



Overview of CSR and NIH Peer Review

Dr. Richard Nakamura
CSR Director

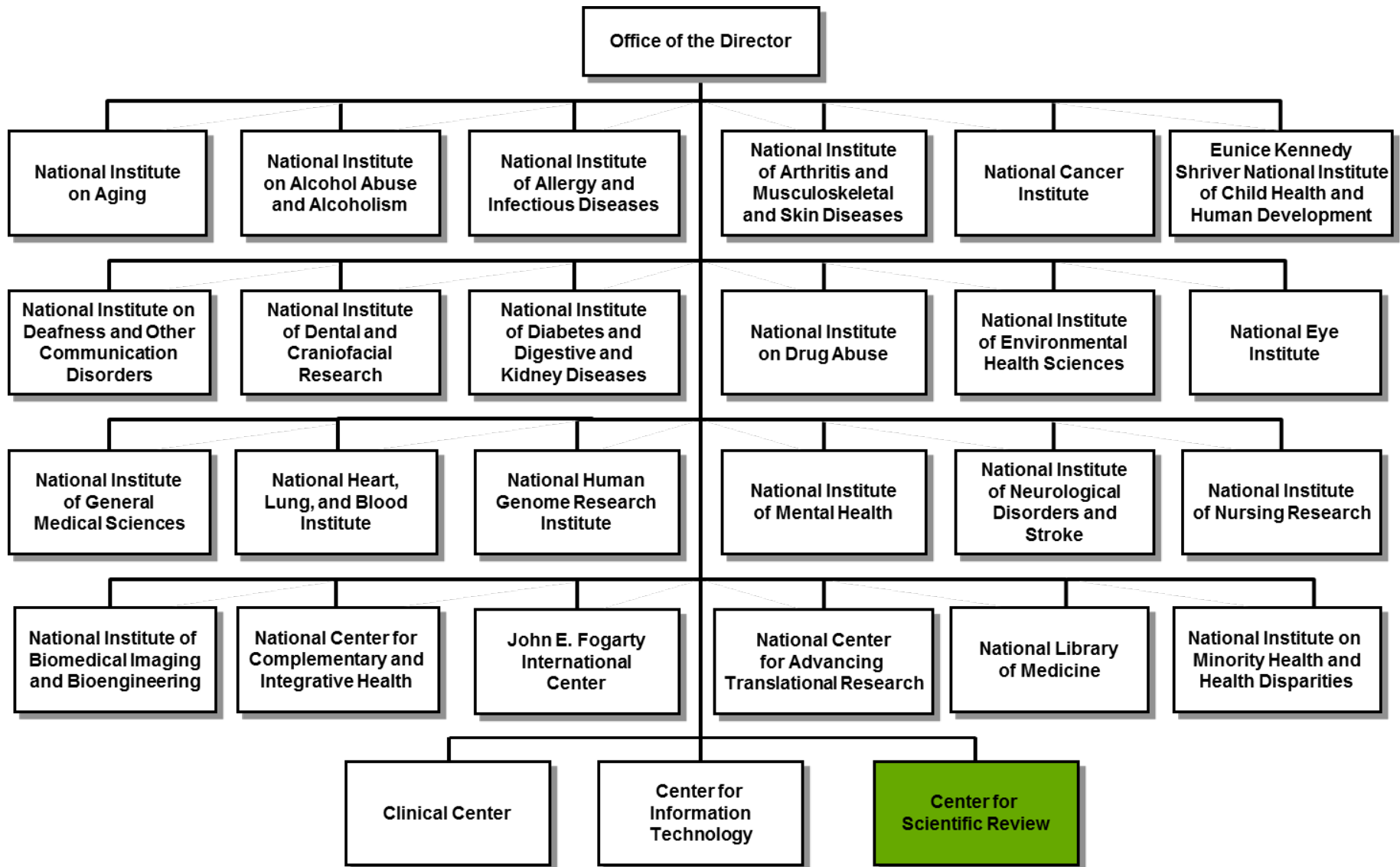
NIH Tribal Consultation Advisory Committee
February 25, 2016

