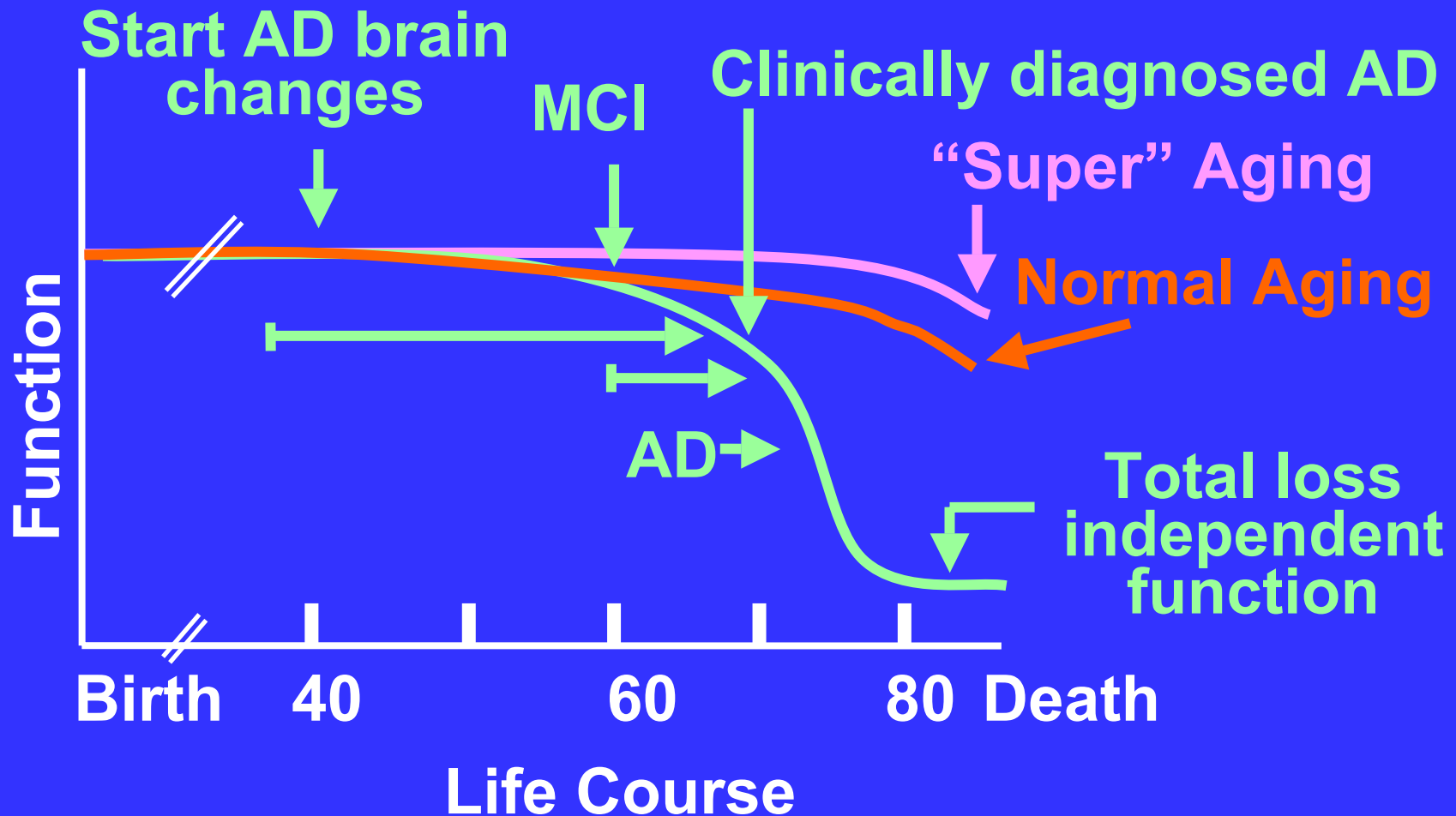


Research Initiatives, Funding and Training Opportunities at the National Institute on Aging

**Marcelle Morrison-Bogorad
Associate Director
Neuroscience and
Neuropsychology of Aging
Program**

54th Annual Scientific Meeting of the Gerontological Society of America
November 15-18, 2001

