

New Fellows Retreat: Early Career Research Funding

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Not All Funding

Opportunities Are the Same

- Different mission statements
 - Fellowships, Training grants
 - Career development (K's)/ Scholar awards
 - Research project (R's)
- Different funding
 - Stipend/Salary
 - Pilot awards
 - Comprehensive research costs
- Different time frames
 - Not renewable: 5 years (K's), 3 years (F's), 2 years (T's)
 - Renewable: 4years-5years (R01) each competitive period

Types of Awards

- Individual fellowships
- Training grants
- Career transition awards
- Career development awards
- Research grants (R01)
- Cooperative agreements
- Administrative supplements
- Institutional Clinical & Translational Science Award (CTSA)
- Contracts
- Loan Repayment Program

Timeline of NIH Funding for Junior Investigators



Post-doc: Institutional Training Grant (NIH-T32)

- Post-docs selected by institution
- Research training in specific area
- Defined number of slots
- Stipend, health fees, tuition, travel

Dept of Medicine:

NIH Institutional Training Grants

- Columbia University Training Program in Lung Science [J. Bhattacharya]
- Training Program in Endocrinology and Metabolism [J. Bilezikian]
- Postdoctoral Training in Arteriosclerosis Research [I. Goldberg (Preventive Medicine)]
- Postdoctoral Training in Cardiovascular Disease [M. Hardy - w/ S. Marx (Cardiology)]
- Multidisciplinary Training in Translational Gastrointestinal and Liver Research [T. Wang (GI)]

CUMC:

NIH Institutional Training Grants

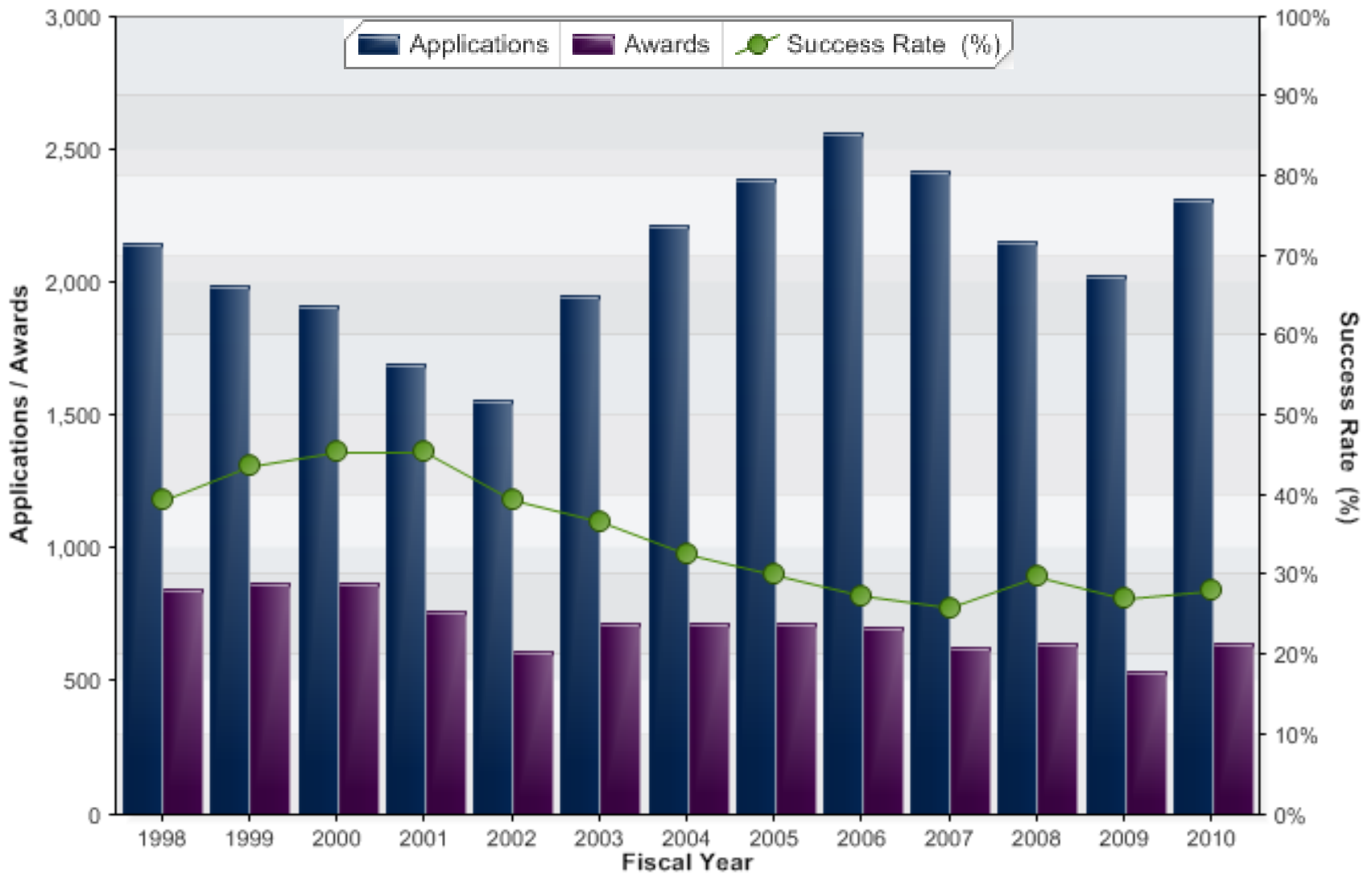
- Cancer Biology Training Program
(R. Baer)
- Medical Genetics Training Program
(A. Christiano)
- Multidisciplinary Training in Translational
Cardiovascular Research (A. Marks)

