

**1999-2000
SUMMARY OF ACTIVITIES
ELECTRON MICROSCOPY CENTER**

I. ARTICLES PUBLISHED IN BOOKS OR JOURNALS.

A. Full-length published articles.

C.A. Peters, R.E. Cutler, Jr., E.T. Maizels, M.C. Robertson, R.P. Shiu, and P. Fields. Hunzicker-Dunn M. Regulation of PKC δ by Estrogen and Rat Placental Lactogen-1 in Luteinized Rat Ovarian Granulosa Cells. *Mol. Cell Endocrinol.* 162:181-191 (2000).

B. Articles in press.

J.C. Brandon, S.D. Izenberg, P.A. Fields, C. Evankovich, G. Wilson, and S.K. Teplick. Pancreatic Clefts Caused by Penetrating Vessels: A Potential Diagnostic Pitfall for Pancreatic Fracture on CT. *J. Radiol* (2000).

II. PUBLISHED ABSTRACTS.

None.

III. BOOKS PUBLISHED.

None.

IV. PRESENTATIONS.

None.

V. NATIONAL PROFESSIONAL RECOGNITION.

Dr. Fields served in the following capacities: On the Editorial Board, *Trends in Reproductive Biology*; As Reviewer for USDA and NSF granting agencies; and on the Membership Committee, Society for the Study of Reproduction.

VI. SUMMARY OF EM ACTIVITIES.

The Center is managed by Dr. P.A. Fields, Assoc. Prof., Cell Biology and Neuroscience (460-6766). Technical support is provided by Dr. S.-J Zhang (460-6258).

The Electron Microscopy Center provides various light microscopy and transmission electron microscopy services.

Light Microscopy.

Charges for tissue fixation, processing, paraffin embedding, sectioning, and H&E staining are \$15/sample (n < 10 samples) or \$10/sample (n = 10 or more samples). Additional negotiations for sample numbers greater than 500. Special histological staining, such as Gomori Trichrome for collagen, Orcein for elastin, PAS for carbohydrate, Sudan black for fat, etc., will cost an additional \$2/slide.

Electron Microscopy.

Charges for tissue fixation, processing, Spurr's embedding, tissue sectioning and staining are \$45/sample. Transmission EM photography costs \$15/hr scope time, and cover the cost of Technician time, TEM negatives and reagents for developing the negatives. The fee for printing is \$3/print.

Immunohistochemistry.

The Center assists individuals conducting both light and electron microscopy immunolocalization studies. Dr. Fields has experience with peroxidase antiperoxidase (PAP) staining or Vecta Stain Kit staining for light microscopy, and PAP staining and immunogold labeling for electron microscopy.

College of Medicine Utilization.

Approximately 1100 research samples were processed for the following departments during 1999-2000: Biochemistry; Cell Biology and Neuroscience; Comparative Medicine; Medicine; Hematology/Oncology; and Physiology.

Additional services included photography and printing for dissertations, manuscripts, grants, and book chapters.

We have trained several faculty this year in the art of immunogold labeling for electron microscopy.

Each year we provide presentations to radiology students, USA Freshman Experience, and give tours to high school groups.

Graduate Student Assistance.

Graduate students and technicians in various departments have been taught how to process, section, and stain tissues for light microscopy studies and for a small equipment user fee (\$5/sample) use the EM facility for various aspects of their research projects.

Grant Applications.

Collaborations ongoing with Dr. Dave Sherwood to establish preliminary data for a grant proposal.

Collaborations ongoing with Dr. Hunzinker-Dunn to establish preliminary data for a grant proposal.

OFFICE OF BIOTECHNICAL SERVICES

The biotechnical core laboratories are managed by a director with input from a core advisory committee. The chart shown below outlines the organizational structure of the Office of Biotechnical Services for the 1999-2000 academic year. The following are directors for each core laboratory: Dr. Tin Cao, Director of the Biopolymer Laboratory; Dr. Raymond Hester, Director of the Research Cytometry Laboratory, Dr. Aladar Bencsath, Director of the Mass Spectrometry Laboratory; Drs. Danna and Warren Zimmer, Co-directors of the Transgenic Animal/ES Cell Laboratory.

