Phyllis Gardner
Professor of Medicine (Clinical Pharmacology)
Medicine - Clinical Pharmacology

Bio

ACADEMIC APPOINTMENTS
- Professor, Medicine - Clinical Pharmacology

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS
We are interested in the general process of signal transduction, focusing on the role that ion channels play in this process. By means of path clamp recording and associated cell and molecular biological techniques, we have studied:

1. Voltage-insensitive Ca2+ channels, Ca2+-dependent K+ channels, other downstream Ca2+ dependent effector molecules; role in cellular activation and signal transduction.

2. Cystic fibrosis C1-channels in epithelial cells and lymphocytes; associated signal transduction pathways and cell biological coupling mechanisms. Phase I/II AAV-CFTR gene therapy trials.

3. NFAT mediated gene transcription; modulations by kinases and phosphatases.

Publications

PUBLICATIONS
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- Genotyping microarray for the detection of more than 200 CFTR mutations in ethnically diverse populations JOURNAL OF MOLECULAR DIAGNOSTICS
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  2005; 7 (3): 375-387

- Diagnostic testing by CFTR gene mutation analysis in a large group of Hispanics novel mutations and assessment of a population-specific mutation spectrum JOURNAL OF MOLECULAR DIAGNOSTICS
  2005; 7 (2): 289-299

- A phase II, double-blind, randomized, placebo-controlled clinical trial of tgAAVCF using maxillary sinus delivery in patients with cystic fibrosis with antrostomies HUMAN GENE THERAPY
  2002; 13 (11): 1349-1359

- Safety and biological efficacy of an adeno-associated virus vector cystic fibrosis transmembrane regulator (AAV-CFTR) in the cystic fibrosis maxillary sinus 11th Annual North American Cystic Fibrosis Conference
  JOHN WILEY & SONS INC.1999: 266–74

- Maxillary sinusitis as a surrogate model for CF gene therapy clinical trials in patients with antrostomies JOURNAL OF GENE MEDICINE
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- Adenovirus-mediated transduction of intestinal cells in vivo HUMAN GENE THERAPY
  1998; 9 (9): 1313-1321

- Efficient and persistent gene transfer of AAV-CFTR in maxillary sinus LANCET
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- A phase I/II study of tgAAV-CF for the treatment of chronic sinusitis in patients with cystic fibrosis HUMAN GENE THERAPY
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- Toward cystic fibrosis gene therapy ANNUAL REVIEW OF MEDICINE
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  Moss, R. B., BOCIAN, R. C., Hsu, Y. P., Dong, Y. J., Kemna, M., Wei, T., Gardner, P.
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- Mechanism of the antiproliferative action of leflunomide - A77 1726, the active metabolite of leflunomide, does not block T-cell receptor-mediated signal transduction but its antiproliferative effects are antagonized by pyrimidine nucleosides JOURNAL OF HEART AND LUNG TRANSPLANTATION
  Cao, W. W., Kao, P. N., Chao, A. C., Gardner, P., Ng, J., Morris, R. E.
  1995; 14 (6): 1016-1030
• CALCIUM-DEPENDENT AND CAMKII-DEPENDENT CHLORIDE SECRETION INDUCED BY THE MICROSOMAL CA2+ATPASE INHIBITOR 2,5-DI-(TERT-BUTYL)-1,4-HYDROQUINONE IN CYSTIC-FIBROSIS Pancreatic epithelial-cells. JOURNAL OF CLINICAL INVESTIGATION
Chao, A. C., Kouyama, K., Heist, E. K., Dong, Y. J., Gardner, P.
1995; 96 (4): 1794-1801

• ACTIVATION OF CFTR CHLORIDE CURRENT BY NITRIC-OXIDE IN HUMAN T-LYMPHOCYTES. EMBO JOURNAL
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• ACTIVATION OF CA2+ CURRENT IN JURKAT T-CELLS FOLLOWING THE DEPLETION OF CA2+ STORES BY MICROSOMAL CA2+ATPASE INHIBITORS. JOURNAL OF IMMUNOLOGY
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• RECOMBINANT HUMAN TUMOR-NECROSIS-FACTOR-ALPHA INDUCES CALCIUM OSCILLATION AND CALCIUM-ACTIVATED CHLORIDE CURRENT IN HUMAN NEUTROPHILS - THE ROLE OF CALCIUM CALMODULIN-DEPENDENT PROTEIN-KINASE. JOURNAL OF BIOLOGICAL CHEMISTRY
SCHUMANN, M. A., Gardner, P., Raffin, T. A.
• SIGNAL TRANSDUCTION BY T-CELL RECEPTORS - MOBILIZATION OF Ca AND REGULATION OF Ca-DEPENDENT EFFECTOR MOLECULES AMERICAN JOURNAL OF PHYSIOLOGY
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• A CAMP-REGULATED CHLORIDE CHANNEL IN LYMPHOCYTES THAT IS AFFECTED IN CYSTIC-FIBROSIS SCIENCE
  Chen, J. H., Schulman, H., Gardner, P.
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• DIHYDROPYRIDINE BAY K-8644 ACTIVATES LYMPHOCYTE-T CALCIUM-PERMEABLE CHANNELS *MOLECULAR PHARMACOLOGY*
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