

Annual Report of PG Department of Biotechnology (2014-2015)

The dept was started in 2008-09 with an aim to upgrade the quality education, to bring in research activities and to develop the department as a centre for research in the emerging field of Biotechnology.

Department signed MoU with Centre for Bioscience and Nanoscience Research (CBNR), Coimbatore on 8th February 2013 for collaborative research and academic programs.

Signed MoU with Synkro Max Biotech, Chennai on 2nd November 2013.

Number of Teaching Faculties - 04 (3 with Ph.D., 2 with M. Phil. and SLET)

Total number of students – 18

Result – During 2014 - 100% (with I, II, III Rank in University)

10 - Research articles published by P.G. Department of Biotechnology during June 2014- April 2015.

Seminar attended and paper presented by Faculties and Students

Rama Bhat P. and Jayadev K. attended and presented a paper in National Seminar on “New Vistas in Biological Sciences” organized by Dept of Biotechnology, St Aloysius College, Mangalore on 15th and 16th January 2015.

Gagana B. attended and presented a paper in National Seminar on “New Vistas in Biological Sciences” organized by Dept of Biotechnology, St Aloysius College, Mangalore on 15th and 16th January 2015.

Prajna P.S. and Rama Bhat P. presented a paper in National Seminar on “New Vistas in Biological Sciences” organized by Dept of Biotechnology, St Aloysius College, Mangalore on 15th and 16th January 2015. (Ph.D. scholar)

Rama Bhat P. and Jayadev K. participated and presented a paper in two- day National conference on “Global Trends and Challenges in Biosciences” organized by Dept. of Microbiology, Dr. MGR Janaki College of Arts and Science for Women, Chennai on 5-6 December 2014.

Rama Bhat P. and Jayadev K. attended one-day symposium of Society of Biological Chemists (India) Coastal Karnataka Chapter, Manipal on “Recent knowledge in the field of Biological Chemistry and allied fields” organized by School of Life Sciences, Manipal University, Manipal on 25th October 2014.

Rama Bhat P., Jayadev K. and Shrinidhi Shetty attended one day seminar on “Radiation and Radioisotopes: Tools in Scientific Research” organized by Centre for Application of Radioisotopes and Radiation Technology (CARRT), Mangalore University, Mangalagangothri on 28th April 2014.

Rama Bhat P. and Jayadev K attended and presented a paper in one-day National Seminar on “Natural vs Synthetic Drugs- A Medicinal approach” organized by PG Dept of Biochemistry, St Aloysius College, Mangalore on 30 September 2014.

Poster Presented by

Jenitta Emima Packiyam attended and presented a poster in National Seminar on “New Vistas in Biological Sciences” organized by Dept of Biotechnology , St Aloysius College, Mangalore on 15th and 16th January 2015.

Jenitta Emima Packiyam attended and presented a poster in 12th National Conference on “Global Trends and Challenges in Biosciences” organized by Department of Microbiology, Dr. MGR Janaki College of Arts and Science for Women, Chennai, held on 5th and 6th December 2014,

Gagana B. attended and presented poster in National Conference on *Advance in Environment Biotechnology for Sustainability*, organized by Department of Biotechnology Alva’s College, Moodbidri in association with Karnataka State Pollution Control Board, Mangalore on 6 - 7 Feb. 2015. (II M. Sc. student)

Mahalakshmi C.S. attended and presented a poster in National Conference on *Advance in Environment Biotechnology for Sustainability*, Organized by Department of Biotechnology Alva’s College, Moodbidri in association with Karnataka State Pollution Control Board, Mangalore on 6 - 7 Feb. 2015. (I M. Sc. student)

Srinivasa Reddy B and Rama Bhat P. presented a poster in National Conference on *Advance in Environment Biotechnology for Sustainability*, , Organized by Department of Biotechnology Alva’s College, Moodbidri in association with Karnataka State Pollution Control Board, Mangalore on 6 - 7 Feb. 2015. (Ph.D. scholar)

Ongoing Research project

Title of the Project: Antimicrobial, antioxidant and wound healing properties of leaf, bark, fruit extracts and silver nanoparticles of *Samadera indica* Gaertner

