



# Research Funding in Texas

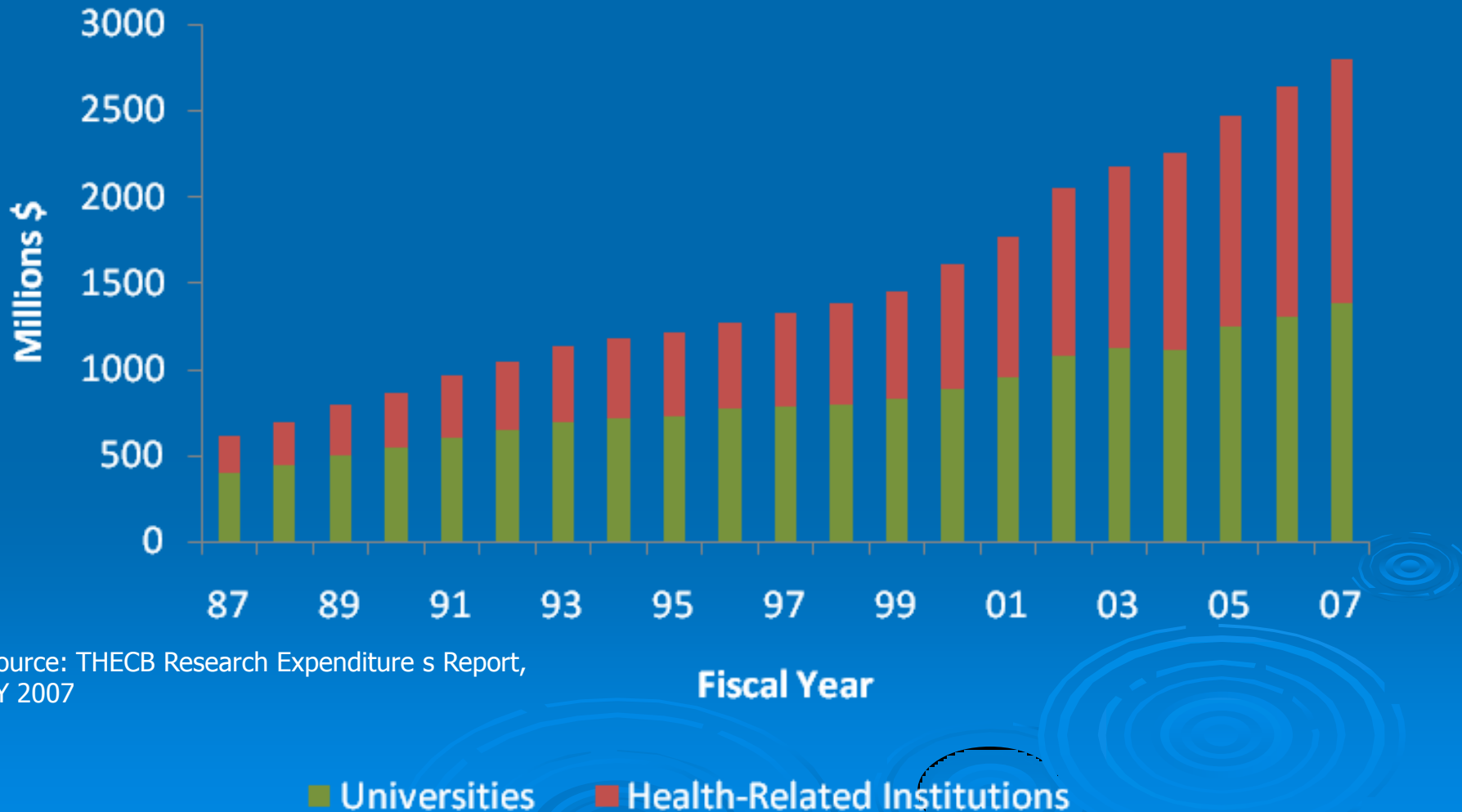
**Presentation for the  
Senate Subcommittee on Higher Education**

