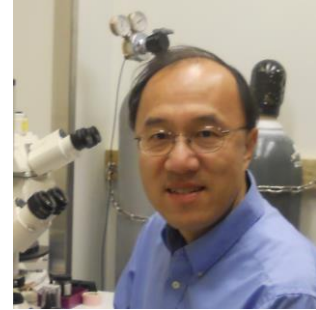


Frank Reidy Research Center for Bioelectrics Seminar Series

How does electrotransfected DNA move in the cytoplasm?

Speaker: Fan Yuan, Ph.D

Professor
Department of Biomedical Engineering
Duke University



When: 9:00 AM, Tuesday, November 15, 2016

Where: 1st floor conference room, IRP II

Abstract:

Electrotransfection is a physical method for delivery of genes into cells using pulsed electric field. Although the method holds great potentials in both basic research and clinical applications, it is difficult to control the delivery due to poor understanding of its mechanisms. In the past few years, we have systematically investigated kinetics of pDNA uptake, and effects of endocytic modulators on DNA transport and electrotransfection efficiency. We have observed that electrotransfection involves at least two pathways of endocytosis; and its efficiency depends on progression of DNA in networks of intracellular vesicles.

Biosketch:

Fan Yuan is currently a Professor of Biomedical Engineering and Ophthalmology at Duke University, Durham, North Carolina, USA.

Peking University (Beijing, P.R. China), Mechanics, B.S., 1983; Biomechanics, M.S., 1985.

The City University of New York, Bioengineering, Ph.D., 1990.

His research interests include biomechanics, transport analysis in cell and tissues, and drug and gene delivery. Awards he received include CAREER Award from National Science Foundation. He is also a Fellow of the American Institute for Medical and Biological Engineering. He has published more than 130 papers and book chapters, and co-authored one textbook on transport analysis in biological systems.