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RESEARCH INTEREST

Pharmaceutical Biotechnology, Enzymatic Chiral Drug Synthesis, Fermentation, Nanobiotechnology

PROFESSIONAL DETAILS

Research Experience : 32 years
PhD Thesis Guided : 33(10 fellows are enrolled for PhD)
M.Tech/M Pharm Thesis : 105
Publications : 214
Patents : 23
Book Chapters : 12

ACADEMIC QUALIFICATIONS

B. Sc. Chemistry (Hons), Viswa Bharati University, Shantineketan 1977
B. Tech Food Technology and Biochemical Engineering, Jadavpur University, 1980
M.Tech *Biochemical Engineering and Biotechnology*, Indian Institute of Technology, Delhi, 1982
PhD *Chemical Engineering and Technology*, Panjab University, Chandigarh, 1991
PDF *Chemical and Biochemical Engineering*, University of Waterloo, Waterloo, Canada, 1994

PROFESSIONAL EXPERIENCE

Dean (2011-2014) National Institute of Pharmaceutical Education and Research, SAS Nagar
Professor and Head (2003-Till date) Department of Pharmaceutical Technology, NIPER, SAS Nagar
In Charge, Biotechnology (2011- Till date) Department of Biotechnology, NIPER, SAS Nagar
Professor and Head (2000-2003) Department of Biotechnology, NIPER, SAS Nagar
Scientist in various posts upto EII (1984-2000) Institute of Microbial Technology, Chandigarh

HONOURS, AWARDS AND FELLOWSHIPS

- **Awarded Top Cited Author for** Journal of Colloid and Interface Science in 2014 – 2015
- **Highly Cited Article of 2011 Award** from American Chemical Society Publications, USA .
- **Innocentive Challenge award** 5589410 - Bitterness in Food Products, 2008.
- **The Punjab Ratan Award** for the recognition of the distinguished services rendered to the people at large, 2005.
- **The Shield for Process Technology by Council of Scientific and industrial Research, New Delhi** for developing an innovative environment friendly process technology for production of **natural streptokinase**, a life-saving thrombolytic drug, and its successful commercialization, 2002.
- **CSIR Technology prize for Biological Sciences and Technology**, for developing a high osmotolerant, ethanol tolerant and genetically modified strain of *Saccharomyces cerevisiae* for the production of **alcohol from molasses**, 1994.

- **Long-term** overseas fellowship for one year three months by the **Department of Biotechnology**, Government of India. Research performed with **Prof. M. Moo-Young** at the Department of Chemical Engineering, University of Waterloo, Canada. Specialization “**Biochemical Engineering and Downstream Processing**”, June 1992 - August 1993.
- **National Scholarship of India**, 1977.
- **Sectional President** of New Biology (Including Biochemistry, Biophysics & Molecular Biology and Biotechnology) section, **99th Indian Science Congress**, held in Bhubaneswar, January 3 - 7, 2012.
- **Member** of Various Professional Bodies
- **Editorial board members** of various journals (Bioresources and Bioprocessing, Applied Nanomedicine, Indian Journal of Biotechnology, etc)