Post-doc: Individual Fellowship

- Supports specific individual
- Stipend, health fees, tuition, travel
- NIH: F32
- Review criteria:
 - Individual fellow
 - Mentor
 - Research project
 - Research environment

NIH Post-doc Fellowships (F32s)

Applications, awards, and success rates



Post-doc: Individual Fellowship

- Voluntary Health Organizations,
Foundations, Professional Societies -

- American Heart Association (Founders): 2 yrs
- American Kidney Fund
 - Clinical Scientist in Nephrology Fellowship
- American Liver Foundation
- Daland Fellowships in Clinical Investigation
- Pfizer Fellowship in Health Disparities

Timeline of NIH Funding for Junior Investigators



Career Transition Awards

- **NIH Pathway to Independence Award (K99/R00)**
 - 1-2 years as a mentored K award for post-docs
 - Total/year: = \$90,000 (salary and research expenses)
 - 75% effort
 - 3 years as an research support award for independent investigators
 - Total/year: = \$249,000 (salary and research expenses)
 - Must have an independent research position
 - Fund 150-200 awards per year

Career Transition Awards

- **BWF: Career Awards for Medical Scientists**
 - To support physician-scientists during the last years of a mentored postdoctoral/fellowship position and the beginning years of an independent faculty position.
 - Must hold an M.D., D.D.S., D.V.M., Pharm.D., or equivalent clinical degree
 - 75% effort to research-related activities
 - Funding: \$700,000 over five years
 - Postdoctoral/Fellowship Portion: Years 1 and 2
Annual Total:\$ 95,000
 - Faculty Portion of the Award: Years 3-5
Annual Total: \$170,000

Career Transition Awards

- **American Heart Association (National) Fellow-to-Faculty Transition Award**
 - Provides funding for during the crucial period of career development which spans the completion of research training through the early years of the first faculty/staff position
 - Training stage: Maximum of \$65,000 per year
 - Faculty stage: Maximum of \$132,000 per year

Timeline of NIH Funding for Junior Investigators



Research Career Programs (K)

- Minimum Effort: e.g. 75% (sometimes 50%)
Research & Career development activities
- Predominantly salary support
 - e.g. NHLBI: \$75K, NIDDK: \$90K, NCI: \$100K
- Up to 5 years
- US citizen/permanent resident
- Reduce effort to 50% in last 2 years if PI of NIH research grant

