



Overview of NIH and NIDDK

Griffin P. Rodgers, M.D.

Deputy Director, NIDDK

NIAID
Hamilton, MT



NIDDK
Phoenix, AZ



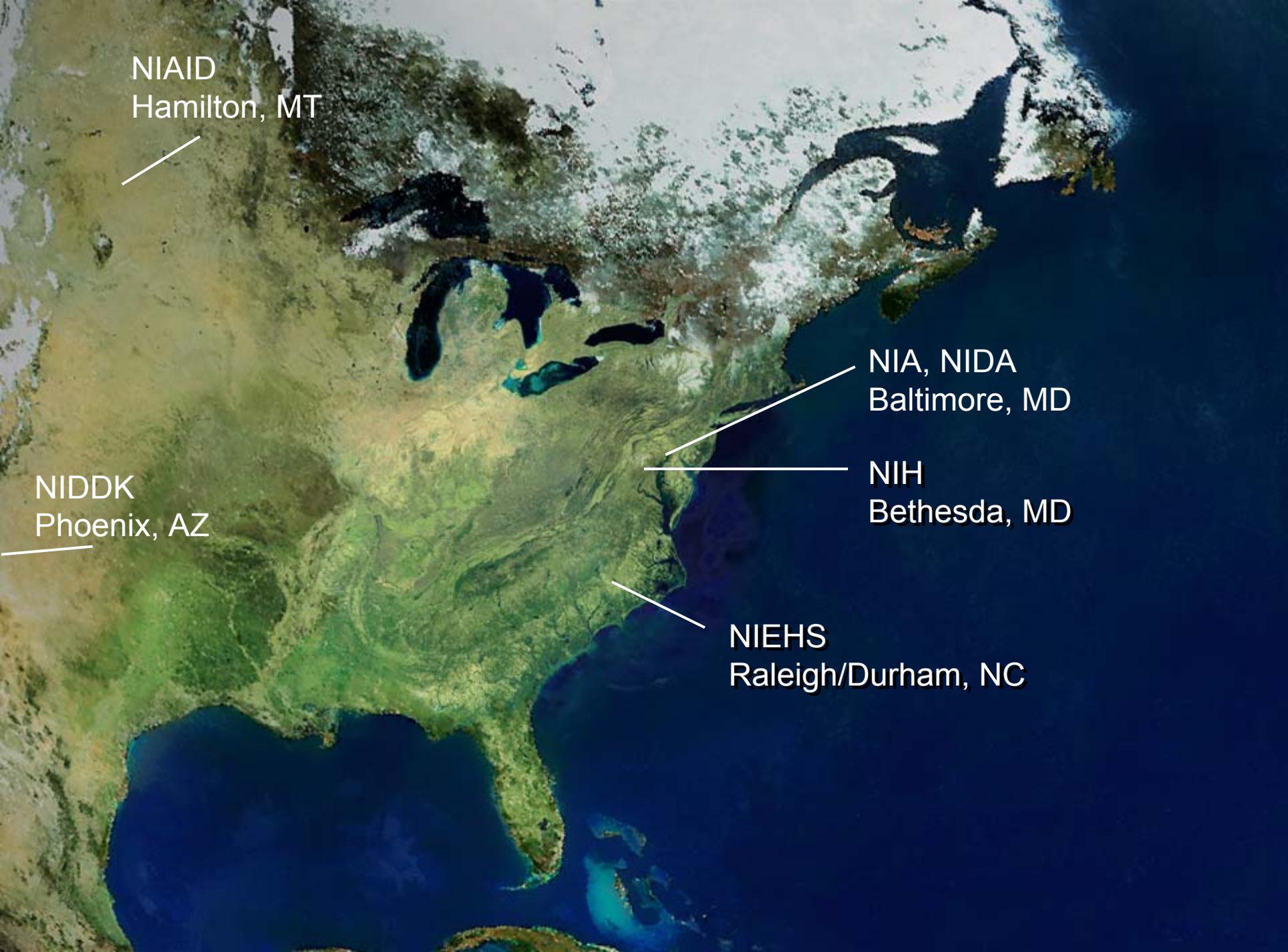
NIA, NIDA
Baltimore, MD

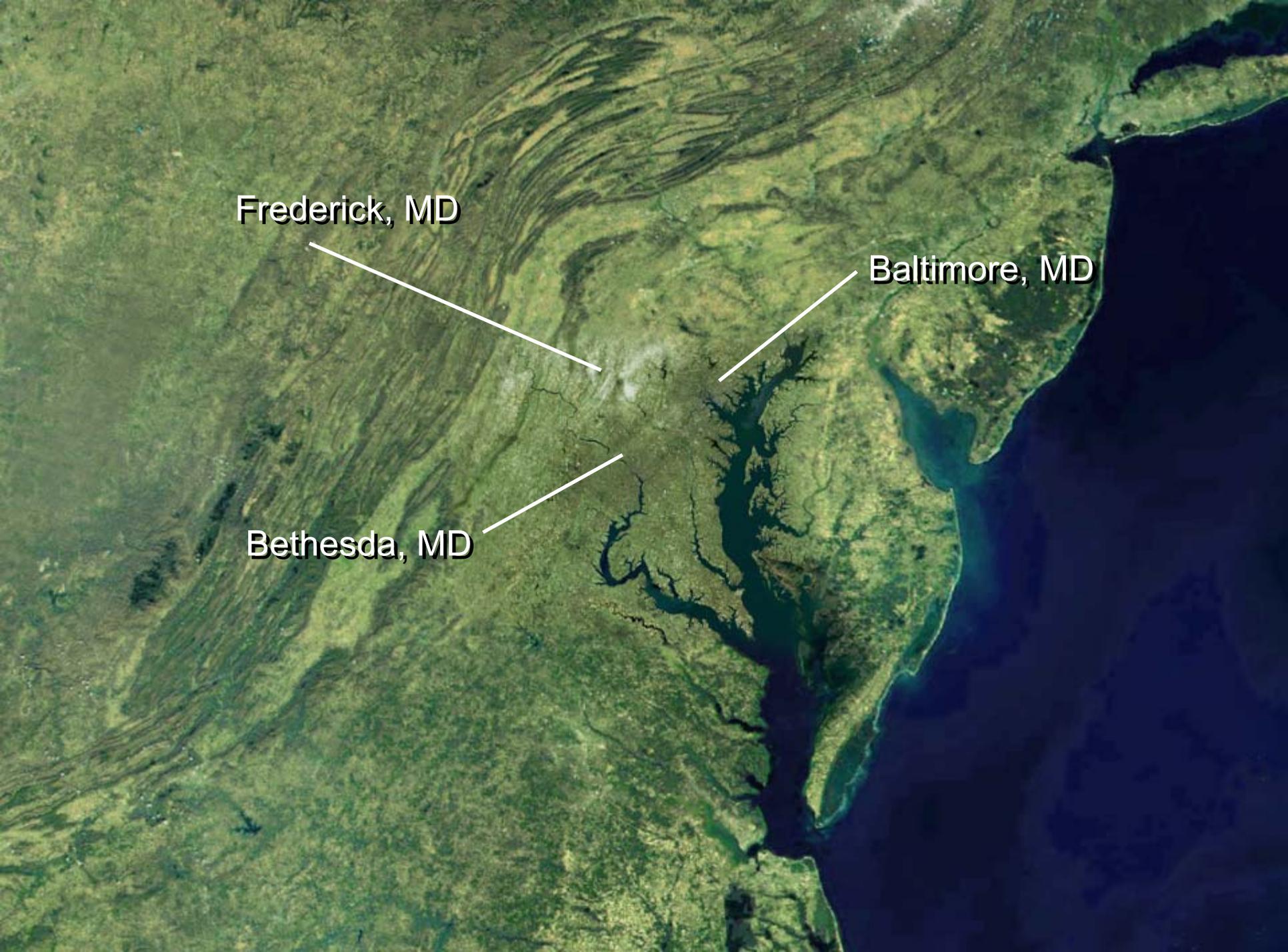


NIH
Bethesda, MD



NIEHS
Raleigh/Durham, NC

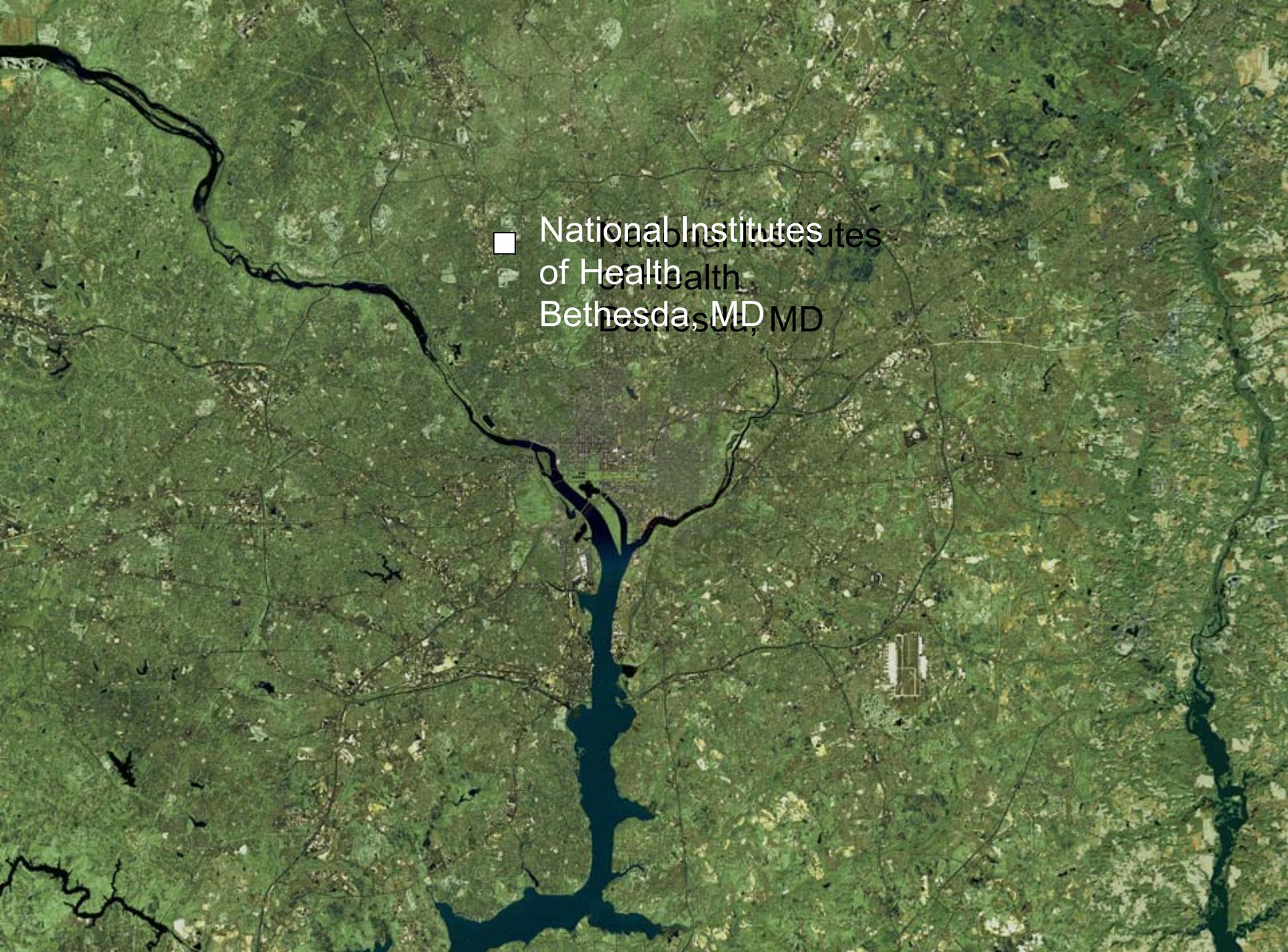




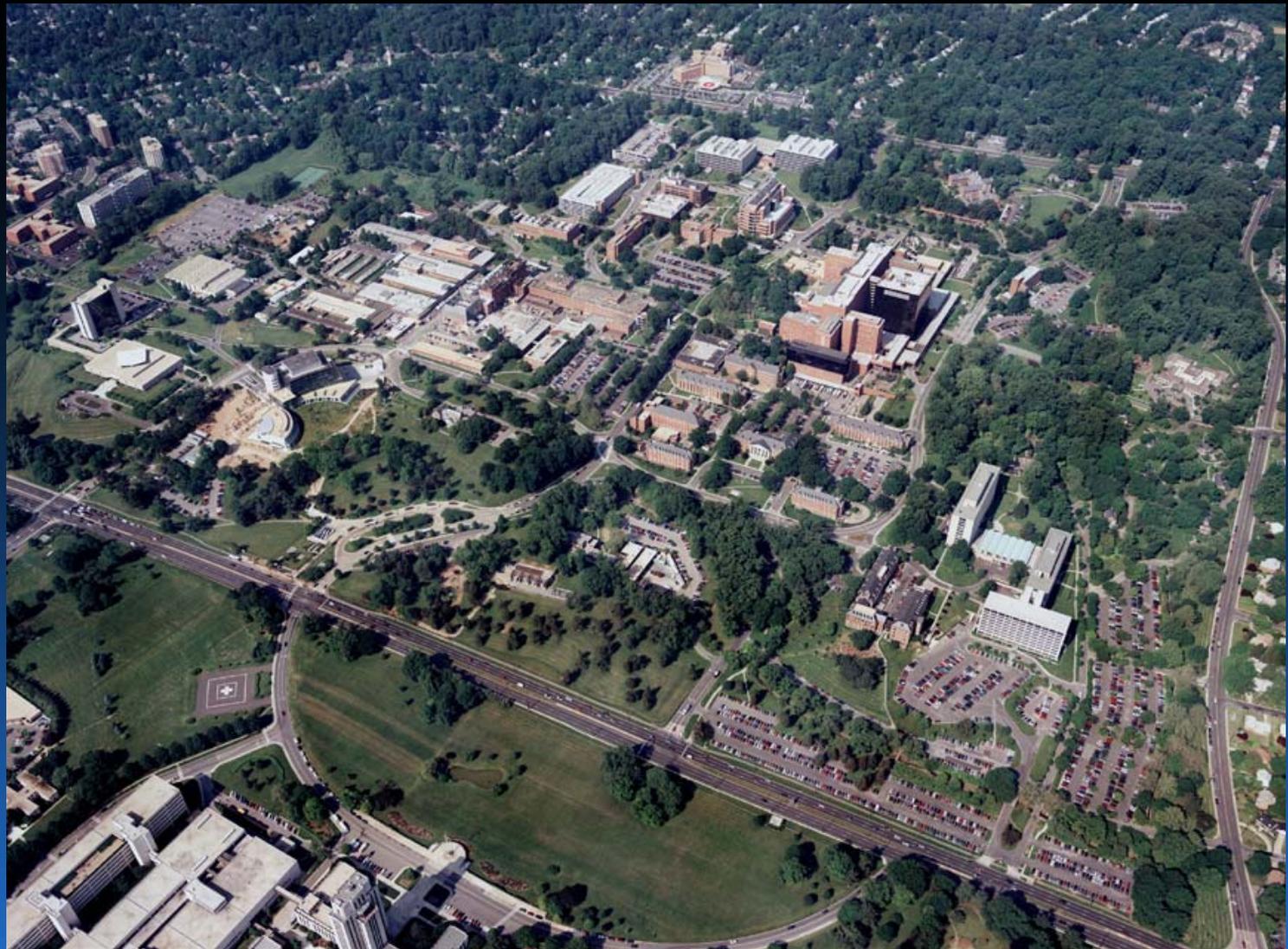
Frederick, MD

Baltimore, MD

Bethesda, MD

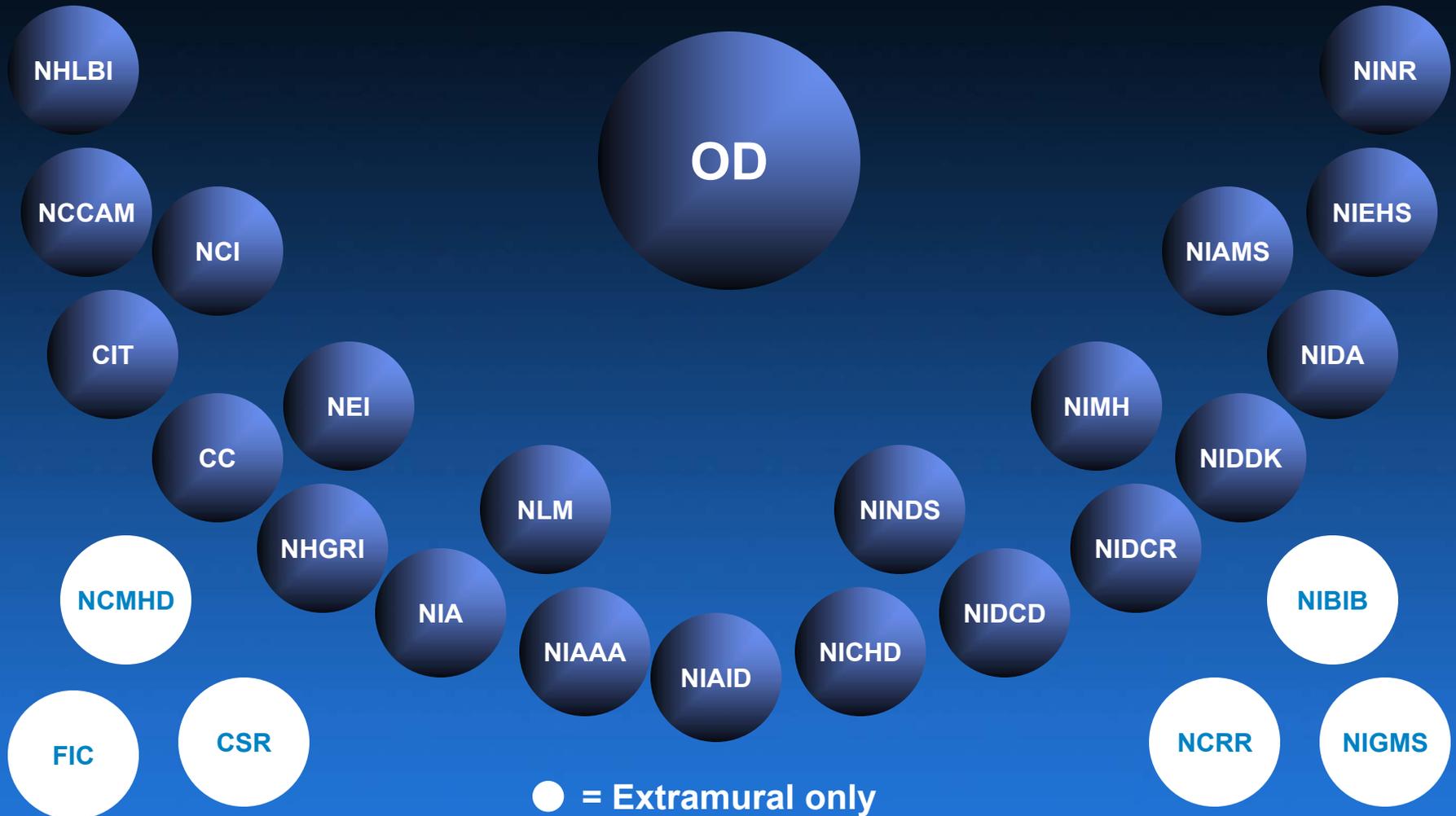


■ National Institutes
of Health
Bethesda, MD



The NIH has 75 buildings on 322 acres in Bethesda, Maryland

NIH consists of 27 Institutes and Centers



National Institutes of Health

The mission of the NIH is to uncover new knowledge that will lead to better health for everyone by:

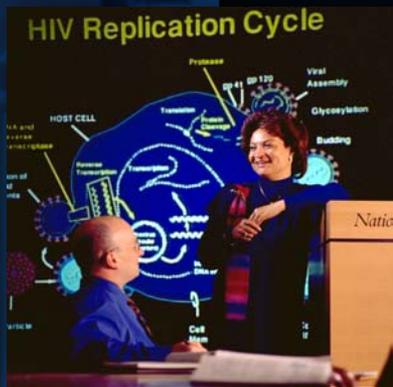
- conducting research in its own laboratories (**intramural**)