SELECTED PUBLICATIONS

1. Microbial transformation of rifamycin B: A new extracellular oxidase from *Curvularia lunata*, R.M. Vohra, **U. C. Banerjee**, S. Das and S. Dube, *Biotechnology Letters*, 11(12): 851-854, 1989.
2. Biotransformation of rifamycins: Process possibilities, **U. C. Banerjee**, B. Saxena and Y. Chisti, *Biotechnology Advances*, 10: 577-595, 1992.
3. Effect of pH and glucose concentration on the production of rifamycin oxidase by *Curvularia lunata* in a batch reactor. **U. C. Banerjee** and J.P. Srivastava, *Journal of Biotechnology*, 28: 229-236, 1993.
4. Transformation of rifamycin B with soluble rifamycin oxidase from *Curvularia lunata*, **U. C. Banerjee**. *Journal of Biotechnology*, 29:137-143, 1993.
5. Effect of glucose and carboxymethylcellulose on growth and rifamycin oxidase production by *Curvularia lunata*, **U. C. Banerjee**, *Current Microbiology*, 26: 261-265, 1993.
6. Spectrophotometric determination of mycelial biomass, **U. C. Banerjee**, Y. Chisti and M. Moo-Young, *Biotechnology Techniques*, 7 (4): 313-316, 1993.
7. Transformation of rifamycin B with immobilized rifamycin oxidase of *Curvularia lunata*, **U. C. Banerjee**, *Biotechnology Techniques*, 7(5): 339-344, 1993.
8. Transformation of rifamycin B with growing and resting cells of *Curvularia lunata*, **U. C. Banerjee**, *Enzyme and Microbial Technology*, 15: 1037-1041, 1993.
9. Studies of rifamycin oxidase immobilized on agar gel, **U. C. Banerjee**, *Journal of General and Applied Microbiology*, 39:251-255, 1993.
10. Evaluation of different bio-kinetic parameters of *Curvularia lunata* at different environmental conditions, **U. C. Banerjee**, *Biotechnology Techniques*. 7(9): 635-638, 1993.
11. Effect of stirrer speed, aeration rate and cell concentration on volumetric oxygen transfer coefficient ($K_L a$) in the cultivation of *Curvularia lunata* in a batch reactor, **U. C. Banerjee**, *Biotechnology Techniques* 7(10): 733-738, 1993.
12. Optimization of culture conditions for the production of rifamycin oxidase by *Curvularia lunata*. **U. C. Banerjee**, *World Journal of Microbiology and Biotechnology*, 10: 462-464, 1994.
13. Disruption of recombinant yeast for the release of β -galactosidase, F. Garrido, **U. C. Banerjee**, Y. Chisti and M. Moo-Young, *Bioseparation*, 4: 319-328, 1994.
14. Characterization of L-asparaginase from *Bacillus* sp. isolated from an intertidal marine alga (*Sargassum* sp.), B.R. Mohapatra, R.K. Sani and **U. C. Banerjee**, *Letters in Applied Microbiology*, 21: 380-383, 1995.

15. Purification and properties of levanase from *Rhodotorula* sp. A. Chaudhary, L.K. Gupta, J.K. Gupta and U. C. Banerjee, *Journal of Biotechnology*, 46: 55-61, 1996.
16. Studies on slime forming organisms of a paper mill-slime production and its control, Anita Chaudhary, L.K. Gupta, J.K. Gupta and U. C. Banerjee, *Journal of Industrial Microbiology and Biotechnology*, 18: 348-352, 1997.
17. Biodegradation of Triphenylmethane Dyes, W. Azmi, R. K. Sani and U. C. Banerjee, *Enzyme and Microbial Technology*, 22: 185-191, 1998.