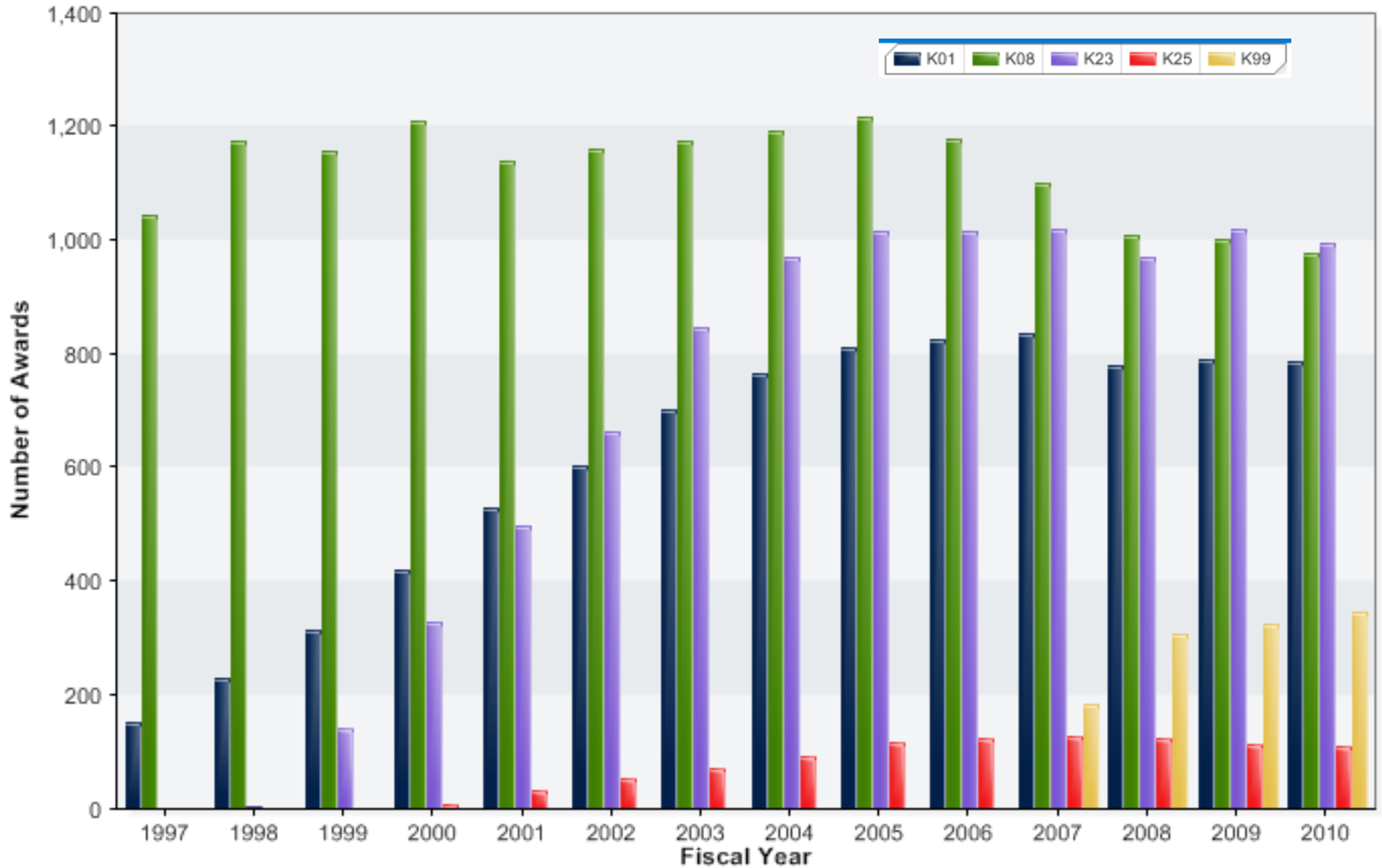
Mentored Clinical Scientist Development Award (K08)

- Support to develop outstanding independent clinician research scientists
- Basic and translational science

Mentored Patient-Oriented Research Career Development Award (K23)

- **Patient-oriented research**: Research conducted with human subjects (or on material of human origin) for which an investigator directly interacts with human subjects
- **Research areas**: (1) Mechanisms of human disease, (2) Therapeutic interventions, (3) Clinical trials, and (4) Development of new technologies

