

NCI Training and the Cancer Research Workforce

National Cancer Advisory Board,
June 28th, 2011

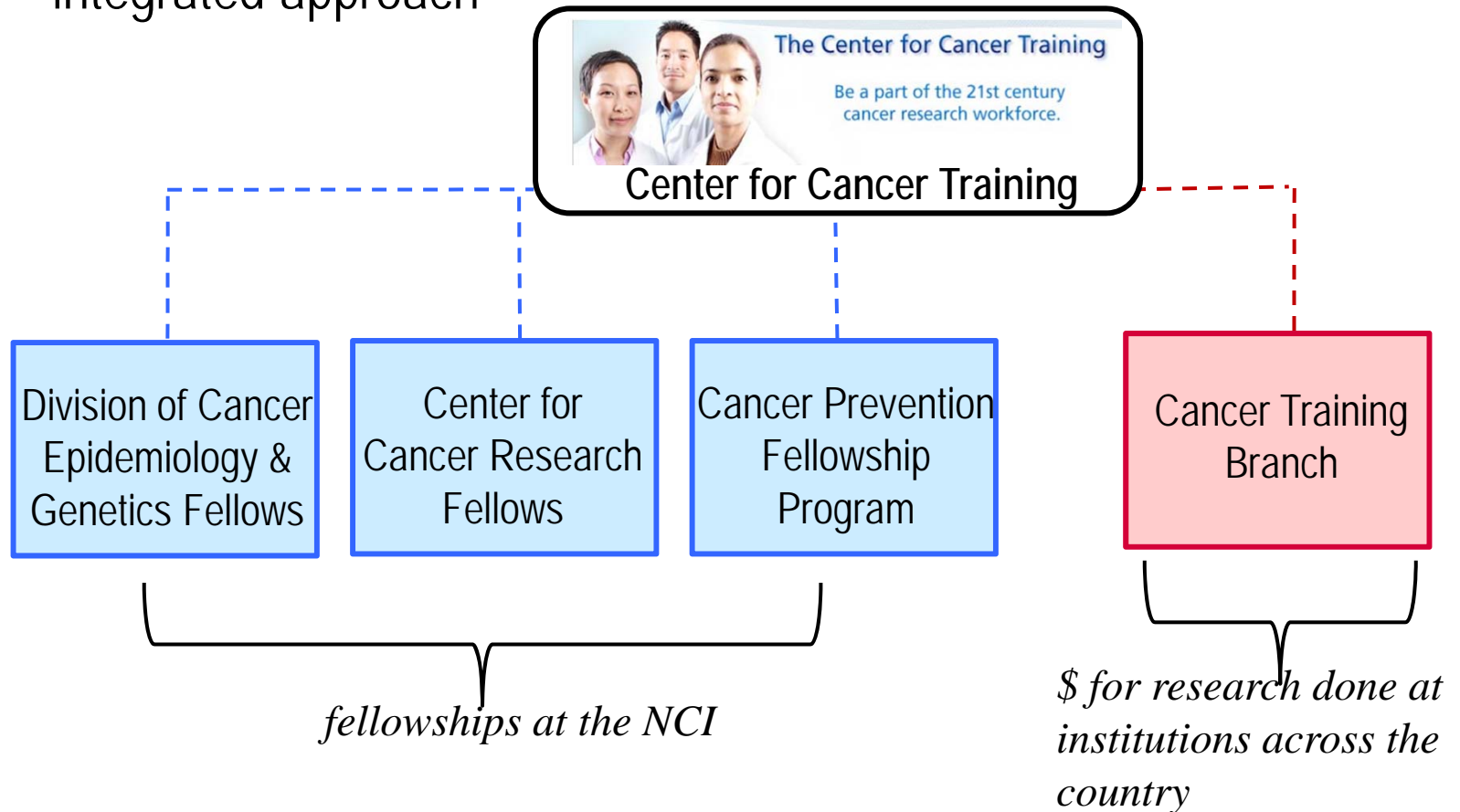
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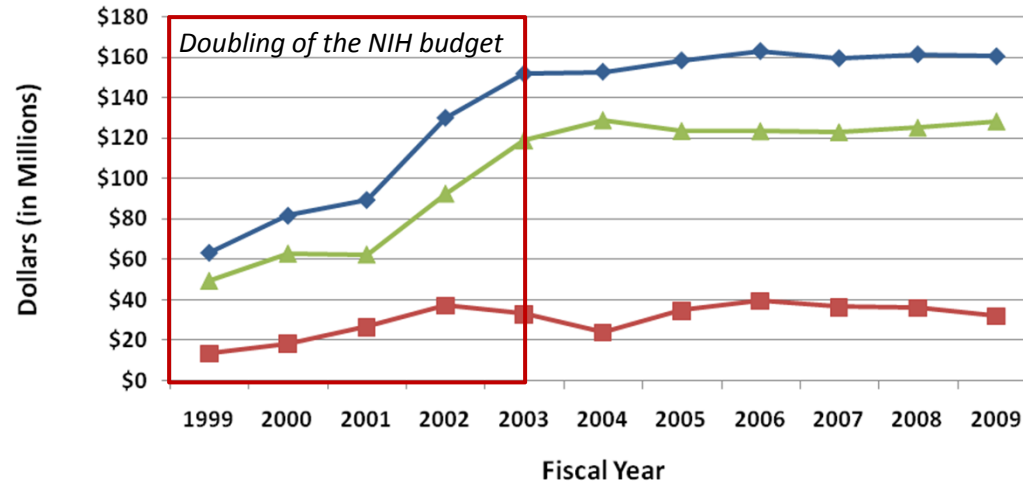
NCI's Center for Cancer Training (CCT)

