

Aging research needs marketing

What can we learn from cancer research?

THE
EMPEROR
OF ALL
MALADIES



A BIOGRAPHY OF CANCER

SIDDHARTHA
MUKHERJEE

NIA versus NCI



- Florence Mahoney
- Mahoney: National Advisory Council on Aging from 1974 to 1978
- Support from **Mary Lasker** and senators **Claude Pepper**, Lister Hill, Ernest Hollings, and Thomas Eagleton
- NIH opposes NIA creation (probably because they don't want to have a new institute taking away money)
- 1972: Bill accepted
- Office of Management and Budget: veto it because an NIA “could raise false expectations that the aging process can somehow be controlled and managed through biomedical research”
- President Nixon vetoes the bill
- 1974: Pressure from Florence, biogerontologists and several key members of congress forces Nixon to sign the bill
- Side note: In Europe only Belgium and Denmark have some efforts to fund biogerontological research

NIA versus NCI

- 1910: The American Association for Cancer Research convinces president Taft to ask congress to build a national lab for cancer research: failure
- 1927: senator Matthew Neely asks congress to give 5 million USD for information that could lead to a cure for cancer: he got 50,000 USD
- 1937: Neely, senator Homer Bone and representative Warren Magnuson : National Cancer Institute Act, success signed by president Roosevelt: NCI founded
- War in Europe ended funds for the NCI
- 1946-47: Neely + senator Claude Pepper: 3rd proposal for nation wide cancer research: rejected

American Society for the Control of Cancer

- Organization of doctors and researchers
- Budget in 1943: 230,000 USD/year
- Mary Woodard Lasker
- Articles in Reader's Digest
- 300,000 USD in donations in one month
- Elmer Foote, publicity expert, was hired
- Board changed from doctors and researchers to business people, movie producers, publicity agents, lawyers, and people from the pharmaceutical industry
- American Cancer Society (ACS)
- 9 million flyers, 50,000 posters, 1.5 million stickers, 165,000 collection boxes, 3,000 displays
- New constitution: only 4 researchers/doctors are allowed in the board and the president has to be a non-scientist



