mahbubani, R. Miller, R. Steffan, J. Dicesare and L. Haff. 1990. The Polymerase chain reaction and gene probes for detection of waterborne pathogens. Sixth International Congress on Rapid Methods and Automation in Microbiology and Immunology, Helsinki, Finland.

134. Atlas, R.M., A. Bej, M. Mahbubani, R. Miller, R. Steffan, J. DiCesare and L. Haff. 1990. Detection of genetically defined bacterial populations in the environment by using the polymerase chain reaction (PCR) and gene probes. EERO Molecular Microbial Ecology Workshop, Braunschweig, FRG.

135. Atlas, R.M., A. Bej, M. Mahbubani, R. Steffan, M. Perlin, J. DiCesare and L. Haff. 1990. Detection of indicator bacteria and pathogens in water by polymerase chain reaction (PCR) and gene probe methods. An International Conference on Biotechnology and Environmental Science: A Molecular Approaches, Bangkok, Thailand.

136. Bej, A.K., S. Molin, M.H. Perlin and R.M. Atlas. 1990. Conditional lethal systems, which efficiently kill pseudomonads. An International Conference on Biotechnology and Environmental Science: A Molecular Approaches, Bangkok, Thailand.

137. Mahbubani, M.H., A.K. Bej, R. Miller, J. DiCesare, L. Haff and R.M. Atlas. 1990. Detection of mip mRNA and viable Legionella pneumophila using PCR. 90th Annual Meeting of American Society of Microbiology, Anaheim, California.

138. Bej, A.K., J.L. DiCesare, L. Haff and R.M. Atlas. 1990. Detection of *Escherichia coli* based upon Polymerase Chain Reaction and amplification of uid. 90th Annual Meeting of American Society of Microbiology (ASM), Anaheim, California.

139. Atlas, R.M., A.K. Bej, R.J. Steffan, J. DiCesare and L. Haff. 1990. Monitoring Microbial Pathogens and Indicator Microorganisms in Water by Using the Polymerase Chain Reaction and Gene Probes. ASTM Symposium on Monitoring Water in the 1990's: Meeting New Challenges. June 11-14, 1990, Denver, Colorado.

140. Mahbubani, M.H., A.K. Bej, R.J. Steffan, R. Miller, J. DiCesare, L. Haff and R.M. Atlas. 1989. Detection of water borne pathogens using polymerase chain reaction (PCR) and gene probes. Cold Spring Harbor Meeting for The Genetics of Bacteria and Their Phages. CSH, NY.

141. Bej, A.K., M.H. Perlin and R.M. Atlas. 1989. "Suicide systems for the containment of genetically engineered microorganisms: model conditional lethal systems for *E. coli* and Pseudomonas using Hok. Cold Spring Harbor meeting for the Genetics of Bacteria and their Phages. CSH, NY.

142. Atlas, R.M., A.K. Bej, R.J. Steffan and M. Perlin. 1989. Environmental monitoring and containment of genetically engineered microorganisms. American Chemical Society (ACS) Annual Meeting, Dallas, Texas.

143. Atlas, R.M., A.K. Bej, T. James and M. Perlin. 1989. Ecological response to the introduction of a genetically engineered microorganism: effects on diversity of a soil microbial community. 5th International Symposium on Microbial Ecology (ISME 5), Kyoto, Japan.

144. Bej, A., R. Atlas, M. Mahbubani, R. Miller, S. McCarty, M. Perlin, J. DiCesare and L. Haff. 1989. Polymerase chain reaction (PCR) for detection of target microorganisms in environmental samples. 5th International Symposium on Microbial Ecology (ISME 5), Kyoto, Japan.

145. Bej, A.K., R.M. Atlas, R.J. Steffan, M. Mahbubani, R.D. Miller, J. DiCesare and L. Haff. 1989. UCLA Symposia (WH89) on Polymerase Chain Reaction, Keystone, Colorado.

146. Atlas, R.M., A.K. Bej, M. Mahbubani, R. Miller, S. McCarty, M. Perlin, K. DiCesare and L. Haff. 1989. Detection of waterborne pathogens by using polymerase chain reaction. Society of Industrial Microbiology, Seattle, WA.

147. Mahbubani, M.H., A.K. Bej, L. Haff, J. DiCesare, R. Miller and R.M. Atlas. 1989. Detection of Legionella by using polymerase chain reaction. ASM Conference on Biotechnology, Orlando, Florida.

148. Atlas, R., A.K. Bej, R. Steffan, J. DiCesare and L. Haff. 1989. Detection of coliforms in water by polymerase chain reaction (PCR) and gene probe methods. 89th American Society for Microbiology (ASM) Annual Meeting, New Orleans, Louisiana.

149. Bej, A.K., M. Perlin and R.M. Atlas. 1989. A conditional lethal system for containing genetically-engineered pseudomonads. 89th American Society for Microbiology (ASM) Annual Meeting, New Orleans, Louisiana.