- providing support for research conducted by scientists in universities, medical schools, hospitals, and other research institutions throughout the country and abroad (**extramural**)
- training research investigators
- fostering the communication of medical information

Warren Grant Magnuson Clinical Center

The world's largest hospital devoted exclusively to clinical research.

- 250 beds
- 7,000 inpatient admissions a year
- 9,750 new patients a year
- 72,600 outpatient visits a year
- 1,200 physicians, dentists, and doctoral-level researchers
- 900 active clinical research protocols

Mark O. Hatfield Clinical Research Center



- **242 Inpatient Beds**
- **80 Day Hospital Stations** – for patients who require a more intensive setting than an outpatient clinic, but do not require admission to the hospital
- **Flexibility** – lab space and patient care areas can be easily interchanged depending on future needs

Mark O. Hatfield Clinical Research Center – April 2002



Opening 12/04

The Louis Stokes Laboratories Building 50



- 253 lab modules arranged in neighborhood clusters to facilitate scientific collaboration
- Research conducted in this facility includes structural and cell biology and microbiology involving investigators from 8 institutes
- Basement houses a state-of-the-art vivarium, big magnets used in NMR structural studies, and a vibration-free slab with high-end electron microscopes for use in cryomicroscopy and electron crystallography

Also, coming in 2005, Porter Neuroscience Research Center

How many researchers are at NIH?



- 1,000 summer students (high school, college, graduate, and medical)
- 230 postbaccalaureate trainees
- 93 medical students
- 160 graduate students
- 3,300 postdoctoral and clinical fellows
- 287 tenure-track investigators
- 919 senior investigators

(2002 data)

How is our research structured?