CCT is catalyzing the development of a 21st century workforce capable of advancing cancer research through a scientifically integrated approach

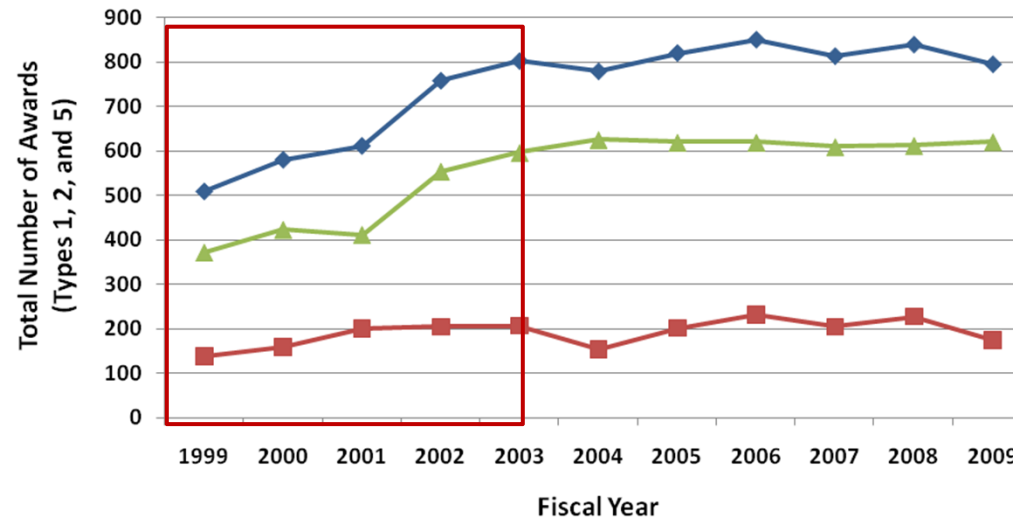


Cancer Training Branch Awards

NCI CTB Training and Career Development Awards
Budget, FY99-09



NCI CTB Training and Career Development Awards, FY99-09



◆ Total Awards (Type 1, 2 and 5)
 ▲ Noncompeting Awards (Type 5)
■ New Awards (Types 1 and 2)