National Institutes of Health

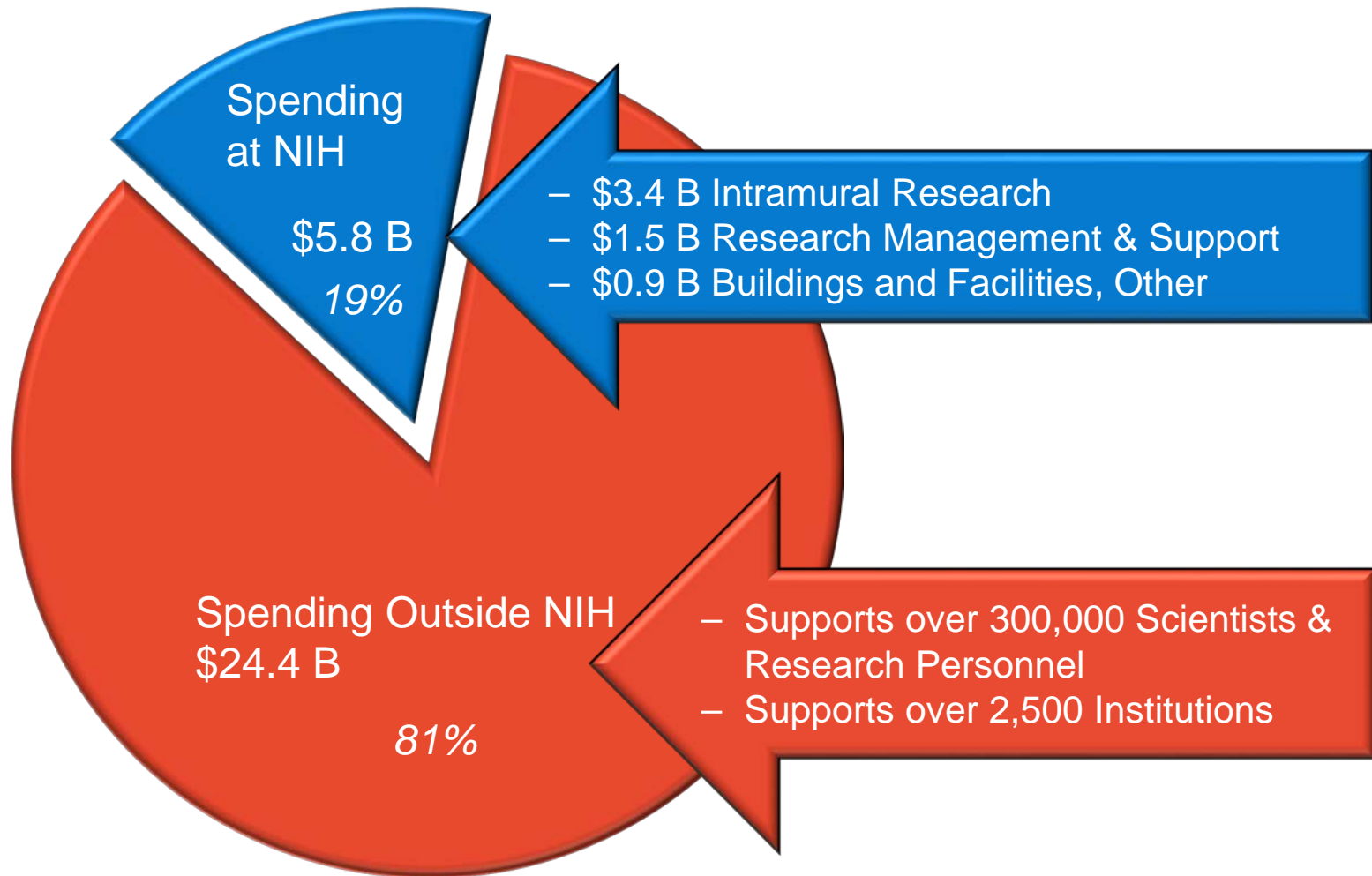


We seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce illness and disability.

