

**RURAL DENTAL COLLEGE, LONI**  
**INTERNATIONAL COLLABORATIONS AND ACTIVITIES**

**INTERNATIONAL FACULTY VISITS**

**Collaboration Between PRAVARA INSTITUTE OF MEDICAL SCIENCES (PIMS), Loni and HADASSAH MEDICAL CENTRE, THE HEBREW UNIVERSITY OF JERUSALEM, ISRAEL**

Pravara Institute of Medical Sciences (PIMS), Loni, and Hadassah Medical Centre, The Hebrew University of Jerusalem, Israel, have established a long-term mutually beneficial partnership through a Memorandum of Understanding (MoU). This collaboration aims to strengthen research initiatives and enhance training programs across medical and dental disciplines.

As part of this ongoing collaboration, faculty members from both institutions have visited each other's campuses to discuss and facilitate effective research and educational activities. Notably, a team from various specialties in medical and dental sciences visited PIMS from March 3rd to 7th, 2019. During this visit, Professor Tal Burstyn-Cohen, Director of the Developmental Biology Laboratory at the Faculty of Dental Medicine, Hadassah Medical Organization, Hebrew University of Jerusalem, Israel, visited Rural Dental College, PIMS, Loni, on March 4th, 2019. A fruitful discussion was held with faculty members of Rural Dental College, focusing on potential international collaboration in areas such as Oral Cancer and Community Dentistry.



### Current Research :-

Pravara Institute of Medical Sciences (PIMS) offers students unparalleled opportunities to engage with world-leading universities and participate in cutting-edge research and training programs. Currently, several research projects and training initiatives are being conducted in the fields of Oral Pathology and Oral Medicine and Radiology.

One of the prominent research collaborations with Hadassah Medical Centre is titled "**Immunohistochemical Analysis of Tumor-Associated Macrophage Receptor Proteins in Oral Potential Malignant Disorders and Oral Squamous Cell Carcinoma.**" This project brings together the expertise of faculty members from both institutions:

- **Dr. Tal Burstyn-Cohen**- Director, Developmental Biology Laboratory, Faculty of Dental Medicine, Hebrew University - Hadassah, Jerusalem, Israel
- **Dr. Rahul B. Patil**- Professor & HOD, Department of Oral Pathology and Microbiology, Rural Dental College, PIMS, Loni

In 2022-2023, this project was extended to explore the role of Tumor-Associated Macrophage Receptor Proteins in ovarian carcinomas, cervical

carcinomas, and neuroblastomas. The research team expanded to include additional collaborators from PIMS:

- **Dr. Ravindra Karle**-Professor, Department of General Pathology, Rural Medical College, PIMS, Loni
- **Dr. Rahul Jadhav**-Associate Professor, Department of General Pathology, Rural Medical College, PIMS, Loni

### **Achievements and Contributions**

- **Monoclonal Antibodies:** PIMS received **Primary Monoclonal Anti-Mouse PROS-1** from Hebrew University, Jerusalem, for use in immunohistochemical analyses.
- **Collaborative Research:** PIMS provided necessary secondary antibodies (anti-rabbit-HRP) and additional reagents required for the completion of the immunohistochemistry (IHC) work.

In addition, a detailed Skype conversation was conducted with **Dr. Galit Almoznino**, DMD, MSc MHA, Head of the Orofacial Sensory Clinic at the Department of Oral Medicine, Hebrew University/Hadassah, Israel, to discuss ongoing and future research proposals with the departments of Oral Medicine & Radiology, as well as Oral Pathology & Microbiology at PIMS.

### **Planned Academic Programs for Long-term Collaboration**

As discussed in the last online meeting, to further develop international cooperation based on our mutual interests, three academic programs have been planned to establish a long-term, mutually beneficial association between PIMS and Hadassah Medical Centre. These academic fellowships and certificate programs are designed to enhance knowledge and skills in specialized fields:

1. **Lasers in Dentistry:-** This program will focus on the latest advancements in laser technology and its applications in modern dental practice.

## **2. Scientific Writing & Biostatistics in Research:-**

This program aims to improve scientific writing skills and understanding of biostatistics, which are crucial for conducting high-quality research.

## **3. Basic Molecular Biology Techniques for Scientific Research**

This program will provide participants with hands-on training in the essential molecular biology techniques necessary for basic scientific research.

### **Collaboration with Karolinska Institute, Sweden**

On **25th February 2019**, Dr. **Anders Gustafsson**, the Academic Vice-President for Research and Professor of Periodontology at the Karolinska Institute, Sweden, visited Rural Dental College, Pravara Institute of Medical Sciences, Loni. During this visit, discussions were held regarding future international collaborations and research projects. These discussions focused on two key research areas:

- 1. Oral Cancer**
- 2. Systemic Diseases and Dental Health**

Plans for joint research projects in these fields are currently under process and are expected to yield valuable insights into the relationships between systemic health conditions and oral health, as well as advancements in oral cancer research.



### **International Collaborative Research**

A joint research project between the **Department of Prosthodontics, Rural Dental College, PIMS, Loni** and the **Department of Periodontics and Implantology, University of Santiago de Compostela, Spain** has been ongoing since **3rd July 2017**. The project is titled: **“Clinical Evaluation of Placement of Abutment-Implant Complex / Microgap, Machined Collar on Implant Stability and Marginal Bone Level Changes of Unloaded 2-Piece Implants – A Clinical Study.”**

This collaborative effort aims to evaluate the clinical aspects of implant placement, focusing on the impact of microgap and machined collar designs on implant stability and bone level changes. This study is expected to contribute significantly to the advancement of implantology and prosthodontics.