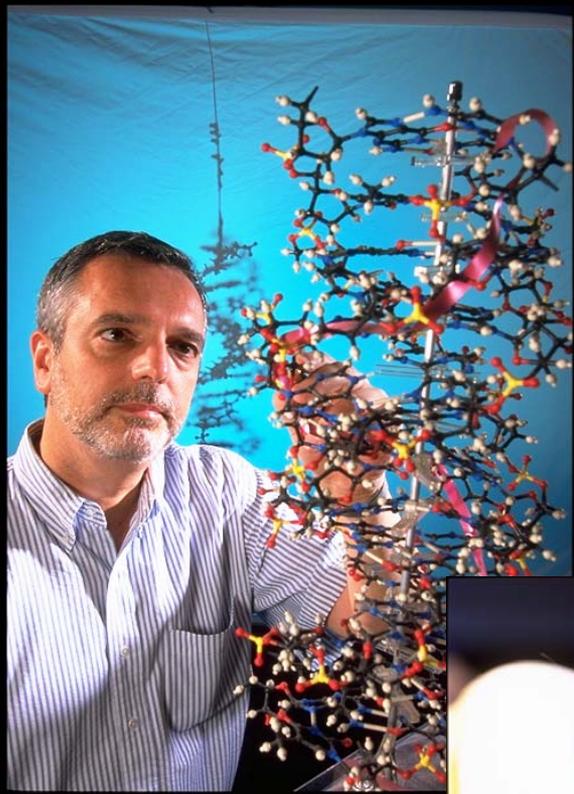
1,200 intramural research laboratories
and clinical branches

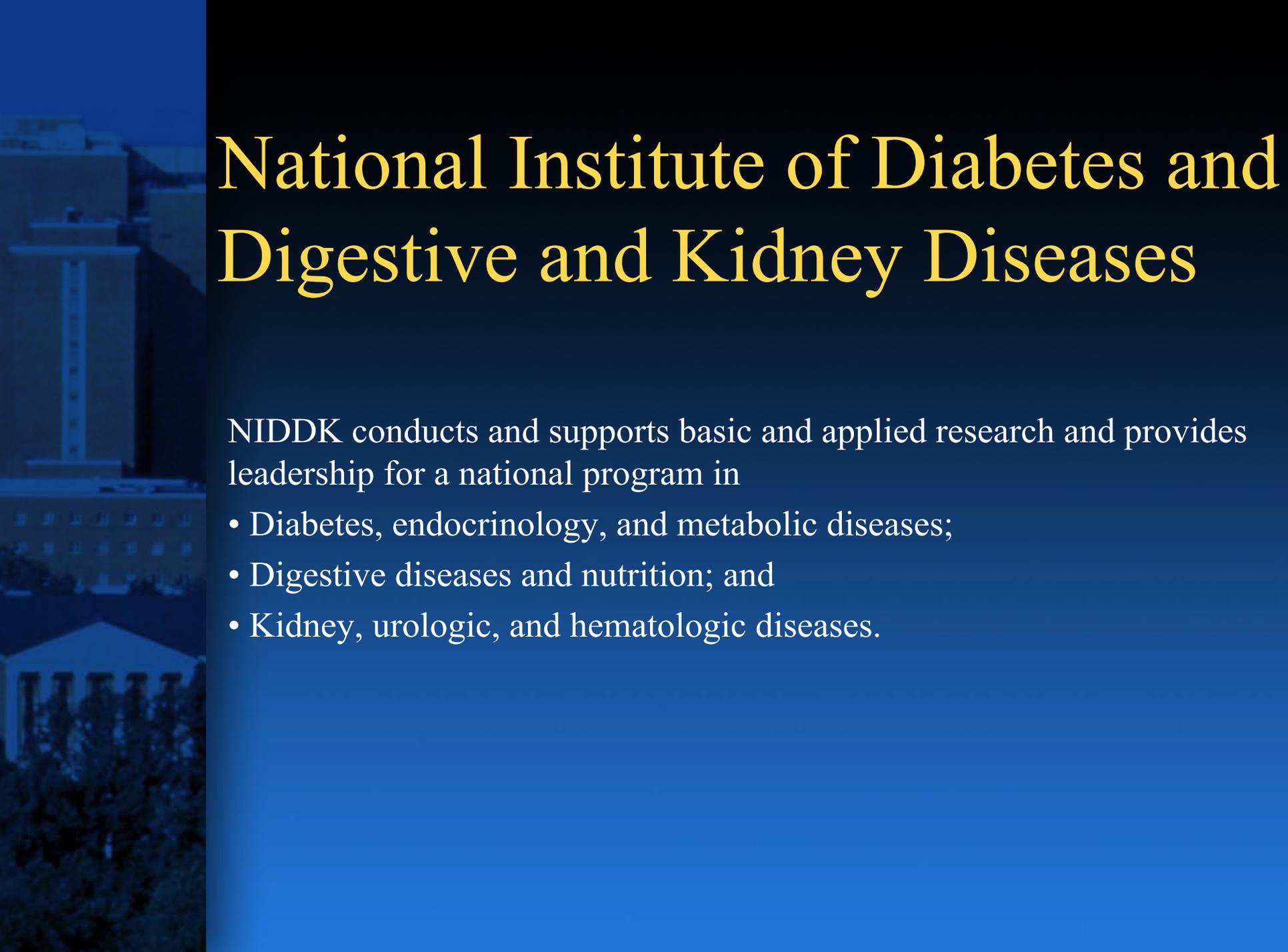
2,480 intramural research projects

90 scientific interest groups

(2001 data)

