

Summer Research Colloquium
Ethical & Responsible Conduct of
Research

Grantsmanship, Ideas & the
Ethics of Grant Writing

Joe Giffels

Director, Research Integrity Office

University of Maryland Baltimore

June 21, 2011

In science the credit goes to the man who convinces the world, not to the man to whom the idea first occurs.

- *William Osler*

Research Is...

- Complex
- Intellectually Demanding
- Rewarding and Frustrating
- Unpredictable
- Big Business
- Prone to Corruption?

Research Is Complex

- Education & training
- Facilities
- Financial support
- Logistics
- Publication
- Other career responsibilities

Research Is Intellectually Demanding

- ❑ Valid assumptions
- ❑ Research plan
- ❑ New information
- ❑ Analysis & conclusions
- ❑ Expression of conclusions
- ❑ Defense of conclusions
- ❑ Separate emotional from analytical

Research Is Rewarding... and Frustrating

- ❑ Discoveries... are incremental and rare
- ❑ Career path... requires constant cultivation
- ❑ Intellectually satisfying... but tedious, laborious and slow
- ❑ New basic insights... come with demands

Research Is Unpredictable

- Accept the unexpected
- Popular opinion

Science cannot stop while ethics catches up—
and nobody should expect scientists to
do all the thinking for the country.