150. Bej, A.K. and M. Perlin. 1988. Apparent transformation of mitochondria in Ustilago violacea. 87th American Society for Microbiology (ASM) Annual Meeting, Miami Beach, Florida.

151. Bej, A.K. and M.H. Perlin. 1987. Development of transformation system for Ustilago violacea. 87th American Society for Microbiology (ASM) Annual Meeting, Atlanta, Georgia.

152. Bej, A., E. Merrel, R. Jacob and M. Perlin. 1986. Electron microscopic study of plasmid of bacterial origin after re-isolation from fungal species, Ustilago violacea. Electron Microscopic Society and Microbeam Society of America Annual Meeting, New Mexico.

153. Bej, A., M. Perlin, E. Merrel and R. Jacob. 1986. Electron microscopic study of plasmid of bacterial origin after re-isolation from transformed fungal species. Electron Microscopic Society of Ghio River Valley (EMSORV) Annual Fall Meeting, University of Louisville, Louisville, KY.

154. Bej, A., R. Jacob, E. Merrel, M. Perlin. 1986. Restriction enzyme analysis & electron microscopic study of plasmid of bacterial origin after re-isolation from transformed fungal species. CSH Summer Meeting on Molecular Genetics of Bacteria and Phages. New York.

INVITED TALK/PRESENTATIONS:

- Department of Microbiology, South Dakota State University, Brookings, SD. Title: *Development of waterborne bacterial pathogens using polymerase chain reaction and gene probe methods,* 1990.
- Department of Microbiology, Molecular Biology and Department of Pathology, Washington University Medical Center and Jewish Hospital, St. Louis, MO. Title: *Detection of bacterial pathogens using polymerase chain reaction and gene probe methods.* 1990.
- Gene-Track Systems, Framingham, MA. Title: *Detection of microbial pathogens using PCR*. 1990.
- Department of Botany and Microbiology, Auburn University, Auburn, AL. Title: *Polymerase Chain Reaction (PCR): General Method and Applications.* 1990.
- Phi Sigma Biology Club, UAB, AL. Seminar Title: *PCR: A Method for All Seasons.* 1990.
- Department of Crimial Justice, Graduate Program in Forensic Science, University of Alabama at Birmingham, Birmingham, AL 35294-2060. Title: *DNA as a Tool in Modern Science*. 1994.
- Freie Universität Berlin, Germany: *Chair* for the session "Microbiological Aspects of Environmental Microbiology". Title: *Usage of PCR and Alternative DNA Amplification Methods in Genetic and Infectious Diseases.* (*Session Chair and Speaker).* 1994.
- American Society for Microbiology, Southeastern Brant Annual Meeting, Birmingham, AL. Seminar Title: *Applications of Polymerase Chain Reaction in Environmental and Food Microbiology: Present status and Future Directions.* 1995.
- Department of Public Health, UAB. *Application of PCR Method to Detect Microbial Pathogens in Various Biological Samples.* 1995.
- American Society for Microbiology, Annual Meeting, 1996. Seminar Title: *Applications of Polymerase Chain Reaction and Alternative Amplification Technologies in Environmental Monitoring of Microorganisms*. 1996.
- Technical University of Denmark, Lyngby DK-2800, Denmark. Title: *Containment of genetically engineered microorganisms in the environment using Staphylococcal nuclease.* 1996.
- Department of Biology and Sigma Xi Seminar. Title: *Microbiological Safety of Shellfish: Have we won the war yet?* 1997.
- Department of Criminal Justice. Title: *Nucleic acid analysis by using DNA-fingerprint methods.* 1999.
- Department of Criminal Justice. Title: *Microbial adaptation of biodegradative microorganisms in Antarctic petroleum-contaminated soils.* 2001.
- Annual Meeting for the Southeastern Branch of the American Society for Microbiology, Birmingham. Title: *Molecular Detection of Pathogens in Seafood.* 2001.
- Department of Criminal Justice, UAB. Title: *Rapid detection of "select agents" using state-of-the-art nucleic acid-based methodologies.* 2002.
- Annual Meeting for the American Society of Microbiology, Salt Lake City, Utah. Title: *Bacterial Paleontology and Astrobiology: Evidence of Microfossils in Ancient Rocks and Astromaterial*. In: *Session No. Q262: Extraterrestrial Microbiology*. [Invitation by Dr. Richard Hoover, NASA MSFC and Dr. Alexi Yu Rozanov, Bacterial Paleotological Society of Russia; Conventors for the session: Monsi Roman and Richard Hoover, NASA, MSFC]. 2002.