National Institute of Diabetes and Digestive and Kidney Diseases



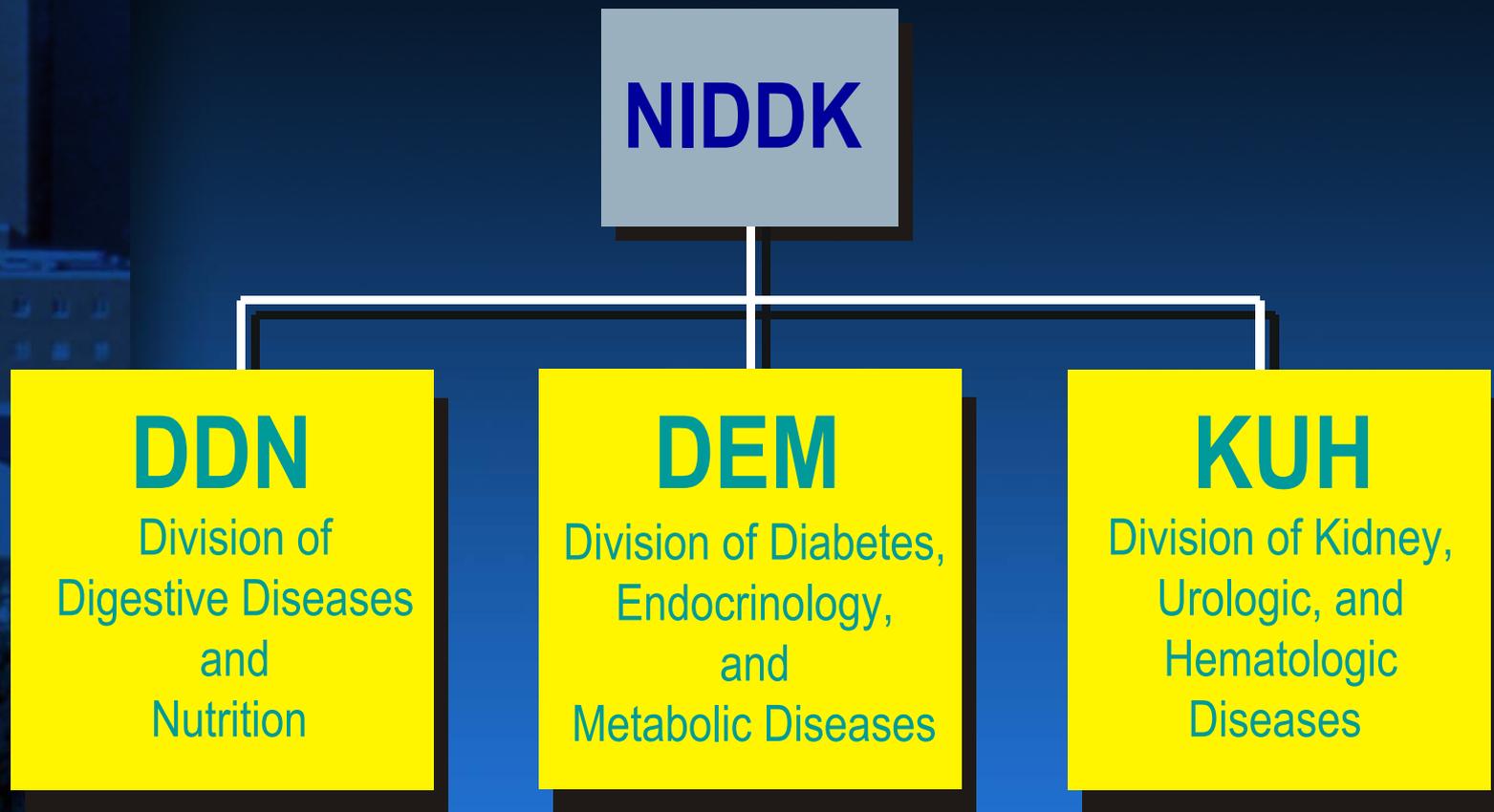


National Institute of Diabetes and Digestive and Kidney Diseases

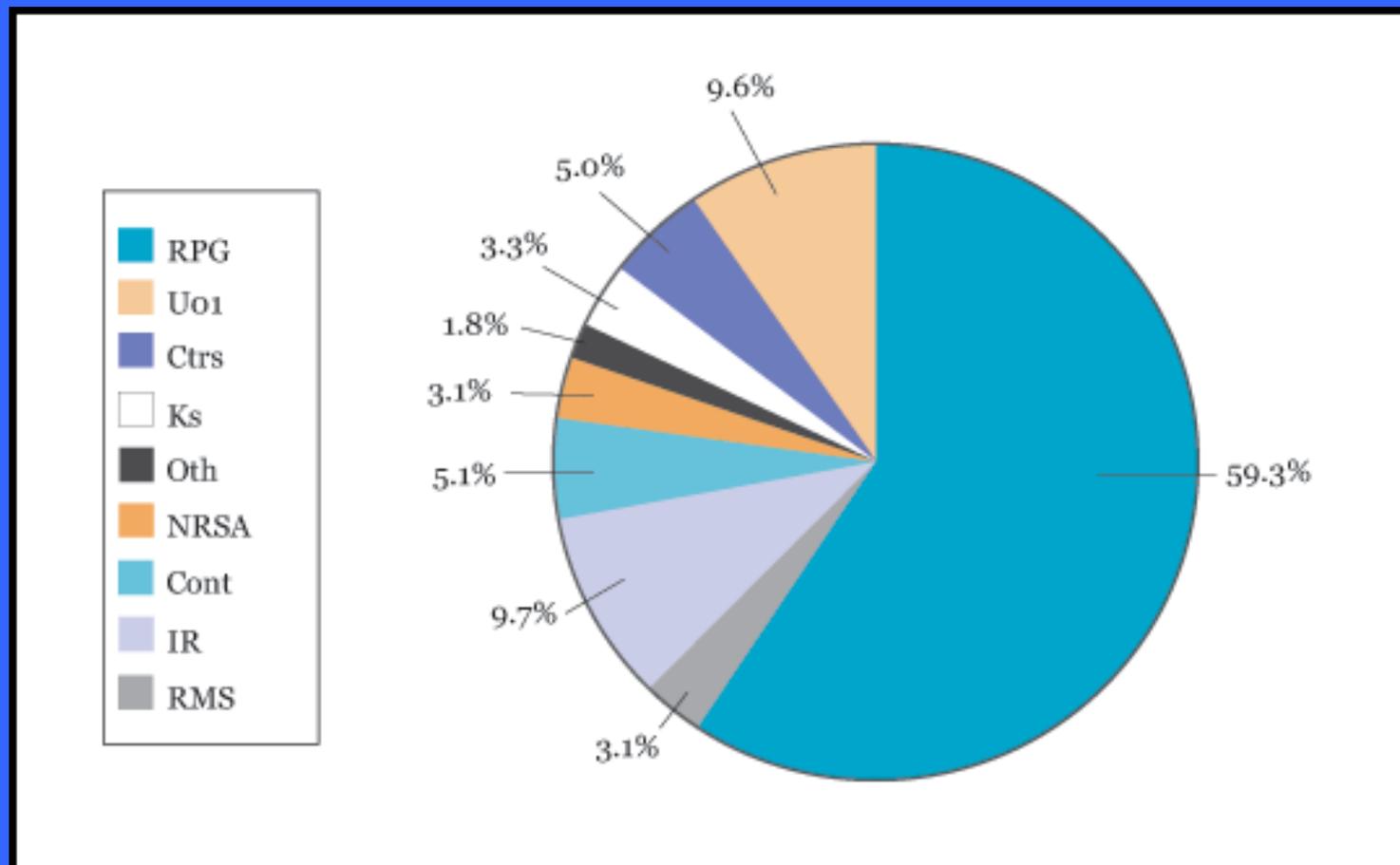
NIDDK conducts and supports basic and applied research and provides leadership for a national program in

- Diabetes, endocrinology, and metabolic diseases;
- Digestive diseases and nutrition; and
- Kidney, urologic, and hematologic diseases.

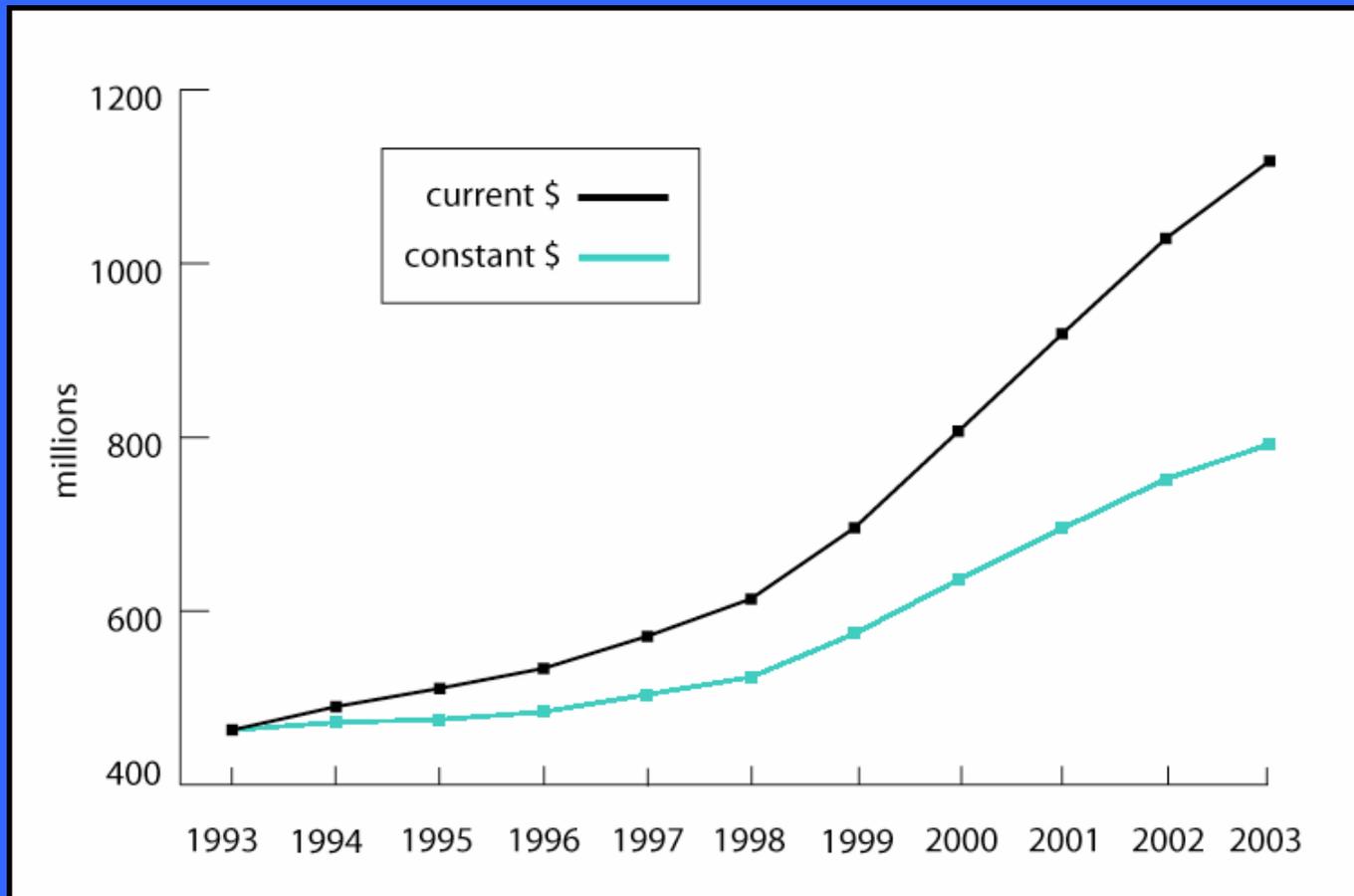
Organizational Structure of NIDDK's Three Divisions