Your Application Could Be Funded by One of 24 NIH Institutes or Centers

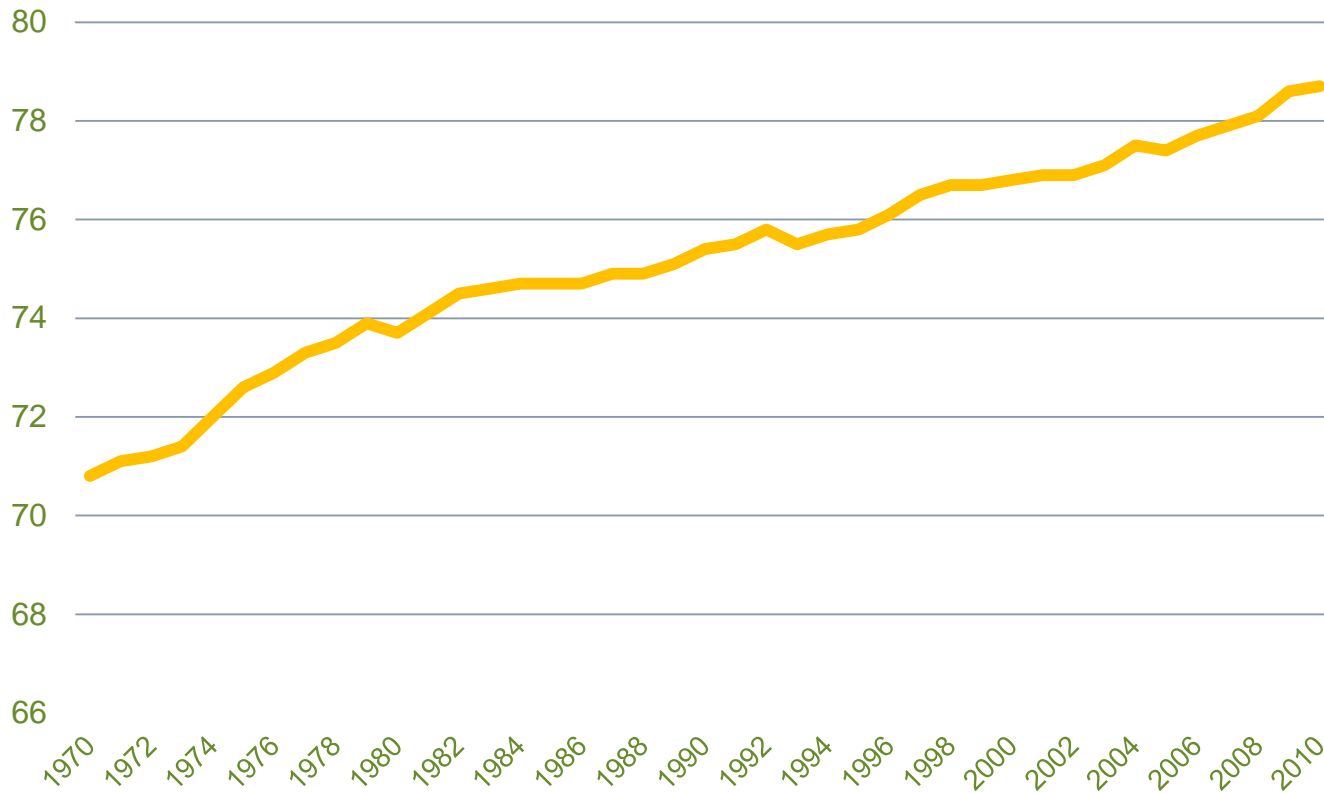


NIH Extramural & Intramural Funding FY 2014 Enacted: \$30.2 Billion