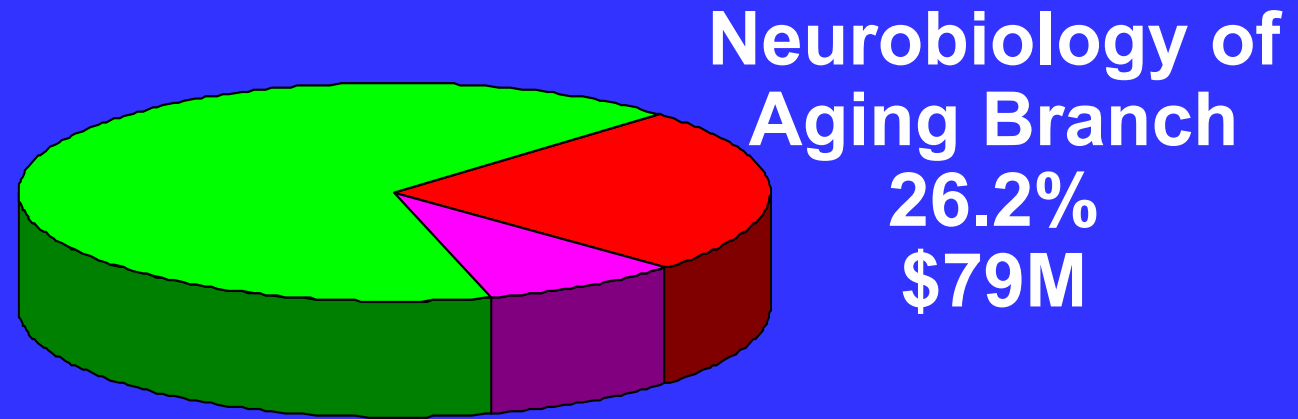
Changes in Super Aging, Normal Aging, and Neurodegenerative Diseases



Neuroscience & Neuropsychology of Aging Program

Marcelle Morrison-Bogorad

\$301.7M



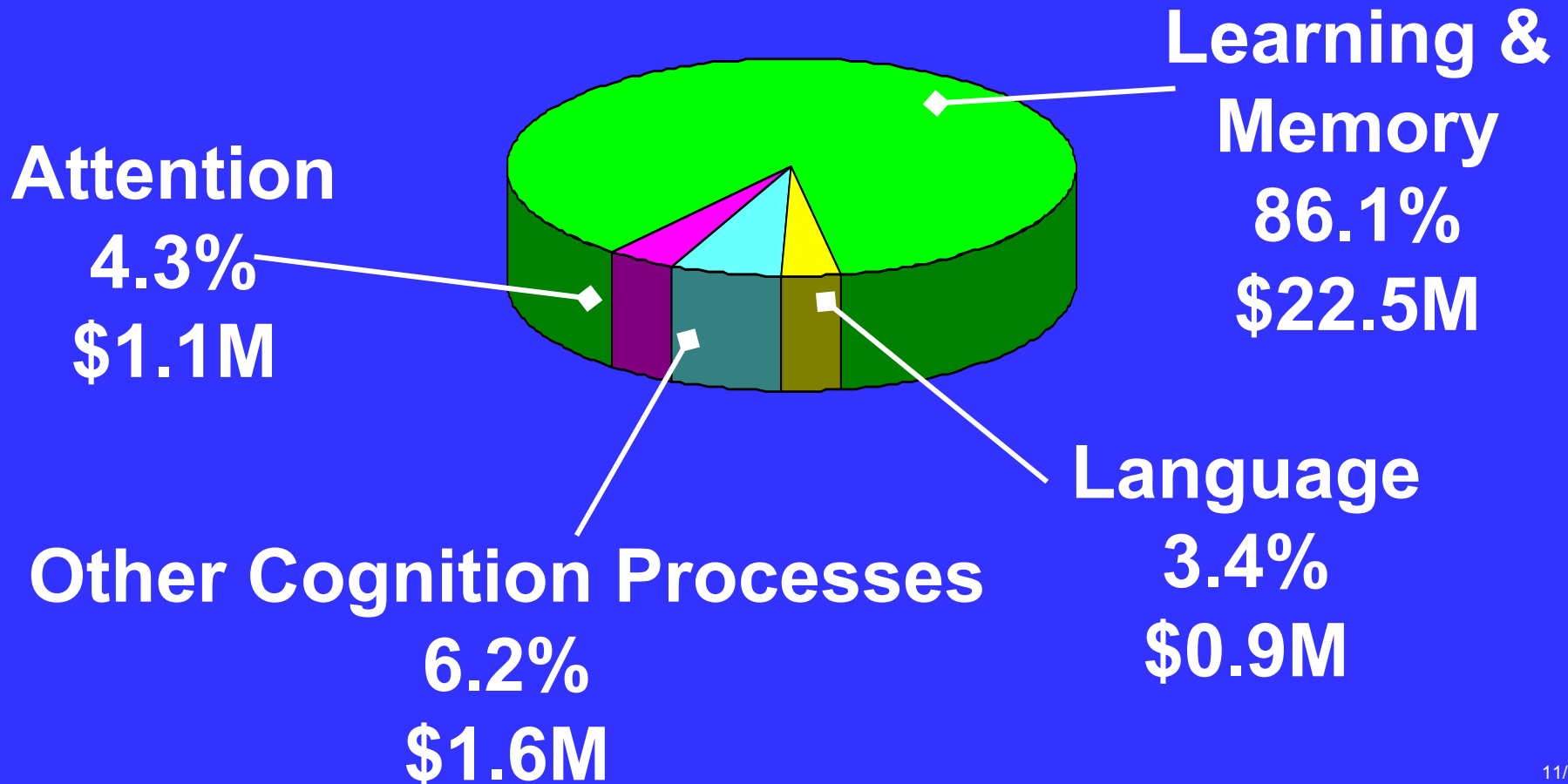
Dementias of
Aging Branch
65.2%
\$196.6M