NIDDK's 2003 Budget \$1.5B



NIDDK Research Project Grant Dollars



New NIDDK Clinical Trials Begun During the NIH Doubling Period (fiscal years 1999 to 2003)

- CAMUS: Complementary and Alternative Medicine for Urinary Symptoms
- DAC: Dialysis Access Consortium
- FAVORIT: Folic Acid for Vascular Outcome Reduction in Kidney Transplantation
- Focal Segmental Glomerulosclerosis in Children and Young Adults
- Frequent Hemodialysis Clinical Trials
- HALT-C: Hepatitis C Antiviral Long-Term Treatment Against Cirrhosis
- Look AHEAD: Action for Health Education in Diabetes
- MIST: Minimally Invasive Surgical Therapies for Prostate Disease
- NASH: Non-Alcoholic Steatohepatitis Clinical Research Network
- Polycystic Kidney Disease Clinical Trials Network
- Study of Viral Resistance to Antiviral Therapy of Hepatitis C
- Type 1 Diabetes in TrialNet
- Type 2 Diabetes in Kids
- Urinary Incontinence Treatment Network

New NIDDK Multi-Site Studies and Resources Begun During the NIH Budget Doubling Period (fiscal years 1999 to 2003)

- A2ALL: Adult to Adult Living Donor Liver Transplantation Cohort Study
- Bariatric Surgery Clinical Research Consortium
- Beta Cell Biology Consortium
- Biliary Atresia Clinical Research Consortium
- Consortium for Linkages to Type 2 Diabetes
- CRIC: Chronic Renal Insufficiency Cohort Study
- CRISP: PKD Cystic Radio-Imaging Study Program
- DPPOS: Diabetes Prevention Program Outcome Study
- Erythroid Lineage Genome Anatomy Projects
- FIND: Family Investigation of Nephropathy of Diabetes
- Functional Atlas for Orphan Nuclear Receptors
- Hematopoietic Stem Cell Resources
- Inflammatory Bowel Disease Genetic Research Consortium
- MPSA: MTOPS Prostate Samples Analysis Consortium
- Progenitor Cell Genome Anatomy Projects
- Mouse Metabolic Phenotyping Centers
- Mouse Models of Diabetic Complications
- NANS: National Analgesic Nephropathy Study
- NIDDK: Central Repositories for Clinical Trials Data, Samples and Genetic Testing
- Non-Human Primate Immune Tolerance Study Group
- Urologic Diseases in America Database
- Zebrafish Gen Mapping and Tools Development

Type 2 Diabetes as a Paradigm of NIDDK's Integrated Research Programs



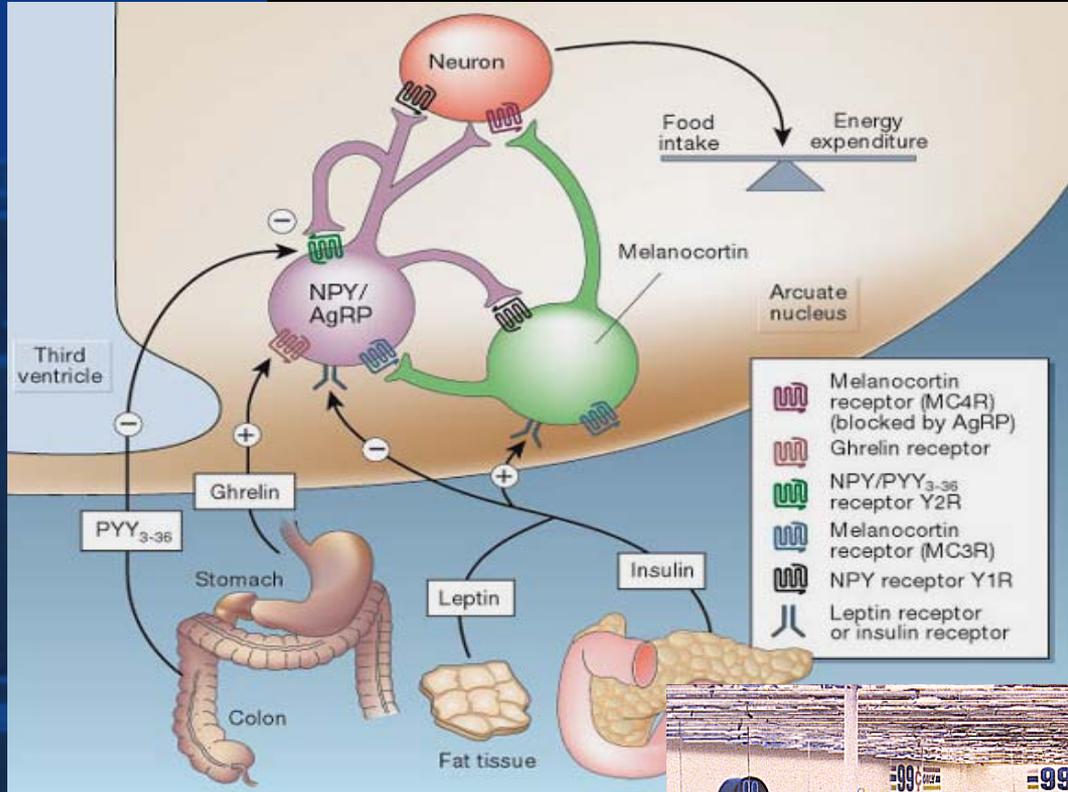
Obesity in America

Half of Americans are overweight (BMI > 25)

25% of Americans are obese (BMI > 30)



- Obesity is a major risk factor for diabetes and other diseases
- 80% of people with type 2 diabetes are obese
- Genetics & environment



WT



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Building a Framework for Organizing and Coordinating Obesity Research Activities

- Identification of genetic, behavioral and environmental factors causing obesity
- Understanding pathogenesis of obesity and its comorbidities
- Prevention and treatment of obesity
- Policy, health services, economics, translation to practice
- Enabling technologies
- Development of multi-disciplinary research teams

