

D. Y. PATIL EDUCATION SOCIETY

(Institution Deemed to be University), Kolhapur

Re-Accredited by NAAC with 'A' Grade

Constituent Unit: Center for Interdisciplinary Research

Programme Name:

M.Sc. Stem Cell and Regenerative Medicine

M.Sc. Medical Biotechnology



Eligibility Criteria: B.Sc. in Zoology, Botany, Microbiology, Biochemistry any related life science programmes, or MBBS, BDS, BAMS, BHMS, B.Pharma or B.E./B.Tech. Biotechnology from recognized university with 50% marks.

OBJECTIVES OF THE PROGRAMME

M.Sc.in Stem Cell & Regenerative Medicine

Department of Stem cell and Regenerative Medicine and Medical Biotechnology offer a specialized programme on M.Sc.in Stem cell and Regenerative Medicine since 2011 for the aspiring candidates who are interested in the field of stem cell and regenerative medicine. This programme covers basic and applied science viz. cell biology, molecular biology and developmental biology with special emphasis on stem cell biology. The University has successfully completed 8 batches of M.Sc. in stem cell and Regenerative Medicine. The two year course is designed in such a way that along with the basic interdisciplinary subject knowledge of life science subjects. Students are also skilled in stem cell techniques. Students also work in DYP Hospital in close association of Doctors and medical students to understand the importance of stem cell in medical problems. The university organizes frequent industrial visits, webinars, workshops and guest lectures by Indian and foreign Scientists. The department has highly qualified faculty with internationally reputed research recognition. The Department also has MOU with world class Universities which helps student's exposure to global platform.

M.Sc. Medical Biotechnology

Centre for Interdisciplinary research has introduced a programme on M.Sc. Medical Biotechnology in 2017. This programme focuses on scientific and industrial applications of biotechnology in support of medicine. This programme covers cell and molecular biology, immunology, genetics, microbiology etc with a special focus on industrial and medical application. This programme is suitable for all biotechnology and life science students. This programme will provide necessary training to pursue successful job/research in industry and other Medical Biotechnology field.

- Contact information: 9423981296 / 9689781122

Principle/Key Person Message

In order to undertake frontier level research in the field of Medical Science, the "Centre For Interdisciplinary Research" has been established at D.Y. Patil Education Society (Deemed to be University), Kolhapur. The centre offers interdisciplinary science research programs leading to Medical research and the Ph.D. awards. To fill up the gap between under graduate and Ph.D. programme, the University has started postgraduate programmes, M.Sc. Stem Cell & Regenerative Medicine, M.Sc. Medical Biotechnology and M.Sc. Medical Physics. The Centre has organized a number of International and National conferences & workshops since its establishment. The centre has various on-going research projects funded by various govt agencies more than 4 crores.



S. Mohan Karuppayil
HOD

ABOUT THE INFRASTRUCTURE



RECOGNITIONS/ACCREDITATIONS/AWARDS IF ANY

Major Highlights

Work in the department is recognized by Government of Maharashtra, through three awards of Start up India, Innovation in Health care worth Rs 1 Lakh, Rs 75,000 and Rs. 50,000 and felicitated by Mr. Nitin Gadkari out of 3000 candidates across the Maharashtra.

Start up Hero of Maharashtra Mr. Abhinandan Patil

Innovation in Health care First Prize Mr. Deepak Sawant

Innovation in Health care Second Prize Miss . Priyanka Papat Patil

MOU's



PATENTS

- | | | | |
|----|---|-----------------|------------|
| 1. | Method of constructing tissue engineered human ear pinna prosthesis.
The patent application number: 201921004685 | Dr. M. G. Joshi | 01/03/2019 |
| 2. | Synthesis process of composite artificial skin bioink for 3D bioprinting
and wound healing application.
The patent application number: 201921004686 | Dr. M. G. Joshi | 01/03/2019 |
| 3. | Process for embedding oleic acid coated superparamagnetic iron oxide
nanoparticles in lipidic nanoparticles.
Indian Patent Application No. 201921019463 | Dr. Gulbake A | 21-06-2019 |