18. Levanases for control of slime in paper manufacture, A. Chaudhary, L.K. Gupta, J.K. Gupta and U. C. Banerjee, *Biotechnology Advances*, 16(5-6): 899-912, 1998.
19. Characterization of a fungal amylase from *Mucor* sp. associated with the marine sponge *Spirastrella* sp., B.R. Mohapatra, U. C. Banerjee and M. Bapuji, *Journal of Biotechnology*, 60: 113-117, 1998.
20. Decolorization of acid green 20, a textile dyes, by white rot fungus, *Phanerochaete chrysosporium* in low cost medium, Rajesh K. Sani and U. C. Banerjee, *Advances in Environmental Research*, 2(4): 485-490, 1999.
21. Decolorization of triphenylmethane dyes and textile and dye-stuff effluents by *Kurthia* sp., R.K. Sani and U. C. Banerjee, *Enzyme and Microbial Technology*, 24: 433-437 1999.
22. Thermostable alkaline Protease from *Bacillus brevis* and its Characterization as a Laundry Detergent Additive, U. C. Banerjee, Rajesh K. Sani, W. Azmi and R. K. Soni, *Process Biochemistry*, 35(1-2): 213-219, 1999.
23. Purification and characterization of a novel β -galactosidase from *Bacillus* sp.MTCC3088, S. Chakraborti, R.K. Sani, U. C. Banerjee and R.C. Sobti, *Journal of Industrial Microbiology and Biotechnology*, 24: 58-63, 2000.
24. Production, purification and characterization of debittering enzyme naringinase, Munish Puri and U. C. Banerjee, *Biotechnology Advances*, 18: 207-217, 2000.
25. Biological decolorization of crystal violet by a newly isolated *Bacillus* sp. and microbial assessment of toxicity of untreated and treated dye, W. Azmi and U. C. Banerjee, *Scientia Iranica*, 8(3): 171-178, 2001.
26. Production, purification, characterization and applications of lipases, R. Sharma, Y. Chisti, U. C. Banerjee, *Biotechnology Advances*, 19: 627-662, 2001.
27. Studies on the production of phytase by a newly isolated strain of *Aspergillus niger* var teigham obtained from rotten wood-logs, Purva Vats and U. C. Banerjee, *Process Biochemistry*, 38: 211-217, 2002.
28. *Botryococcus braunii*: A renewable source of hydrocarbons and other chemicals, A. Banerjee, R. Sharma, Y. Chisti, U. C. Banerjee. *Critical Reviews in Biotechnology*, 22(3): 245-279, 2002.
29. Biotechnological applications of cyclodextrins. M. Singh, R. Sharma, U. C. Banerjee, *Biotechnology Advances*, 20: 341-359, 2002.
30. A rapid and sensitive fluorometric assay method for the determination of nitrilase activity, A. Banerjee, R. Sharma and U. C. Banerjee, *Biotechnology and Applied Biochemistry*, 37: 289-293, 2003.
31. A high-throughput amenable colorimetric assay for enantioselective screening of nitrilase producing microorganisms using pH sensitive indicators, A. Banerjee, P. Kaul, R. Sharma, U. C. Banerjee, *Journal of Biomolecular Screening*, 8(5): 559-565, 2003.
32. Microbial reduction of 1-acetonaphthone: a highly efficient process for multigram synthesis of S (-)-1-(1'-naphthyl) ethanol, A. Roy, M. S. Bhattacharya, L. Ravi Kumar, H.P.S. Chawla and U. C. Banerjee, *Enzyme and Microbial Technology*, 33(5): 576-580, 2003.