Neuropsychology
of Aging Branch
8.6%
\$26.1M

Neuropsychology of Aging Branch

Molly Wagster

\$26.1M



Dementias of Aging Branch

Neil Buckholtz

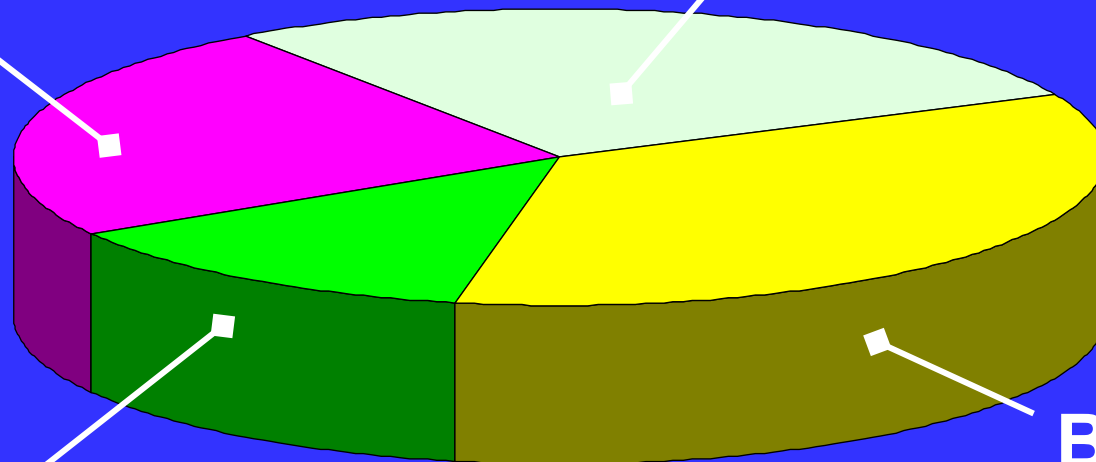
\$196.6M

Clinical Studies

28.5%
\$55.9M

Research Centers

25.2%
\$49.6M



Population Studies

11.7%
\$23.1M

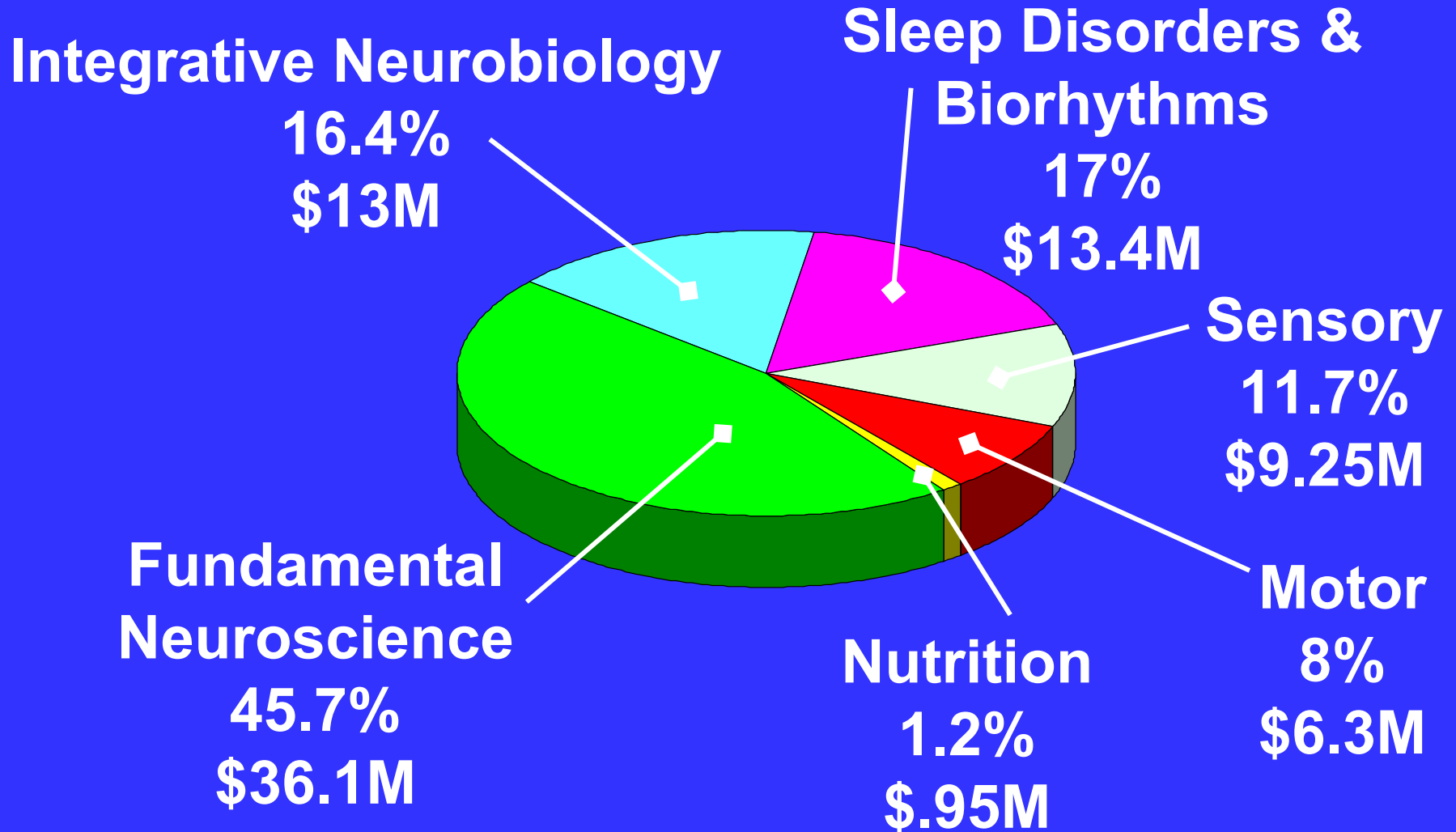
Basic Research

34.6%
\$68M

