

## VII. STANDING COMMITTEES

## A. Academic and Student Affairs

Update on Research: Past Trends, Current Status and Future Prospects for Research Funding

For information only.

David Eaton, Interim Vice Provost for Research, will provide a short summary of trends in federal research funding over the past decade, including UW growth and market share. He will provide some highlights of recent new major awards, as well his perspectives on federal funding of research in the coming years.



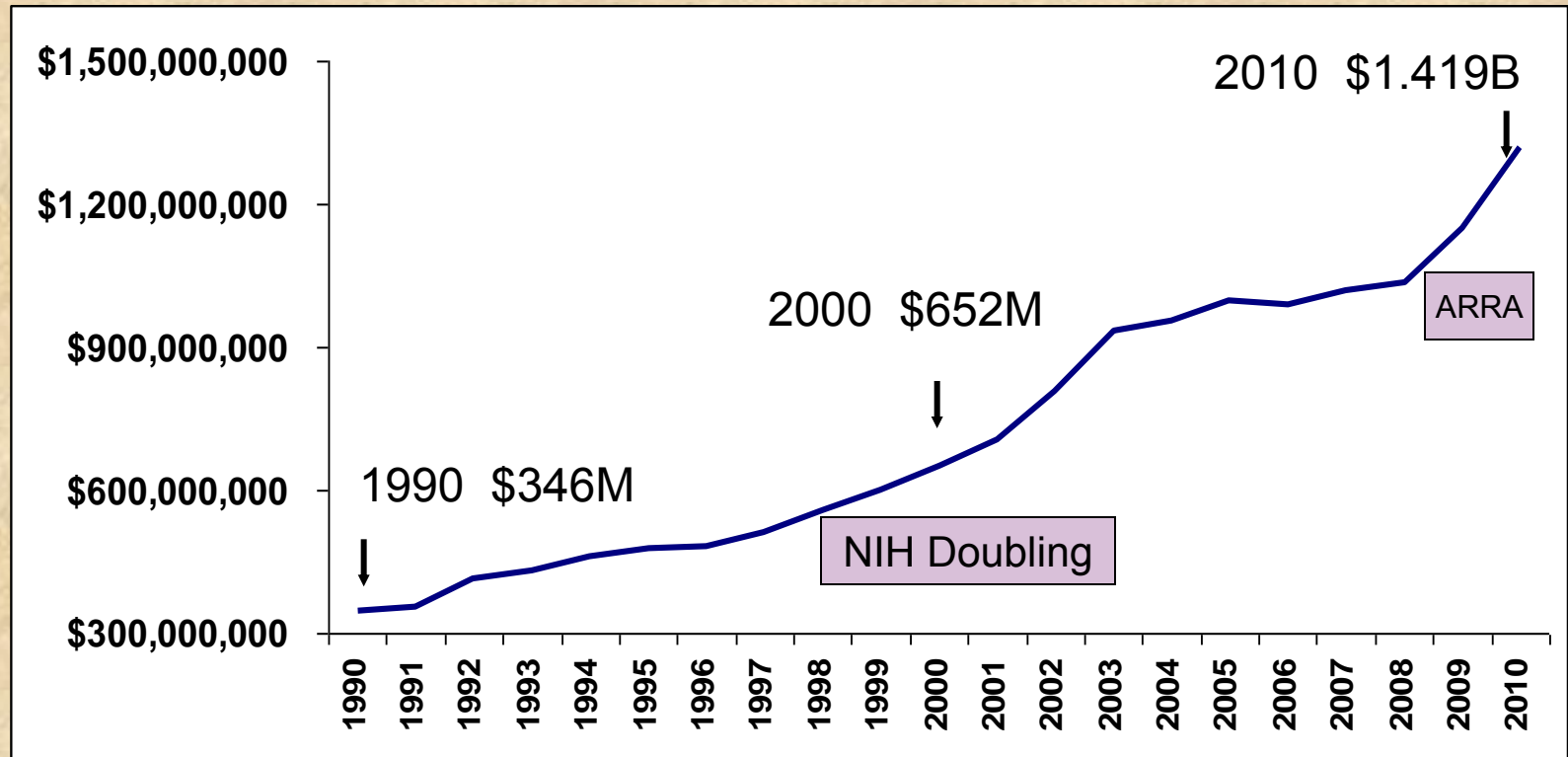
Dr. Eaton is a professor in the School of Public Health and Director of the Center for Ecogenetics & Environmental Health. He is an Associate Vice Provost for Research, currently serving as Interim Vice Provost. Dave received his Ph.D. in pharmacology from the University of Kansas Medical Center (KUMC) in 1978. He joined the UW faculty as an Assistant Professor of Environmental Studies and Environmental Health in 1979. He is now Professor of Environmental and Occupational Health Sciences, and also holds adjunct appointments in Public Health Genetics and Medicinal Chemistry. He served as Associate Dean for Research in the School of Public Health from 2000-2005, and as Associate Vice Provost for Research from 2005-2010. He is currently founding Director of the Center for Ecogenetics and Environmental Health at the University of Washington, and Interim Vice Provost for Research, at the UW. Nationally, he has served as President of the Society of Toxicology and on numerous other Boards and Commissions, including the NAS/NRC Board of Environmental Studies and Toxicology; he has chaired or served on numerous National Academy committees dealing with controversial areas in toxicology, such as ‘safe’ levels of arsenic in drinking water, evaluation of the EPA’s Risk Assessment on Dioxins in the environment, and a review of the federal strategy to address environmental health and safety issues related to nanomaterials. He has published over 150 scientific articles and book chapters in the field of toxicology, and is author of several key textbook chapters on the principles of toxicology, such as ‘Casarett and Doull’s Toxicology’, ‘Comprehensive Toxicology’ and ‘Textbook of Clinical Occupational and Environmental Medicine’. Dr. Eaton is an Elected Fellow of the American Association for the Advancement of Science and the Academy of Toxicological Sciences, and is a Lifetime National Associate of the National Academies of Sciences.

