

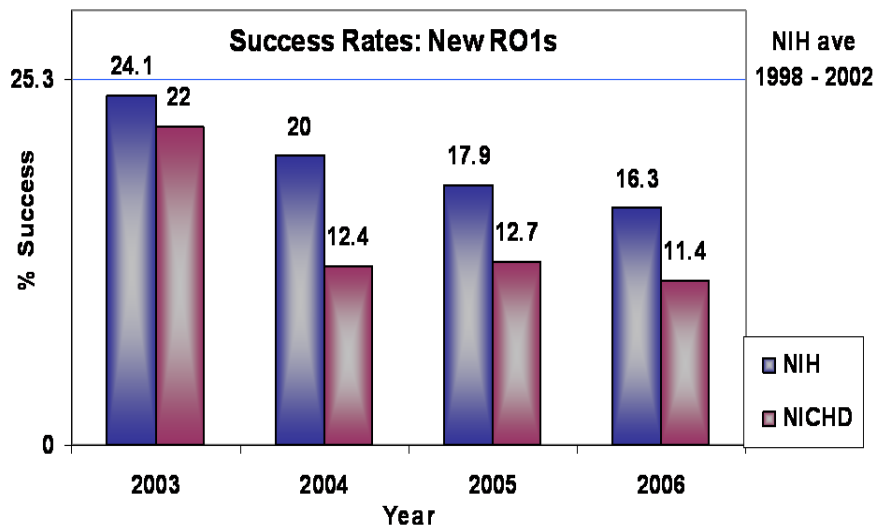
## The Research Funding Crisis in the U.S.

Research in the U.S. has proven a cost-effective component of medical care. Despite the seemingly large monetary investment in biomedical research, the discovery and utilization of new drugs, vaccines, and other medical diagnostics and therapeutics saves the U.S. health care system more than the amount of money invested in their discovery.

However, we are in a period of financial crisis that may impede the progress of U.S. biomedical research and allow research in other countries to overtake and supplant our primacy in this area. This crisis is particularly true for research on women and children's health. The National Institutes of Health (NIH) is by far the largest provider of funding for biomedical research. Within the many Institutes that make up the NIH, the Institute of Child Health and Human Development (NICHD) is the only Institute designed to support research on diseases of women and children.

U.S. biomedical researchers apply for NIH funding. The foundation of NIH funding is the RO1, which is granted for no more than 5 years at a time, with the possibility for competitive renewals. Only the best applications that survive the rigorous review and ranking by peers and NIH staff may be awarded the requested research funds. Unfunded grants may be resubmitted no more than twice, for a total of three submissions. NIH frequently publishes success rates, indicating the percentage of applications that eventually get funding within the three submission limit. In general the top 35 or 40% of new applications are of sufficiently high quality and importance to justify funding. But, as shown in the first graph, the success rates are dropping rapidly, especially at NICHD, which funds a lower percentage of applications than the average for NIH in general. From 1998 through 2002 the success rates were fairly stable at NIH (25.3% for new submissions) and NICHD (21.8%). With decreasing funding of NIH, the success rate has dropped to 16.3% in 2006. The decrease was even more severe at NICHD (11.4% in 2006). In other words, only a third of worthy, scientifically sound, and highly important new research ever gets funded.

The fiscal crisis has also affected funding for ongoing, productive investigators. Continuations are applications for 3 to 5 years of additional support for already funded researchers. The success rate for continuations has dropped to about 34% for NIH and 25% for NICHD (second



graph). Thus, more than 70% of researchers who had achieved initial funding, were productive for 3 to 5 years, and advanced our knowledge about diseases of women and children are losing their funding.