33. Screening for enantioselective nitrilases: Kinetic Resolution of racemic mandelonitrile to (R)-(-)-Mandelic Acid by new bacterial isolates, P. Kaul, A. Banerjee, S Mayilraj and **U. C. Banerjee**, *Tetrahedron Asymmetry*, 15: 207-211, 2004.
34. Determination of gibberellins in fermentation broth produced by *Fusarium verticillioides* MTCC 156 by high-performance liquid chromatography tandem mass spectrometry, R. Sharma, J. Iyer, A. K. Chakraborti and **U. C. Banerjee**, *Biotechnology and Applied Biochemistry*, 39: 83-88, 2004.
35. Streptokinase– a clinically useful thrombolytic agent. A. Banerjee, Y. Chisti and **U. C. Banerjee**, *Biotechnology Advances*, 22: 287-307, 2004.
36. Production of phytase (myo-inositolhexakisphosphate phosphohydrolase) by *Aspergillus niger* van Teighem in laboratory scale fermenter, P. Vats, D. K. Sahoo and **U. C. Banerjee**, *Biotechnology Progress*, 20(3): 737-743, 2004.
37. Production studies and catalytic properties of phytases (myo-inositolhexakisphosphate phosphohydrolases): An overview, P. Vats and **U. C. Banerjee**, *Enzyme and Microbial Technology*, 35: 3–14, 2004.
38. Removal of dyes from the effluent of textile and dyestuff manufacturing industry: A review of emerging techniques with reference to biological treatment, H. S. Rai, M. S. Bhattacharyya, J. Singh, T. K. Bansal, P. Vats and **U. C. Banerjee**, *Critical Reviews in Environmental Science and Technology*, 35: 219-238, 2005.
39. Biotransformations for the production of chiral drug (S)-Duloxetine catalyzed by a novel isolate of *Candida tropicalis*. P. Soni and **U. C. Banerjee**, *Applied Microbiology and Biotechnology*, 67: 771-777, 2005.
40. High performance liquid chromatographic method for the simultaneous estimation of the key intermediates of Duloxetine, P. Soni, T.T. Mariappan and **U. C. Banerjee**, *Talanta*, 67: 975-978, 2005.
41. Biocatalytic synthesis of S(-)-1-(1'-naphthyl) ethanol by a novel isolate of *Candida viswanathii*, A. L. Kamble, P. Soni and **U. C. Banerjee**, *Journal of Molecular Catalysis B: Enzymatic*, 35: 1-6, 2005.
42. Use of phytases (myo-inositolhexakisphosphate phosphohydrolases) for combating environmental pollution: a biological approach, Purva Vats, Mani Shankar Bhattacharyya and **U. C. Banerjee**, *Critical Reviews in Environmental Science and Technology*, 35: 469-486, 2005.
43. Bioactive compounds from cyanobacteria and microalgae: an overview, S. Singh, B. N. Kate and **U. C. Banerjee**, *Critical Reviews in Biotechnology*. 25(3): 73-95, 2005.
44. *Candida viswanathii* as a novel biocatalyst for stereoselective reduction of heteroaryl methyl ketones: A highly efficient enantioselective synthesis of (S)- α -(3-pyridyl) ethanol, P. Soni, G. Kaur, A. K. Chakraborti and **U. C. Banerjee**, *Tetrahedron Asymmetry*. 16 (14): 2425-2428, 2005.
45. Enantioselective hydrolysis of methoxyphenyl glycidic acid methyl ester [(\pm)-MPGM] by a thermostable and alkalostable lipase from *Pseudomonas aeruginosa*, S. Singh and **U. C. Banerjee**, *Journal of Molecular Catalysis B: Enzymatic*, 36: 30-35, 2005.
46. Study of the experimental conditions for the lipase production by a newly isolated strain of *Pseudomonas aeruginosa* for the enantioselective hydrolysis of (\pm) methyl trans-3(4-methoxyphenyl) glycidate (MPGM), Sawraj Singh and **U. C. Banerjee**, *Bioprocess and Biosystems Engineering*, 28: 341-348, 2006.
47. Enantioselective reduction of acetophenone and its derivatives with new yeast isolate *Candida tropicalis* PBR-2 MTCC 5158, P. Soni and **U. C. Banerjee**, *Biotechnology Journal*, 1: 80-85, 2006.
48. Purification and characterization of an enantioselective arylacetone nitrilase from *Pseudomonas putida*, A. Banerjee, P. Kaul and **U. C. Banerjee**, *Archives of Microbiology*, 184: 407-418, 2006.