Research Career Development Awards



Research Career Development/ Scholar Programs

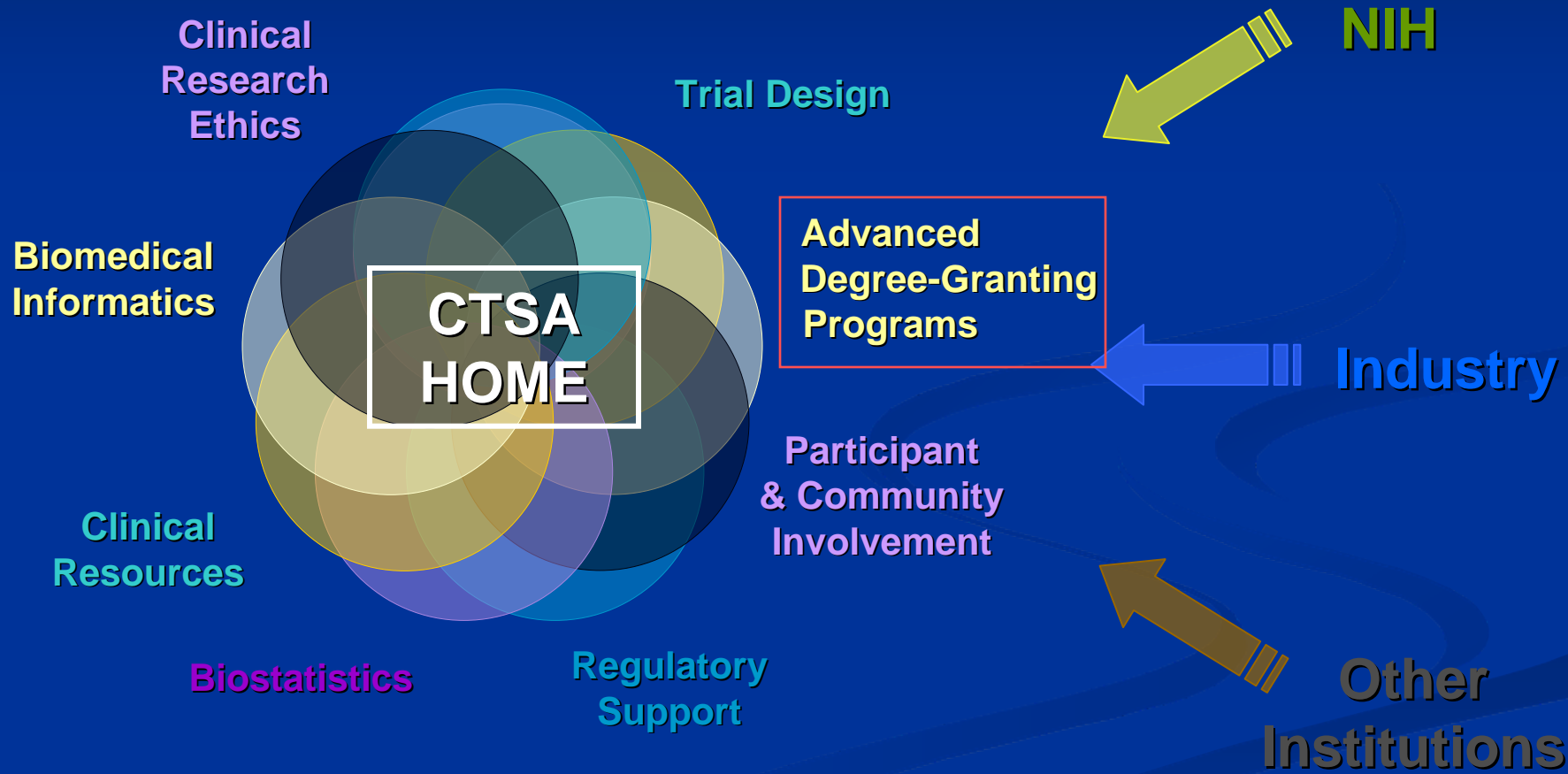
- American Heart Association
 - Scientist Development Grant
- American Society of Nephrology
 - Career Development Grants
- Damon Runyon Cancer Research Foundation
 - Clinical Investigator Award
- Doris Duke Charitable Foundation
 - Clinical Scientist Development
- Foundation for Digestive Health and Nutrition
 - AGA Research Scholar Awards

Timeline of NIH Funding for Junior Investigators



CTSA Awards:

A Home for Clinical and Translational Science



Mentored Clinical Scientist Development Program Award (K12)

- Support to an institution for career development experiences for clinicians leading to research independence.
- Institutions recruit and select candidates into their programs
- Candidates must meet the same criteria as for the individual mentored clinical scientist development award.

