

BIOGRAPHY OF PROF. BIMAL K. BANIK



PROF. BIMAL K. BANIK

Ph. D. C. Chem. F. R. S. C.
President's Endowed Professor and Professor
Program Director and Principal Investigator of NIH and NCI Grants
Editor-in-Chief, Organic & Medicinal Chemistry Letters, Springer, Germany
Fellow, Royal Society of Chemistry, Cambridge, UK
The University of Texas-Pan American
1201 West University Drive
Edinburg, Texas 78539, USA
Telephone (office): 956-665-8741; Fax: 956-665-5006
E-mail: banik@utpa.edu

Professor Bimal K. Banik was born in the village of Alipur, Raj Bagan which is located in Debipur in the district of Burdwan, West Bengal, India to highly respectable parents Mr. Ananta K. Banik and Mrs. Sumati Banik. He is married to Mrs. Indrani Banik and has two young daughters, Antara and Mandira. His parents significantly inspired his brothers and him to pursue a solid and moral education. They taught him to be honest and productive by not engaging in partiality or demonstrating favoritism to people irrespective of race, religion and origin. His lovely wife has been fully supportive of him in all of his activities and his charming daughters have kept him focused on his several responsibilities with their talents and through their numerous sacrifices.

Professor Banik completed all of his education from West Bengal, India including studies at Bejoy Narayan Mahavidyalaya (B. Sc.) and Burdwan University (M. Sc.). He conducted his Ph. D. thesis work on total synthesis of terpenoids and alkaloids at the Indian Association for the Cultivation of Science, Kolkata under the supervision of Professor U. R. Ghatak and received his Ph. D. degree from Jadavpur University in 1987. Upon earning his Ph. D., Dr. Banik came to the USA to conduct postdoctoral research work with Professor R. G. Salomon on the synthesis of marine natural products at Case Western Reserve University in Cleveland, Ohio in 1989. Within a year, he accepted an offer for a teaching and research postdoctoral position at Stevens Institute of Technology (SIT), Hoboken, New Jersey in 1990 under the direction of Professor A. K. Bose. He conducted research on antibiotics and was also responsible for

teaching in the classroom and mentoring high school students, teachers, undergraduates, graduates and postdoctoral fellows at this institution. He was promoted to Research Assistant Professor in 1994 at SIT. Professor Banik joined at the University of Texas M. D. Anderson Cancer Center, Houston, Texas in 1995 to conduct research on the synthesis, biological evaluation and mechanism of action studies on novel compounds as anticancer agents. He mentored students, scientists and postdoctoral fellows and collaborated with many faculties at this institution. Dr. Banik then joined the University of Texas-Pan American (UTPA) in 2004 where he became Tenured Full Professor of Chemistry and the university's first President's Endowed Professor in 2007.

He has been actively involved in teaching several courses for undergraduates and graduate students for many years. He believes that the purpose of research is to advance knowledge, the purpose of technology is to advance the social situation and the purpose of education is to fulfill human potential. Dr. Banik has supervised 390 students that include 15 post doctoral fellows. A number of his students have been accepted or completed their education at Harvard University, Yale University, MIT, Rice University, University of Texas Southwestern Medical Center, Baylor College of Medicine, Robert Wood Johnson Medical University, University of Pennsylvania, University of Texas at Austin, Rutgers University, Texas A & M University, Rice University, Polish Academy of Science, University of Tokyo, University of Turkey, University of Mexico, Vanderbilt University and Stanford University. Many of his students are employed at Merck Research Laboratories, Roche Pharmaceutical Company, Procter & Gamble, Schering-Plough Research Institute, and Johnson & Johnson Pharmaceutical Company. Following his guidance and active participation with him, a number of his students received university, state, national and international awards for research excellence.

Professor Banik is extremely delighted and honored to publish papers in this special volume of the journal "Heterocyclic Letters" that contains papers exclusively from his group. He is grateful to late Professor R. R. Gupta for his sincerest encouragement to him. Dr. Vandana Gupta, the Editor of this journal has worked very closely with Professor Banik to realize this very important and crucial objective.

