Federal Regulations on Research

- Regulations that are necessary (albeit with modification):
  - Governance of ethics: e.g. Institutional Review Boards (IRBs)
  - Sensitivity to cultural issues: e.g. NAGPRA
  - Sensitivity to national defense: e.g. ITAR

- Regulations that impede research without addressing real problems:
  - Controls around the use of research dollars: money is scarce and only a means to another end: it’s not the goal of research
  - Effort reporting: progress is not a linear function of effort
  - Unreimbursed costs (esp. administrative): these are contributing to the increasing costs of education (through tuition)
The Research Budget at UC

- Research is ~¼ of UC’s expenditures but less than ¼ of its revenue.

- Decreasing State support means the institutional support must come increasingly from tuition.

**UC Operating Revenues FY12-13: $24B**

- **$5.6B in research expenditures, 23% of UC’s $24B budget**
  - **$4.0B direct** of which UC contributes ~$1B
  - **$1.0B reimbursed indirect costs**
  - **$0.6B unrecovered indirect costs**

  » **$241M lost to low rates (e.g. administrative costs)**
  » **$371M ICR waived (usually required by government program officers)**

Source: Institutional Research, Current Fund Expenditures by Function and Fund Source Location

[http://accountability.universityofcalifornia.edu/report.html](http://accountability.universityofcalifornia.edu/report.html)
Federal Funding at UC

- Federal agencies provide 60% of all UC research (+8% flowthrough)
  - ~3/4 of the federal support from NIH and NSF: NIH/NSF~4
- UC provides ~$1B for research from its own funds
- Research supports 30% of UC FTE, $1.9B in salaries including:
  - $342M for faculty, $428M for researchers, $702M for staff, $227M for post-docs, and $226M for students
State Funding at UC

State support has declined, UC Tuition and Fees have increased

In-state resident tuition and fees
Per Capita State Support

May 29, 2015, NAS
Steven Beckwith, University of California
Increases in Other Government, Business, and Non-Profit funding did not make up for a 10% loss in federal funding.

NB: >40% of UC’s business research funding is to run clinical trials, expensive owing to regulations (e.g. IRBs).
Costs of Research

- **Direct costs (~67%)**
  - Salaries & Benefits
  - Materials & Services
  - Subcontracts
  - Equipment
  - Stipends

- **Facilities & Administration (~33%)**
  - Buildings
  - Operations & Maintenance
  - Finance (interest)
  - Equipment
  - Library
  - Administration

Example: UC Irvine

May 29, 2015, NAS

Steven Beckwith, University of California
Burdens on Research Universities

- Our research system is showing signs of erosion: decreasing per capita funding, increasing burdens of compliance, increasing costs of facilities and people, and increasing expectations for short-term returns.
- Research costs for public research universities puts an undue burden on support from undergraduate education.
- Pressures to produce short-term benefits and solutions to immediate problems do not address the underlying weaknesses and do not capitalize on the greatest strengths of the current system: basic research.
- Unproductive regulations increase the costs and decrease the benefits of all research, especially by forcing researchers into unproductive activities.