- Annual Meeting for the American Society of Microbiology, Southeastern Branch, Gainesville, FL. Title: *Advancements of Nucleic Acid-based Rapid Detection of Microbial Pathogens in Seafood.* 2002.
- Annual Meeting for the International Society for Optical Engineering (SPIE). *Instruments, Methods and Missions for Astrobiology VI (AM115)*, San Diego, CA, August 3-8, 2003. Title: *Hydrocarbon-degrading microorganisms in Antarctica: Where do they come from?* 2003.
- Marine Biotechnology Workshop for Educators at the Dauphin Island Sea Lab, AL.Southern of Marine Educators, Marine Biotechnology.Keynote Address: *Marine Microbes (Bacteria) and Biotechnology.* 2003.
- Center for Ocean Sciences Education Excellence (COSEE): Dauphin Island Sea Lab, AL. Sponsored by National Science Foundation, Mississippi Alabama Sea Grant Consortium and University of Southern Mississippi. 2003.
  Guest Presentation: Rapid detection of *Vibrio vulnificus* in Gulf of Mexico water and seafood using real-time PCR.
  Workshop: Identification of *Vibrio vulnificus* in Gulf of Mexico water and oysters using real-time PCR and conventional culture methods.
- Center for Ocean Sciences Education Excellence (COSEE). Dauphin Island Sea Lab, AL. Sponsored by National Science Foundation, Mississippi Alabama Sea Grant Consortium and University of Southern Mississippi. Organizer: Dr. John Dindo, Dauphin Island Sea Lab. 2004.
  Guest Presentation: "Microorganisms in the Gulf of Mexico Water and Shellfish: *Rapid Detection Using Real-time Polymerase Chain reaction (PCR) Method.*"
  Workshop: Identification of *Vibrio vulnificus* in oysters using real-time PCR and conventional culture methods.
- Annual Meeting of American Society for Microbiology: Southeastern Branch. Title: *Detection of Vibrios in Shellfish Using DNA Microarrays and Phage-displayed Peptides*. 2004.
- Connecting Gulf of Mexico and Human Health. Title: *Detection of Vibrios in shellfish using real-time PCR and beyond.* 2005.
- Interstate Shellfish Sanitation Conference. Title: *Rapid Detection of Vibrio in shellfish using molecular methods.* 2005.
- Sigma Xi Scientific Society (Alabama Chapter): Title: *Microbial Diversity of Schirmacher Oasis Lakes in East Antarctica and its Biomedical Applications*. 2009.
- Freshman Learning Experience: Biology **-** Educational Philosophy, Molecular Biology Classes and Research projects – Title: *Microorganisms in Antarctica – Adaptation and Biomedical Applications*. 2009, 2010, 2011.
- Alpha Epsilon Delta (AED), National Pre-Health Honor Society, Biology, UAB. Title: *Antarctic bacterial diversity and their biomedical applications*. 2010.
- Pre-Optomtery Club, UAB. Title: *Bioprospecting Antarctic Microbial Ecosystem*, 2013.

PROFESSIONAL SERVICE ACTIVITIES:

Professional research consultations (non-profit; no financial remuneration effective)

- Michael W. Armstrong, Business Journal Staff Writer, Philadelphia Business Journal, Philadelphia, PA. Suicide Genes Portend Short Lives for Microbes.
- Dr. Geetha Vasanthakumar, Staff Molecular Biologist. Southern Research Institute, Birmingham, AL. Applications of PCR-Amplification Technology for the Detection of Foodborne Microbial Pathogens.