Institutional Clinical Research Curriculum Award

- Comprehensive courses in clinical research
 - Biostatistics, epidemiology, study designs, bioethics, legal and regulatory issues
- For the career development of clinical investigators

NIH's Extramural Loan Repayment Program

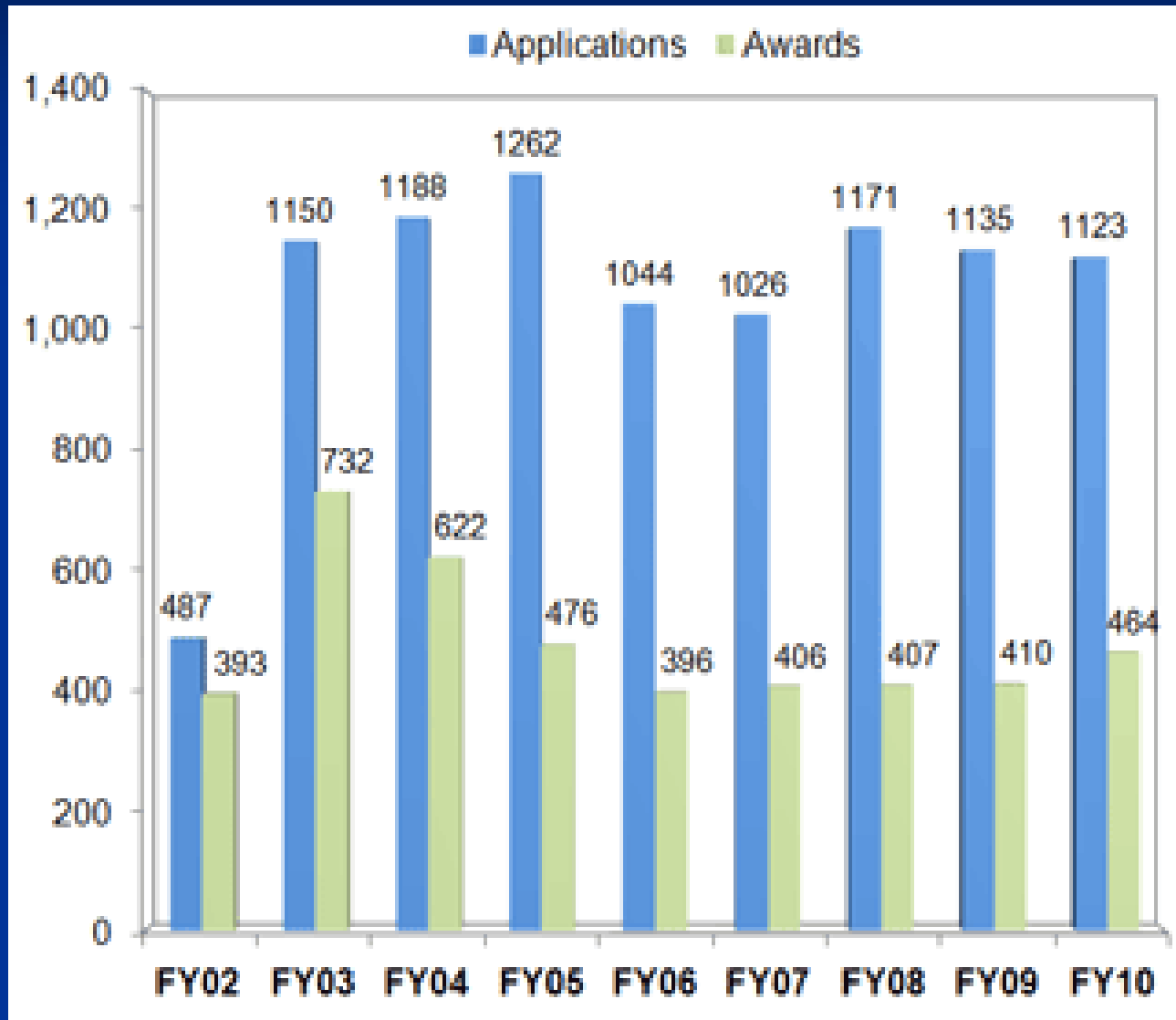
- Up to \$35,000 a year towards educational loan debt
- Conduct qualified research activities for at least 50% of their effort (or less than 20 hours per week) for a minimum of 2 years
- Qualifying educational loan debt equals or exceeds 20% of the applicant's institutional base salary

