In June 2002, the IU Division of Nephrology received NIH funding to establish a George M. O’Brien Center for Advanced Renal Microscopic Analysis at the Indiana Center for Biological Microscopy. The primary goal of this Center is to develop new optical methodologies for investigators in Nephrologic and Urologic Research and to make the technology widely accessible to the renal research community. Approaches include intravital multiphoton microscopy, 3-dimensional imaging and quantitative microscopic analysis. We have established the Indiana O’Brien Fellows Program, which provides funds for investigators to implement these new techniques for their specific research needs, either in their laboratories, or utilizing the facilities of the Center.