- Dr. Susan K. Bromberg, Principal Research Molecular Geneticist, Miller Brewing Company, Milwakee, WI. Use of PCR technology in the detection of microrganisms in beer products.
- Dr. Claudia Thio, Perkin Elmer Corporation, PCR Division, Alameda, CA. Consultation on the use of PCR technology on the detection of coliform bacteria in drinking water.
- Dr. Eric Stephen, Biotechnology Section, Bureau of Chemical Hazard, Environmental Health Center, Health and Welfare Center of Canada, Ottawa, Ontario, Canada. Use of PCR technology in environmental and water samples.
- Dr. Rieno Lee, Roche Molecular Systems, Alameda, CA. Application of the PCR technology for the detection of total bacteria using universal target for drinking water safety; use of PCR technology in the detection of microbial pathogens in food samples.
- National Molecular Biology Adavancement Panel, Migliara/Kaplan Associates, Owings Mills, MD. Purchase, quality, and useage of molecular biology research related products and equipment to enhance the molecular biology industry.
- Dr. Lonnie Ingram (Professor and Director), Department of Microbiology, The University of Florida, Gainsville, FL: Provided consultation on the detection of *Escherichia coli* strain by PCR.
- Dr. Ashley Williamson, Southern Research Institute, Birmingham, AL on the microbial air sample monitoring using polymerase chain reaction.
- Dr. Martin Alexander, N.J. Consultation on the bioremediation of toluene on a private industrial property using genetically engineered microorganisms carrying conditional suicide genes.
- Dr. S. McCarthy (Research Microbiologist), U.S. Food and Drug Administration, Gulf Coast Seafood Laboratory, Dauphin Island, AL : Provided assistance in the use of PCR for microbial pathogen detection in seafood.
- Dr. Y. Sohni, Assistant Professor of Biology, Alabama Agriculture and Mechanical University, Normal, AL. Assisted in the preparation of a AAMU and NIH grant on the Molecular characterization of coccoid form of *Helicobacter pylori.*
- Dr. Laurie Connell, Northwest Fisheries Science Center. Seattle, WA. Assisted in the development of a PCR-based detection of *V. parahaemolyticus* in coastal waters.
- Orgenic Ltd., Isreal. Evaluation of “Gene Comb” colorimetric hybridization assay to characterize the multiplex PCR amplified DNAA from foodborne microbial pathogens.
- LI-COR, Inc. Lincoln, NE. Use of IR dye technology for the detection multiplexed PCR amplified DNA from foodborne microbial pathogens.
- Bio101, Inc., Sorento Valley, CA. Evaluation of the bacterial RNA purification kits for RT-PCR detection of *Vibrio cholerae.*
- National Marine Fisheries Services, Pascagoula, MS. Identification of Fish species using DNA Barcode.
- Qiagen, Germany. Development and testing of a field deployable, high yield and quality of nucleic acids purification kit to be used in extreme environments (Polar and desert environments)
- NSF-Division of Geobiology (Polar program). The use of the Bioinformatics tools for community diversity study
- Mississippi Alabama Sea Grant Fellowship Committee
- Antarctic expedition committee, Tawani Foundation
- U.S. Food and Drug Administration, Seafood Safety, Dauphn Island consulting the technology for Seafood Safety of *Vibrio*

Services for the department, school, university and community:

- Biology Faculty Affairs Committee (Chair)
- Biology Graduate Admissions Committee
- Biology Undergraduate Honors Research Committee (Co-chair).
- Biology Seminar Committee (Chair and Co-chair)
- Biology Faculty Search Committee (Micorbiologist position, 2009)
- Biology Faculty Search Committee (Chair, Developmental Biologist; Phage Genomics positions)
- Department of Biology Mission and Vision: Research Thrust/New Faculty appointment committee
- Department of Biology short and long term strategic plans committee. *Ad hoc* member of the research plan committee
- UAB Department of Criminal Justice Faculty Search Committee
- Biology representative for the UAB Benevolent Fund
- Biology Molecular Biology Track for the undergraduate program: Course curriculum committee (*ad hoc* member)
- Biology Molecular Biology Track Course development for the Undergraduates
- UAB Forensic Science Program Course Curriculum for the Concentration in the DNA Technology
- Participated in developing UAB Biomedical Research and Technology Transfer Brochure in association with the UAB Creative Research Services and UAB Research Foundation
- UAB School of Natural Sciences and Mathematics, Department of Biology representative in Faculty Affairs Committe, 2004-2005; 2005-2006
- UAB School of Natural Sciences and Mathematics, UAB, President's Excellence in Teaching Award Committee, 2004, 2005, 2007
- Served as a judge for the Science Fair for Alabama Schools
- Alabama State Science Olympiad – "Designer Genes" competetion
- Served as a judge for the Central Alabama Regional Science Fair, Birmingham, AL
- Judge for the Regional Middle and High School Science Competition, UAB.
- UAB Center for community Outreach Development (CORD)
- UAB Summer Scholarship Program: Supervised undergraduate research projects in my lab
- UAB International Exchange Student Program
- UAB Research Day Presentation
- Alabama Alliance for Minority Program (AAMP): Summer Minority Student Research Internship Program.
- Participated in publishing a research achievement entitled in *"UAB Magazine."*
- Participated in publishing a research achievement entitled in "*UAB Reporter*."
- Participated in 2 of the UAB magazines in association with UAB Creative Service to publish research activities on the containment of genetically engineered microorganisms using conditional suicide genes
- Participated in publishing research achievement in "*Popular Science*" magazine on the containment of genetically engineered microorganisms using conditional suicide gene.
- Participated in publishing research achievement in "Force Five: Mississippi-Alabama Sea Grant Consortium" magazine on the applications of PCR-based detection of microbial pathogens in seafood
- Participated in publishing an article on a research project, "development of a PCR-based detection of virulent strains of *Vibrio vulnificus* in shellfish." Published in "*Force Five: Mississippi-Alabama Sea Grant Consortium"* magazine.