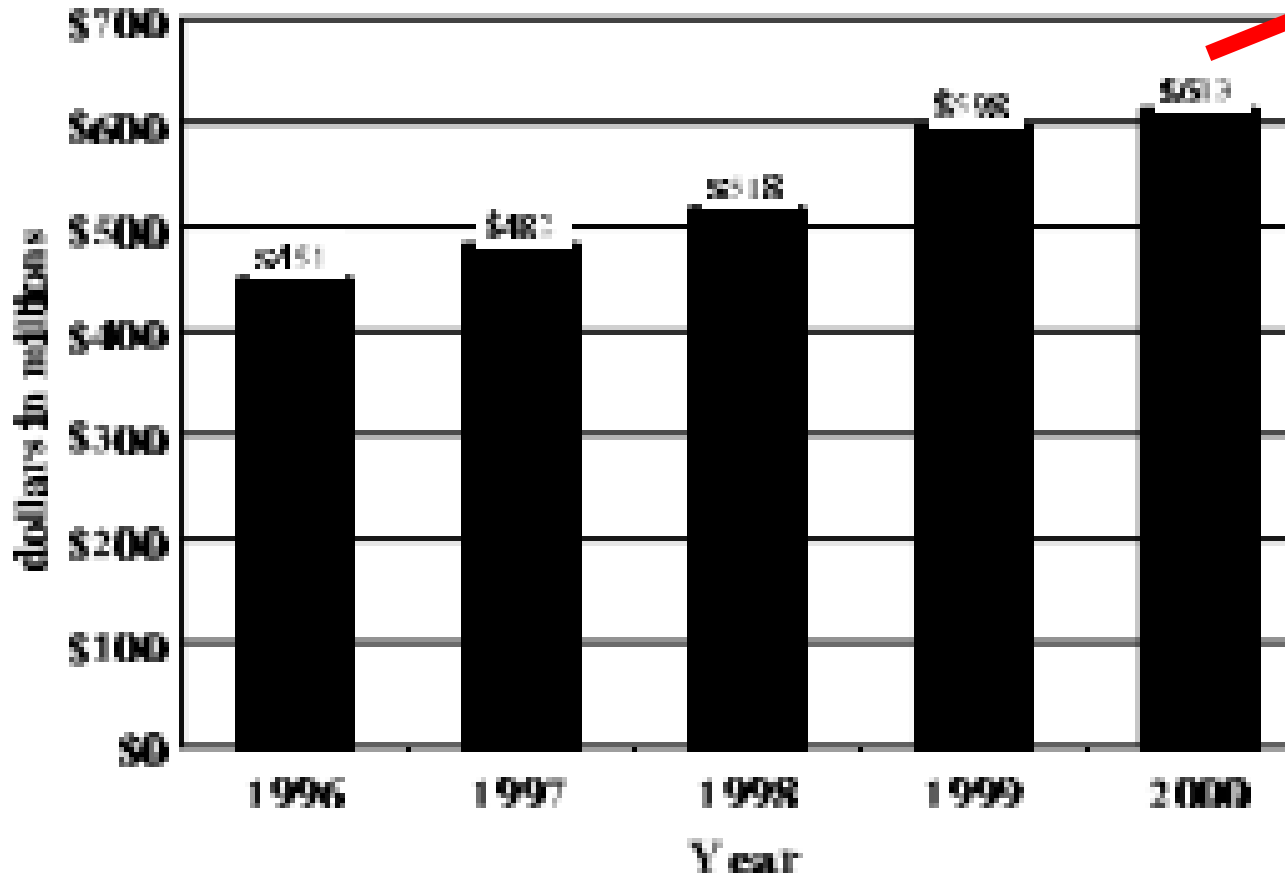
ACS financials

- 230,000 USD in 1943
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- 832,000 USD in 1944
- 4,292,000 USD in 1945
- 12,045,000 USD in 1947

