

# PATHOLOGY

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Office: 9374 Scott Hall; 313-577-1102

Chairperson: Wael Sakr

<http://www.pathology.med.wayne.edu>

The discipline of pathology is a broadly based investigation of all aspects of the diseases that affect living systems. This includes the study of the underlying causes of disease, as well as the molecular and cellular mechanisms of the disease process. The goal of our Ph.D. program is to train students to be creative and successful scientists with a solid understanding of clinically relevant disease processes. Although broadly based, our Ph.D. program has a particular focus on the molecular and cellular mechanisms of cancer and metabolic diseases.

In the first semester, Pathology Ph.D. students join the first year Ph.D. students from all the Ph.D. programs at the medical school to take IBS 7015 during the first semester. In the subsequent semesters, each student follows a unique individualized plan of study designed to take into account previous educational experience, individual interests, and the student's thesis project research area. The program consists of a selected electives, small number of required courses, several research rotation projects, a qualifying examination, and a doctoral dissertation based on new and significant research findings.

AL-KHAFAJI, BASIM: M.B.Ch.B., Baghdad University School of Medicine; Clinical Associate Professor

ALI-FEHMI, ROUBA: M.D., Damascus University; Professor (Clinician-Educator)

ANDERSON, BARBARA J.: M.D., Wayne State University; Associate Professor

ARTISS, JOSEPH D.: Ph.D., University of Windsor; Associate Professor Emeritus

AULICINO, MICHAEL: M.D., University of Michigan; Clinical Assistant Professor

BANDYOPADHYAY, SUDESHNA: M.D., Calcutta National Medical College; Associate Professor (Clinician-Educator)

BEYDOUN, RAFIC: M.D., Damascus University; Associate Professor (Clinician-Educator)

BONNETT, MICHELLE: M.D., M.S., B.S., Wayne State University; Clinical Assistant Professor

BOSCH, BARBARA: M.D., University of Iowa; B.S., Central College; Associate Professor (Clinician-Educator)

CHITALE, DHANANJAY: M.B.B.S., Seth G.S., Medical College and King Edward Memorial Hospital; Clinical Associate Professor

CRISSMAN, JOHN C.: M.D., Case Western Reserve University; Professor Emeritus

EBRAHIM, SALAH A.D.: M.D., Cairo University; Associate Professor (Clinician-Educator)

EISENBREY, A. BRADLEY: M.D., Wayne State University; Clinical Associate Professor

FAIRFAX, MARILYNN: M.D., University of Texas Health Sciences Center; Ph.D., Dartmouth College; Associate Professor (Clinician-Educator)

FERNANDEZ-VALDIVIA, RODRIGO: Ph.D., Universidad Autonoma de Madrid; B.S., Universidad de San Agustin de Arequipa; Assistant Professor

FRAUCHIGER, WENDY: M.D., Northwestern University; B.A., Occidental College; Clinical Assistant Professor

FRIDMAN, RAFAEL: Ph.D., Hebrew University Medical School; Professor

GABA, ARTHUR: M.D., Wayne State University; Clinical Assistant Professor

GABALI, ALI M.: M.D., Dammam University (formerly King Faisal University); Ph.D., Rush University; Associate Professor

HABIB, LUZETTE: M.D., B.S., University of Michigan; Clinical Assistant Professor

HERSCHMAN, BARRY R.: M.D., Wayne State University; Clinical Associate Professor

HLAVATY, LEIGH: M.D., Wayne State University; Clinical Assistant Professor

HO, KHANG-LOON: M.D., Kachsiung Medical College; Clinical Associate Professor

HONN, KENNETH V.: Ph.D., Wayne State University; Distinguished Professor

INAMDAR, KEDAR: Ph.D., Virginia Commonwealth University; M.B.B.S., Bharati Vidyapeeth Medical College; Clinical Assistant Professor

JACQUES, SUZANNE M.: M.D., Indiana University School of Medicine; Professor (Clinician-Educator)

JIN, BO: M.D., Sun Yat-Sen University of Medical Sciences; Clinical Assistant Professor

JONES, BRUCE: M.D., Wayne State University; B.S., University of Michigan; Clinical Assistant Professor

KANDOUZ, MUSTAPHA: Ph.D., Universite de Paris; Associate Professor

KELLER, CHRISTIAN: M.D., University of Tubingen Medical School; Clinical Associate Professor

