

## ABOUT REGENERATIVE MEDICINE LABORATORY

Regenerative Biology deals with repair and regeneration of degenerated tissue by employing assets of stem cells.

Stem cells are the body's raw material, able to become any types of cells that body needs such as Muscles cells, skin cells, blood cells and more. Stem-cell field encompasses the properties of stem cells and their potential therapeutic use. Mesenchymal stem cell (MSCs) research successively moves towards clinical phases due to their advantageous characteristics such as stemness and plasticity, lack of immunogenicity and safety upon transplantation. Dental pulp from human teeth have been proposed as a promising source of multipotent MSCs to be used in clinical applications, including dental tissue engineering, repair of bone injury, treatment of neural defects and degenerative diseases. The **Regenerative Medicine Laboratory (RML)**, is a state-of-the-art research lab in **Dr. D. Y. Patil Dental College & Hospital, Sant Tukaram Nagar, Pimpri, India**, dedicated to the study of dental pulp stem cell and regenerative biology. RML mandate to allow this cross-disciplinary, multi-pronged approach to research, straddles the divide between clinical and laboratory research in stem cell biology. Research at RML, involves a wide range of topics in stem cell biology:



## STEM CELL TRAINING AND RESEARCH

### STEM CELL TRAINING PROGRAM

#### Practicals:-

Preparation of media

Sub culturing of cells, cryopreservation and revival

Isolation of cells from tissue

Maintenance of cultures (different types)

Types of cultures (adherent and suspension, primary cells, etc.)

Cell count and viability (Trypan blue)

Characterisations and differentiation of stem cells

DNA/RNA Isolation from stem cells

MTT Assay

Use of hypoxia chamber

#### Theory:-

Applications of Cells/Tissue culture

Importance of sterility

Design and description of equipment

Do's & don'ts in GMP/GLP Tissue culture lab

#### Eligibility:

**Interested students/faculty/Researchers from Universities/Institutes/Industry.**



## RESEARCH PROJECT

We offer various projects for interested students centered on basic and applied cell and molecular biology including animal cell culture, stem cell research, Many of our past projects have resulted in publications in peer-reviewed journals. Project period ranges from 1 – 6 months, past projects include:

Interested Topics:-

- Stem Cell and Tissue engineering
- Ayurveda and Stem cell
- Stem cell in Dentistry
- Drug Testing with Stem cells

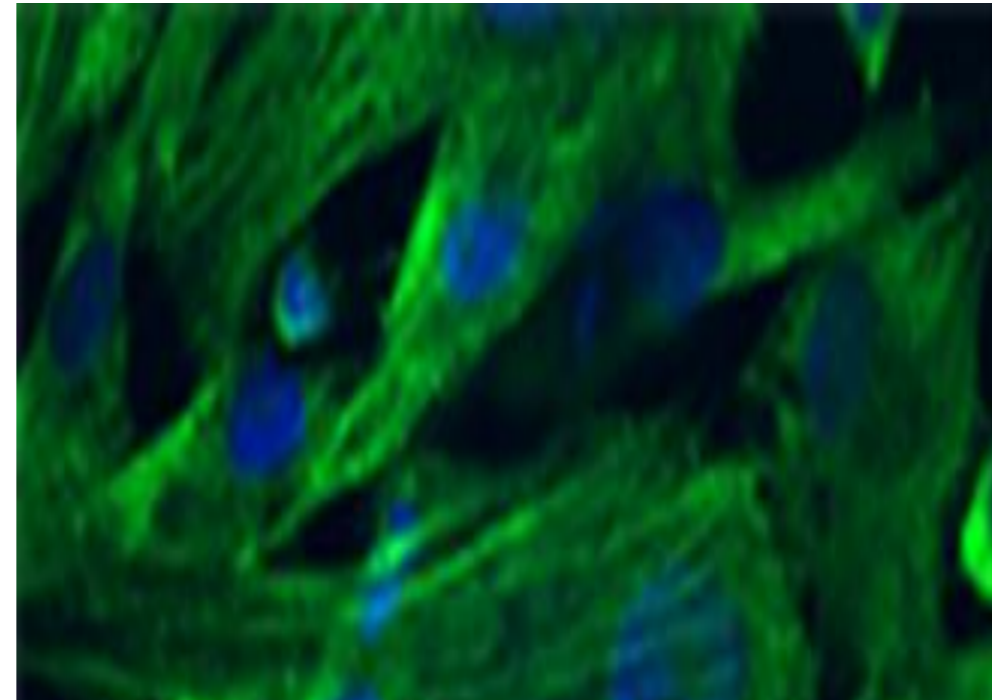
**Eligibility:** M. Sc. biotech/Zoology/life sciences/MDS

### Incubation facility:

We provide laboratory infrastructure and research support for Ph.D. students needing to complete their doctoral dissertation.

### Consultation and contract Research Services:

We routinely provide research and consultation services on various stem cell related projects.



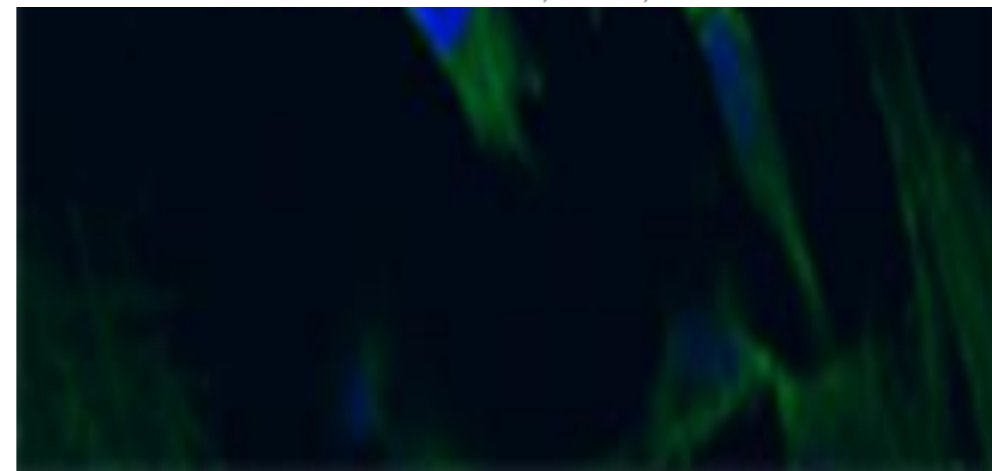
# DPU

Re-accredited by NAAC with a CGPA of 3.62 on a four point scale at 'A' Grade  
**DR. D. Y. PATIL VIDYAPEETH, PUNE**

(DEEMED TO BE UNIVERSITY)

## DR. D. Y. PATIL DENTAL COLLEGE & HOSPITAL

SANT TUKARAM NAGAR, PIMPRI, PUNE-411018



## Our Mentors

**Dr. P.D. Patil**  
Chancellor, DPU

**Dr. Smita Jadhav**  
Trustee & Director ,DPU

**Dr. N. J. Pawar**  
Vice-Chancellor, DPU

**Dr. A. N. Suryakar**  
Registrar ,DPU

**Dr. D. Gopalakrishnan**

Dean

Dr. D. Y. Patil Dental College & Hospital

## Our Team

**Director Research :-** Dr. Ramesh Bhonde

**In-charge :-** Dr. Supriya Kheur MDS. Ph.D

**Research Scientist:-**Mr. Avinash Kharat MSc. Ph.D

**Research Associate:-** Mr. Avinash Sanap MSc. Ph.D



**contact:**

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