49. Stereoselective nitrile hydrolysis by immobilized whole-cell biocatalyst, P. Kaul, A. Banerjee, and U. C. Banerjee, *Biomacromolecules*, 7(5): 1536-1541, 2006.
50. Catalytic characterization of phytase (myo-inositol hexakisphosphate phosphohydrolase) from *Aspergillus niger* van Teighem: glycosylation pattern, kinetics and molecular properties, Purva Vats and U. C. Banerjee, *Enzyme and Microbial Technology*, 39: 596-600, 2006.
51. Optimization of physicochemical parameters for the enhancement of carbonyl reductase production by *Candida viswanathii*, Pankaj Soni and U. C. Banerjee, *Bioprocess and Biosystems Engineering*, 29: 149-156, 2006.
52. Enhancing the catalytic potential of nitrilase from *pseudomonas putida* for stereoselective nitrile hydrolysis, A. Banerjee, P. Kaul and U. C. Banerjee, *Applied Microbiology and Biotechnology*, 72: 77-87, 2006.
53. Purification and characterization of an enantioselective carbonyl reductase from a *Candida viswanathii*, P. Soni, H. Kansal and U. C. Banerjee, *Process Biochemistry*, 42: 1632-1640, 2007.
54. Cross-linked amorphous nitrilase aggregates for enantioselective nitrile hydrolysis, P. Kaul and U. C. Banerjee, *Advanced Synthesis & Catalysis*, 349: 2167-2176, 2007.
55. Improvement of carbonyl reductase production of *Geotrichum candidum* for the transformation of 1-acetonaphthone to S(-)-1-(1'-naphthyl) ethanol, M. S. Bhattacharyya and U. C. Banerjee, *Bioresource Technology*, 98: 1958-1963, 2007.
56. Decolonization of triphenylmethane dye-bath effluent in an integrated two-stage anaerobic reactor, H.S. Rai, S.Singh, P.P.S. Chemma and U. C. Banerjee, *Journal of Environmental Management*, 83: 290-297, 2007.
57. Response surface optimization of the critical medium components for the carbonyl reductase by *Candida viswanathii* MTCC 5158, P. Soni, M. Singh, A. L. Kamble and U. C. Banerjee, *Bioresource Technology*, 98: 829-833, 2007.
58. Enantioselective transesterification of (RS)-1-chloro-3-(3,4-difluorophenoxy)-2-propanol using *Pseudomonas aeruginosa* lipase, M. Singh and U. C. Banerjee, *Tetrahedron: Asymmetry*, 18: 2079-2085, 2007.
59. Studies on the production of enantioselective nitrilase in a stirred tank bioreactor by *Pseudomonas putida* MTCC 5110, S.C. Naik, A. Banerjee, P.K. Kaul, B. Barse and U. C. Banerjee, *Bioresource Technology*, 99: 26-31, 2008.
60. Transesterification of primary and secondary alcohols using *Pseudomonas aeruginosa* lipase, M. Singh, S. Singh, R.S. Singh, Y. Chisti and U. C. Banerjee, *Bioresource Technology*, 99: 2116-2120, 2008.
61. Predicting enzyme behavior in nonconventional media: correlating nitrilase function with solvent properties, P. Kaul and U. C. Banerjee, *Journal of Industrial Microbiology & Biotechnology*, 35 (7): 713-20, 2008.
62. Molecular evolution of a defined DNA sequence with accumulation of mutations in a single round by a dual approach to random chemical mutagenesis (DuARChEM): A makeover of random chemical mutagenesis. U. Mohan and U. C. Banerjee, *ChemBioChem*, 9: 2238 – 2243, 2008.
63. Production of Carbonyl Reductase by *Geotrichum candidum* in a Laboratory Scale Bioreactor. M. S. Bhattacharyya, A. Singh and U. C. Banerjee. *Bioresource Technology*, 99: 8765-8770, 2008.
64. Studies on the dephosphorylation of phytic acid in livestock feed using phytase from *Aspergillus niger* van Teighem, P. Vats, B. Bhushan and U. C. Banerjee, *Bioresource Technology*, 100: 287-291, 2009.
65. Enhancing the biocatalytic potential of carbonyl reductase of *Candida viswanathii* using aqueous- organic solvent system, H. Kansal and U. C. Banerjee, *Bioresource Technology*, 100: 1041-1047, 2009.