PROGRAMME/COURSE DETAILS

SEMESTER-I

Theory Papers	Theory marks	Internal marks	Total marks
(Paper 1) SCRM.1.1.1 Biochemistry	80	20	100
(Paper 2) SCRM.1.1.2 Cell Biology & Developmental Biology	80	20	100
(Paper 3) SCRM.1.1.3 Genetics and Molecular Biology	80	20	100
(Paper 4) SCRM.1.1.4 Immunology and Virology	80	20	100
Practical	Marks		
(Practical 1) SCRM.1.1.P.1 Biochemistry	40	-	40
(Practical 2) SCRM.1.1.P.2 Genetics and Molecular Biology	40	-	40
(Practical 3) SCRM.1.1.P.3 Cell Biology & Developmental Biology	40	-	40
(Practical 4) SCRM.1.1.P.4 Immunology and Virology	40	-	40
(Practical 5) SCRM.1.1.P.5 Industry visit and report	40	-	40
Total	520	80	600

SEMESTER-2

Theory Papers	Theory marks	Internal marks	Total marks
(Paper 5) SCRM.1.2.1 Clinical Biochemistry and Disease Metabolism	80	20	100
(Paper 6) SCRM.1.2.2 Biostatistics and Bioinformatics	80	20	100
(Paper 7) SCRM.1.2.3 Biomedical Instrumentation & Nanotechnology	80	20	100
(Paper 8) SCRM.1.2.4 Stem Cell Biology	80	20	100
Practical	Marks		
(Practical 6) SCRM.1.2.P.1 Clinical Biochemistry and Disease Metabolism	40	-	40
(Practical 7) SCRM.1.2.P.2 Biostatistics and Bioinformatics	40	-	40
(Practical 8) SCRM.1.2.P.3 Biomedical Instrumentation & Nanobiotechnology	40	-	40
(Practical 9) SCRM.1.2.P.4 Stem Cell Biology	40	-	40
(Practical 10) SCRM.1.2.P.5 Industry Visit and Report	40	-	40
Total	520	80	600

SEMESTER-3

Theory Papers	Theory marks	Internal marks	Total marks
(Paper 9) SCRM 2.3.1 Stem Cells: Diseases and Applications	80	20	100
(Paper 10) SCRM 2.3.2 Biomaterials, Tissue Engineering and 3D BioPrinting	80	20	100
(Paper 11) SCRM 2.3.3 Clinical research, bioethics and regulatory affairs	80	20	100
(Paper 12) SCRM 2.3.4 Cell and Tissue banking and Cryopreservation	80	20	100
Practical	Marks		
(Practical 11) SCRM 2.3.P.1 Stem Cells: Diseases and Applications	40	-	40
(Practical 12) SCRM 2.3.P.2 Biomaterial, Tissue Engineering and 3D BioPrinting	40	-	40
(Practical 13) SCRM 2.3.P.3 clinical research, bioethics and regulatory affairs	40	-	40
(Practical 14) SCRM 2.3.P.4 Cell and Tissue banking and Cryopreservation	40	-	40
(Practical 15) SCRM 2.3.P.5 Project Synopsis	30	10	40
Total	520	80	600

SEMESTER-4

Theory Papers	Theory marks	Internal marks	Total marks
(Paper 13) SCRM.2.4.1 Elective 1	80	20	100
(Paper 14) SCRM.2.4.2 Elective 2	80	20	100
Project and Practical			
(Practical 16) SCRM 2.4.P.1 Major Project	300	100	400
Total	460	140	600

Elective Papers (Please choose any two papers)

1. Research Methodology
2. Entrepreneurship and Management
3. Nanobiotechnology
4. Enzymes and Enzyme technology
5. Environmental Sciences and Biodiversity
6. Experimental techniques and Good lab practices

M.Sc. MEDICAL BIOTECHNOLOGY

SEMESTER-1

Theory Papers	Theory marks	Internal marks	Total marks
(Paper 1) MBT.1.1.1 Biochemistry	80	20	100
(Paper 2) MBT.1.1.2 Cell Biology & Developmental Biology	80	20	100
(Paper 3) MBT.1.1.3 Genetics and Molecular Biology	80	20	100
(Paper 4) MBT.1.1.4 Immunology and Virology	80	20	100
Practical	Marks		
(Practical 1) MBT.1.1.P.1 Biochemistry	40	-	40
(Practical 2) MBT.1.1.P.2 Cell Biology & Developmental Biology	40	-	40
(Practical 3) MBT.1.1.P.3 Genetics and Molecular biology	40	-	40
(Practical 4) MBT.1.1.P.4 Immunology and Virology	40	-	40
(Practical 5) MBT.1.1.P.5 Industry Visit and Report	40	-	40
Total	520	80	600