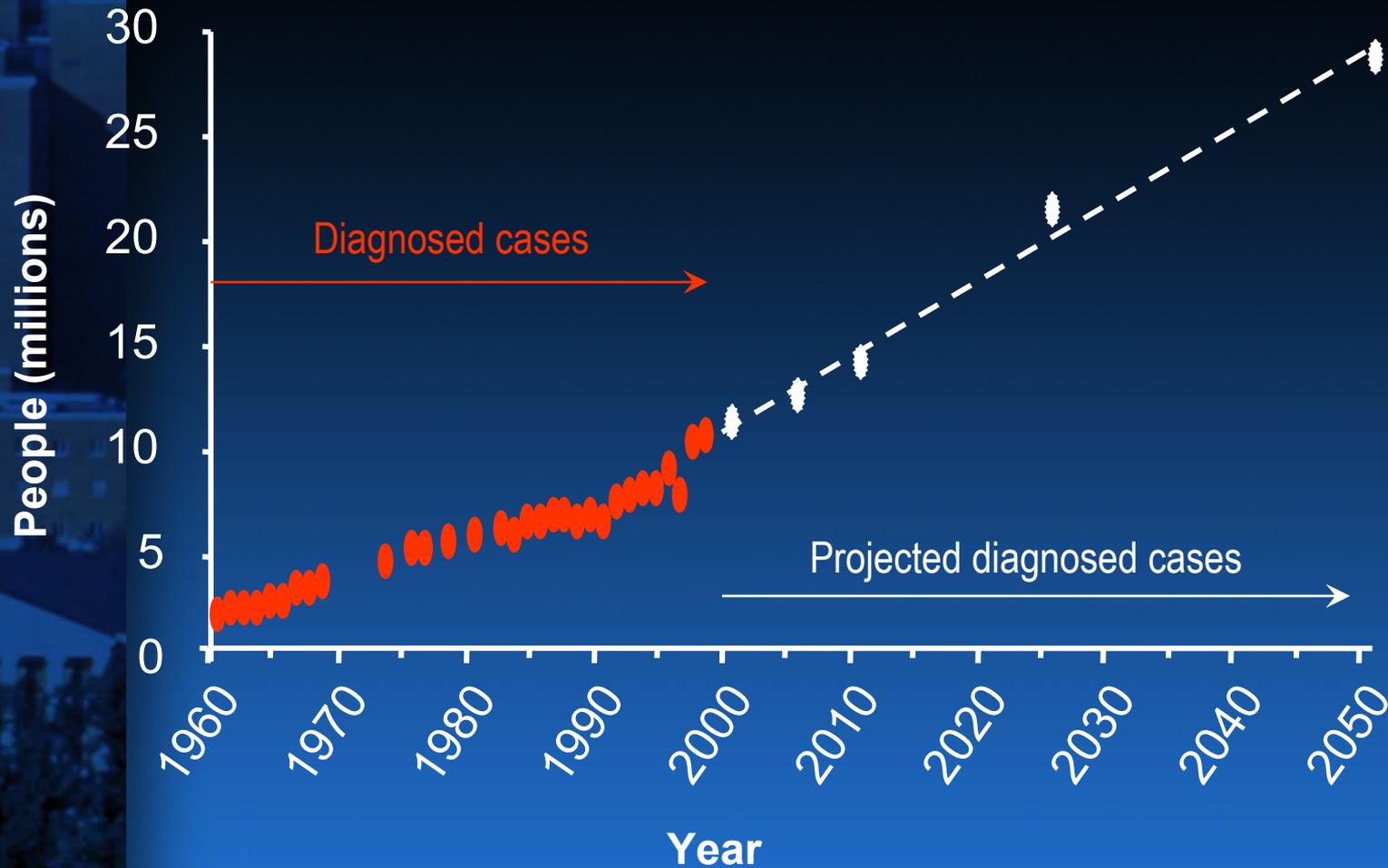
Diabetes in America

- Afflicts 16 million people
- 800,000 new cases a year; one-third undiagnosed
- Sixth leading cause of death from disease
- Highest incidence in minorities
- Main cause of new blindness, kidney failure, and amputations
- Shortens lifespan by up to 15 years
- Costs more than \$105 billion annually



Prevalence of Diagnosed Diabetes in the United States

Diagnosed (1960-1998) and Projected Diagnosed (2000-2050) Cases



Data for 1960-1998 from the National Health Interview Survey, NCHS, CDC.

Projected data for 2000-2050 from Boyle JP, et al, *Diabetes Care* 24:1936-40, 2001.