66. Stereoselective synthesis of (R)-1-chloro-3(3,4-difluorophenoxy)-2-propanol using lipases from *Pseudomonas aeruginosa* in ionic liquid-containing system. M. Singh, R. S. Singh and U. C. Banerjee, *Journal of Molecular Catalysis B: Enzymatic*, 56: 294-299, 2009.
67. Purification and characterization of carbonyl reductase from *Geotrichum candidum*. M. Singh, M. S. Bhattacharyya and U. C. Banerjee. *Process Biochemistry*. 44 (9): 986-991, 2009.
68. *Burkholderia cenocepacia*: A new biocatalyst for efficient bioreduction of ezetimibe intermediate. A. Singh, A. Basit and U. C. Banerjee. *Journal of Industrial Microbiology and Biotechnology*, 36: 1369-1374, 2009.
69. Increased enantioselectivity of lipase in the transesterification of dl-(±)-3-phenyllactic acid in ionic liquids. Linga Banoth, Manpreet Singh, A. Tekewe and U. C. Banerjee. *Biocatalysis and Biotransformation*. 27: 4, 263-270. 2009.
70. Immobilization of intracellular carbonyl reductase from *Geotrichum candidum* for the stereoselective reduction of 1-naphthyl ketone. Mani Shankar Bhattacharyya, Amit Singh and U. C. Banerjee, *Bioresource Technology*, 101(6): 1581-6, 2010.
71. Cross-linked enzyme aggregates of recombinant *Pseudomonas putida* nitrilase for enantioselective nitrile hydrolysis. S. Kumar, Utpal Mohan, A. L. Kamble, S. Pawar and U. C. Banerjee. *Bioresource Technology*, 101(17): 6856-6858, 2010.
72. Stabilization of lysozyme by benzyl alcohol: Surface tension and thermodynamic parameters. M. K. Goyal, I. Roy, A. Amin, U. C. Banerjee and A. K. Bansal, *Journal of Pharmaceutical Sciences*, 99: 4149-4161, 2010.
73. Xanthine oxidoreductase: A journey from purine metabolism to cardiovascular excitation-contraction coupling, A. Agarwal, A. Banerjee and U C Banerjee, *Critical Reviews in Biotechnology*, 31: 264-280, 2011.
74. A rational approach for the design and synthesis of 1-acetyl-3,5-diaryl-4,5-dihydro(1H) pyrazoles as a new class of potential non-purine xanthine oxidase inhibitors, K. Nepali, G. Singh, A. Turan, A. Agarwal, S. Sapra, R. Kumar and U. C. Banerjee, P. K. Verma, N. K. Satti, M. K. Gupta, O. P. Suri and K. L. Dhar, *Bioorganic & Medicinal Chemistry*, 19: 1950-1958, 2011.
75. N-(1,3-diaryl-3-oxopropyl)amides as a new template for xanthine oxidase inhibitors, K. Nepali, A. Agarwal, S. Sapra, V. Mittal, R. Kumar and U. C. Banerjee, M. K. Gupta, N. K. Satti, O. P. Suri and K. L. Dhar, *Bioorganic & Medicinal Chemistry*, 19: 5569-5576, 2011.
76. N-Fused imidazoles as novel anticancer agents that inhibit catalytic activity of topoisomerase II α and induce apoptosis in G1/S phase, A. T. Baviskar, C. Madaan, R. Preet, P. Mohapatra, V. Jain, S. K. Guchhait, C. N. Kundu, U. C. Banerjee and P. V. Bharatam, *Journal of Medicinal Chemistry*, 54: 5013–5030, 2011.
77. Production of carbonyl reductase by *Metschnikowia koreensis*, A. Singh, Y. Chisti and U. C. Banerjee, *Journal of Bioresource Technology*, 102: 10679-10685, 2011.
78. Lipase-mediated kinetic resolution of (RS)-1-bromo-3-[4-(2-methoxy-ethyl)-phenoxy]-propan-2-ol to (R)-1-bromo-3-(4-(2-methoxyethyl) phenoxy) propan-2-yl acetate, A. Kaler, V. S. Meena, M. Singh, B. Pujala, A. K. Chakraborti and U. C. Banerjee, *Tetrahedron Letters*, 52: 5355–5358, 2011.
79. Production of shikimic acid. S. Ghosh, Y. Chisti, and U. C. Banerjee, *Biotechnology Advances* 30: 1425–1431, 2012.
80. New chemical and chemo-enzymatic routes for the synthesis of (RS)-, and (S)- Enciprazine, L. Banoth, T. K. Narayan and U. C. Banerjee, *Tetrahedron: Asymmetry*, 23 (17): 1272-1278, 2012.
81. New chemo-enzymatic synthesis of (R)-1-chloro-3-(piperidin-1-yl) propan-2-ol, L. Banoth, T. K. Narayan, B. Pujala, A. K. Chakraborti and U. C. Banerjee, *Tetrahedron: Asymmetry* 23: 1564–1570, 2012.