SEMESTER-2

Theory Papers	Theory marks	Internal marks	Total marks
(Paper 5) MBT.1.2.1 Clinical Biochemistry and Disease Metabolism	80	20	100
(Paper 6) MBT.1.2.2 Biostatistics and Bioinformatics	80	20	100
(Paper 7) MBT.1.2.3 Biomedical Instrumentation & Nanotechnology	80	20	100
(Paper 8) MBT.1.2.4 Stem Cell Biology	80	20	100
Practical	Marks		
(Practical 6) MBT.1.2.P.1 Clinical Biochemistry and Disease Metabolism	40	-	40
(Practical 7) MBT.1.2.P.2 Biostatistics and Bioinformatics	40	-	40
(Practical 8) MBT.1.2.P.3 Biomedical Instrumentation & Nanotechnology	40	-	40
(Practical 9) MBT.1.2.P.4 Stem Cell Biology	40	-	40
(Practical 10) MBT.1.2.P.5 Industry visit and report	40	-	40
Total	520	80	600

SEMESTER-3

Theory Papers	Theory paper marks	Internal marks	Total marks
(Paper 9) MBT.2.3.1 Industrial Biotechnology	80	20	100
(Paper 10) MBT.2.3.2 Cell Culture and Animal Biotechnology	80	20	100
(Paper 11) MBT.2.3.3 Medical Microbiology	80	20	100
(Paper 12) MBT.2.3.4 Molecular Diagnostics & Therapeutics	80	20	100
Practical	Marks		
(Practical 11) MBT.2.3.P1 Industrial Biotechnology	40	-	40
(Practical 12) MBT.2.3.P2 Cell culture and Animal Biotechnology	40	-	40
Practical 13) MBT.2.3.P3 Medical Microbiology	40	-	40
(Practical 14) MBT.2.3.P4 Molecular Diagnostics & Therapeutics	40	-	40
(Practical 15) MBT.2.3.P5 Project Synopsis	30	10	40
Total	520	80	600

SEMESTER-4

Theory Papers	Theory paper marks	Internal marks	Total marks
(Paper 13) MBT.2.4.1 Elective I	80	20	100
(Paper 14) MBT.2.4.2 Elective II	80	20	100
Project and Practical			
(Practical 16) MBT.2.4.P1 Major Project	300	100	400
Total	460	140	600

Elective Papers (Please choose any two papers)

7. Research methodology
8. Entrepreneurship and management
9. Nanobiotechnology
10. Enzyme and Enzyme technology
11. Environmental Sciences and Biodiversity
12. Experimental Animal Techniques and Good Laboratory Practices

FACULTY DETAILS



Prof. S Mohan Karuppaiyl

Professor and Head

Research Interests: Drug Repositioning, Identification of targets in Biofilm formation in *Candida albicans*.

Google Scholar: https://scholar.google.co.in/citations?hl=en&user=L4tH6_8AAAAJ

E-Mail: prof.karuppaiyl@gmail.com



Dr. Meghnad Joshi

Associate Professor

Research Interests: Development of tissue engineered and 3D printed scaffolds for organ development and other medical applications. Stem cell biology and regenerative medicine, cellular basis of human organ engineering, cancer biomarker identification, cell transplantation, applications of growth factors, and disease biophysics, mitochondrial transplantation strategies for organ

regeneration. <https://scholar.google.co.in/citations?hl=en&user=IRfMMUkAAAAJ>

E-Mail: drmeghnadjoshi@gmail.com



Dr. Arpita Pandey Tiwari

Assistant Professor

Research Interests: Nanobiotechnology, Nanomedicine, Magnetofection, Gene Delivery, Gene therapy, Nucleic acid Biosensing, Cancer Therapy, Bio-Inks, Targeted Gene Therapy, Cancer Stem cells, Antimicrobial studies, Cytotoxicity studies, DNA-nanomaterial interaction for biomedical applications.