Primary Prevention

Secondary Prevention

Tertiary Prevention

Type 2 Genetics Consortium

Pilot Prevention & Control Studies

NDEP

Mouse Models of Complications

Look AHEAD

Innovative Approaches & Environmental Approaches to Obesity Prevention

Type 2 in Kids Network

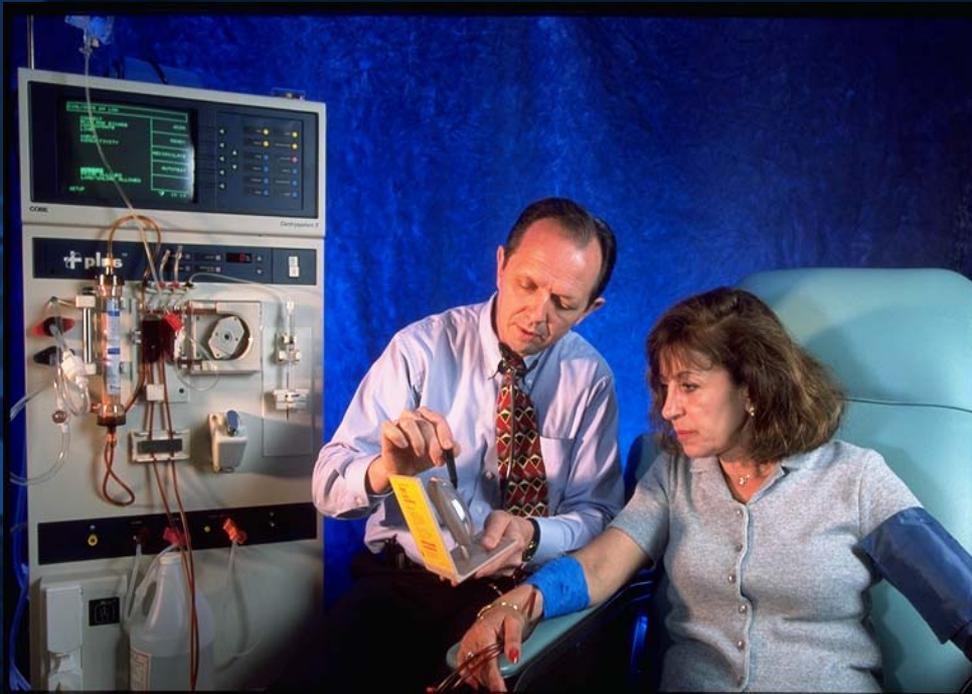
ACCORD

**FIND
NKDEP**

Bariatric Surgery Registry

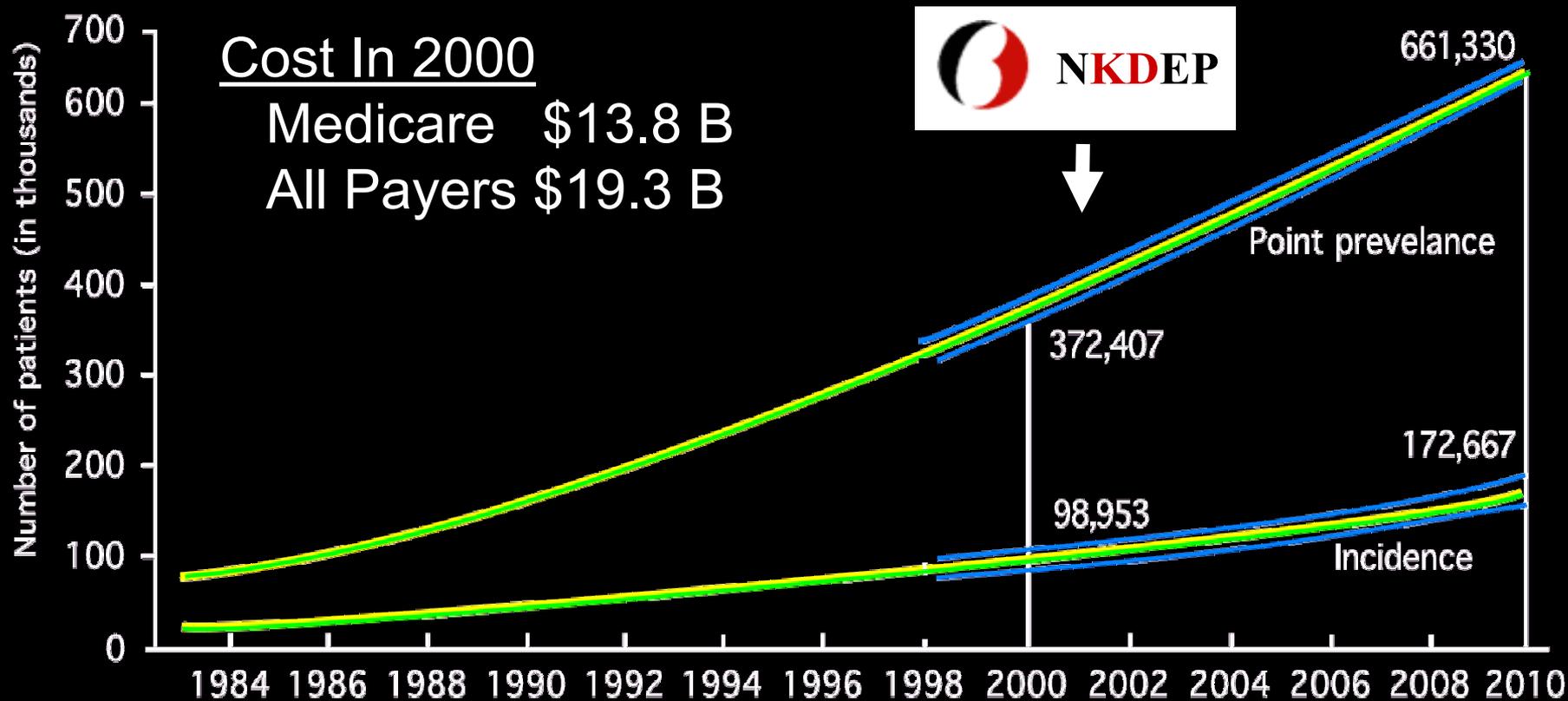
DPP/OS

Dialysis and Transplantation Treatments for Kidney Failure

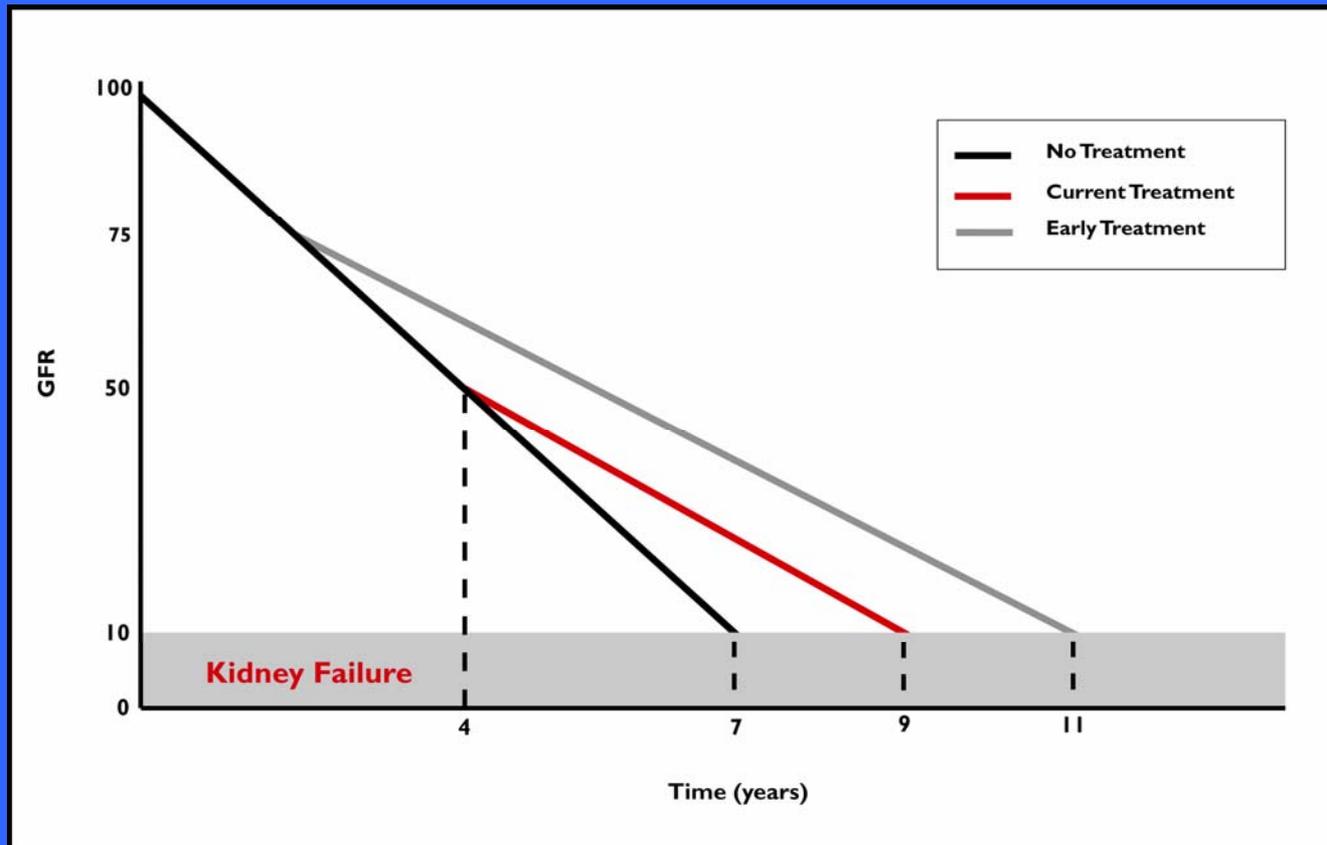


- 400,000 people were treated in 1998; 6,000 were children and young adults
- 85,500 new cases in 1998
- 20% annual mortality
- Direct health costs \$17 billion a year

ESRD Is A Rapidly Growing Problem



Early Treatment Makes a Difference



NKDEP

Key Messages to Target Audiences

Consumer message

- Learn the risks
 - Family history
 - Hypertension
 - Diabetes
- Encourage participation from patient
- Early detection and effective treatment can delay CKD progression

Primary Care Physicians

- Test high-risk patients for kidney damage
- Spot urine albumin to urine creatinine ratio is preferable to 24-hr urine collection
- Appropriate treatment and education



www.nih.gov