Paul Brakeman, M.D., Ph.D.

Associate Professor, Pediatrics
UCSF Benioff Children's Hospital *San Francisco*

Curriculum Vitae

Education

- John Hopkins University, M.D., Ph.D.

Residencies

- University of California, San Francisco

Biography

Dr. Brakeman is an Associate Professor based at the the UCSF Benioff Children's Hospital with a primary appointment in Pediatrics and a secondary apointment in the Division of Nephrology in the Department of Medicine.

The primary focus of his research is the engineering of human renal epithelial cells for use in a bioartificial kidney. Work is currently underway at UCSF on a multi-center project to develop a bioartificial implantable renal assist device based on hemofiltration. One of the important components of an implantable bioartificial device is an active renal proximal tubule cell bioreactor that can provide some of the metabolic activity of renal tubules. Another critical function of the cellular bioreactor will be the reabsorption of salt and water in order to reduce the volume of the filtrate generated as much as possible before elimination via the bladder. Dr. Brakeman's lab is focused on engineering human proximal tubules cells to enhance sodium and water reabsorption for use in the bioartificial kidney. In addition, he is actively evaluating the use of the proximal tubule cell bioreactor for use in toxicology and pharmaceutical evaluation of novel compounds.
