Oral Biology and Pathology Department

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Degrees Awarded
M.S. in Biomedical Science (Oral Biology and Pathology track) (Thesis and Non-thesis/Capstone Option).
Ph.D. in Oral Biology and Pathology

Web Site
https://dentistry.stonybrookmedicine.edu/dentalprograms/mastersphdadmissions

Application
https://graduateadmissions.stonybrook.edu/apply/

Department of Oral Biology and Pathology

The Graduate Program in Oral Biology and Pathology, within the Health Sciences Center, offers a program of study and research leading to the M.S. and Ph.D. degrees. The M.S. curriculum is of approximately two years’ duration and is particularly suited for those graduates interested in pursuing careers in the dental field as well as dental graduates who wish to obtain further basic science training before entering or while obtaining a clinical specialty. The Graduate Program in Oral Biology and Pathology is also of particular interest to industrial-based scientists seeking additional training and advanced degrees. While the Department is interested in all aspects of oral biology, active programs of research presently being conducted include the following: development, metabolism, control of the oral microflora on the teeth and various epithelial surfaces; pathogenesis of periodontitis and gingivitis; interrelationship between systemic and oral diseases; ultrastructure and metabolism of healthy and diseased periodontal tissues with an emphasis on remodeling and matrix metalloproteinases; biology of epithelial growth and differentiation; epithelial gene therapy; mechanisms of epidermal and oral carcinogenesis; wound repair; biology of skin and mucosal grafting; acquired and innate immunity; inflammation and fibrosis, salivary gland biology, mucosal immunology, stem cell biology, and cancer. Further details may be obtained from the graduate program director.

Admission requirements of Oral Biology and Pathology Department

In addition to the minimum Graduate School requirements, the following are required:

A. A bachelor’s degree and grade point average of 3.3 in the sciences and 3.0 overall
B. Original transcripts with three letters of recommendation preferably from professors within the science disciplines

All applicants are carefully screened by the credentials committee of the department. Interviews and discussions are arranged with faculty members and graduate students where possible. Formal approval for acceptance into the program is given by the Graduate School.

Facilities of Oral Biology and Pathology Department

The Department currently occupies 18,000 square feet of space in Dutchess and Westchester Halls comprised of offices, well-equipped research laboratories.

In addition, the Department houses two special Core Facilities including: The Living Skin Bank, which can produce clinical grade cell therapies is housed in the Department of Oral Biology and Pathology under the scientific direction of Dr. Marcia Simon; and the University Stem Cell Gene Transfer and Viral Vector Core (SCGTC) to provide high titer retroviral and lentiviral vectors for stem cell transduction under the Scientific direction of Dr. Soosan Ghazizadeh.

In addition, Stony Brook University Supports a number of Research Core Facilities, which are coordinated under the Office of Scientific Affairs. The goal of these facilities is to provide commonly used technologies to the campus, and thus facilitate the research processes.

Requirements for the Ph.D. Degree in Oral Biology and Pathology

In addition to the minimum degree requirements of the Graduate School:

A. All students must complete all or part of the Oral Biology and Pathology Oral Systems course.
B. M.S. students in the thesis option are required to take 30 credits composed of a combination of coursework (at least two graduate courses selected from offerings within and outside the Department are required) and independent research leading to a thesis. M.S. students in the Non-thesis/Capstone option are required to take 30 credits composed of a combination of coursework (at least four graduate courses selected from offerings within and outside the Department are required), and a capstone project that may have a research component.
C. Ph.D. students are generally required to complete four to six course offerings at the graduate level and advance to candidacy by preparing a detailed written proposal in the format of a National Institutes of Health research grant application. A public seminar is presented by the student to members of his or her advisory committee, the department, and the University community at large, in which the student defends the proposal. This is followed by a further defense by the student before his or her advisory committee. A determination for advancement to candidacy is then made based on the defense of both the oral presentation and written proposal and forwarded to the Graduate School for official approval.

D. An original research thesis/dissertation is required for completion of the M.S. (thesis option) and Ph.D. degrees, respectively. For the Ph.D., a public defense followed by an examination of the student’s dissertation by the Dissertation Committee is required. For the M.S. degree, after a public presentation, the student defends the thesis to the student’s thesis committee. If the thesis/dissertation is recommended for approval, the determination is submitted to the Graduate School for final decisions to award the degree.

Faculty of Oral Biology and Pathology Department

Distinguished Professors


Professors


Rifkin, Berry R., M.S. 1964, University of Illinois; D.D.S. 1968, Temple University; Ph.D. 1973, University of Rochester: Educational studies on Bone development, bone resorption and osteoclast biology, enamel and dentin development, and issues in personalized medicine.


Associate Professors


Walker, Stephen G., M.Sc., 1987, University of Guelph, Canada; Ph.D. 1994, University of British Columbia, Canada. Oral Microbial ecology in health and disease; Microbial diagnostics; Antibiotic susceptibility testing.

Clinical Assistant Professors


Adjunct Professors

Rafailovich, Miriam, Ph.D., 1981, Stony Brook University: Properties of polymers in confinement at surfaces and interfaces, organic/ inorganic nanocomposites, flame retardant polymers, electrospun scaffolds, cell/surface interactions, templated biomineralization, nanorheological measurements, neutron and x-ray scattering and reflectivity from organic thin films.

Research Faculty

Gao, Jay G., Ph.D. 1989, Institute of Genetics, Fudan University, China Shanghai. Cutaneous and hepatic retinoid metabolism, regulation of lipolysis and lipogenesis.

Lee, His-Ming, Ph.D. 1996, SUNY at Stony Brook: #-Proteinase Inhibitors in Periodontal Disease: Serpinolytic Inhibition by Doxycycline.

Oral Biology and Pathology Program Faculty

Richard Faber, Orthodontics and Pediatric Dentistry

Zachary Faber, Orthodontics and Pediatric Dentistry

Hechang Huang, Orthodontics and Pediatric Dentistry
Charles Larsen, Orthodontics and Pediatric Dentistry
Robert Lopatkin, Orthodontics and Pediatric Dentistry
Wellington Rody, Orthodontics and Pediatric Dentistry
Antonino Russo, Orthodontics and Pediatric Dentistry
Robert Schindel, Orthodontics and Pediatric Dentistry
Julio Carrion, Periodontology
Vincent Iacono, Periodontology
Srinivas Myneni, Periodontology
Seyed Bassir, Periodontology
Georgios Romanos, Periodontology
Marcus Abboud, Prosthodontics and Digital Technology
Dan Colosi, Prosthodontics and Digital Technology
Rafael Delgado-Ruiz, Prosthodontics and Digital Technology
Mina Mahdian, Prosthodontics and Digital Technology
Jerome Cymerman, Endodontics
Thomas Manders, Endodontics
Clarissa Amarillas, General Dentistry
Ana C. Botta, General Dentistry
Ying Gu, General Dentistry
Miriam Rafailovich, Materials Science and Chemical Engineering
Chad Korach, Mechanical Engineering

NOTE: The course descriptions for this program can be found in the corresponding program PDF or at COURSE SEARCH.