NIH's Extramural Loan Repayment Program

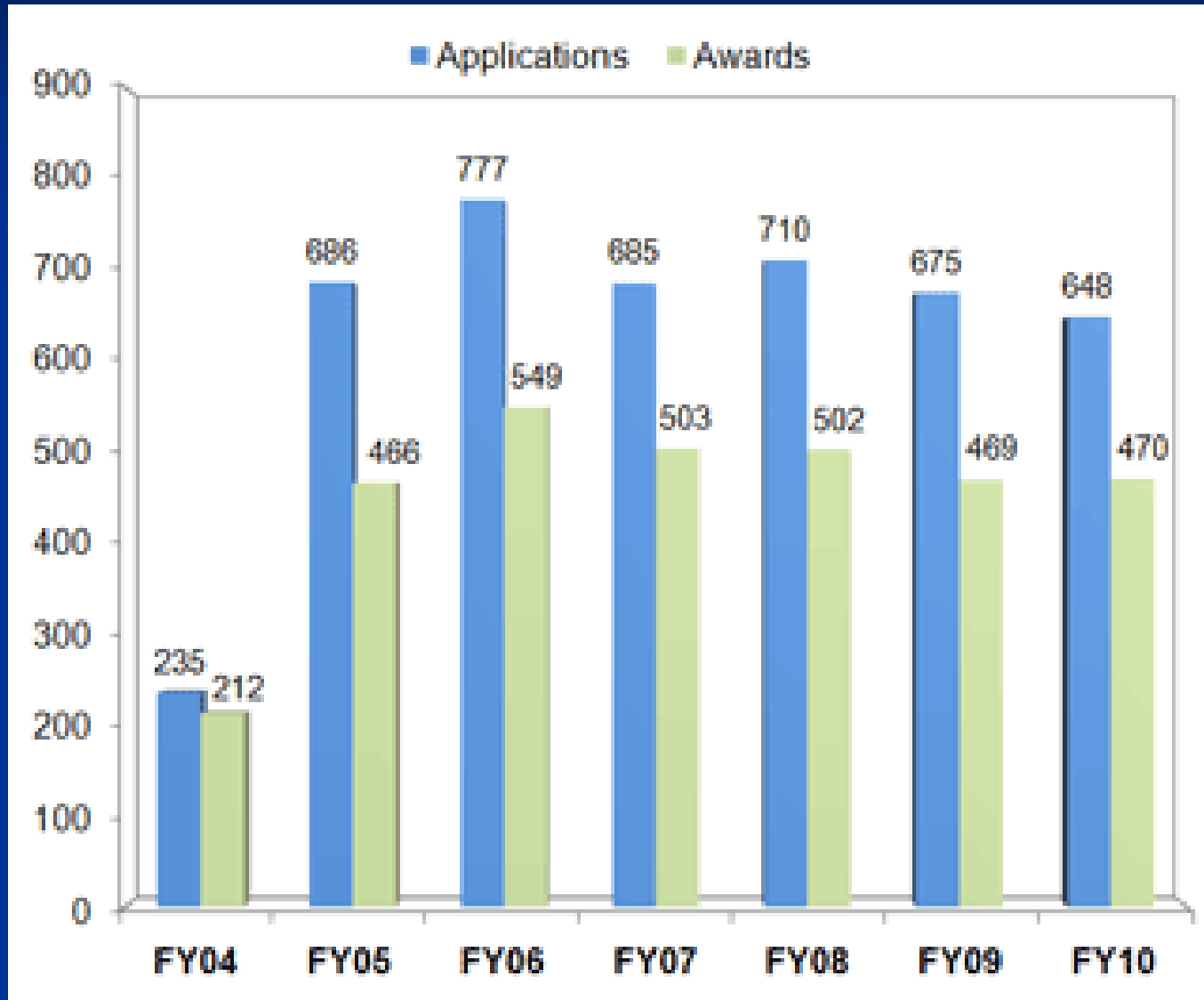
Extramural Programs

- Clinical Research
- Health Disparities Research
- Clinical Researchers from Disadvantaged Backgrounds
- Pediatric Research
- Contraception and Infertility Research