NIA

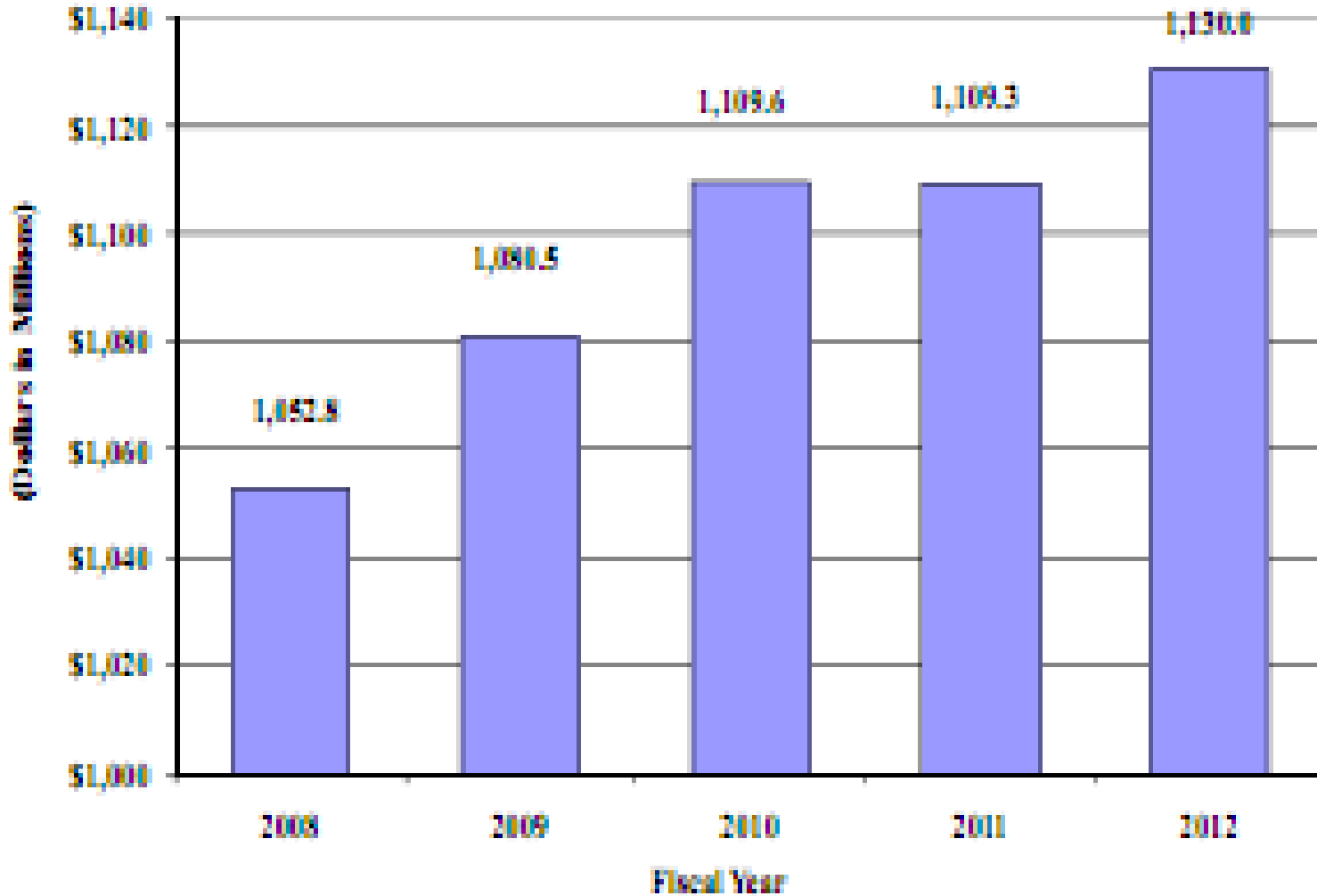
Funding Levels by Fiscal Year



613

NIA

Funding Levels by Fiscal Year



1,130



NATIONAL INSTITUTES OF HEALTH
National Institute on Aging
Budget Authority by Activity
(Dollars in thousands)

	FY 2010 Actual		FY 2011 CR		FY 2012 PB		Change vs. FY 2010	
	<u>FTEs</u>	<u>Amount</u>	<u>FTEs</u>	<u>Amount</u>	<u>FTEs</u>	<u>Amount</u>	<u>FTEs</u>	<u>Amount</u>
<u>Extramural Research</u>								
<u>Detail:</u>								
Aging Biology		\$162,933		\$162,878		\$166,231		\$3,298
Behavioral & Social Research		182,259		182,197		185,948		3,689
Neuroscience		458,508		458,354		467,789		9,281
Geriatrics & Clinical Gerontology		150,079		150,028		153,116		3,037
Subtotal, Extramural		\$953,779		\$953,457		\$973,084		\$19,305
Intramural Research	266	\$114,528	267	\$114,501	267	\$115,646	1	\$1,118
Research Management & Support	149	\$41,329	149	\$41,327	149	\$41,257	0	(\$72)
TOTAL	415	\$1,109,636	416	\$1,109,285	416	\$1,129,987	1	\$20,351