# Update on Research Funding

## What does the future hold?

**Dave Eaton**  
**Interim Vice Provost for Research**  
and  
**Professor and Director,**  
**Center for Ecogenetics & Environmental Health**

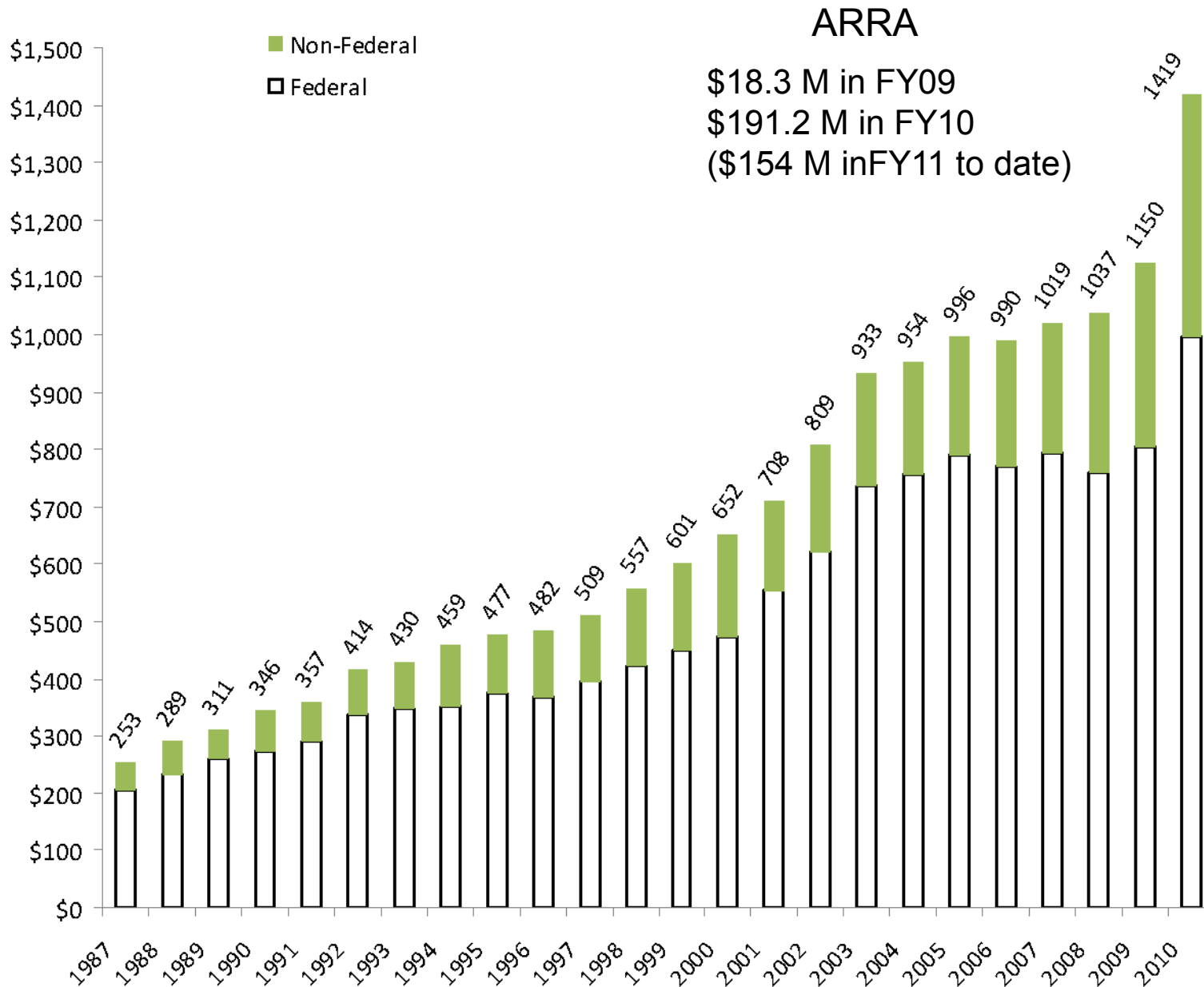
# UW Grant & Contract Funding Trends 1990 - 2010



- Research funding has doubled twice in the past 20 years
- Major increases during the period of NIH doubling 1998-2003.