<https://scholar.google.co.in/citations?hl=en&user=9W6x18sAAAAJ>

E-Mail: arpitaptiwari@gmail.com



Dr. Ashwini Jadhav

Assistant Professor

Research Interests: Identification of Molecular targets in Biofilm formation in *Candida albicans*. Drug repurposing, Fungal biotechnology

<https://scholar.google.co.in/citations?user=e0JqWtsAAAAJ&hl=en>

Email: ashujadhav09@gmail.com



Dr. Shivaji Kaashte

Assistant Professor

Research Interests:

Stem cells, Biomaterials and its application in healthcare, Wound healing and skin substitutes, Bone defects and Bone tissue engineering.

Google Scholar: <https://scholar.google.co.in/citations?hl=en&user=tsbH-VwAAAAJ>

E-Mail: kashtesb@gmail.com

ADJUNCT FACULTY

Dr. Suchitra Sumitran , University of Gothenberg, Sweden
Dr.Udyan Apte, University Kansas, USA
Dr. Ramesh Bhonde, DY Patil University, Pune
Dr. Gokul Das, Roswell Park Cancer Institute, New York, USA
Dr. Mahesh Kulkarni, NCL. Pune.

Scholarships Available if any:

Home like Experience for Outstation students in Campus:-

Alumni Testimonials:-

D. Y. Patil provides a platform to nurture the research capabilities and makes one competent enough to compete with world class researchers and scientists. I am so thankful to CIR for making me who I am today. (Dr. Sonali Rohiwal,Czech Republic)

PLACEMENT COMPANIES



Dr. Ashwini B. Salunkhe

2012

ashwinisalunkhe@yahoo.com

Current employment:

Assistant Professor,
Rajaram College ,Kolhapur

Past employment :

Visiting Scientist,
University Of Sweden



Dr. Nanaso D. Thorat

2014

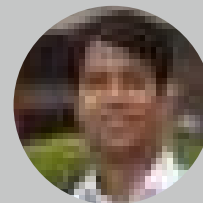
nanasaheb.thorat@wrh.ox.ac.uk

Current employment:

Marie-Curie Fellow (Researcher),
Medical Science Division
University Of Oxford

Past Employment:

Post Doctoral Fellow
Material and Surface Science
Institute, Bernal Institute, University
of Limerick, Ireland.



Dr. Vishwajeet M. Khot

2014

wish.khot@gmail.com

Current employment:

Assistant Professor,
D.Y. Patil University ,
Kolhapur .

Past Employment:

Researcher
University College of London,
UK



Dr. Manisha R. Phadataré

2014

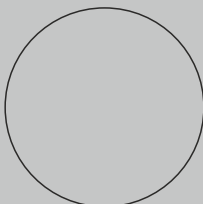
phy.manisha@gmail.com

Current employment:

Researcher at Mid Sweden
University, Sweden

Past Employment:

Assistant Professor,
D. Y. Patil University ,
Kolhapur



Dr. Seema J. Dhawal

2014

seemadhawal.7@gmail.com

Current employment:

Sub Regional Officer ,
Maharashtra Pollution Control
Board Division,Mumbai



Dr. Hemraj M. Yadav

2014

hemrajy@gmail.com

Current employment:

Ramanujam Fellow,
Shivaji University,Kolhapur.

Past employment:

Assistant Professor,
D.Y. Patil University ,
Kolhapur



Dr. Sachin V. Otari

2014

sachinotari169@gmail.com

Current employment:

Kothari Post Doctoral Fellow,
Shivaji University, Kolhapur

Past employment:



Dr. Prajakta B. Shete

2014

jgd.prajakta@gmail.com

Current employment:



Dr. Vidya A. Karande

2015

vidyakarande16@gmail.com

Current employment:

Assistant Professor



Dipali S. Nikam

2015

dipaphysics@gmail.com

Current employment:



Ms. Swati Vilas Jadhav

2015

swativjphysics@gmail.com

Current employment:

Postdoctoral Researcher, Busan,
South Korea



Dr. Satvekar Rajashri Kundlik

2015

rajshrinaik5@gmail.com

Current employment:

Assistant Professor (Adhoc),
Rajaram College, Kolhapur



Dr. Rohiwal Sonali Suresh

2015

rohiwalsonali@gmail.com

Current employment :

Post Doctoral Fellow,
Czech Republic.