- Assisted UAB Magazine on the Antarctic cold tolerant microorganisms
- Presented a talk on the “Principles of Gene Therapy” in EMSAP seminar course

RESEARCH ASSOCIATES/TECHNICIANS:

- Dr. Bixi Jian (Post-doc)
- Dr. Chi-Ying Lee (Post-doc)
- Dr. Patrick Bryan (Post-doc)
- Andra Perry (Res. Technician)
- Sharon Graves (Res. Technician)
- Lynn Beasely (Res. Technician)
- Katherine Nobels (Res. Technician)
- Teruaki Nakatsuji, Ph.D. (Post-doc)
- Nazia Mojib (Post-doc)

HIGH SCHOOL STUDENTS:

- Jefferson County International Baccalaureate School (JCIB) High School Internship Program, 2010 (Mr. Koushik Kasanagottu)
- Altamont High School, Birmingham, AL: Research Projects, 2006-2012 (Mr. Rakesh Goli)

UNDERGRADUATE RESEARCH STUDENTS:

2017

- Maryem Gendy, Undergraduate Honors Research (BY498)
- Sarah Ladhani, Capstone Research (BY 494)
- Kelsey Jolly, Capstone Research (BY 494)
- Brinda Shah, Undergraduate Research (BY398)

2016

- Savannah Russel Capstone Research (BY 494)

2015

- Adam Archie, Undergraduate Honors Research (BY498)*
- Troy McClain, Undergraduate Research (BY398)
- Arsh Patel, Capstone Research (BY 494)

2014

- Joshua Godwin, BS, Undergraduate Research (BY 398)
- Adel Shabani, BS, Undergraduate Honors Research (BY 498)*
- Eddy Kim, BS, Undergraduate Research (BY398)*
- Baily Stropes, BS, Undergraduate Research (BY 398)*
- Philip Fisher, BS, Capstone Research (BY 494)*
- Adam Archie Trent, BS, Undergraduate Honors Research (BY498)*
- Troy Donavan McClain, BS, Undergraduate Research (BY398)

2013

- Joseph Hakim, BS, Undergraduate Research (BY 398)*
- Anil Habib, BS, Capstone Research (BY 494)
- Joshua Godwin, BS, Undergraduate Research (BY 398)
- Adel Shabani, BS, Capstone Research (BY494); Undergraduate Research (BY 398)*
- Eddy Kim, BS, Undergraduate Research (BY398); Capstone Research (BY 494)*

2012

- Mabrey, Haley, BS, Undergraduate Research (BY 398)
- Barlow, Kaquanta, BS, Undergraduate Research (BY 398)

2011

- Farhoomand, Amin, BS, Undergraduate Biology Honors Research (BY 498)*
- Watkins, Samantha, BS, Undergraduate Research (BY 398)*
- Wukyoung Song, BS, Undergraduate Research (BY 398)
- Michael Jacobson, BS, Undergraduate Research (BY 398)

2010

- Obot, Itoro, BS, Undergraduate Research (BY 398)
- Watkins, Samantha, BS, Undergraduate Research (BY 398)*
- Farhoomand, Amin, BS, Undergraduate Biology Honors Research (BY 498)*
- Watkins, Samantha, BS, Undergraduate Biology Honors Research (BY 498)*

2009

- Veerandra Jadhav, BS, Undergraduate research (BY 398)
- Stensby, Danielle, BS, Undergraduate research (BY 398)
- Jessica, Allred, BS, Undergraduate research (BY 398)
- Cho, Yun Ju, BS, Undergraduate research (BY 398)
- Williams, Aimee, Post-Baccalaureate, Non-thesis Research

2008

- Stephen Palladino, BS, Undergraduate research (BY 398)

2007

- Lindsey Quinn, BS, Undergraduate research (BY 398)

2006

- Joshua Wall, BS, Undergraduate Research (BY 398)
- Prakash Prasai, BS, Undergraduate Research (BY 398)
- Jenny Fowler, BS, Undergraduate Research (BY 398)
- Jimmy Huynh, BS, Undergraduate Research (BY 398)
- Dipesh Patel, BS, Undergraduate Research (BY 398)
- Jacqulin Latner, BS, Undergraduate Research (BY 398)
- Austin Powell, BS, Undergraduate Research (BY 398)
- Doris Muthaa, BS, Undergraduate Research (BY 398)
- Reena Patel, BS, Voluntary undergraduate research student from Vanderbilt University, TN.
- Alicia Waters, BS, Biology Honors Program (BY 489)*

2005

- Alicia Waters, BS, Biology Honors Program (BY 498)*
- Jonathan Huang, BS, Biology undergraduate program (BY 398)*

2004

- Danielle Stensby, BS, Undergraduate research (BY398)
- Jessica Allred, BS, Undergraduate research (BY398)
- Yun Ju Cho, BS, Undergraduate research (BY398)

- Aimee Willams, Post-Baccalaureate, Non-thesis Research (BY689)

2003
- Cheryl Mosley, BS, Undergraduate research (BY398)
- Alicia Waters, BS, Biology Honors research (BY498)*

2002
- April White, BS, Undergraduate research (BY398)
- Kalpana Jain, BS, Undergraduate research (BY398)

2001
- Amanda Wilson, BS, Undergraduate research (BY398)
- Jeffrey Carroll, BS, Biology Honors research (BY498)*
- Vicki Modi, BS, Biology Honors research (BY498)*