Long-term: President Obama has made a strong commitment to increased research funding; Research funding has typically had bi-partisan support

## Total Grant and Contract Awards by Year (in Millions) Fiscal Years 1987-2010

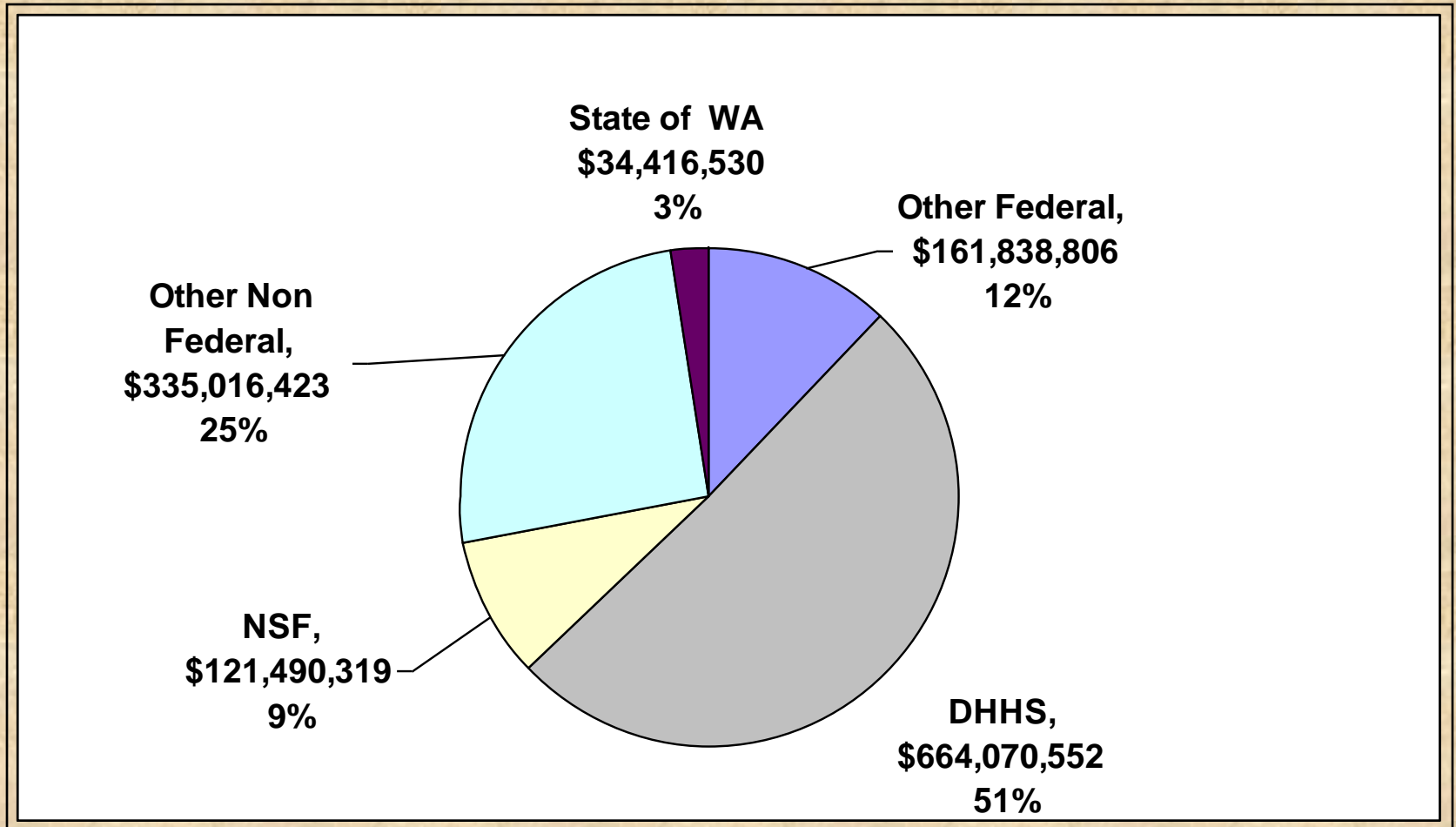


# FY2010- Basic Facts

- UW was awarded 5,454 awards totaling \$1.42 billion
  - fourth consecutive year over a billion dollars
- 70% from federal, 30% from non-federal sources
  - Federal awards over \$996 million
- Generated nearly \$500 million in salaries, including:
  - \$163M for faculty salaries
  - \$208.6M for staff salaries
- UW received 498 ARRA awards worth \$191.2M
  - 1st in the country in receipt of NIH ARRA awards.