Past employment :

Post Docotral Fellow, IIT Kharagpur



Dr. Rakesh Maruti Patil

2016

rmpatil2007@gmail.com

Current employment :

Scientific Officer,
Government Forensic Laboratory,
Kolhapur



Dr. Raghvendra Ashok Bohara

2016

raghvendraboehara@gmail.com

Current employment:

Post Doctoral Fellow,
National University Of Ireland,
Galway



Dr. Arpita Pandey Tiwari

2016

arpitaptiwari@gmail.com

Current employment:

Assistant Professor,
D.Y. Patil University ,Kolhapur

Past : Assistant Professor,
School of Nanoscience and
Technology,
Shivaji University,Kolhapur



Dr. Abhinav Vasant Raut

2017

raut.abhinav@gmail.com

Current employment:

Research Scientist,DMIMS,
Wardha

Past : Post Docotral Fellow
IIT Madras



Ms. Sneha G. Kumbhar

2017

ksneha.22@gmail.com

Current employment:

Scientific Writer,
Springer Nature Publishers,
Pune



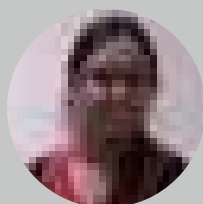
Mr. Valmiki B. Koli

2017

valmiki1010@gmail.com

Current employment:

Post Doctoral Fellow,
National Dong Hwa University Shou-
Feng,
Hualien,Taiwan



Ms. Jagruti V. Meshram

2019

jagruti_meshram@yahoo.com

Current employment:



Mr. Kashte Shivaji Bhikaji

2019

kashtesb@gmail.com **Current**

employment:

Assistant Professor,
D.Y. Patil University ,Kolhapur



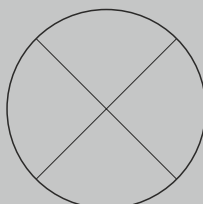
**Mr. Patil Abhinandan
Ravsahab**

2019

abhisir5@gmail.com

Current employment:

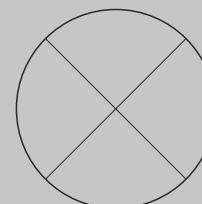
Assistant Professor,
Sanjay Ghodawat University,
Kolhapur



Ms. Patil Priyanka Popat

2019

Current employment:



Ms. Pritighute Patil

2020

pritighutepatil@gmail.com

Current employment:

Assistant Professor,
Dr. D. Y. Patil University,
Pune

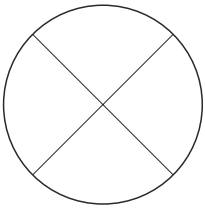


Ms. Pranjali Mahamuni
2020
pranjalisamsung@gmail.com
Current employment:

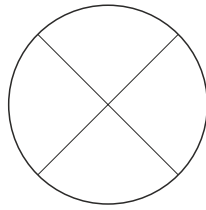


Ms. Pooja Patil
2021
Current employment:
Assistant Professor,
CSIBER, Kolhapur

OVERSEES STUDENTS EXCHANGE AWARDS



Ms. Akshita Sharma
Student exchange
Inserm Aix Marseille
University, France.



Mr. Sohan Thombare
Student exchange
Mid Sweden University,
Sweden



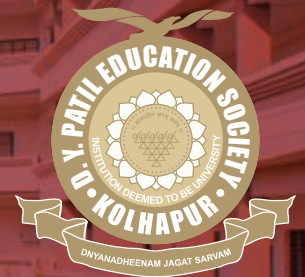
Ms. Shital Kale
Student exchange
DST-SERB



Dr. J. L. Gunjekar
Teacher exchange
DST

Contact Details:

Dr. Arpita Pandey Tiwari , 9423981296
Dr. Ashwini Jadhav 9689781122
Ms. Namrata shinde 7507653550



D. Y. PATIL EDUCATION SOCIETY
DEEMED TO BE UNIVERSITY, KOLHAPUR

Reaccredited by NAAC with 'A' Grade

Address: 869, E, D. Y. Patil Vidyanagar, Kasaba Bawada, Kolhapur, Maharashtra 416006

Phone: (0231) 2601235 / 36, | **Fax:** (0231) 2601595

E-mail: info@dypatilkolhapur.org | **Website:** www.dypatilunikop.org