2000
- Jeffrey Carroll, BS, Biology Honors research (BY498)*
- Gregory McKee, BS, Biology Honors research (BY498)*
- Brian Southern, BS, Biology Honors research (BY498)*
- Karla Hak, BS, Biology Honors research (BY498)*

1999
- Susan Patel, BS, Undergraduate research (BY398)
- Crystal Salazar, BS, Undergraduate research (BY398)
- Gregory McKee, BS, Biology Honors research (BY498)*
- Brian Southern, BS, Biology Honors research (BY498)*
- Karla Hak, BS, Biology Honors research (BY498)*

1998
- Timothy Isbell (Co-advised), BS, Undergraduate research (BY398)
- Manmohan Ghanta, BS, Undergraduate research (BY398)
- Sharon Graves, BS, Biology Honors research (BY498)*
- Patrick Lett, BS, Biology Honors research (BY498)*

1997
- Adam Summerlin, BS, Undergraduate research (BY398)
- Asghar Mudassar, BS, Undergraduate research (BY398)
- Sharon Graves, BS, Biology Honors research (BY498)*
- Patrick Lett, BS, Biology Honors research (BY498)*

1996
- Sonya Griffin, BS, Undergraduate research (BY398)
- Arturo Racelis, BS, Undergraduate research (BY398)
- James Daubenspeck (Co-advised), BS, Undergraduate research (BY398)
- Kiran Chava, BS, Biology Honors research (BY498)*

1995
- Masha Moshtaghi, BS, Undergraduate research (BY398)

- Kiran Chava, BS, Biology Honors research (BY498)*
- Farhana Bashar, BS, Biology Honors research (BY498)*
- Michael Likos, BS, Biology Honors research (BY498)*

1994

- Kiran Chava, BS, Undergraduate research (BY398)
- Stephen Skelton, BS, Undergraduate research (BY398)
- Wendy Gwinn, BS, Biology Honors research (BY498)*
- Naghma Kahn, BS, Biology Honors research (BY498)*

1993

- Anne Brewer, BS, Undergraduate research (BY398)
- Charlie Bottom BS, Undergraduate research (BY398)

1992

- Wee-Yao Ng, BS, Undergraduate research (BY398)
- Jonathan Southworth, BS, Undergraduate research (BY398)

Advanced Directed Reading (BY 397):

- Chesnokova, Olga, B
- Watkins, Samantha, BS
- Bowersock, Joscelyn, BS
- Charlie Bottom, BS
- Manoj Kaplash, BS
- Ina Walker, BS
- Kiran Desai, BS
- Alison Abercrombie, BS
- Lisa (Mengyi) Shi
- Kim Hyesung, BS
- Hamidreza Jobehdari, BS
- Stephanie Below, BS
- Christine Walsh, BS
- Najeba Akhi, BS
- Tara white, BS
- Sheri Mayo, BS
- Deborah B Ejem, BS

Alabama Alliance for Minority Program (AAMP)

- Marilyn D. Wyatt
- Moncenya Chatman
- Kristen Bishop-Mathis

Science and Technology Honors Program Thesis Committee

- Ms. Christina Cooley (2017-current)
- Mr. David Alex Monaco (2017-2018)
- Kyle Beshears (2014-2015)
- Ms. Jasmine Howard (2013-2014)
- Mr. Raj V. Vachhani (2012-2013)
- Ms. Ian Hollifield (2012-2013)
- Mr. Olamida Alakija (2012-2013)
- Mr. Joe Rogers (2013-2014)

GRADUATE STUDENTS (PhD and MS) SUPERVISED:

1. **George B.H. Green, PhD, 2019-present. "**Metagenomic insight into the effect of nutrition on the Gut Microbiome: Invertebrate, Vertebrate, Mammalian Models."

2. **Amber M. Richardson, M.S., 2020-present.** Antibiotic resistance evolution in *Vibrio vulnificus.*

3. **Joseph A. Hakim, PhD**. **2019**. "Genomic insight into the gut microbiome of the sea urchins *Lytechinus variegatus* and *Strongylocentrotus purpuratus* revealed distinct community compositions and their metabolic profiles."

4. **Hyunmin Koo, PhD**. **2018.** "Metagenomics approach to the study of microbial community structure and function in perennially ice-covered freshwater lakes in cold ecosystems."

5. **Joseph A. Hakim, MS. 2016.** "Comparison of gut microbiomes in natural and laboratory cultured Sea Urchins."

6. **Stephanie Momeni, PhD. 2016**. "MLST on *Streptococcus mutans*." (Jointly with Dr. Noel Childers, UAB School of Dentistry). Current: Post-doctorate, UAB School of Dentistry.
7. **Hyunmin Koo, MS. 2013.** "Effect of MC252 Oil on Microbial Diversity in Gulf of Mexico Sediments."