# UW G&C Awards FY 2010

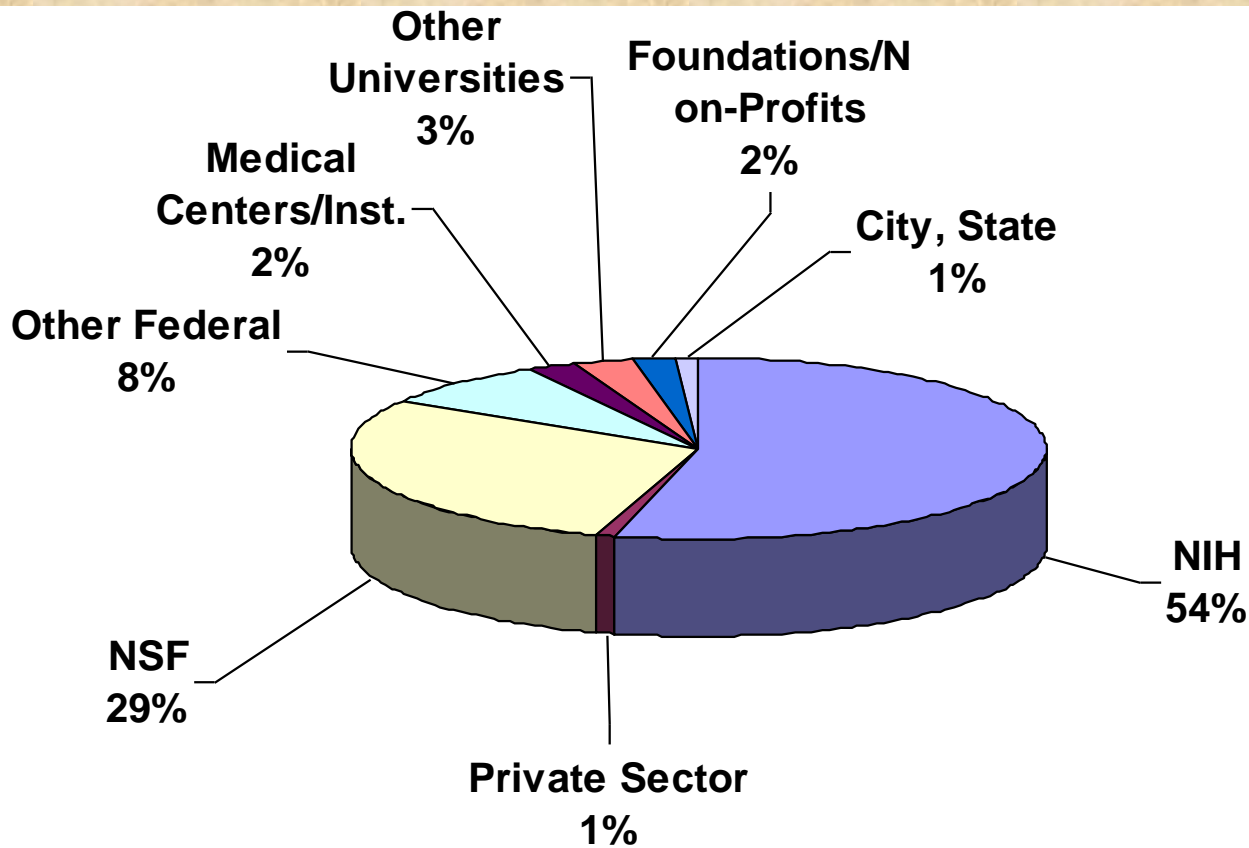
## \$1.42 Billion



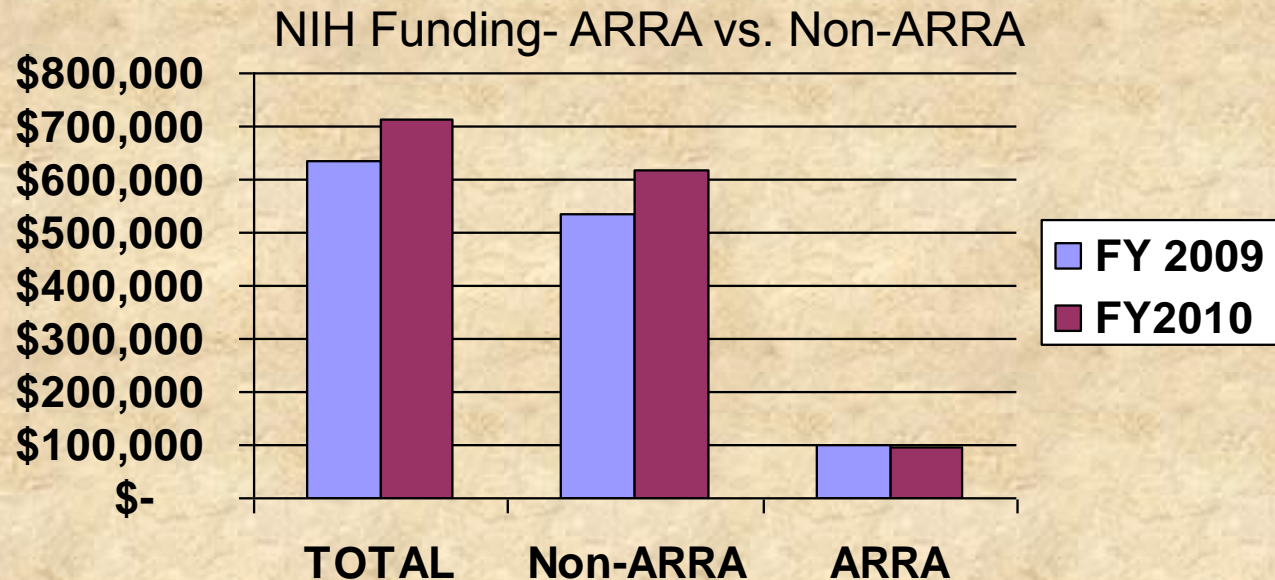


# ARRA Funding 2009-2011

747 Awards worth \$365 Million



# Federal Funding: ARRA vs. Non-ARRA awards



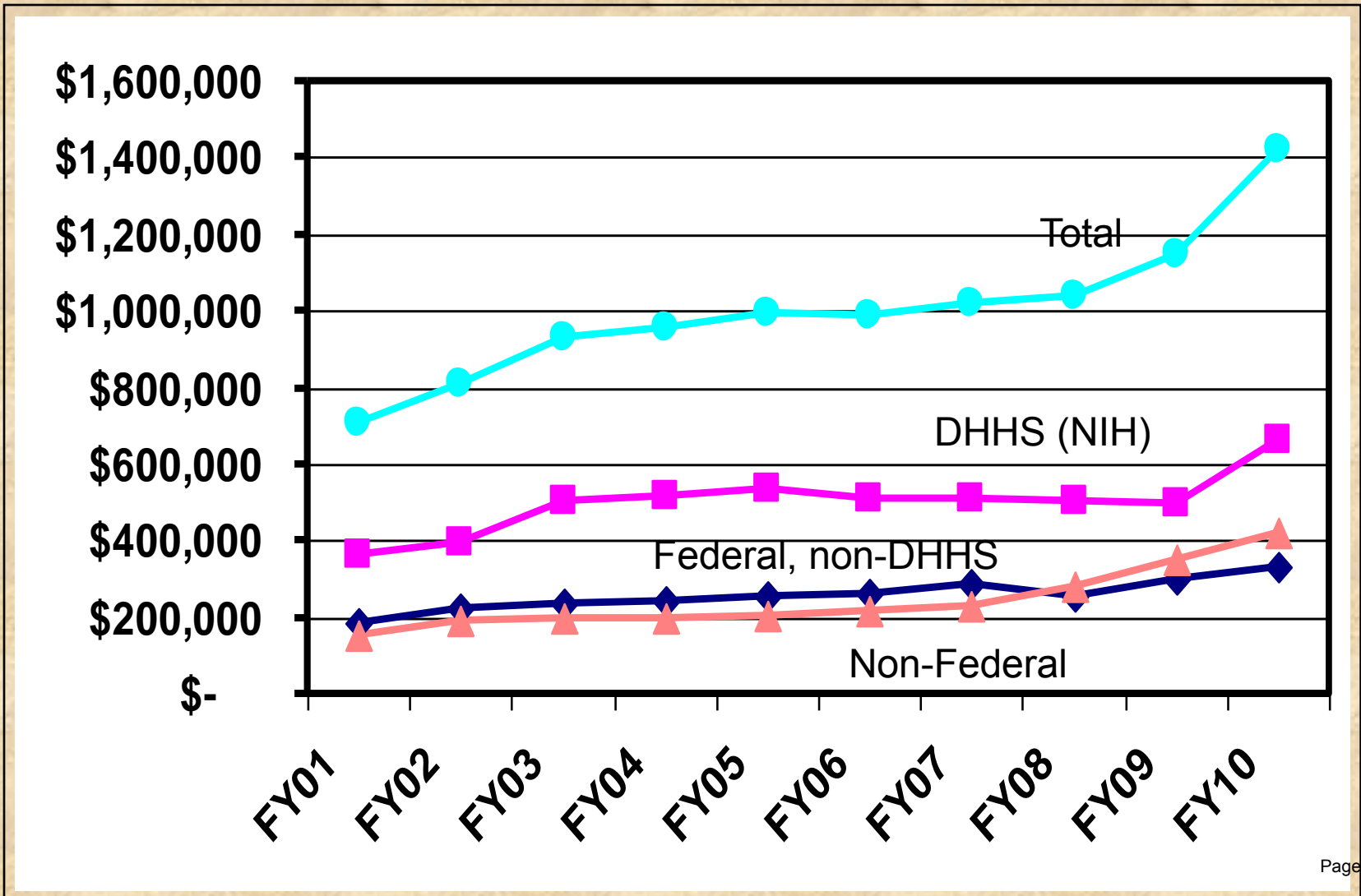