KHOURY, NABIHA: M.D., Damascus University of Medicine; Clinical Assistant Professor

KIM, HYEONG-REH: Ph.D., Northwestern University; Professor

KUO, TUAN HUEY: Ph.D., Cornell University; Professor Emeritus

KUPSKY, WILLIAM J.: M.D., Harvard University; B.S., Massachusetts Institute of Technology; Professor (Clinician-Educator)

LEE, MIN WOO: M.D., B.S., Seoul National University; Clinical Associate Professor

LEFF, TODD: Ph.D., University of Indiana; Associate Professor

LONARDO, FULVIO: M.D., 2nd Medical School, Naples, Italy; Professor (Clinician-Educator)

LONG, PATRICK M.: Ph.D., Wayne State University; Clinical Assistant Professor

LOPEZ-PLAZA, ILEANA: M.D., Universidad Central del Caribe School of Medicine; B.S., Pennsylvania State University; Clinical Associate Professor

MADDIPATI, KRISHNA RAO: Ph.D., India Non-Medical School; Associate Professor (Research)

MEIER, FREDERICK: M.D., McGill University; A.B., Dartmouth College; Clinical Professor

MILLER, FRED R.: Ph.D., University of Wisconsin; Professor Emeritus

NASH, TAMMON A.: M.D., Wayne State University; M.S., University of Michigan; Assistant Professor (Clinician-Educator)

ORMSBY, ADRIAN: M.D., Auckland Medical School, New Zealand; Clinical Associate Professor

PIMENTEL, JASON: M.B.B.S., University of New South Wales; B.A., University of Texas; Clinical Associate Professor

POULIK, JANET M.: M.D., Université Paul Sabatier, Toulouse, France; Associate Professor (Clinician-Educator)

QURESHI, FAISAL: M.D., King Edward Medical College, Lahore, Pakistan; Professor (Clinician-Educator)

REDDY, KALADHAR B.: Ph.D., Osmania University; Professor

SAKR, WAEL A.: M.D., University of Damascus; Professor and Chair

SALIMNIA, HOSSEIN: Ph.D., Laval University; Clinical Professor

SCHALDENBRAND, MICHAEL F.: M.D., Wayne State University; Clinical Assistant Professor

SCHULTZ, DANIEL: M.D., B.S., University of Michigan; Clinical Assistant Professor

SHEHATA, BAHIG M.: M.D., Assiut University School of Medicine; Professor (Clinician-Educator)

SHENG, SHIJIE: Ph.D., University of Florida; Professor

SPITZ, WERNER U.: M.D., Hadassah Medical School; Clinical Professor

STONE, CHAD: M.D., University of Connecticut; B.A., Central Connecticut State University; Clinical Assistant Professor

SYKES, ELIZABETH: M.D., Royal Free Hospital School of Medicine; Clinical Assistant Professor

TUTHILL, J. MARK: M.D., Creighton University; M.S., Georgetown University; B.S., University of Massachusetts; Clinical Assistant Professor

VAN EGMOND, EVE: M.D., Wayne State University; B.S., University of Detroit; Clinical Assistant Professor

WANG, JIAN: Ph.D., McGill University; Associate Professor

WILLIAMSON, SEAN: M.D., Temple University; B.S., Duquesne University; Clinical Associate Professor

ZARBO, RICHARD: D.M.D., M.D., B.S., University of Connecticut; Clinical Professor

- Pathology (Ph.D.) (<http://bulletins.wayne.edu/graduate/school-medicine/programs/pathology/pathology-phd/>)

#### **PTH 7080 Special Topics in Pathology Cr. 1-15**

Frontier areas in experimental pathology and clinical laboratory sciences. Format may be lecture, laboratory, or discussion; topics to be announced in Schedule of Classes. Offered Every Term.

**Restriction(s):** Enrollment is limited to Graduate level students.

**Repeatable for 20 Credits**

#### **PTH 7085 Critical Review of Scientific Publications Cr. 1**

For Ph.D. students in biomedical fields. Current experimental approaches in medical research. Offered Every Term.

**Restriction(s):** Enrollment is limited to students with a major in Pathology; enrollment limited to students in the PhD in Medicine program; enrollment is limited to Graduate level students.

**Repeatable for 5 Credits**

#### **PTH 7090 Signal Transduction and Cell Growth Regulation Cr. 3**

Signal transduction pathways, both cellular and molecular, and their alterations in cancer. Journal articles and instructor handouts used; emphasis on relationship to disease process. Offered Every Other Winter.