8. **Jonathan Huang, PhD. 2013**. "Microbial biodiversity in Antarctic Lakes." 2013. Current: DMD

9. **Nazia Mojib, PhD. 2011**. "Study of the cold adaptive mechanisms in bacteria and investigation of the chemotherapeutic and antimicrobial potential of their pigments." Current: Post-doctorate at Georgia Institute of Technology.

10. **Amy Roach, MS (Plan II). 2011.** "Diversity, Biosynthesis, and Applications of Extremophile Eubacterial Pigments.

11. **Genola Burke, MS. 2009**. "Taxonomic analysis of Antarctic biodegradative microorganisms and study of community profile by real-time PCR." Current: Birmingham City School.

12. **Maulshree Gangwar, MS. 2008.** "Rapid detection of *Salmonella* in shellfish using real time PCR." 2008. Current: The World Bank.

13. **Linda Ward, MS. 2005.** "Detection of *Vibrio parahaemolyt*icus in shellfish (UAB Dept. of Forensic Science) using multiplexed real-time PCR with taqman fluorescent probes."

14. **Gitika Panicker, PhD. 2004**. "Molecular analysis and detection of Vibrio vulnificus in its quiescent and active state." Current: CDC.

15. **Amy Rizvi, MS. 2004.** "Rapid detection of pathogenic *Vibrio parahaemolyticus* in shellfish and GoM water using multiplexed conventional and real-time PCR." Current: Eli Lilly and Company.

16. **Michael Myers, PhD. 2002.** “Identification and characterization of serum-induced genes and development of a rapid detection of selected Gram-positive and Gram-negative bacterial species.” Current: USDA.

17. **Lisa Blankinship, MS. 2002.** “Molecular analysis, detection, and elimination of *Vibrio parahaemolyticus* from shellfish.” Current: University of North Alabama. (Received PhD, UAB).

18. **Michael Myers, MS. 2001.** “Detection of *Vibrio parahaemolyticus* O3:K6 in Gulf water.” Current: USDA.

19. **Madalina Mateescu, MS. 2001**. “Response and tolerance of *Vibrio cholerae* O1 at cold temperatures.”

20. **Greer Kaufman, MS. 2001**. “Molecular methods for detection and characterization of *Vibrio parahaemolyticus*.” Current: Southern Research. (Received PhD, UAB).

21. **Gitika Panicker, MS. 2000**. “Cold adaptation and biodegradation of aromatic hydrocarbons by Antarctic microorganisms.” Current: CDC (Received PhD, UAB).

22. **Michael Vickery, MS. 1997**. “PCR-based approaches for monitoring microbial pathogens in seafood.” Current: BioGx, Inc. (Received PhD, UAB).

23. **Cynthia Brasher, MS. 1997**. “Development of a multiplex PCR methods for detection of microbial pathogens in shellfish.” Current: Genentech.
24. **Amanda Jeffreys, MS. 1997**. “Molecular mechanisms of cold adaptation in *Salmonella typhimurium*.”

25. **Albert Lee Smith, MS. 1996.** “Bacterial identification and characterization by DNA fingerprints.” (Received M.D., UAB).

26. **Jonathan Southworth, MS. 1995.** “Development of a conditional Suicide system in bacteria for the containment of genetically engineered microorganisms released in the environment.” Current: M.D.

GRADUATE THESIS/DISSERTATION STUDY COMMITTEE

1. Mathew Brown (Ph.D., Biology, UAB)
2. Kenneth C. Stuck (Ph.D., Biology, UAB)
3. Chi-Wu Chiag (Ph.D., Biology, UAB)
4. Kiran Desai (Ph.D., Public Health, UAB)
5. Michael Vickery (Ph.D., Biology, UAB)
6. Chris Murdock, (Ph.D., Biology, UAB)
7. Dorothy Payne (Ph.D., Biology/Microbiology, UAB)
8. Jason Linville (Ph.D., Justice Science/Biology, UAB)
9. Stanley Trask (M.S., Biology, UAB)
10. Christian Burkhan (M.S., Biology, UAB)
11. Julianne Gumulak (M.S., Biology, UAB)
12. Keela Dod-Baker (M.S., Biology, UAB)
13. Jeffrey Salius (M.S., Criminal Justice, UAB)