## ARRA Research Funding Impacts:

- 658 FTE = jobs created or maintained
  - Largely specialized and technical jobs
  - Students, post-docs, technicians, some support staff
  - Very little overlap with State budget cut-related jobs
- Immediate economic stimulation (direct + indirect)
- At the end of 2 years, funding will drop ~ 15%
- But Base will have increased (perhaps >15%!



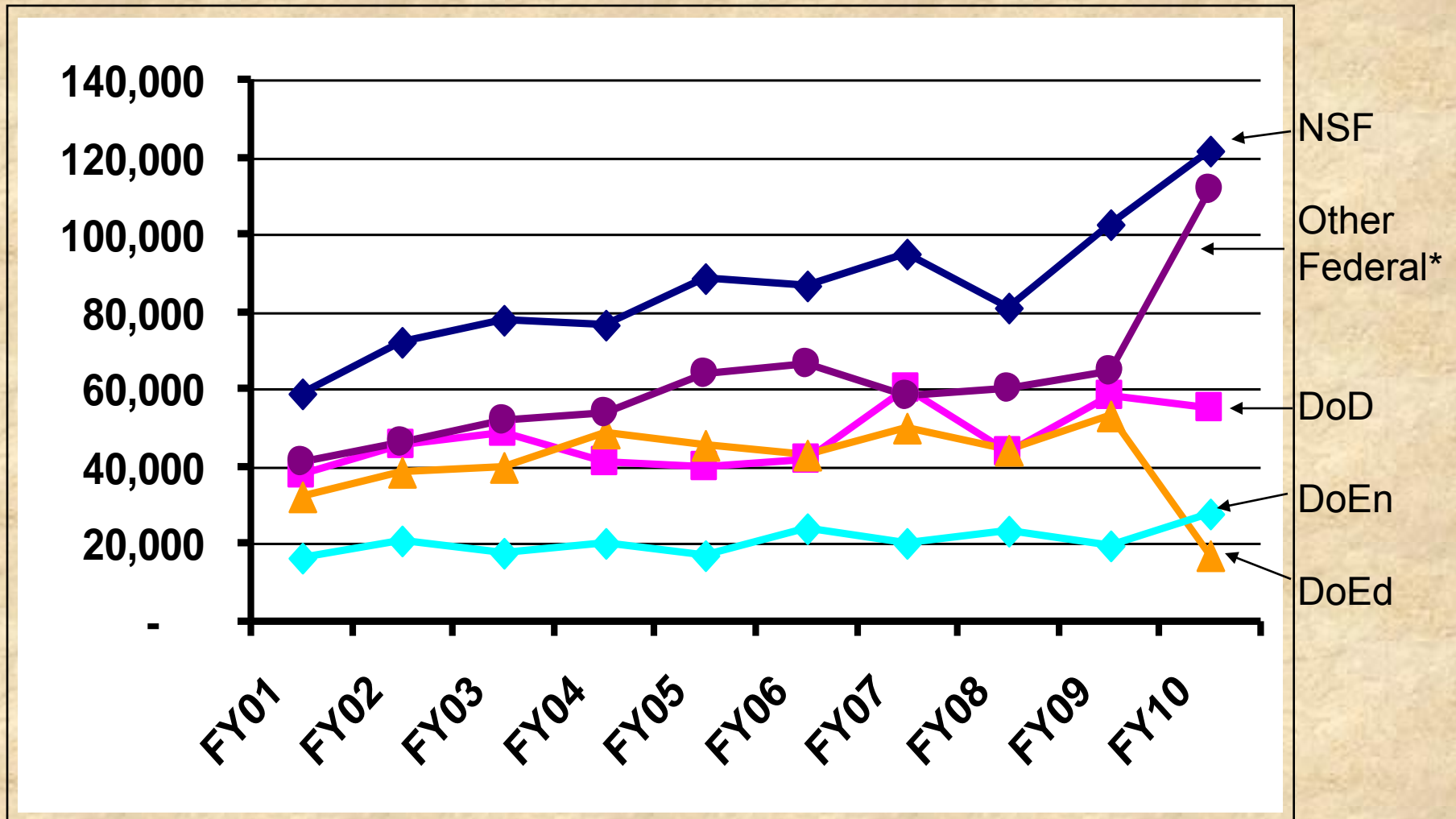
# Federal and non-Federal Funding Trends