The Benefits of Biomedical and Public Health Advances

U.S. Life Expectancy



Source: CDC National Vital Statistics Reports, Vol 60, No 4, January 11, 2012

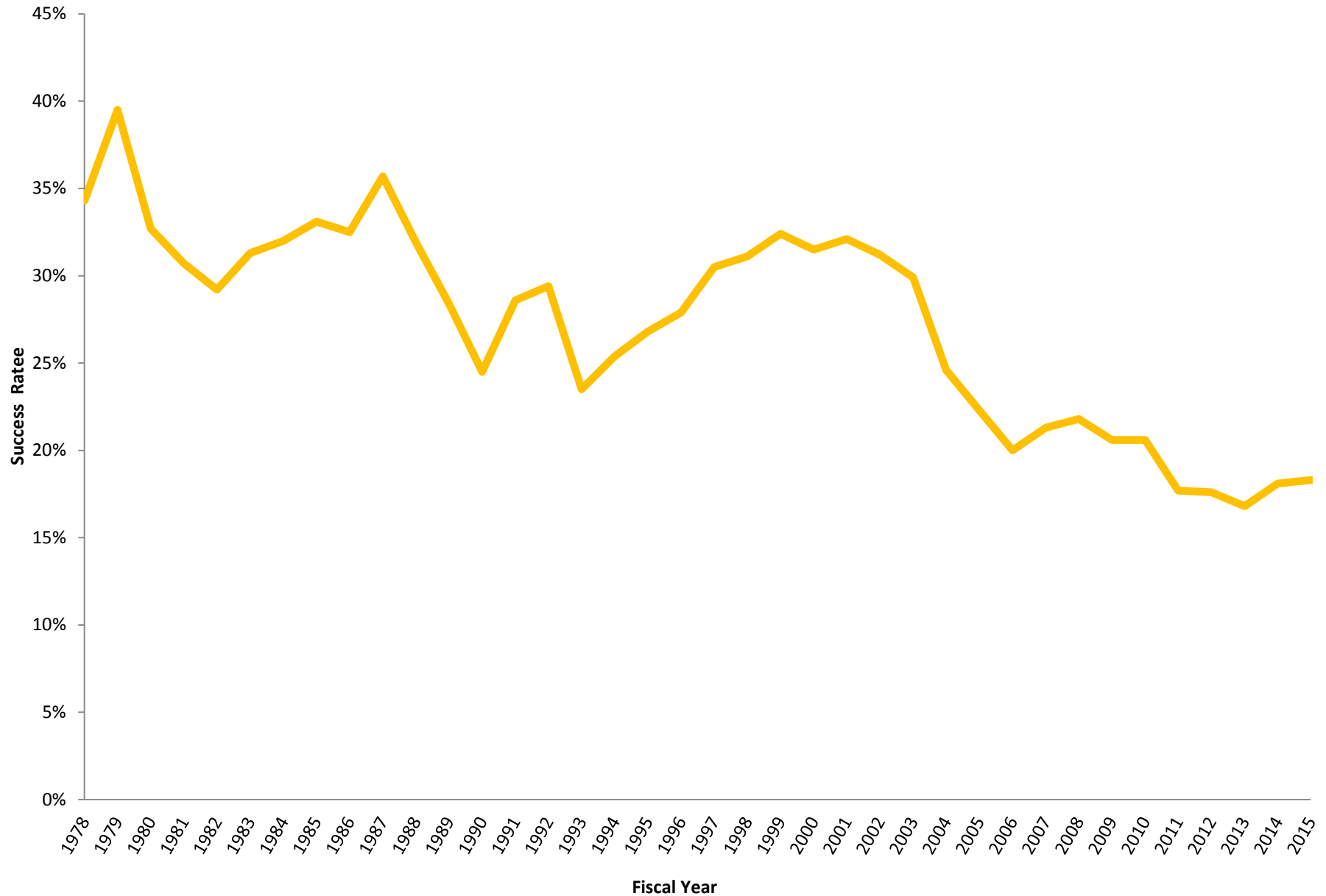
Why Has NIH Been so Successful?