**July 23, 2008**

# Research Goal in *Closing the Gaps*

- ✓ Increase the level of federal science and engineering R&D obligations to Texas universities to **6.5% of all obligations** (from 5.5% in 2000)
  - ❖ Increase research expenditures by Texas public institutions from **\$1.45B to \$3B by 2015** (~5%/year)

# Long-term trends in Research Expenditures show steady improvement over time



Source: THECB Research Expenditures Report, FY 2007

## However, our record on achieving the research goal in *Closing the Gaps* is mixed

- ✓ Federal science and engineering obligations for research and development **increased by \$665 million** from FY 1998 to FY 2005
- ✓ Texas' percentage of federal obligations has increased overall since FY 1998, but has seen declines in recent years.
- ✓ Despite the increase in total annual dollars, Texas still lags behind other key states in overall federal obligations.

# Where do we stand nationally?

Texas has made progress in securing more federal research dollars, but is still well behind key states

<b>Federal Obligations (FY05)</b>	
California	\$3.56B
New York	\$2.05B
Pennsylvania	\$1.49B
Maryland	\$1.46B
<b>Texas</b>	<b>\$1.40B</b>

Source: THECB Research  
Expenditure Report, FY 2007

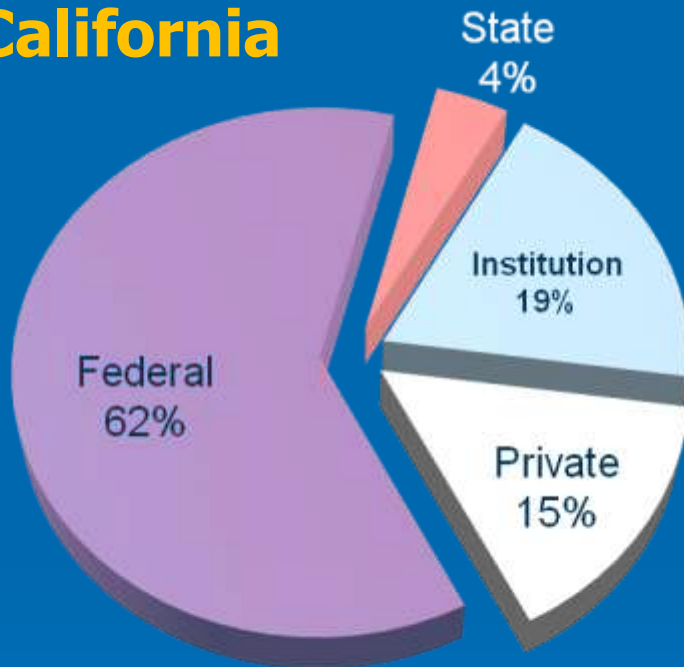
However, compared to key peer states Texas has maintained its percentage of Federal obligations

State	Change in R&D Obligation Share
Texas	.32%
Maryland	(.12)%
New York	(.13)%
Pennsylvania	(.39)%
California	(.65)%

Source: National Science Foundation/Division of Science Resources Statistics, Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions, FY 2005

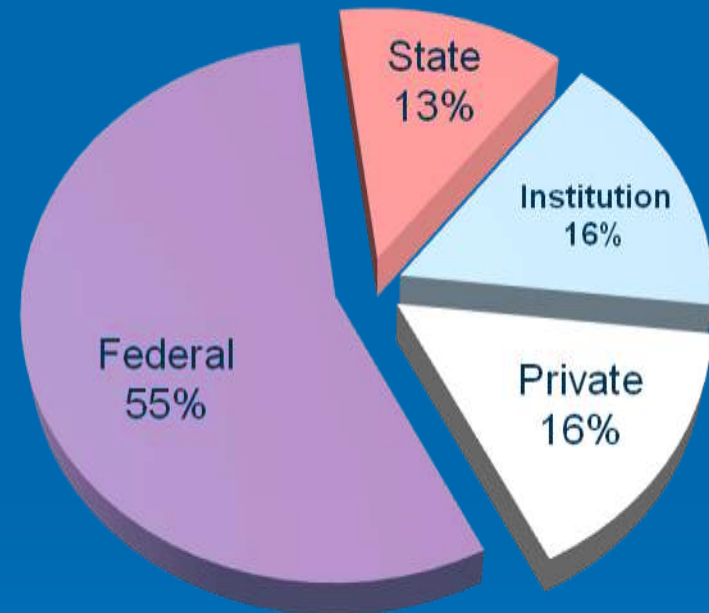
# Texas funds a higher percentage of research than a key economic and educational competitor