82. Lipase catalyzed kinetic resolution for the production of (S)-3-[5-(4-fluoro-phenyl)-5-hydroxy-pentanoyl]-4-phenyl-oxazolidin-2-one: An intermediate for the synthesis of ezetimibe. A. Singh, Y. Goel, A. K. Rai, and U. C. Banerjee, *Journal of Molecular Catalysis B: Enzymatic*, 85-86: 99-104, 2013.
83. Stereoselective biocatalytic hydride transfer to substituted acetophenones by the yeast *Metschnikowia koreensis*, A. Singh, Y. Chisti and U. C. Banerjee, *Process Biochemistry*, 47: 2398–2404, 2013.
84. Indenoindolone derivatives as topoisomerase II-inhibiting anticancer agents, C. N. Kundu, M. Kashyap, S. Kandekar, A. T Baviskar, D. Das, R. Preet, P. Mohapatra, S. R. Satapathy, S. Siddharth, S. K. Guchhait and U. C. Banerjee, *Bioorganic & Medicinal Chemistry Letters*, 23: 934-938, 2013.
85. Synthesis of metallic nanoparticles using plant extracts, A. K. Mittal, Y. Chisti, and U. C. Banerjee, *Biotechnology Advances* 31: 346–356, 2013.
86. Enhanced transfection efficiency and reduced cytotoxicity of novel lipid-polymer hybrid nanoplexes, S. Jain, S. Kumar, A. Agrawal, K. Thanki, and U. C. Banerjee, *Molecular Pharmaceutics*, 10: 2416–2425, 2013.
87. 3-Formylchromone based topoisomerase II α inhibitors: discovery of potent leads. Satyajit Singh, A. T. Baviskar, V. Jain, N. Mishra and U. C. Banerjee, P. V. Bharatam, K. Tikoo and M. P. S. Ishar, *Journal of Medicinal Chemistry Communication*, 4: 1257-1266, 2013.
88. Synthesis of gold nanoparticles using whole cells of *Geotrichum candidum*, A. K. Mittal, A. Kaler, A. Vasant Mulay and U. C. Banerjee, *Journal of Nanoparticles* 2013:6, 2013
89. One-pot synthesis of (R)-1-(1-naphthyl) ethanol by stereoinversion using *Candida parapsilosis*, S. M. Amrutkar, L. Banoth and U. C. Banerjee, *Tetrahedron Letters*, 54: 3274-3277, 2013.
90. Synthesis of imine-pyrazolopyrimidinones and their mechanistic interventions on anticancer activity. A. T. Baviskar, U. C. Banerjee, M. Gupta, R. Singh, S. Kumar, M. K. Gupta, S. Kumar, S. K. Raut, M. Khullar, S. Singh, and R. Kumar, *Bioorganic and Medicinal Chemistry*, 21: 5782-5793, 2013.
91. New and Efficient Chemical and First Chemo-enzymatic Synthesis of (RS)-, (R)-, and (S)-Bunitrolol, L. Banoth, B. Chandarrao, B. Pujala, A. K. Chakraborti and U. C. Banerjee, *Synthesis*, 46(4): 479-488, 2014.
92. Biosynthesis of silver nanoparticles: elucidation of prospective mechanism and therapeutic potential, A. K. Mittal, J. Bhaumik, S. Kumar and U. C. Banerjee, *Journal of Colloid and Interface Science*, 415(1):39-47,2014.
93. Biotransformation of 3-cyanopyridine to nicotinic acid by whole cells of recombinant *Escherichia coli*, O. Pai, L. Banoth, S. Ghosh, Y. Chisti, U. C. Banerjee, *Process Biochemistry*, 49, 655–659, 2014
94. 2-(2-Arylphenyl)benzoxazole As a Novel Anti-Inflammatory Scaffold: Synthesis and Biological Evaluation, K. Seth, S. K. Garg, R. Kumar, P. Purohit, V. S. Meena, R. Goyal, U. C. Banerjee and A. K. Chakraborti, *ACS Medicinal Chemistry Letters*, 5(5): 512-516, 2014.
95. Quercetin and gallic acid mediated synthesis of bimetallic (Ag-Se) nanoparticles and their antitumor and antimicrobial potential, A. K. Mittal, S. Kumar and U. C. Banerjee; *Journal of Colloid and Interface Science*, 431, 194-199, 2014.
96. Applications of phototheranostic nanoagents in photodynamic therapy, J. Bhaumik, A. K. Mittal, A. Banerjee, Y. Chisti, U. C. Banerjee, *Nano Research*, 5, 1373-1394, 2015.
97. Lipase catalyzed green synthesis of enantiopure atenolol. B. P. Dwivedee, S. Ghosh, J. Bhaumik, L. Banoth, and U. C. Banerjee, *RSC Advances*, 5 (21), 15850-15860, 2015.
98. Switch in site of inhibition: A strategy for structure based discovery of human topoisomerase II catalytic inhibitors, A. T. Baviskar, S. M. Amrutkar, N.Trivedi, V. Chaudhary, A. Nayak, S. K. Guchhait, U. C.

99. Biocatalytic Approach for the Synthesis of Enantiopure Acebutolol as a β 1-Selective Blocker, L. Banoth; N. S. Thakur; J. Bhaumik; **U. C. Banerjee, *Chirality*, 27: 382–391, 2015.**
100. Generation of aroE overexpression mutant of *Bacillus megaterium* for the production of shikimic acid, S. Ghosh, **U. C. Banerjee, *Microbial Cell Factories*, 14:69, 2015.**
101. Bioinspired nanotheranostic agents: synthesis, surface functionalization and antioxidant potential, J. Bhaumik, P. K. Aili, N. S. Thakur, A. Ghanghoria, A. K. Mittal and **U. C. Banerjee, *ACS Biomaterial Science and Engineering*, 1, 382-389, 2015 .**
102. Hyaluronic acid-PEI-Cyclodextrin polyplexes: Implications on in vitro and in vivo transfection efficiency and toxicity S. Jain, S. Kumar, A. Agrawal, K. Thanki, and **U. C. Banerjee, *RSC Adv.* 5: 41144-41154, 2015.**
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