Neurobiology of Aging Branch

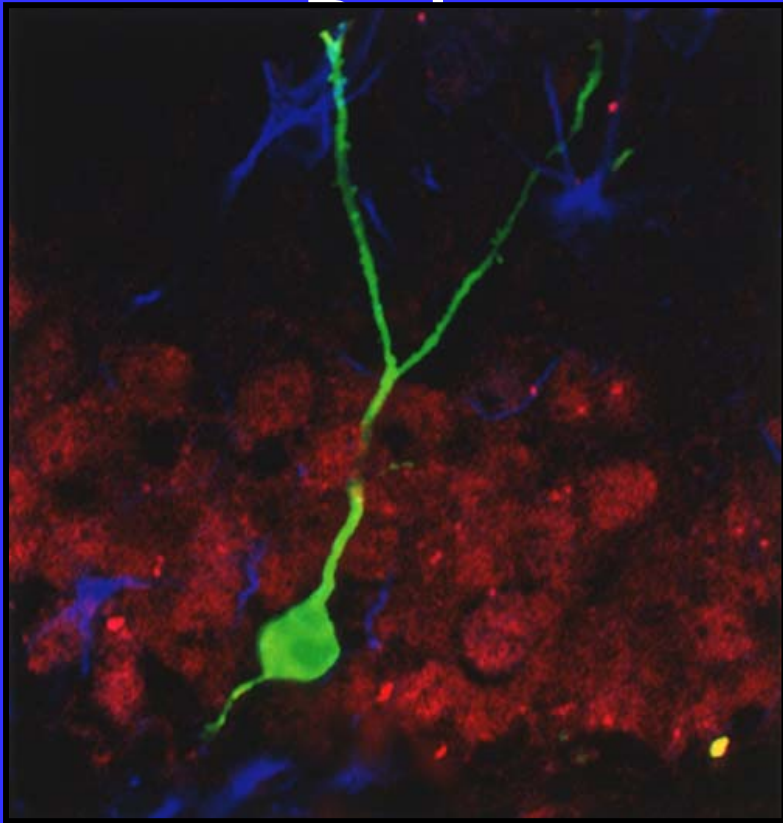
Andrew Monjan

\$78.9M



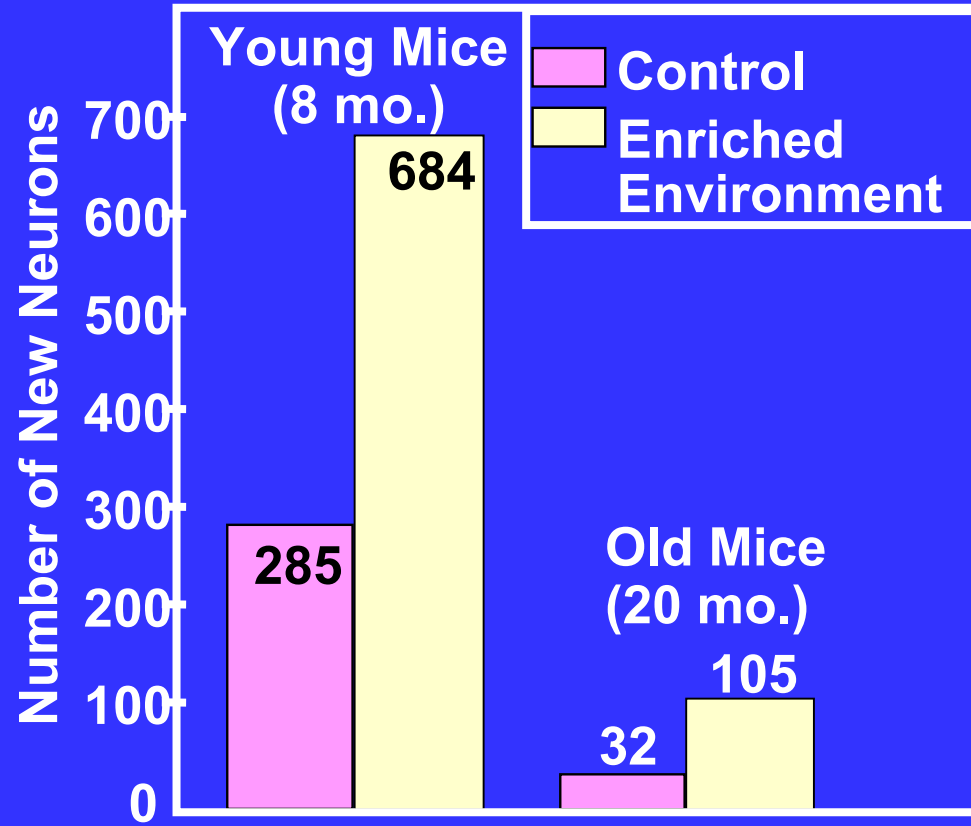
Growth of New Nerve Cells in the Brain

New Nerve Cell Growth in Mouse



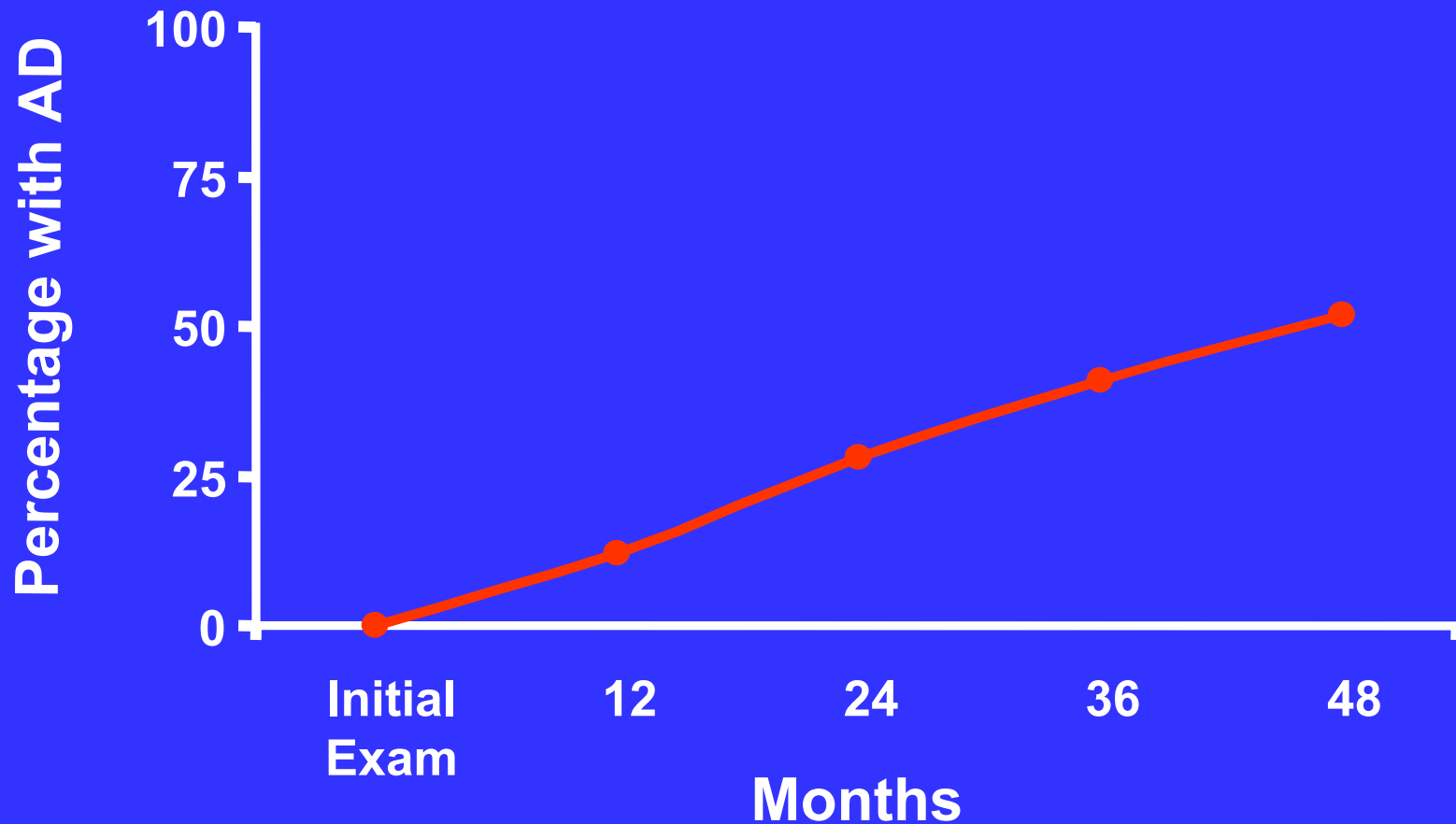
Gage R, unpublished, 2001

Effect of Environment and Age



Kempermann et.al, J Neurosci, 18:3206-3212, 1998