## California



**\$6.5B Total**  
All institutions, public  
and private

## Texas



**\$3.3B Total**  
All institutions, public  
and private

# How is research funded?

The *Texas Charter for Public Higher Education* (1987), suggested research be funded via a combination of:

- Research Enhancement Program
- Advanced Research Program
- Advanced Technology Program
- Research Appropriations (special items)
- Indirect Cost Recovery



# Today, Texas invests in a number of initiatives designed to facilitate research

- ✓ Advanced Research Program
- ✓ Research Development Fund
- ✓ Emerging Technology Fund
- ✓ Competitive Knowledge Fund
- ✓ Cancer Prevention and Research Institute
- ✓ Special Item Funding
- ✓ Indirect Cost Recovery

Orange = New Program

# ARP is a cornerstone for state funded research

- ✓ Advanced Research Program (ARP) focuses on basic research:
  - ❖ FY2008-09: **\$16.4M**
- ✓ Competitive, peer reviewed grants
- ✓ Funded **1,520 awards** allowing research opportunities for approx. **6,000 graduate** and **4,000 undergraduate** students.

# Research Development Fund (RDF)

- ✓ Texas Excellence Fund and University Research Fund created in 2001
- ✓ Evolved into RDF in 2003 and began operation in FY2006
- ✓ RDF supports research capacity at public universities, such as funding laboratories and facilities
- ✓ FY 2008-09: **\$80.9M**

# Emerging Technology Fund

- ✓ Fund established in 2005
- ✓ Supports activities that create high quality jobs or result in scientific breakthroughs
- ✓ Three areas of emphasis:
  - ❖ Public and private collaboration
  - ❖ Match grants to innovators
  - ❖ Attract top research talent to Texas
- ✓ FY 2008-09: **\$117.3M**

# Competitive Knowledge Fund

- ✓ Established in 2007 to enhance support of faculty for instructional excellence and research
- ✓ Eligible universities include: Texas A&M University, Texas Tech University, UT Austin, and University of Houston
- ✓ FY 2008-09: **\$93.2M**

# Cancer Prevention and Research Institute

- 80th Texas Legislature authorized creation of Institute tasked with implementing the Texas Cancer Plan
- Voters authorized constitutional amendment to use general obligation bonds each year up to 10 years, beginning in 2010
- Matching grants will be distributed for medical research designed to find cure for cancer
- Funding: **\$300 million/FY, up to 10 years** (\$3 billion)

# Special Item Funding

- ✓ Special items are funded at many institutions to support specific research functions or initiatives
- ✓ McDonald Observatory (UT Austin), Wind Energy Research (West Texas A&M), and Water Research Center (UT San Antonio) are examples of specific research projects funded via special item appropriations
- ✓ FY 2008-09: **\$260.3M**

# Indirect Cost Recovery

- ✓ Universities were previously allowed to keep only 50% of grant overhead amounts
- ✓ Since 2003, based on recommendations in CTG, the Legislature has allowed universities to keep all overhead funds from grants
- ✓ Including FY2004, that amounts to an estimated **\$230-290M** in additional funding



# Strategic planning considerations for Research funding

- ✓ Texas needs to invest in **basic research**
- ✓ Texas must continue to **strengthen research** at existing national research institutions to better compete with national peers
- ✓ Texas must invest in **targeted research excellence** at regional institutions

# Funding research in Texas has resulted in a measurable return on investment

- ✓ The most recent analysis of the Advanced Research Program identified very specific economic impacts such as license and royalty revenues and start-up commercial activities
- ✓ The analysis found that the state **gained \$916 million for its \$161 million investment** in the program through 2006—a **5.7 to 1 return on investment**

Source: Bureau of Business Research, IC2 Institute & UT-Austin, *Impact Assessment of Advanced Research Program*, 2006