SCIENTIFIC ACHIEVEMENTS OF PROF. BIMAL K. BANIK

GRANT, SUPPORT, AWARD and CONTRACT: Principal Investigator: Awarded approximately 5.00 Million Dollar Research Grants from NIH, NCI, Kleberg Foundation, University of Texas M. D. Anderson Cancer Center, University of Texas Health Science Center at San Antonio and the University of Texas-Pan American 1997-2011; Co-Principal Investigator: Awarded \$441,000.00 Dollar Research Grants from NIH, 1994 and 2006; Director, University of Texas M. D. Anderson Cancer Center, Core Research Laboratory and Chair, UTPA Department of Chemistry, Instrumentation Committee: Generated approximately 1.87 Million Dollar Instrumentation Grant, 1997 and 2010; Principal Investigator: Pending 2.00 Million Dollar Grant Applications 2011-2012.

EDITORIALS:

1. **B. K. Banik***, "β-Lactams: Synthesis, Stereochemistry, Synthons and Biological Evaluation", **Current Medicinal Chemistry**, 2004, 11, Number 14.
2. **B. K. Banik***, "Current Approaches to the Development of New Chemotherapeutic Anticancer Agents", **Current Medicinal Chemistry**, 2001, 8, Number 12.
3. **B. K. Banik***, "Iodine-Catalyzed Organic Reactions", **Molecules**, 2009.
4. **B. K. Banik***, "Organobismuth Chemistry and Material Chemistry", **Molecules**, 2010.
5. **B. K. Banik***, "Beta-Lactams: Synthesis and Synthons", **Tetrahedron Symposium-in-Prints**, 2012.

BOOKS:

1. **B. K. Banik***, "Topics in Heterocyclic Chemistry", **Springer**, 2010. Volume 22.
2. **B. K. Banik***, "Beta-Lactams: Unique Structures of Distinction", Springer, 2012.

BOOK CHAPTERS:

1. (a) A. K. Bose, M. S. Manhas, **B. K. Banik** and V. Srirajan, " β -Lactams: Cyclic Amides of Distinction", In *The Amide Linkage: Selected Structural Aspects in Chemistry, Biochemistry, and Material Science*, Eds: A. Greenberg, C. M. Breneman and J. F. Liebman, **John Wiley & Sons Inc.**, 2000, 157.
(b) A. K. Bose, M. S. Manhas, **B. K. Banik** and V. Srirajan, " β -Lactams: Cyclic Amides of Distinction", In *The Amide Linkage: Selected Structural Aspects in Chemistry, Biochemistry, and Material Science*, Eds: A. Greenberg, C. M. Breneman and J. F. Liebman, **John Wiley & Sons Inc.**, 2003, 157.
2. **B. K. Banik***, I. Banik and F. F. Becker, "Anticancer β -Lactams", **Springer**, 2010, 22, 349.
3. **B. K. Banik***, "Microwave-Induced Synthesis of Diverse β -Lactams", **Springer**, 2012.

REVIEWS:

1. **B. K. Banik***, "Samarium Metal in Organic Synthesis", **Eur. J. Org. Chem.**, 2002, 2431.
2. A. K. Bose, M. S. Manhas, S. N. Ganguly, A. H. Sharma and **B. K. Banik**, "MORE Chemistry for Less Pollution: Applications for Process Development", **Synthesis**, 2002, 11, 1578.
3. **B. K. Banik*** and F. F. Becker, "Synthesis, Electrophilic Substitution and Structure-Activity Relationship Studies of Polycyclic Aromatic Compounds for the Development of Anticancer Agents", **Current Medicinal Chemistry**, 2001, 8, 1513.
4. **B. K. Banik***, "Tributyltin Hydride Induced Intramolecular Aryl Radical Cyclizations: Synthesis of Biologically Interesting Organic Compounds", **Current Organic Chemistry**, 1999, 3, 517.
5. A. K. Bose, **B. K. Banik**, N. Lavlinskaia, M. Jayaraman and M. S. Manhas, "MORE Chemistry in a Microwave", **Chem. Tech.**, 1997, 27(9), 18.

PUBLICATIONS and PRESENTATIONS: 595

CITATIONS in JOURNALS: 3700; MEDIA EXPOSURES: 130 (TV, Newspapers and Internet)

USA and INTERNATIONAL PATENTS: Banik and Becker have contributed equally in the patents and therefore, both of them are the principal authors and inventors of the patents that are controlled and managed by the University of Texas Board of Regents and their assigned Attorneys; this patent list is found at the Thomson/Delphion website on April 17, 2006 (www.delphion.com/fcgi-bin/patsearch); The actual number of approved patents is not known at that time. Some patents marked with "A and a Specific Number" may merge together (below). This merger may reduce the number of patents.

