

Department of Microbiology

Barkatullah University, Bhopal

The Department of Microbiology was established in the year 1981-1982. At present, the Department offers two year's M.Sc., Ph. D. and Post Doctoral Research program in Microbiology.

Course of Study

1. M.Sc. Microbiology

The admission in M.Sc. Microbiology programme is merit based at National level. In M.Sc. Microbiology Programme students are exposed to various fields of Microbiology like Agriculture & Environmental Microbiology, Medical Microbiology, Industrial Microbiology, Bacteriology, Virology, Microbial Biochemistry, Microbial Metabolism, Microbial Genetics, Immunology & Immunodiagnostic, Molecular Biology & Genetic Engineering, Food & Dairy Technology etc. Besides these in Fourth Semester, students are sent to various International and National Research Laboratories/Institutes to carry out their Project/Dissertation Research work.

Seats	:	30
Duration	:	Two Year's (Four Semesters)
Eligibility	:	B.Sc. (Bio Group)/M.B.B.S./B.M.L.T./B.D.S. with minimum of 50% marks.
Fees	:	15,850/- (In First Semester)

2. Ph.D. Microbiology

This Department is an approved research centre for conducting Ph.D. in Subject-Microbiology under the Faculty of Life sciences. Students can apply for Ph.D. on the basis of entrance test at National level followed by an interview and as per University Guidelines.

Head of the Department

Dr. Vinod Singh

Professor & Head

Department of Microbiology

Specialization: Immunology and Medical Microbiology

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Departmental Activities:

Department of microbiology has been extensively engaged on identification, characterization and management strategies of pathogenic & non-pathogenic microbes on human, environment and various socio economically important plants. The department has conducted the study on antimicrobial, anti-Inflammatory activity and immuno-modulating effect of probiotics against *Enterobacteriaceae* and also induced arthritis (CIA) in experimental model. The department has conducted comparative study of molecular, genomic and antigenic patterns of drug resistant and drug sensitive bacteria of oral micro flora.

One of the faculty members is doing research on identification and characterization of Begomovirus, *Cucumber mosaic virus*, potyvirus and phytoplasma species from various horticulture, ornamental, weed and economically important crop plants. The department is engaged in study on genetic diversity of medicinally important Mushroom from Madhya Pradesh region as well as engaged on isolation & identification of various bacterial & fungal endophytes on deferent plants and find its properties on plant growth promotion.

The department is also working on interaction between microbes and plants especially related to soil rhizospheric bacteria. The desired work is aimed to generate beneficial bacteria which are interacting with plant roots and they are promoting/improve the plant growth. We have successfully detected and identified some beneficial bacterial strains which are help for plant growth promotion and showed biocontrol activity against phyto-pathogens for development of sustainable agriculture.

The department has been regularly organized various conferences, seminars and informative scientific lectures related to different aspects of advance modern science. Recently One Day National Symposium on “Current Trends in Life Sciences” organized by Dr. Vinod Singh on February 2017.

Departmental Facilities:

- The Department has its own well furnished building including Class Rooms, Library, Seminar Hall, Computer Lab and have well developed laboratories with well equipped instruments such as Atomic Absorption Spectrophotometer, PCR, Electrophoresis Unit, Gel Documentation System, ELISA Reader, Lyophilizer, Laminar Air Flow, BOD Incubators, Shaking Incubators, Centrifuge, pH Meter, UV-Visible Spectrophotometer, Microscopes, Oven etc.
- The department established mushroom cultivation centre.
- The department has established insect proof experimental agricultural field for research experiment purpose related to maintain the plant virus/es cultures and use of beneficial bacterial strains for plant growth promotion for development of sustainable agriculture.

Research Projects completed and on hand:

All the Faculty members are engaged in Teaching and Research work in the field of Microbiology and have received various research projects from different funding agencies like ICMR, DBT, UGC, MPCST etc.

Research Scholar Registered for Ph. D. at Department (2012-2017): 10 No.

NET CSIR-UGC (LS/JRF/SRF)	:	02 Nos.
ICAR NET	:	03 Nos.
GATE	:	01 Nos.
B.U. ENTRANCE EXAMINATION	:	04 Nos.

Awards:

- **Dr. Vinod Singh** has received Distinguished Scientist Award for the contribution and achievement in the field of **Microbiology-VIFRA-2015** at Chennai by Venus International Foundation, Center for Advanced Research

and Design.

- **Mr. Govind Gupta** and **Mrs. Bharti Mahajan**, Ph.D. Research Scholar, Department of Microbiology has been awarded **Fellowship for Training of Young Scientist** in 32nd M.P. Young Scientist Congress organized by M. P. Council of Science & Technology, Bhopal (M.P.) held on March 2017.
- Students of M.Sc. Microbiology were awarded **Third Prize and Consolation Prize** in National Conference on Climate Change-Its Impact on Agriculture, Biodiversity, Health and Environment held on March 2017.

FACULTY

S.N.	Name of Faculty	Designation	Specialization
1.	Prof. Anil Prakash	Professor & Dean Faculty of Life Sciences	Agricultural Microbiology & Biotechnology, Mycology, Mushroom Technology and PGPR
2.	Dr. Vinod Singh	Professor & Head	Immunology and Medical Microbiology
3.	Dr. Sunil Kumar Snehi	Assistant Professor	Plant Molecular Virology and Molecular Biology

Photo Graphs of Department

1. One Day National Symposium held on 11 February 2017

(From Left- Dr. Rahul M. Shrivastav, Dr. Prabha Desikan, Dr. Vinod Singh and Dr. Parul Tripathi)



(From Left- Dr. Manoj Tripathi, Dr. Anil Prakash, Dr. Vinod Singh and Prof. Akhilesh Kumar Pandey)





2. One Day Lecture given by Prof. A.M. Deshmukh

(From Left- Dr. Sunil Kumar Snehi, Dr. Anil Prakash, Prof. A.M. Deshmukh and Dr. Vinod Singh)



3. Faculty Members/Sr. Scientist given Lecture in One Day Lecture Series at Department of Microbiology

(From Left- Dr. Sunil Kumar Snehi, Dr. Puneet Singh Chauhan, Dr. Vinod Singh, Prof. Iqbal Ahmad, Dr. Rajnish Chaturvedi, Dr. Deepak Dwivedi)



4. Students of Regional Science College visited Department of Microbiology



5. Library of Department of Microbiology



**Dr. Vinod Singh
Professor & Head
Department of Microbiology**