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Bimal Krishna Banik's Biography

Ph.D., C.Chem., F.R.S.C., F.I.C.S., F.I.S.R.O.S.E.T., F.R.S.C.S.; Gold Medalist

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Former First President's Endowed Professor and Tenured Full Professor, University of Texas-Pan American, Edinburg, USA;
Former Adjunct Professor, University of Texas Health Science Center at San Antonio and University of Texas at San Antonio, USA;
Former Vice President of Research & Education Development, Community Health Systems of South Texas;
Director and Principal Investigator of US NIH, US NCI and US Foundation Grants;
Editor-in-Chief: 12 International Journals; Founder: 4 International Journals

Banik's Reactions are dedicated to Professor R. R. Gupta on his 80th birthday.

Professor Banik has developed 4 Banik's reactions and these are published in the current issue of Heterocyclic Letters (August 2021, Volume 11, Issue 3). Most of the Name Reactions developed by Scientists have received the highest recognitions from the scientific community. Students are fascinated to learn these Name Reactions in their undergraduate and graduate degree programs. Therefore, it is anticipated that Banik's reactions will also be included as course materials for various higher level degree programs. In these name reactions, Dr. Banik has strategically introduced new and novel reactions for the first time a) to oxidize the benzylic positions of the aromatic rings, b) to facilitate the formation of 4-membered *N*-heterocyclic compounds, c) to substitute aromatic rings with nitro groups and d) to incorporate various nucleophilic functionalities to the sugar molecules. He has extensively used these Name Reactions for the synthesis of anticancer and antibacterial agents for the past 20 years.

Bimal Krishna Banik, son of Ms. Sumati Banik and Ananta Kumar Banik, was born in Alipur Rajbagan Colony in the District of Burdwan, West Bengal (WB), India. Bimal studied at Alipur Junior Basic School and Debipur Station High School, WB, India. He obtained his B. Sc. Honors degree in Chemistry from Itachuna Bejoy Narayan Mahavidyalaya and M. Sc. degree in Chemistry from Burdwan University. He pursued doctoral research at the Indian Association for the Cultivation of Science, Calcutta and received his Ph. D. degree in Synthetic Organic Chemistry from Jadavpur University, Calcutta in 1987. Thereafter, he proceeded with postdoctoral research (1989-1993) at Case Western Reserve University (USA) and Stevens Institute of Technology (USA). Dr. Banik was a Tenured Full Professor in Chemistry and First President's Endowed Professor in Science & Engineering at the University of Texas-Pan American; an Adjunct Professor in Chemistry at the University of Texas at San Antonio; an Adjunct Professor in Biochemistry at the University of Texas Health Science Center at San Antonio; and an Assistant Professor in Molecular Pathology at the University of Texas M. D. Anderson Cancer Center, Houston. He served as the Vice President of Research & Education Development of the Community Health Systems of South Texas. At present, Dr. Banik is a Full Professor and Senior Researcher of the Deanship of Research Development & College of Natural Sciences at Prince Mohammed Bin Fahd University, Kingdom of Saudi Arabia.

Professor Banik has taught organic and medicinal chemistry to B. S., M. S., and Ph. D. students in USA and Saudi Arabia universities for many years. His teaching skills are outstanding which has been reflected through numerous students' and peer's evaluations. He has mentored approximately 400 students, 20 postdoctoral fellows, and 7 Ph. D. research scientists along with advising 26 university faculties/scientists. Professor Banik was a proactive advisor for two students' organizations and societies consisting of 1400 students from different disciplines including Arts, Science, Engineering, Business, Pharmacy, Physician Assistant, Music, Drama, Clinical Science and Education.

The major research area of Professor Banik deals with synthetic chemistry and chemical biology of ovary, colon, breast, blood, prostate, brain, pancreas and skin cancers (also on NCI 60 cancer cell lines); antibiotics; hormones; catalysis; green chemistry; salts-and metal-mediated reactions; natural products; and microwave-induced reactions. As the Principal Investigator (PI), he has been awarded $7.25 million in grants from USA NIH and USA NCI. Importantly, he has more than 500 peer-reviewed publications along with more than 500 presentation abstracts. The number of citations from his publications is more than 7550 with an h-index of 45. His research has been greatly publicized through the media. Professor Banik has served as the PI of a joint green chemistry symposium between USA and India. He has presided 20 symposiums at the American Chemical Society (ACS) National Meetings and over 2 dozen conferences at the State, National and International level, including 1 at the Nobel Prize celebration in Germany. In the capacity of chair, he has introduced more than 300 speakers. He is a reviewer of 93, editorial board member of 10, editor-in-chief of 12, founder of 4, associate editor of 6 and guest editor of 10 journals. As the editor-in-chief, he has recruited approximately 200 associate editors, regional editors and editorial board members from different countries. He is an examiner of NSF, NCI, NRC, DOE, ACS and International grant applications; reviewer of promotion & tenure of faculty of national and international universities; examiner of doctoral thesis; panel member of NSF and NCI/NIH grant sections. Over the years, he has served as the chair/member of more than 100 scientific committees. Professor Banik has also served as the chair of the University of Texas M. D. Anderson Cancer Center's drug discovery symposiums and directed the NCI-funded analytical chemistry Core

research laboratory. Importantly, Dr. Banik was the Director of several US NIH and US NCI grants on behalf of his universities in the USA since 2006-2012.

Professor Banik has ranked within the Top 2% Researchers of the World. He has received the Indian Chemical Society's (ICS) Life-Time Achievement Award in 2018; Mahatma Gandhi Pravasi Honor medal from the UK Parliament; ICS's Professor P. K. Bose endowment medal; Dr. M. N. Ghosh gold medal; University of Texas Board of Regents' Outstanding Teaching award; 5 top-cited papers awards by Elsevier Journals; approximately 50 certificates of excellences in his profession; Indian Association Community Service award; ACS Member Service award; US NCI webpage recognition; best researcher and mentor award by the UTPA; chosen as One of the World's Most Influential People on Earth in Year-2016 by US News Corporation; Burdwan University Eminent Alumnus recognition; First President's Endowed Professorship at the UTPA in its 87 years of history; UTPA's award for excellence in international studies. Some of his international research presentations are considered as keynote, plenary, inaugural and award-winning lectures. Dr. Banik has received more than 200 invitations to deliver lectures in USA, India, UK, Germany, China, Hong Kong, Greece, Italy, France, Jamaica, Sweden, Japan, Singapore, Pakistan, Norway, Bangladesh, Canada, Mexico, Vietnam, South Korea, Thailand, Saudi Arabia, United Arab Emirates, Argentina, Portugal, Switzerland, Venezuela, Brazil, Spain, New Zealand, Egypt, Austria, Australia and Turkey. He has been invited to publish research articles and textbooks by major publishers, including Wiley, Elsevier, Springer, Springer Nature, Taylor & Francis, De Gruyter, Bentham, Thompson, Linus, Nova, Pearson, Cengage, Houghton Mifflin and PMU Press.

Selected from more than 500 Publications (Patent, Press Release, Perspective, Editorial, Review, Book, Book Chapter and Paper)

Patent

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