**Prerequisites:** IBS 7015 with a minimum grade of C

**Restriction(s):** Enrollment is limited to Graduate level students.

#### **PTH 7130 Neuropathology Cr. 2**

Offered Yearly.

**Prerequisites:** PTH 7000 with a minimum grade of C

**Restriction(s):** Enrollment is limited to Graduate level students.

#### **PTH 7150 Pathology of Respiratory Tract Cr. 2**

Offered Yearly.

**Prerequisites:** PTH 7000 with a minimum grade of C

**Restriction(s):** Enrollment is limited to Graduate level students.

#### **PTH 7180 Cardiovascular Pathology Cr. 2**

Gross, microscopic and submicroscopic anatomy and pathophysiology of cardiovascular disease, both human and experimental. Offered Yearly.

**Prerequisites:** PTH 7000 with a minimum grade of C

**Restriction(s):** Enrollment is limited to Graduate level students.

#### **PTH 7330 Pathology of the Kidney Cr. 2**

Techniques of preparing renal biopsies for light and electron microscopy and immunofluorescent studies; ultrastructure of normal kidney; physiology of kidney - acute and chronic renal failure; glomerular disease; pyelonephritis; vascular disease; and acute tubular necrosis and renal transplantation. Offered Yearly.

**Prerequisites:** PTH 7000 with a minimum grade of C

**Restriction(s):** Enrollment is limited to Graduate level students.

#### **PTH 7500 Systemic Pathophysiology Cr. 3**

Pathology and pathogenesis underlying abnormal physiologic function of major organ systems in humans. Offered Yearly.

**Prerequisite:** PSL 7010 with a minimum grade of C and BCH 7010 with a minimum grade of C

**Restriction(s):** Enrollment is limited to Graduate level students.

**Course Material Fees:** \$25

#### **PTH 7890 Seminar Cr. 1**

Offered Yearly.

**Restriction(s):** Enrollment is limited to students with a major in Pathology; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree.

**Repeatable for 25 Credits**

#### **PTH 7990 Directed Study in Clinical Pathology and Pathologic Anatomy Cr. 2**

Offered Yearly.

**Restriction(s):** Enrollment is limited to students with a major in Pathology; enrollment limited to students in the PhD in Medicine program; enrollment is limited to Graduate level students.

**Repeatable for 12 Credits**

#### **PTH 8000 Current Topics in Tumor Metastasis Cr. 3**

Advances in research on key aspects of tumor metastasis; emphasis on molecular mechanisms, tumor invasion, angiogenesis, and organ-specific tumor metastasis. Offered Fall.

**Prerequisites:** IBS 7015 with a minimum grade of C

**Restriction(s):** Enrollment is limited to Graduate level students.

**PTH 8010 Molecular Biology of Diabetes and Obesity Cr. 2**

Basic principles and current research topics in the etiology and pathology of diabetes; diabetic complications and obesity. Offered Every Other Fall.

**Prerequisites:** IBS 7015 with a minimum grade of C

**Restriction(s):** Enrollment limited to students with a class of Applicant Masters, Candidate Masters or Doctoral Candidate; enrollment is limited to Graduate level students.

**PTH 9990 Pre-Doctoral Candidacy Research Cr. 1-8**

Research in preparation for doctoral dissertation. Offered Yearly.

**Restriction(s):** Enrollment is limited to Graduate level students.

**Repeatable for 12 Credits**

**PTH 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 7.5**

Offered Yearly.

**Restriction(s):** Enrollment is limited to Graduate level students.

**PTH 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 7.5**

Offered Yearly.

**Prerequisite:** PTH 9991 with a minimum grade of S

**Restriction(s):** Enrollment is limited to Graduate level students.

**PTH 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5**

Offered Yearly.

**Prerequisite:** PTH 9992 with a minimum grade of S

**Restriction(s):** Enrollment is limited to Graduate level students.

**PTH 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5**

Offered Yearly.

**Prerequisite:** PTH 9993 with a minimum grade of S

**Restriction(s):** Enrollment is limited to Graduate level students.

**PTH 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0**

Offered Yearly.

**Restriction(s):** Enrollment is limited to Graduate level students.

**Course Material Fees:** \$370.26

**Repeatable for 0 Credits**