14. Amrita Lal (M.S., Criminal Justice, UAB)
15. Nicole Harold (M.S., Criminal Justice, UAB)
16. Carl Mauterer (M.S., Criminal Justice, UAB)
17. Merrick (M.S., Criminal Science, UAB)
18. Mark Acree (M.S., Criminal Justice, UAB)
19. Ursula Makey (M.S., Criminal Science, UAB)
20. Troy Merrick (M.S., Criminal Science, UAB)
21. Diana Wagner (M.S., Criminal Justice, UAB)
22. Robin Plymale (M.S., Criminal Justice, UAB)
23. Robyn Ludlum (M.S., Criminal Justice, UAB)
24. Sara Cooley (M.S., Criminal Justic, UAB)
25. Amanda Cunningham (M.S., Biology, UAB)
26. Junying Zheng (Ph.D., Biology, UAB)
27. Patrick Erwin (Ph.D., Biology, UAB)
28. Joel Berletch (Ph.D., Biology, UAB)
29. Jenny Chang (Ph.D., Biology/Microbiology, UAB)
30. Keela Dodd-Baker (Ph.D., Biology, UAB)
31. Debbie Payne (Ph.D., Biology/Microbiology, UAB)
32. Andrew Mobley (M.S., Biology, UAB)
33. Chris Freeman (PhD, Biology, UAB)
34. Steve Kimble (M.S., Biology, UAB)
35. Rachel Philpott (M.S., Biology/Microbiology, UAB)
36. Hsiang-Yin Chen (PhD, Biology, UAB)
37. Jenny Chang (PhD, Biology, UAB)
38. Suja Rajan (PhD, Biology, University of Alabama, Tuscaloosa)
39. Denis Otali (PhD, Biology, UAB)
40. Kayla Beiser (PhD, Biology, UAB)
41. Kenan Matterson (PhD, Biology, UAB)
42. Zach Nolen (MS, Biology, UAB)
43. Gregory Peek (PhD, Biology, UAB)
44. Cassandra Gurbutt (MS, Biology, UAB)
45. Benjamin Marsella (MS, Biology, UAB)
46. Steven Paladino (MS, Biology, UAB)
47. Yifeng Gao (PhD, Biology, UAB)
48. Jack (John) Schoelz (PhD, Biology, UAB)
49. Megan Roegner (PhD, Biology, UAB)
50. Matthew Kuhl (MS, Biology, UAB)
51. Alex Dawson (MS, Biology,, UAB)

COURSES TAUGHT:

- **Molecular Genetics** – BY311/511 (Lecture; Gene Structure, Function and Regulation) (Undergraduates and Graduates from the Dept of Biology, Dept of Education and Dept of Forensic and Justice Sciences). *(Developed in 1993; offered every year).*

- **Principles of DNA Technology** (Formerly *Recombinant DNA Technology with lab*) – BY431/531 (Lecture; Gene manipulation & cloning; Gene characterization; State-of-the-art methodologies for gene identification; Introduction to Bioinformatics) (Undergraduates and Graduates from the Dept of Biology, Dept of Education, Dept of Forensic and Justice Sciences, School of Medicine Graduate Programs). *(Developed in 1993; offered every year).* Complied a **Laboratory Manual for the Recombinant DNA Technology**

BY431/531 course in 1993 consisting of methods for gene cloning and characterization in the *laboratory* set-up.

- **Extremophiles and Bioprospecting** – Biology Special Topics BY494/695/795 (Lecture; Biology majors) *(Developed in 2011; offered once).*

- **Seminar in Microbiology/Microbial Ecology** (BY499/694/794) for the graduate and upper division undergraduate students *(In rotation).*

- **Seminar in Biology** – (BY499/694/794) for the graduate and upper division undergraduate students *(In rotation).*

- **Microbiology** – BY261 (Lecture; Nursing majors) *(Taught in 1991, 1992).*

- **Investigative Molecular Genetics** – BY 445/545 (Lecture/Laboratory; Individual research projects on DNA structure function) (Primarily undergraduates from the Department of Biology and Graduates from the Biology, Medical Graduates, and Forensic Science programs) *(Developed in 1993; offered every year until 1996.*

- **Advanced Molecular Genetics** course with **laboratory** (BY 445/545) for the upper division undergraduate and graduate students from the Department of Biology and Department of Forensic Science (Department of Justice Sciences) *(Developed in 1993; offered every year until 1995)*
- **Techniques in Biological Research** (BY 445/545/645) for the graduate and upper level undergraduate students –A team-taught course (*My section was to lecture and lab on PCR technique*)

SELECTED SYNERGISTIC ACADEMIC SERVICE ACTIVITIES:

- **Howard Hughes Medical Institute** (HHMI), National Genomics Research Initiative (NGRI) Undergraduate Phage Genomics Program, for the UAB undergraduates 2010-2012 (jointly with Dr. Denis Monti, UAB).
- **Alabama Alliance for Minority Program (AAMP):** Summer Minority Student Research Internship 2000, 2002. Training and supervision of research projects to minority students representing the State of Alabama Minority Colleges.
- **Center for Ocean Sciences Education Excellence (COSEE)** for K-12 School Teachers, Dauphin Island Sea Lab, AL. Sponsored by NSF, Mississippi Alabama Sea Grant Consortium; University of Southern Mississippi. 2003-2012.
- **UAB Undergraduate Honors Program.** Research committee for UAB undergraduate honors students.
- **Pre-Optometry Club, UAB.** Advising the pre-optometry students as need and present seminar.