1. Includes FTEs which are reimbursed from the NIH Common Fund for Medical Research.

2. Includes Real Transfers and Comparable Adjustments as detailed in the "Amounts Available for Obligation" table.

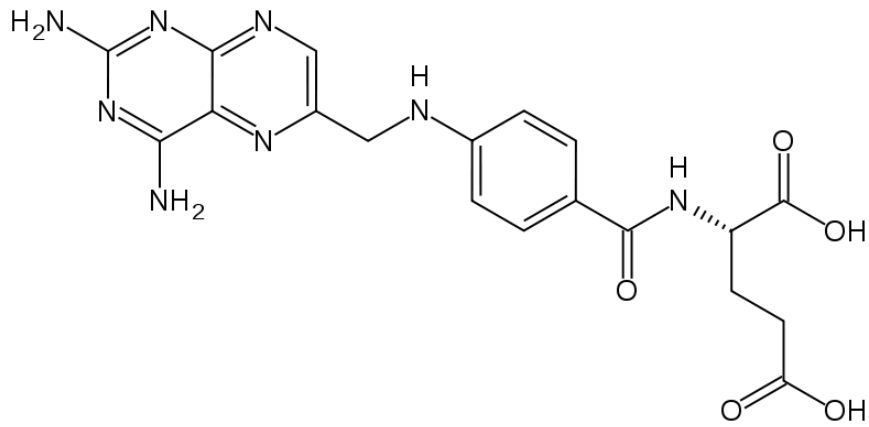
Still budget is way too low...

- As many as 80 to 85% of the grant proposals submitted to the NIA who have passed peer-review cannot be funded because of lack of budget (Gavrilov and Gavrilova, 2008)

Changing congress

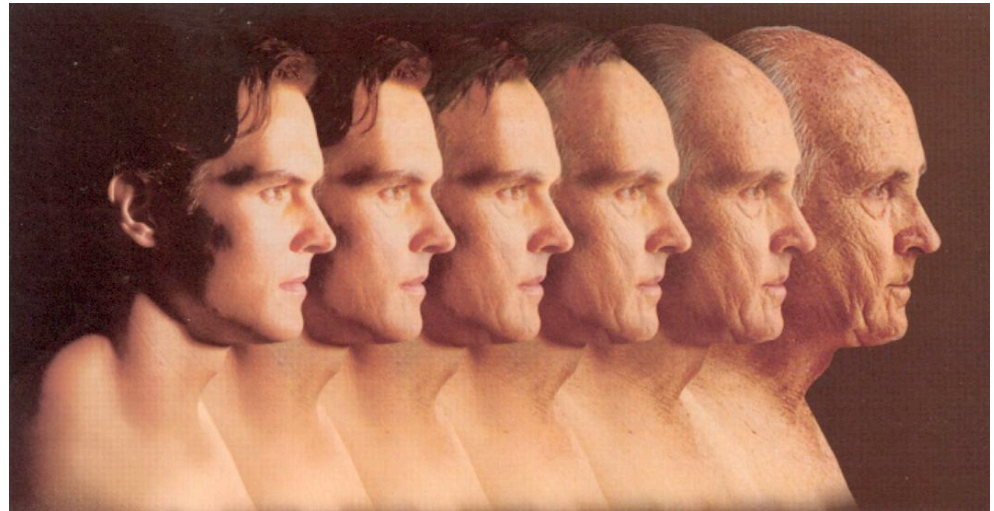
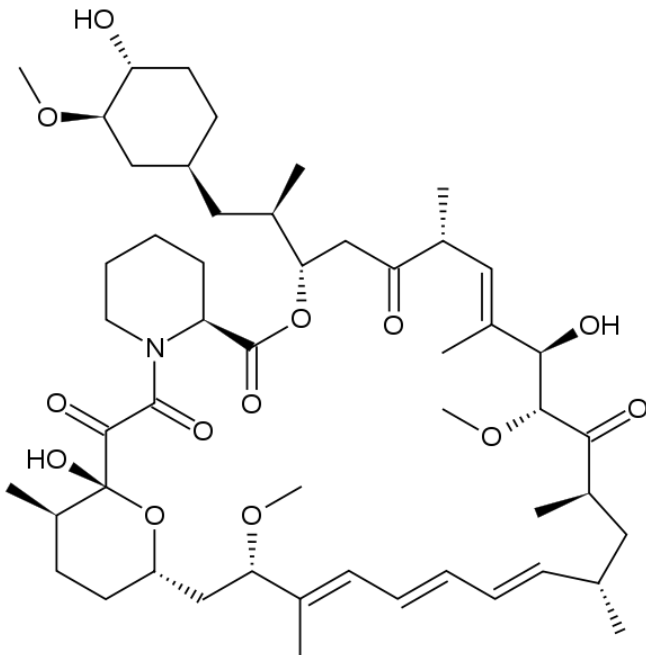
- But to change congress they realized that they needed a top scientist as public image of the research on cancer
- Sidney Farber (aminopterin)