1. **B. K. Banik*** and F. F. Becker*, "Polycyclic Aromatic Compounds as Antimicrobial and Antiviral Compounds", **World Patent, Number WO039507A1**, 2005.
2. **B. K. Banik*** and F. F. Becker*, "Antimicrobial and Antiviral Compounds", **World Patent, Number WO05039507A3**, 2005.
3. **B. K. Banik*** and F. F. Becker*, "Antimicrobial and Antiviral Compounds", **US Patent, Number US20050107430A1**, 2005.
4. F. F. Becker* and **B. K. Banik***, "Antitumor Chrysene Compounds", **European Patent, Number EP1124552A4**, 2005.
5. F. F. Becker* and **B. K. Banik***, "Antitumor Dibenzofluorene Compounds", **European Patent, Number EP1 135379**, 2004.
6. F. F. Becker* and **B. K. Banik***, "Antitumor Dibenzofluorene Compounds", **US Patent, Number US20020103191A1**, 2002.
7. F. F. Becker* and **B. K. Banik***, "Antitumor Dibenzofluorene Compounds", **US Patent, Number US6479662**, 2002.
8. F. F. Becker* and **B. K. Banik***, "Antitumor Dibenzofluorene Compounds", **US Patent, Number US6184224**, 2002.

9. F. F. Becker* and **B. K. Banik***, "Antitumor Dibenzofluorene Compounds", **US Patent, Number US6362200**, 2002.
10. F. F. Becker* and **B. K. Banik***, "Antitumor Chrysene Compounds", **European Patent, Number EP1124552A1**, 2000.
11. F. F. Becker* and **B. K. Banik***, "Antitumor Dibenzofluorene Compounds", **European Patent, Number EP1135379A1**, 2001.
12. F. F. Becker* and **B. K. Banik***, "Antitumor Dibenzofluorene Compounds", **US Patent, Number US6184224**, 2001.
13. F. F. Becker* and **B. K. Banik***, "Antitumor Dibenzofluorene Compounds", **European Patent, Number EP1135379A1**, 2001.
14. F. F. Becker* and **B. K. Banik***, "Antitumor Chrysene Compounds", **World Patent, Number WO24394A1**, 2000.
15. F. F. Becker* and **B. K. Banik***, "Antitumor Chrysene Compounds", **US Patent, Number US6015811**, 2000.
16. F. F. Becker* and **B. K. Banik***, "Antitumor Dibenzofluorene Compounds", **World Patent, Number WO0032583C2**, 2000.
17. F. F. Becker* and **B. K. Banik***, "Antitumor Dibenzofluorene Compounds", **Canadian Patent, Number CA2352878AA**, 2000.
18. F. F. Becker* and **B. K. Banik***, "Antitumor Chrysene Compounds", **Canadian Patent, Number CA2346873AA**, 2000.
19. F. F. Becker* and **B. K. Banik***, "Antitumor Dibenzofluorene Compounds", **World Patent, Number WO0032583A1**, 2000.

COMMENTARY:

1. **B. K. Banik***, "Bismuth Nitrate-catalyzed Michael Reactions", **Thomson-ISIR Web of Science Database has described it as a Fast Breaking Paper in the field of Chemistry (top 1% paper), June, 2004.**

FELLOW at the INTERNATIONAL LEVEL:

Based on research accomplishments, selected as the Fellow of the highly prestigious and oldest scientific organization, Royal Society of Chemistry (Cambridge, England), 2003-present; authorized to use Title "FRSC", 2003-present; Chartered Chemist of the Royal Society of Chemistry, authorized to use Title "CChem", 1998-present

REVIEWER: Reviewer of 45 national and international journals on biomedical science, organic chemistry, medicinal chemistry and drug discovery; reviewed approximately 500 papers

EDITOR-in-CHIEF: Organic and Medicinal Chemistry Letters by Springer (2010-present)

CHAIRMAN at the NOBEL PRIZE RESEARCH CELEBRATION MEETING: Chaired a session in Nuremberg, Germany (Antineoplastic Agents: New Strategies and New Compounds), 2008

EDITORIAL BOARD MEMBER of the INTERNATIONAL RESEARCH JOURNALS:

