The title is meant to suggest that mathematics can be a link between experimental science and practical medicine, although in reality only a few mice will actually appear in this talk. I hope to tell you a story of discovery through interdisciplinary collaboration. In particular, I will tell you about some collaborations between mathematicians and scientists in which I have taken part. How can we design cancer vaccines? How can we make the ideal time-release tablet? How much blood-thinner should we prescribe? What are the best shoes to wear to improve your balance? When do we need to perform a Caesarian? These problems illustrate different types of mathematical models, and different mathematical techniques used to reach different goals, but all of them bridge the gap from bench to bedside, and beyond.

Of Mice and Math: mathematical models in medicine

Tuesday, Oct. 1st
SC 199, Refreshments 4:15pm, Lecture 4:30pm