Training, Fellowships, and Career Development Budget by IC

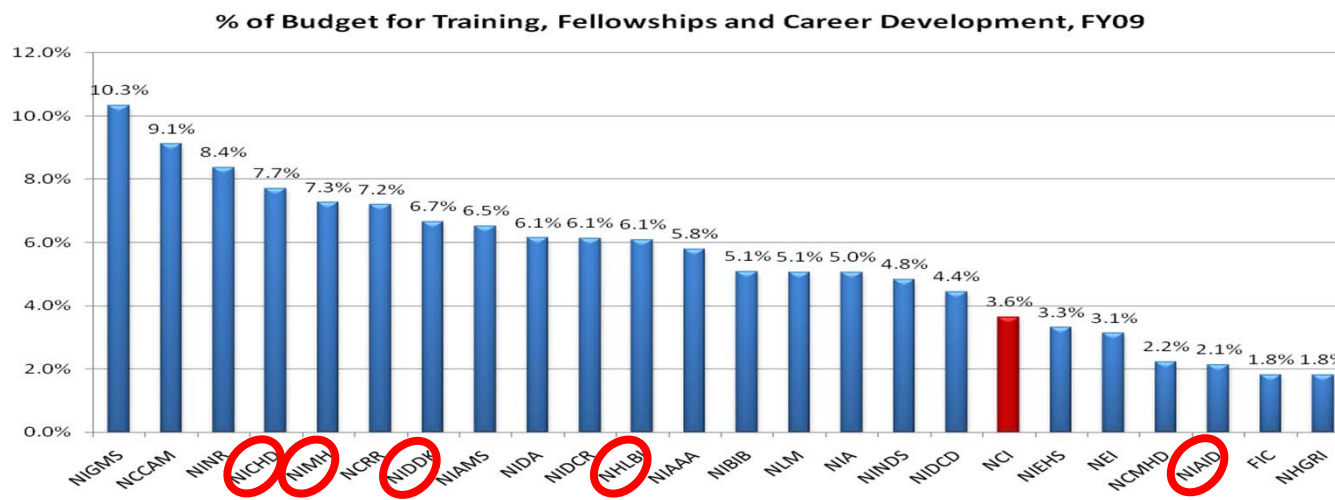
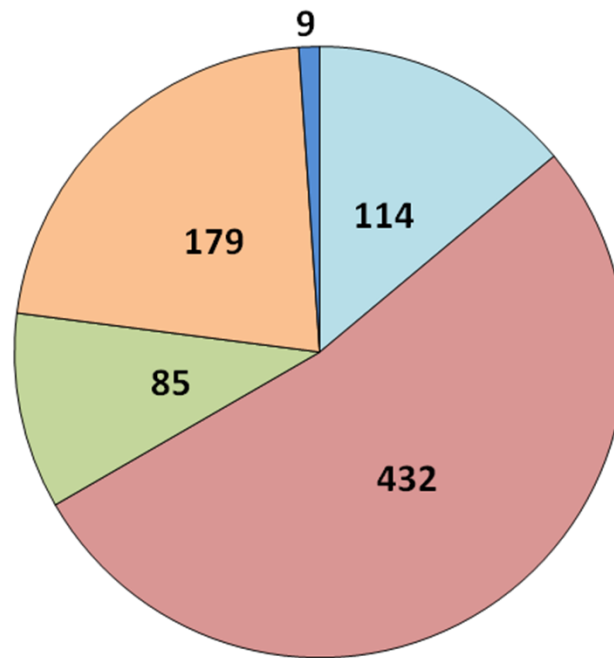


Chart generated from budget-by-mechanism data from NIH RePORT and NIH Databook sites

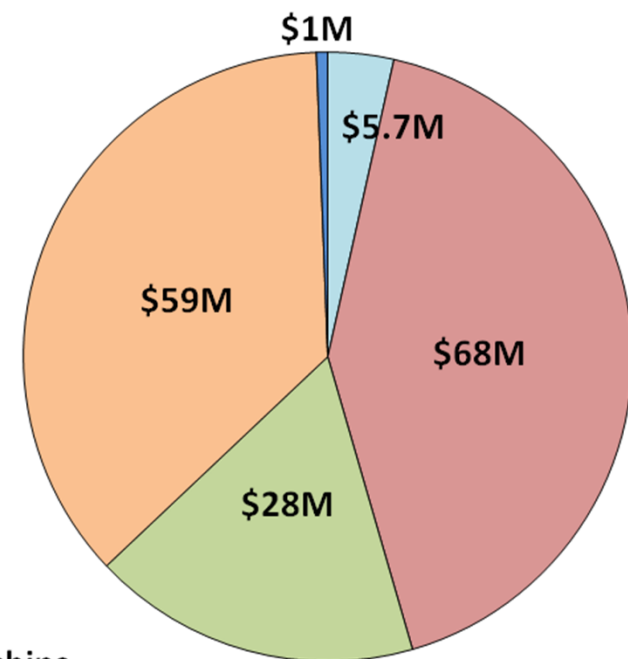
Building a scientifically diverse workforce

Breakdown of the CTB Portfolio by Activity

Est. Count of Awards



Est. Dollars Spent

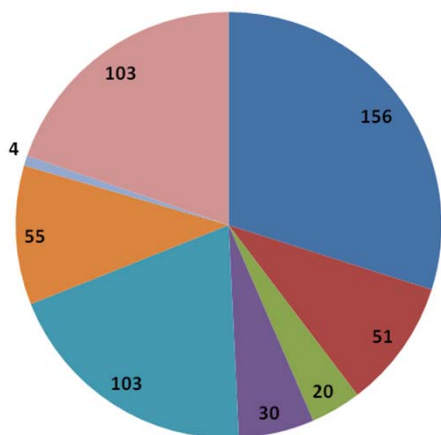


- Fellowships
- K Awards
- R25
- T32
- Other

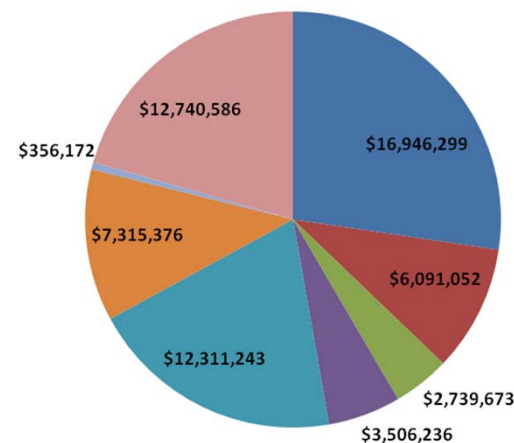
*Does not include ARRA awards
Data from FY09*