Peer Review

- It is transparent to the applicant
- The focus is on funding ideas or people not institutions
- Ideas spring from independent researchers across the country
- Researchers must compete—like entrepreneurs—for funding
- Scientists from the external community are the primary judges
- Scientists and staff put a high value on fairness and work hard to maintain it

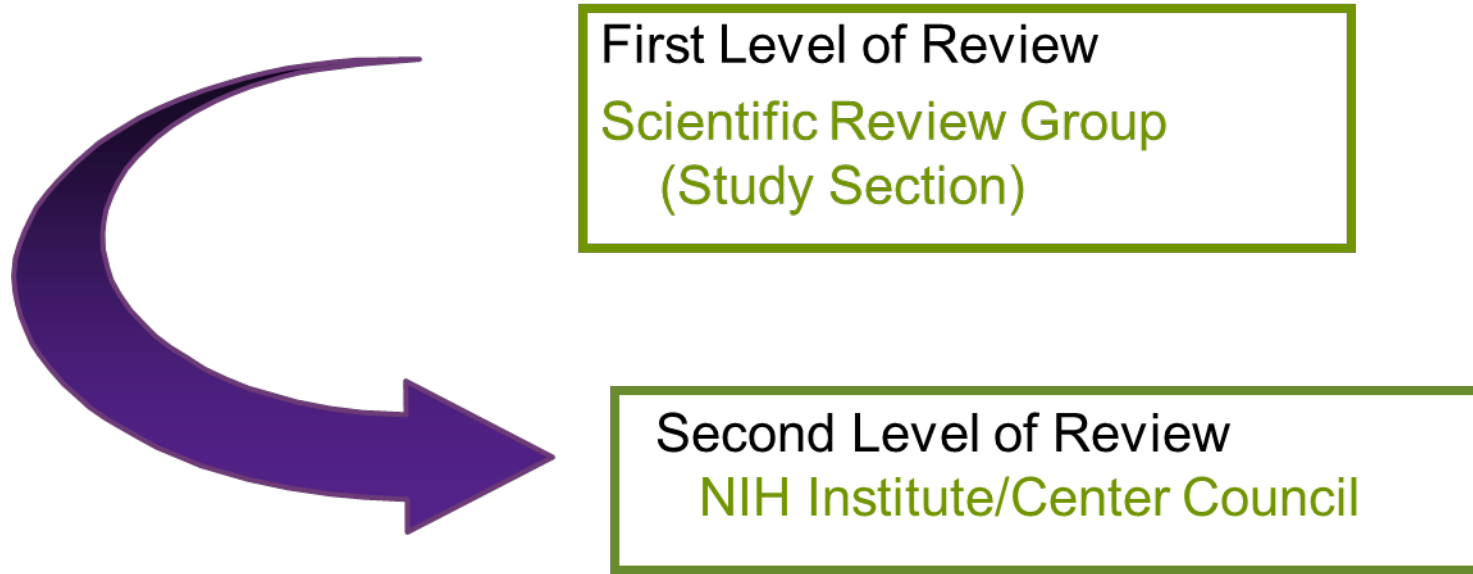
Grant Success Rates

FY 1978-2015



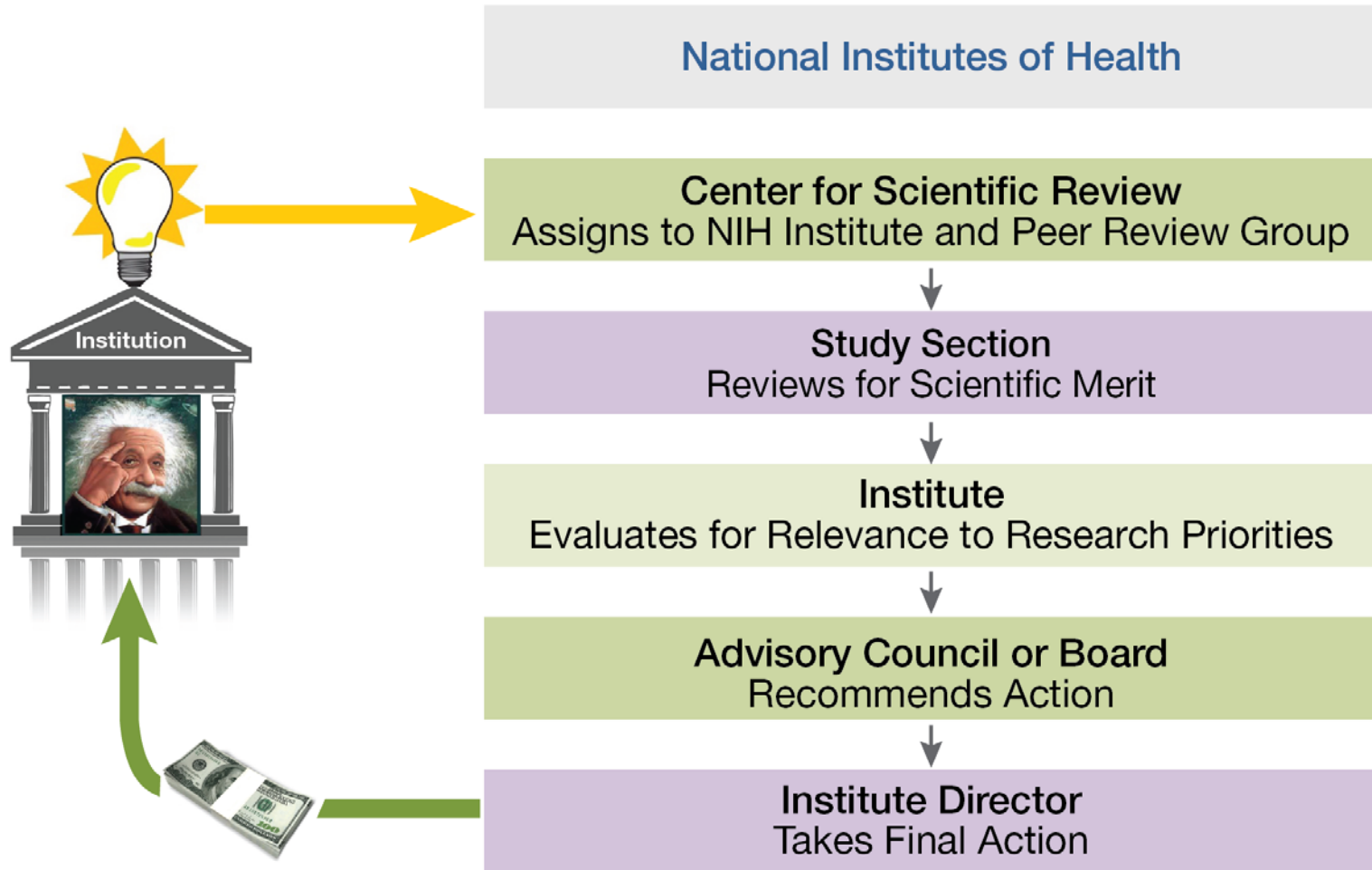
The Review Process

NIH Peer Review System for Grant Applications



About 92,000 applications and 17,000 reviewers

Peer Review and Funding of NIH Grant Applications



CSR Mission



To see that NIH grant applications receive fair, independent, expert, and timely reviews – free from inappropriate influences – so NIH can fund the most promising research.

CSR Peer Review – Fiscal Year 2015

- 92,000 applications received
- 17,000 reviewers
- 239 Scientific Review Officers
- 1,500 review meetings

The Peer Review Process



The SRO Assigns at Least Three Reviewers to Each Application

Main Review Criteria

- Overall Impact
 - Assessment of the likelihood for the project to *exert a sustained, powerful influence on the research field(s) involved*
- Core Review Criteria
 - Significance
 - Investigator(s)
 - Innovation
 - Approach
 - Environment

9-Point Scoring Scale

Impact	Score	Descriptor
High Impact	1	Exceptional
	2	Outstanding
	3	Excellent
Medium Impact	4	Very Good
	5	Good
	6	Satisfactory
Low Impact	7	Fair
	8	Marginal
	9	Poor

Other Issues Reviewers Consider in Assessing Impact

- Protections of human subjects
- Inclusions of women, minorities and children
- Appropriate use of vertebrate animals
- Management of biohazards