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Cure for cancer: A national goal

Solomon Garb in 1969

“A big obstacle in the fight against cancer is the severe and chronic lack of money, something that is not known to most people. We won’t get there by repeating this. It is also necessary to explain how it will be used, what kind of projects will be financed with it, why these projects deserve our support, and where the scientists and technicians that have to execute them will come from”

Mr. Nixon:

You can

cure cancer

If prayers are heard in Heaven, this prayer is heard the most:

"Dear God, please. Not cancer."

Still, more than 218,000 Americans died of cancer last year.

This year, Mr. President, you have it in your power to begin to end this curse.

As you agonize over the Budget, we beg you to remember the agony of those 218,000 Americans. And their families.

We urge you to remember also that we spend more each day on military matters than each year on cancer research. And, last year, more than 21 times as much on space research as on cancer research.

We ask a better perspective, a better way to allocate our money to save hundreds of thou-

sands of lives each year.

America can do this. There is not a doubt in the minds of our top cancer researchers that the final answer to cancer can be found.

Already, 4 out of about 200 types of cancer can be cured with drugs. And 37 other drugs will cause temporary remission in 17 other types of cancer.

Dr. Sidney Farber, Past President of the American Cancer Society, believes: "We are so close to a cure for cancer. We lack only the will and the kind of money and comprehensive planning that went into putting a man on the moon."

Why don't we try to conquer cancer by America's 300th birthday?

What a holiday that would be! Cancer could be then where smallpox, diphtheria and polio

are today—almost nonexistent.

If you fail us, Mr. President, this will happen: One in six Americans now alive, 34,000,000 people, will die of cancer unless new cures are found.

One in four Americans now alive, 51,000,000 people, will have cancer in the future.

We simply cannot afford this. Our nation has the money on one hand and the skills on the other. We must, under your leadership, put our hands together and get this thing done.

Surely, the war against cancer has the support of 100% of the people. It is a war in which we lost 21 times more lives last year than we lost in Viet Nam last year. A war we can win and put the entire human race in our debt.

To the public, cancer patients, their friends and relatives:

Write or wire the President, urging him to put more funds behind cancer research. Or, please use this coupon.

Dear Mr. Nixon:
Cancer research needs more funds. Please provide them in your 1971 budget. Please.

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

Mail this coupon to: The President
The White House
Washington, D.C.

CITIZENS COMMITTEE FOR THE CONQUEST OF CANCER

888 United Nations Plaza, New York, N.Y., Solomon Gush, M.D., Executive Feltz, Co-chairman

Conquest of Cancer Act

- 9 March 1971
- Ted Kennedy and Jacob Javits
- Ann Landers Column in Chicago Sun-Times →
1 million letters to
congress



Why have some diseases a big impact in a given era?

- The society couples diseases to psychological crises
- Cancer: in the '70s when the focus changed from extern (USSR) to intern (cancer)
- AIDS: in the '80s when the generation was obsessed with sexuality and freedom
- SARS: in 21st century when fear for globalization
- What about aging???

Aging is a disease

- Perlman, 1954: “disease complex” or “aging syndrome”
- More recently: Caplan (1992), David Gems (2003, 2011), Bulterijs *et al.* (2015), Zhavoronkov and Bhullar (2015)

Conclusion

- Cancer has a similar history to aging
- We need also marketing and business people as well as celebrities
- Aging has be recognized as a disease