CTB Individual and Institutional Awards

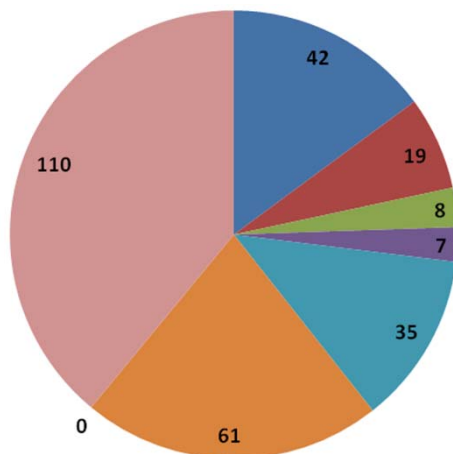
Individual, Number of Awards



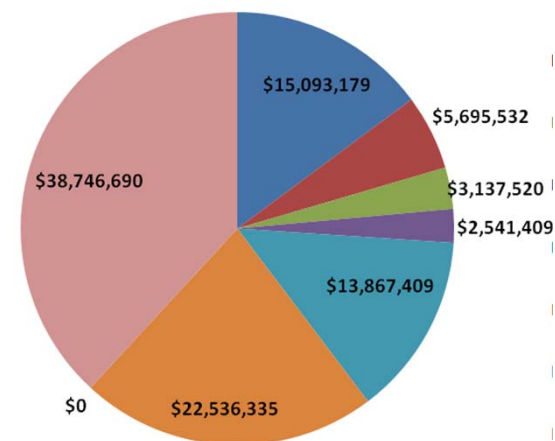
Individual, Budget



Institutional, Number of Awards



Institutional, Budget



Source: NCI Funded Research Portfolio (NFRP). Note, some projects are coded to more than one high-level CSO category and therefore are counted as Dual Discipline.
Data from FY09

Issues affecting training

Major Goals of Training

- Produce scholarly work
- Master technical skills
- Develop critical questions/hypotheses
- Develop critical thinking skills
- Grow and expand scientifically
- Inter-, multi-, trans- disciplinary training
- Develop “soft” skills: writing, presenting, management, etc.
- Build towards independence and next career step

Overview and challenges facing the workforce

- Number of postdocs and predocs is increasing
- More predocs are doing postdoctoral training, especially in biomedical research
- Most trainees are supported on research grants
- Tenure track positions are not growing
- Trainees have difficulty transitioning to independence
- Time to first R01 continues to increase
- There is a need for a more scientifically diverse workforce
- It is difficult to track trainee outcomes
- Increased time in training may have a negative effect on students choosing science as a career track

Forces driving the workforce

- Colleges and universities are mostly graduate student driven
- Need for “low cost” highly trained workforce
- Tournament model of employment, not supply and demand
- Increasing competition for tenure track positions and grant funding

Transitioning to independence and reduce time to first R01

Addition of F30 and F31 to CTB Portfolio

- Analysis of future grant funding suggests trainees receiving F30s, F31s, and F32s may be more likely than trainees supported on institutional grants to have academic-focused careers
- Obtaining individual F grants will help demonstrate fundability and assist in future funding

K22 and K99/R00 Modifications

- **K22**
 - Expand science to all cancer research
 - Limit eligibility to 8 years postdoc experience and only investigators in mentored positions
 - Limit eligibility to not include previous K support
- **K99/R00**
 - Expand science to all cancer research

CCT/CTB activities to address these issues

- Improve the transition to independence
 - Add F30 and F31 mechanisms
 - Modify the K22 and K99/R00 mechanisms to broader science
 - Maintain the 3:1 postdoc to predoc ratio on training grants
- Building a scientifically diverse workforce
 - Maintain a diverse scientific portfolio
 - Develop career options and training on institutional training grants
 - Publicize the R25 mechanism for broader use
- Outcomes evaluation of the K portfolio

What else could we do?

- Encourage innovative institutional training grants offering career track options
- Encourage more structured training activities on RPGs
- Increase indirect costs on Career Awards
- Develop additional tracking tools

Other questions to consider

- Should we compress the number of Career (K) mechanisms?
- What is the right size and distribution of institutional training grants?

Thank you for your attention!