- *Elvin Stackman*

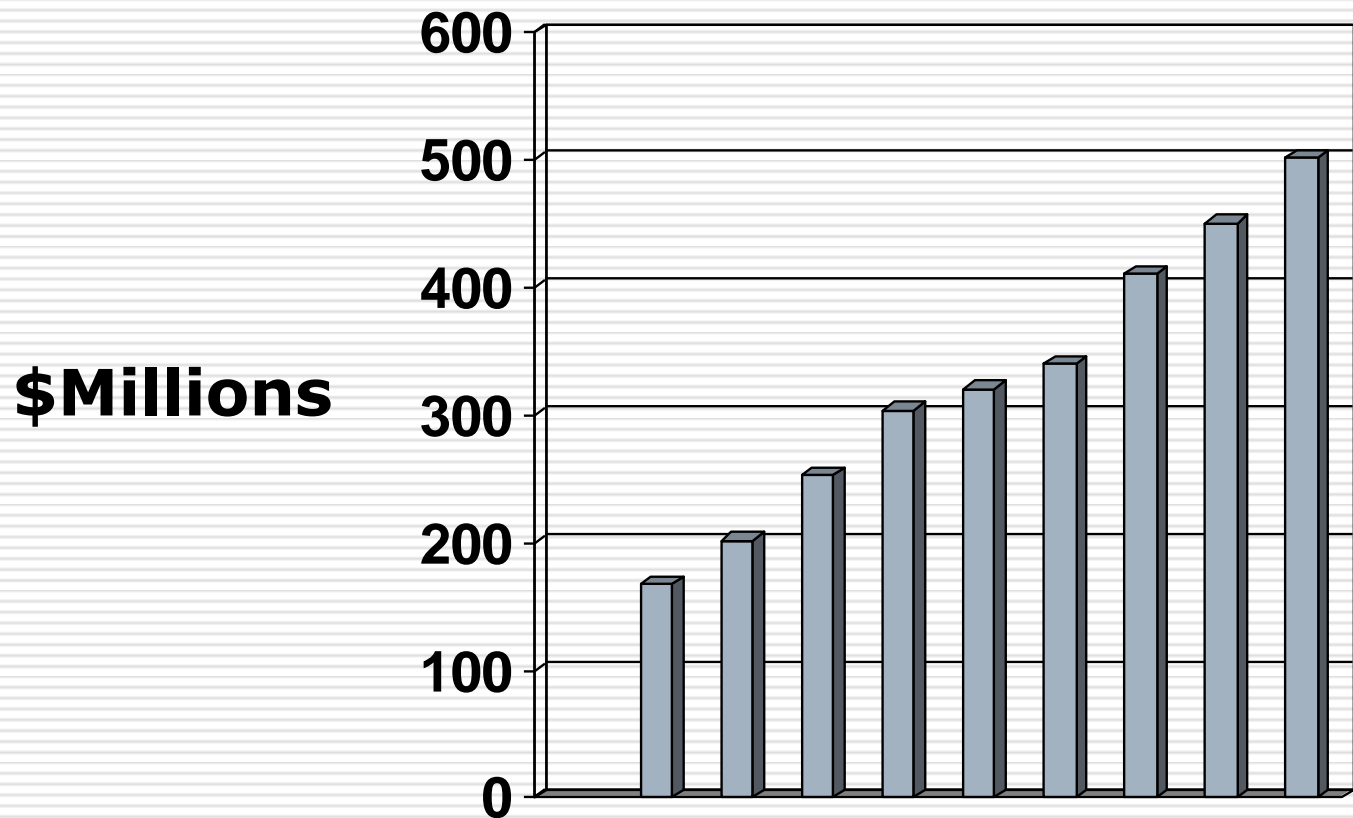
Research Is Unpredictable

- Accept the unexpected
- Popular opinion
- Art vs science
- Unpredictable, or invalid conclusions?

Research Is Big Business

- ❑ US R&D budget... \$350 B
- ❑ NIH budget... \$30 B
- ❑ UMB awards... \$500 M
- ❑ New drug R&D costs... \$600 M - \$1 B or \$200 M
- ❑ Ave R01 (annual)... \$500 K
- ❑ Annual Revenue to universities on inventions... \$2 B

Growth In Research Support Last 10 Years -- UMB



Research Is Prone to Corruption?

- ❑ Scientific misconduct
- ❑ Invalid conclusions

A few observations and much reasoning
lead to error;
many observations and a little reasoning
to truth.

- *Alexis Carrel*

Research Is Prone to Corruption?

- ❑ Scientific misconduct
- ❑ Invalid conclusions
- ❑ Financial conflicts of interest
- ❑ Science is politically, economically, popularly driven

Though many have tried, no one has ever yet explained away the decisive fact that science, which can do so much, cannot decide what it ought to do.

- *Joseph Wood Krutch*

Responsible Conduct of Research

- Data acquisition, management, sharing, and ownership
- Mentor/trainee relationships
- Publication practices and responsible authorship
- Peer review
- Collaborative science
- Human subjects
- Research involving animals
- Research misconduct (F, F and P)
- Conflict of interest and commitment



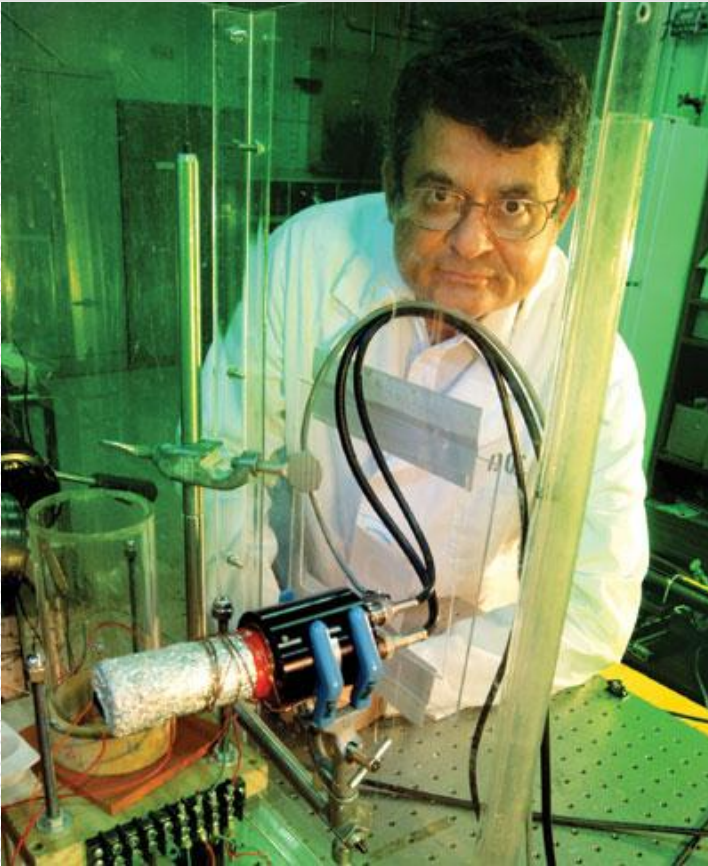
**Jesse
Gelsinger**

Joe Giffels
Academic Affairs

Woo Suk Hwang



Grantsmanship
Academic Affairs/UMB



Rusi Taleyarkhan

Summer Research Colloquium
Ethical & Responsible Conduct of
Research

Grantsmanship, Ideas & the
Ethics of Grant Writing

Joe Giffels

Director, Research Integrity Office

University of Maryland Baltimore

June 21, 2011