Awarder: Vision Group of Science and Technology (VGST Project), DBT Karnataka

Awardee: PG Biotechnology Department

Amount: Rs. 30,000.00

Duration: 5 months (March - July 2015)

Names of students working: **Ms. Chaithanneya and Ms. Deepa P.R. (I M.Sc.)**

Guest Lectures

- “Application of enzymes in Food Industry” by Dr. R. Ragunathan, Senior Scientist (R&D), Synkro Max Biotech, Chennai on 23.09.2014 (11 am- 12.30 pm).
- “Recent Advances in Biological Sciences” by Dr. R. Ragunathan, Senior Scientist (R&D), Synkro Max Biotech, Chennai on 23.09.2014 (2.30-4.00 pm).
- “Kitchen Chemistry” by Dr. Arun Isloor, Associate Prof. Department of Chemistry, NITK, Surathkal, Mangalore on 14.10.2014.
- “Modern Food Biotechnology in Human Health and Development” by Dr. Vidya S.M., Associate Professor, Dept. of Biotechnology, NMAMIT, Nitte on 23.01.2015.

Seminar/Conferences

Organized Two-day National Conference on “**Advances in Environmental Biotechnology for Sustainability**” in association with Karnataka State Pollution Control Board, Mangalore on 6-7 February 2015.

A State Level Science Meet, “Alva’s VJnana” with Science students interaction, lab visit and seminar competition on “Green Nanotechnology” held on 23rd January, 2015.

Institution/Industry visit

Students of I M.Sc. and II M.Sc. year with Faculties of Biotechnology visited School of Life Sciences, Manipal on 27/11/2014. SLS organized one day work shop for the students on instrumentation, Guest lectures and demonstration.

Visited CFTRI, Mysore, Labland Biotech & Biodiesel, Mysore on 6th April 2015; Pasteur’s Institute, Coonoor, Tea Processing Unit, Nilgiri, Botanical Garden, Ooty and Potato Research Institute, Ooty on 7-8 April 2015.

Research publications by P.G. of Biotechnology 2014-15

Prateeksha Chelkar, Manisha Shetty, Jenitta Emima Packiyam E, Rama Bhat P, Jayadev K, Venkatakrisna Rao. 2014. Decolorization of dye congo red by *Aspergillus niger* silver nanoparticles. *J. Microbiol. Biotech. Res.* 4(3): 36-39.

Srinivasa Reddy B. and Rama Bhat P. 2014. Identification of two HT-29 plasma membrane proteins as binding glycoproteins of Enterotoxigenic *Escherichia coli* (ETEC)

Colonization factor antigen I (CFA/I). *International Journal of Current Microbiology and Applied Sciences* 3(10): 290-300.

Lakshmi N., Jenitta Emima Packiyam, Rama Bhat P. and Jayadev K. 2014. Studies on phytochemical, synthesis of silver nanoparticles from the floral extract of *Mesua ferrea* L. and their antibacterial activity. *International Journal of Green and Herbal Chemistry* 3(4): 1730-1739

Srinivasa Reddy B. and Rama Bhat P. 2015. CFA/I, an ETEC colonization factor, is a target of therapeutic significance: Scope of IgY antibodies as an alternative to antibiotics. *Proc. Nat. Sci. Acad. (Biol. Sci.)* (in press).

Prajna P.S. and P. Rama Bhat. 2015. Phytochemical and mineral analysis of root of *Loeseneriella arnottiana* Wight. *International Journal of Current Research in Biosciences and Plant Biology* 2(3): 67-72.

Prathibha S., Jenitta Emima Packiyam E., Rama Bhat P., Jayadev K. and Shrinidhi Shetty. 2015. Green synthesis of silver nanoparticles from fruit extracts of *Terminalia chebula* Retz. and their antibacterial activity. *International Journal of Biosciences* 3(2): 29-35.

Additional information

PG student are undertaking their project work in the Dept with different topics

Regular class seminars and unit tests

Additional minor work on drinking water quality test as well as testing of hostel drinking water