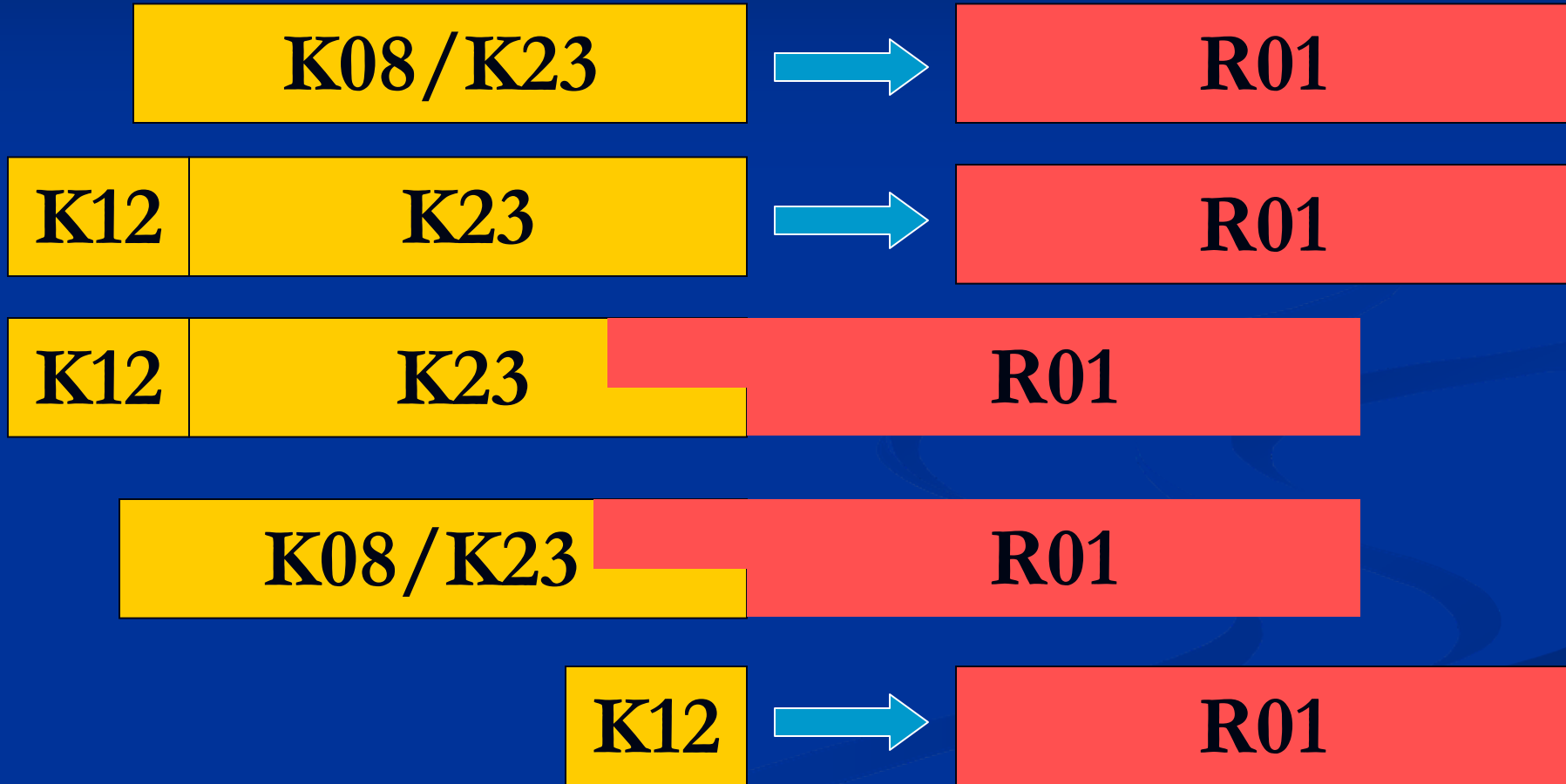
LRP: Clinical Research – New Applications –



LRP: Clinical Research – Renewal Applications –



Career Development (K) Support to Research Grant (R01)



NIH: one round of applications



When Preparing an Application:

- Read instructions
- Never assume that reviewers “will know what you mean”
- Refer to literature thoroughly and thoughtfully
- Explicitly state the rationale of the proposed investigation
- Include well-designed tables and figures
- Present an organized, lucid write-up

Elements of a Good Proposal

- Feasible
- Relevant
- Unique
- Innovative
 - Clear
 - Brief
- Consistent

**Anticipate Questions
and
Answer them before
they are asked**

Common Problems with Grant Applications from New Investigators

- Overly ambitious
- Not independent of previous mentor's research
- Fishing expedition
- Not hypothesis driven
- Descriptive, not mechanistic project
- Unfocussed
- No or insufficient preliminary data
- Unrealistic budget
- Methodologies beyond the expertise of investigator or research team