## FY 2001-2010 (Includes ARRA funding)



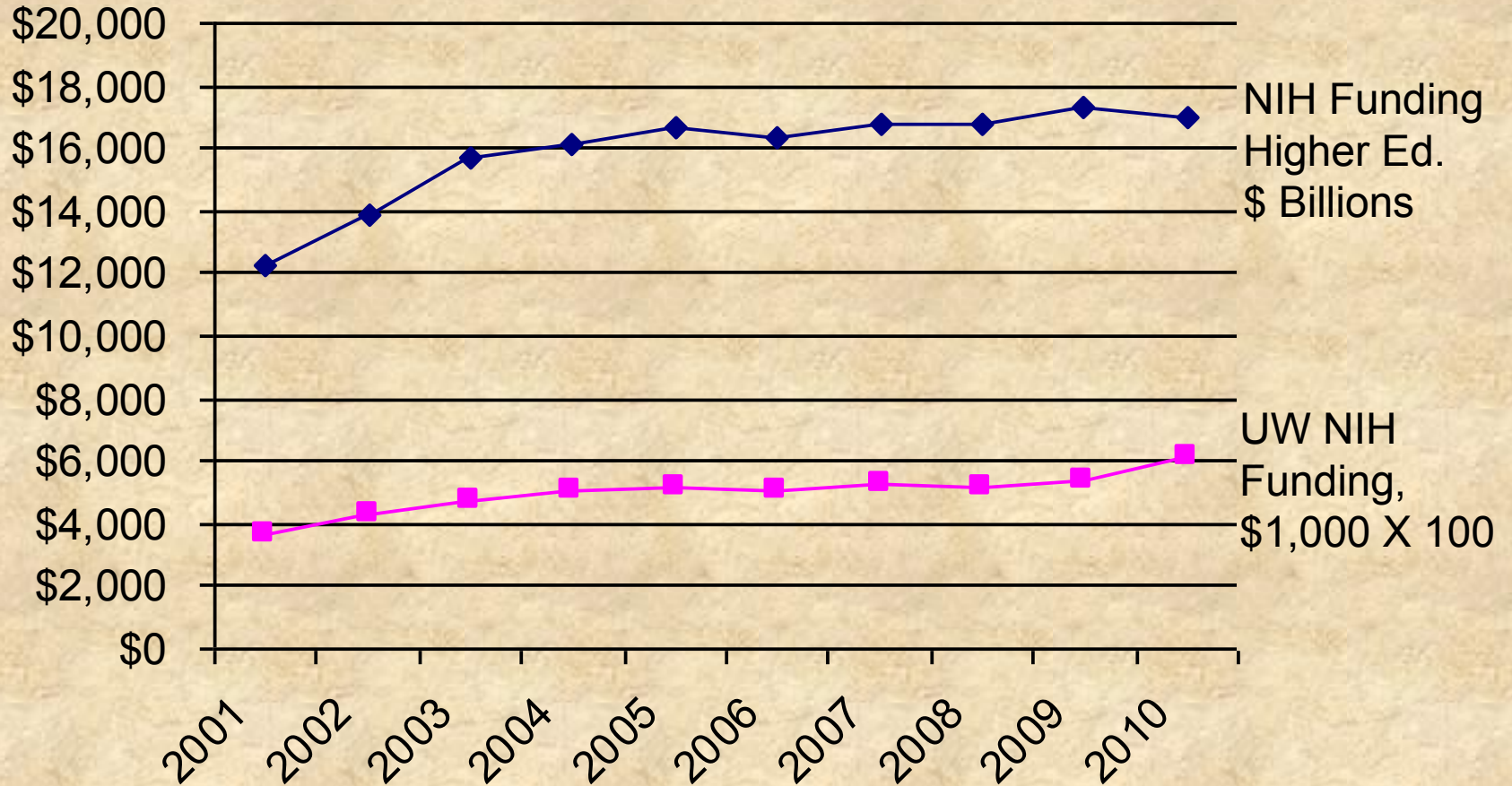
# Federal, Non-DHHS Funding

## FY 2001-2010 (includes ARRA)



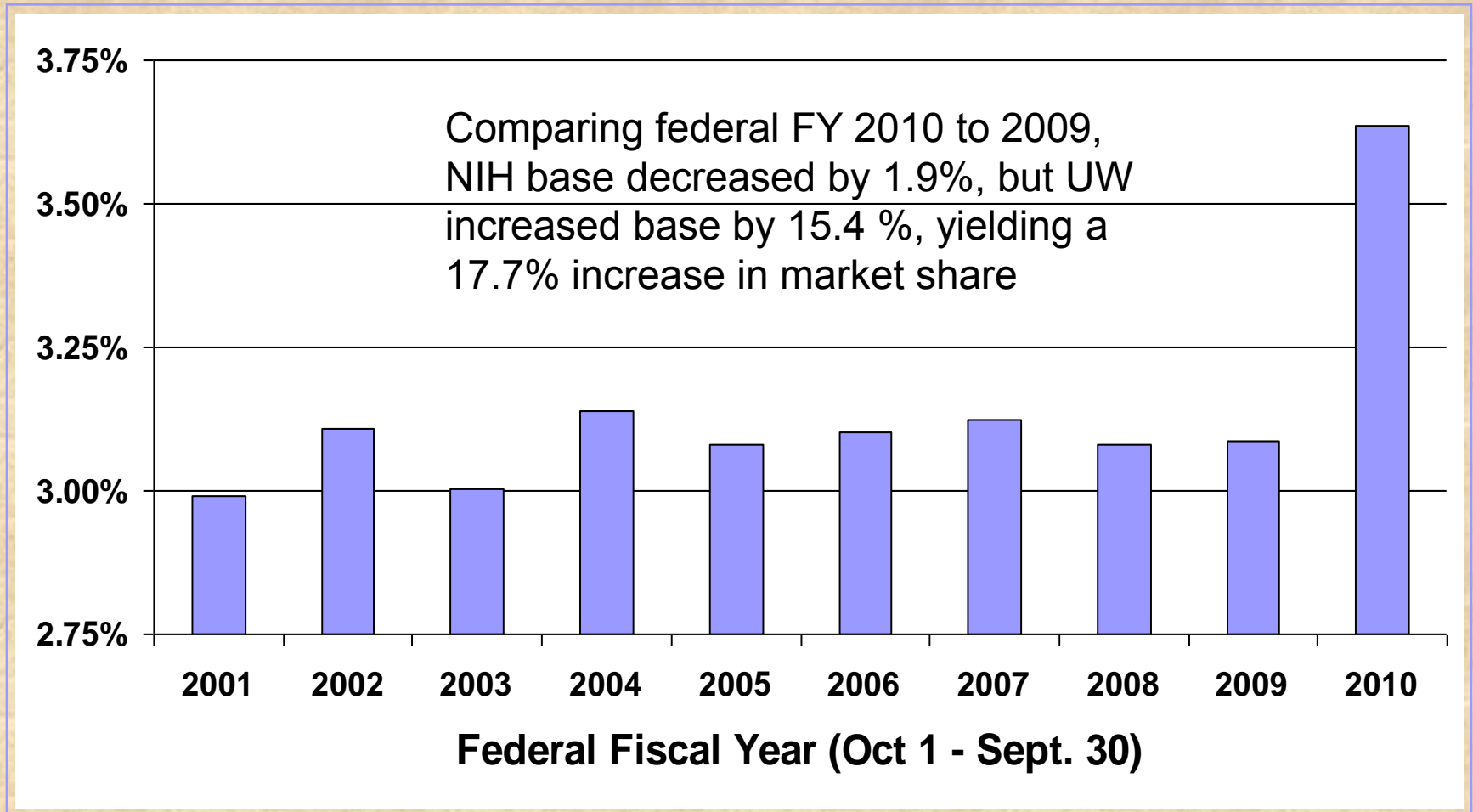
\*FY2010 includes \$62M grant from HRSA for Global Health