The SRO Convenes the Study Section Meeting

Role of the Scientific Review Officer

Designated Federal Official with overall responsibility for the review process

- Performs administrative and technical review of applications to ensure completeness and accuracy
- Nominates reviewers and chair based on broad input
- Provides CSR training for reviewers and chair
- Prepares summary statements

Role of Study Section Chair

Senior extramural scientist that partners with their Scientific Review Officer to conduct the meeting

- Guides and summarizes study section discussion
- Ensures all study section member opinions are given careful consideration
- Manages scientific discussions at the meeting, e.g., timeliness and thoroughness
- Acts as the scientific face of an area of science and its support

Reviewers

- Ph.D. or M.D. in relevant research area
- Successful at competitive, independent research
- Excellent publications, scientific and professional recognition
- Demonstrated wisdom, selflessness, cooperativity in review
- Demonstrated scientific independence
- Diversity of perspectives, gender, race/ethnicity, region

At the Meeting: Application Discussion

- Any member in conflict with an application leaves the room
- Reviewer 1 introduces the application and presents critique
- Reviewers 2 and 3 highlight new issues and areas that significantly impact scores
- All eligible members are invited to join the discussion and then vote on the final overall impact score

Discussions Focus on the Best Applications

- Reviewers discuss application in rank order based on preliminary impact scores
- Reviewers typically discuss the top half the applications
- The panel will discuss any application a reviewer wants to discuss



Summary Statement

- Scores for each review criterion
- Critiques from assigned reviewers
- Administrative notes if any



If an application is discussed, applicants receive:

- An overall impact/priority score and percentile ranking, which helps determine funding
- A summary of review discussion
- A budget recommendation

Early Career Reviewer Program

- Train and educate qualified scientists to become critical and well-trained reviewers
- Expose investigators to the peer review experience to help make them more competitive as applicants
- Enrich the existing pool of NIH reviewers



www.csr.nih.gov/ecr

What Happens After Scientific Reviews

Review results sent to the applicants and the NIH Institutes

NIH Institutes and Centers:

- Conduct second level review for relevance to priorities and public health needs.
- Seek input from their advisory councils, which include community representatives and patient advocates.
- Make final funding decisions.
- Help all applicants take the next steps forward.

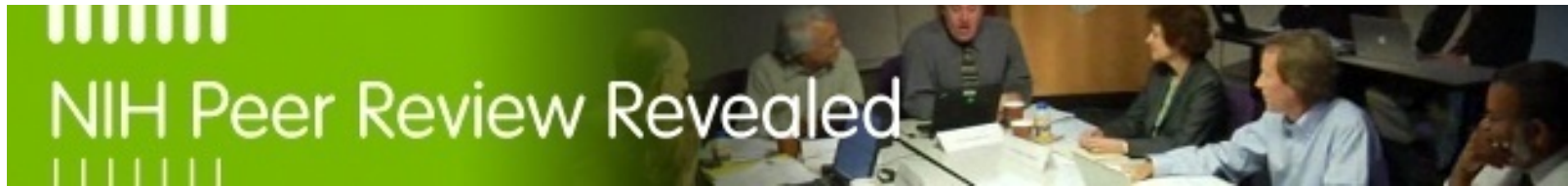
Role of the NIH Program Officer

- Work with the scientific community to assess research needs and opportunities. Develop funding opportunity announcements.
- Attend peer review meetings and help applicants understand their reviews and take the next steps.
- Make award priority recommendations to Council and IC, including modifications to aims, award amount and duration.
- Oversee grants in their scientific areas and monitor performance.
- Work with grants management staff to ensure research is progressing and government regulations are followed.

Questions?



www.csr.nih.gov



View the Videos



- **NIH Peer Review Revealed**
- **Jumpstart Your Research Career with CSR's Early Career Reviewer Program**
- **NIH Tips for Applicants**
- **What Happens to Your NIH Grant Application**

<http://www.csr.nih.gov/video/video.asp>