Chemistry-An Indian Journal (2003-present); Bulletin of the Catalysis Society of India (2004-present); E-Journal of Chemistry (2004-present); Heterocyclic Communications (2006-present); Scientific Journals International (USA, 2006-present); International Agricultural Journal on Citrus Fruits (USA, 2007-present); Organic Chemistry Insights (USA, 2007-present); The Open Natural Products Journal (USA, 2008-present); Current Organic Synthesis (Bentham, 2009-present); Current Medicinal Chemistry (Bentham, USA, 2009-present); Organic Chemistry International (USA, 2010-present); Heterocyclic Letters (Raman Publication, 2010-present)

MEMBER at the NATIONAL and INTERNATIONAL LEVEL:

American Chemical Society; 1990-present; Division of Organic Chemistry, American Chemical Society, 1991-present; Division of Medicinal Chemistry, American Chemical Society, 1996-present; International Union of Pure and Applied Chemistry, 1997-present; Royal Society of Chemistry, 1998-present; Texas Faculty Association, 2008-present.

REVIEWER and EXAMINER at the NATIONAL and INTERNATIONAL LEVEL:

Reviewer of International grants (Austria and Canada), 2000-present; Reviewer of American Chemical Society grants (USA), 2004-present; Reviewer of National Science Foundation grants (USA), 2004-present; Panel Member of NSF grants (2008-present); Panel Member of NIH/NCI grants (2008-present); Reviewer of National Institutes of Health grants (USA), 2006-present; Reviewer of UTPA faculty research grants (USA), 2005-2008; Reviewed more than 550 external and internal research grants, 1997-2010; Reviewer of Ph. D. Science theses, 1998-present; reviewed 17 Ph. D. dissertations.

CHAIRMAN at the ACS NATIONAL MEETINGS: New Reactions and Methodologies, Denver, CO, 2011; New Reactions and Methodologies, Anaheim, CA, 2011; New Reactions and Methodologies, San Francisco, CA, 2010; Asymmetric Reactions and Syntheses, Washington, D. C., 2009; Aromatic and Heterocycles, Salt Lake City, UT, 2009; New Reactions and Methodologies, Philadelphia, PA, 2008; New Reactions and Methodologies, New Orleans, LA, 2008; New Reactions and Methodologies, Boston, MA, 2007; New Reactions and Methodologies, Chicago, IL, 2007; Metal-Mediated Reactions and Syntheses, San Francisco, CA, 2006; Metal-Mediated Reactions and Syntheses, Atlanta, 2006; Total Synthesis of Complex Natural Products, Washington, D. C., 2005; New Reactions and Methodologies, San Diego, CA, 2005; Total Synthesis of Complex Organic Molecules, Philadelphia, PA, 2004; Asymmetric Reactions and Syntheses, Boston, MA, 2002

SELECTED HONORS and AWARDS: Published a whole volume containing 30 papers in Heterocyclic Letters, 2011; Received NIH/NCI, UTPA Graduate Program and UTPA Science & Mathematics Webpage recognition, 2011; Received nomination for the USA Professor of the Year Award, 2010-2011; Published a paper in "International Innovation", London, 2010; Received nomination for USA Presidential Award for Mentoring Students in Science, Engineering and Mathematics sponsored by National Science Foundation, 2010; Received the University of Texas-Pan American Excellence Award in Research and Creative Endeavor, 2010; Received the University of Texas Board of Regents' Outstanding Teaching Award, 2009; Finalists for the University of Texas Chancellor Award for 4 years at the UTPA 2006-2010; Outstanding Mentor Award by the Union City, the New Jersey Board of Education and Citation by a Senator of New Jersey, 1993-1994; Recognized as one of the top mentors out of 300 for the past 18 years by the Director of the American Chemical Society SEED Program, 2006-2007; Chemical & Engineering News acknowledged UT Board of Regents' Teaching Award Contribution, 2009; Received Provost's Award for International Studies, 2009; The Times of India published an article based on significant achievements in the Expert Section, 2009; Served as the chair or member of more than 100 committees, 1997-2011; Organized many national and international science conferences; Introduced more than 300 scientists/students in conferences; More than 25 journals/book companies and conference organizers' invitations to write books/ book chapters/reviews/articles/deliver lectures are being considered, 2011; Awarded First President's Endowed Professorship at the UTPA, 2007 in its 81st year; Program Director, NIH Grant, 2006-2012 and NCI Grant, 2008-2013; Awarded Gold Medal for standing 1st in 1st class by the Governor of West Bengal, India, 1982