# UW -NIH Funding

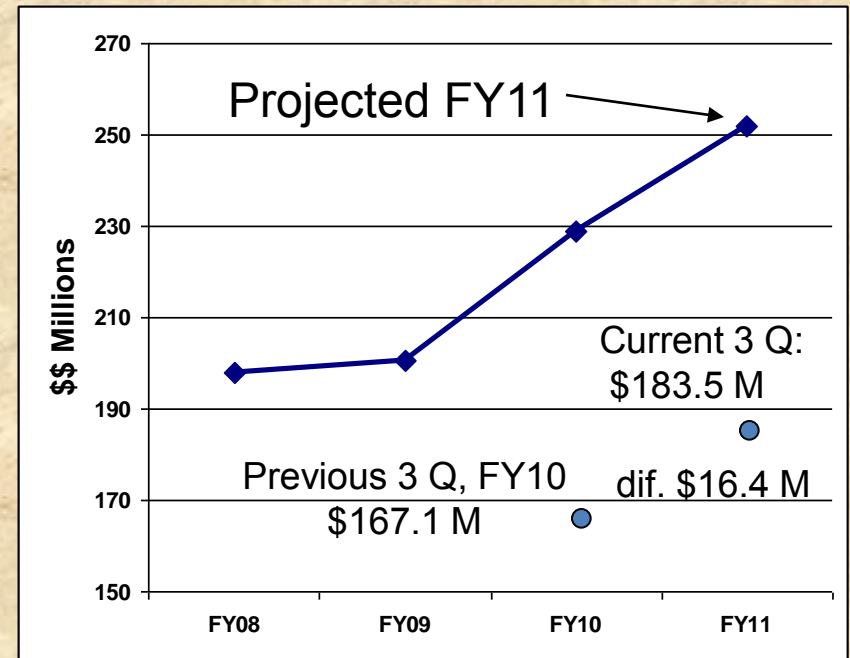
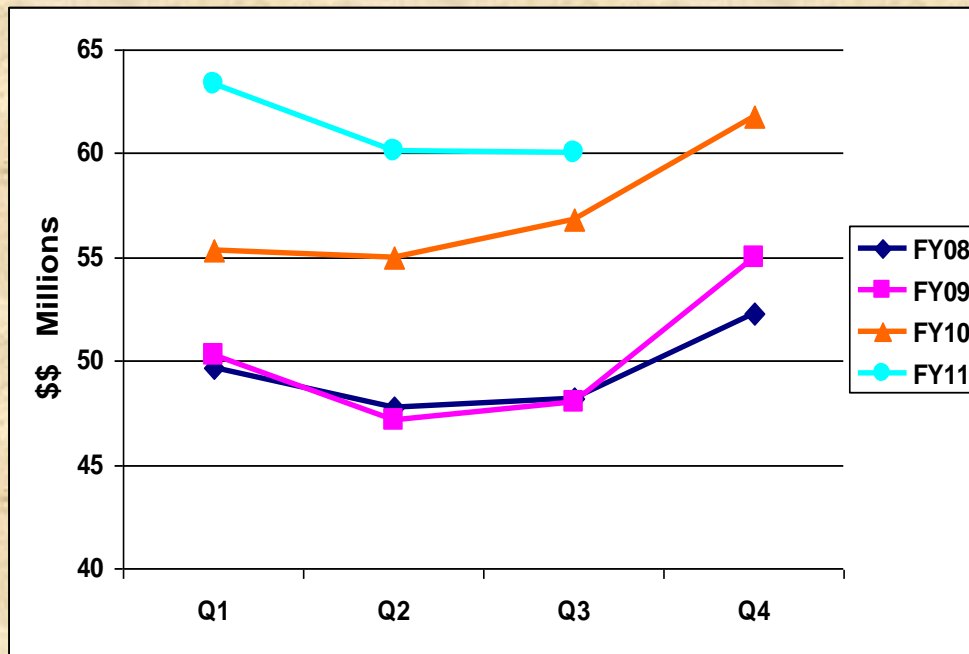


# UW “Market Share” of Base\* NIH funding to Academic Research Institutions

(\*Excluding ARRA funding received in FY2009 and 2010)



# Indirect Cost Recovery Revenue Trends





# What Are the Results of Research?

- Trained workforce
- Breakthroughs that lead to public benefit
  - Healthcare
  - Energy
  - Environment
  - Communications
  - Sustainable cities
- Intellectual property that leads to companies and jobs





# *The Chronicle of Higher Education*

September 28, 2010

The Top 100 Institutions in Federally Financed R&D Expenditures, 2009

Rank	Institution	2009 \$\$, x 1000
1	Johns Hopkins U.	\$1,587,547
2	U. of Michigan (all campuses)	\$ 636,216
3	<b>U. of Washington</b> (all campuses)	<b>\$ 619,353*</b>
4	Massachusetts Inst. Technol.	\$ 532,618
5	U. of California, San Diego	\$ 511,428

\*NSF chronically 'under-reports' UW grants and contract awards from federal agencies, for reasons I'm don't know! Our data indicate that we had FY2009 expenditures on Federal G&C of **\$707,963,586**.

# UW Global Ranking by HEEAC, 2010

“Higher Education Evaluation & Accreditation Council of Taiwan” (HEEACT)

- This ranks institutions only on the impact of research, based on the number and quality of scientific publications
- Considers overall ranking based on detailed assessment in 6 science areas: Clinical, Life, Natural, Engineering, Social, Agricultural and Environmental

Rank	Institution	'Score'
1	Harvard	96.3
2	Stanford	50.3
3	J. Hopkins	49.9
<b>4</b>	<b>Univ. Wash.</b>	<b>49.0</b>
5	UCLA	48.4
6	UC-Berkeley	46.4
7	MIT	46.1
8	Univ. Mich.	45.9
9	Univ. Toronto	43.7
10	Oxford U.	42.8

# Summary – future research funding

- Federal funding for research will, at best, remain flat for the next several years
  - F&A rate will go down 2%, from 56% to 54% (main campus)
- In order to ‘grow’ our research, we will need to increase our ‘market share’
  - Happened in FY 2010 for NIH funding; less clear with NSF
  - Develop central support program for large, interdisciplinary grants
  - Provide seed funding for innovative interdisciplinary programs
  - Invest in new facilities that attract and retain top faculty
- And/or, we will need to seek new sources
  - Examples –USDA grant for \$40M; HRSA grant for \$62M
  - Industry funding has not been a substantial part of our portfolio – an area for potential growth if economy continues to recover
    - Seek ‘entrepreneurial’ faculty and foster partnerships – C4C
  - Increasing support from foundations is helpful, but has a serious down-side: low Indirect Cost recovery

# Threats to the Research Enterprise

- Decreases in federal funding for research
- Loss of key faculty
  - Retirements
  - Loss to other Universities, particularly ‘privates’ (retention)
- Ability to recruit top new faculty, retain current stars
  - Competitive salaries
  - Competitive start up funds
  - Excellent facilities
  - Family support / spousal hires