Development of Alzheimer's Disease in Persons with MCI



Genetics of Alzheimer's Disease

Early Onset

Autosomal Dominant Genes

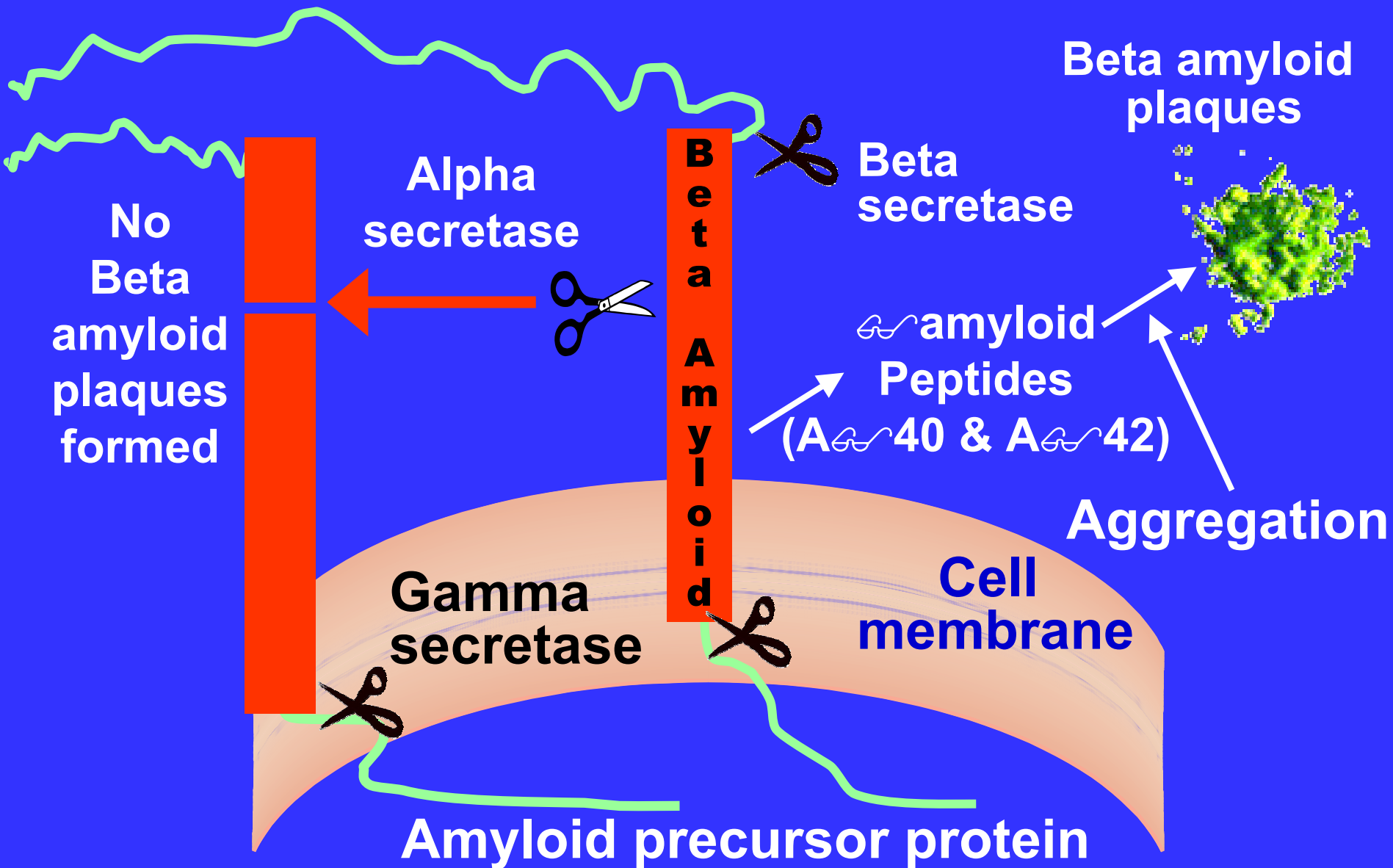
- ❖ amyloid precursor protein
- ❖ presenilin I
- ❖ presenilin II
- ❖ ? others

Late Onset

Risk Factor Genes

- ❖ apolipoprotein E4
- ❖ chromosome 12
- ❖ chromosome 10
- ❖ chromosome 9
- ❖ others?

Production of Amyloid Plaques



Drug Development and Testing

- ❖ Program announcement and pilot grants for drug discovery
- ❖ Small Business Innovation Research Grants (SBIRs)
- ❖ Preclinical toxicology contract
- ❖ Pilot trials and trial planning grants
- ❖ ADCS
- ❖ Full scale clinical trials
- ❖ Add-ons to ongoing clinical trials

Selected Current NNA Requests for Applications

- **RFA-AT-02-002: Elucidation of the Underlying Mechanisms of Placebo Effect**
- **RFA-MH-02-003: Development of PET and SPECT Ligands for Brain Imaging**
- **RFA-NS-02-007: Gene Therapy for Neurological Disorders**
- **RFA-AG-01-006: Biology of Adult Stem Cells in Aging**
- **RFA-AG-01-005: Alzheimer's Disease Clinical Research and Training Program**

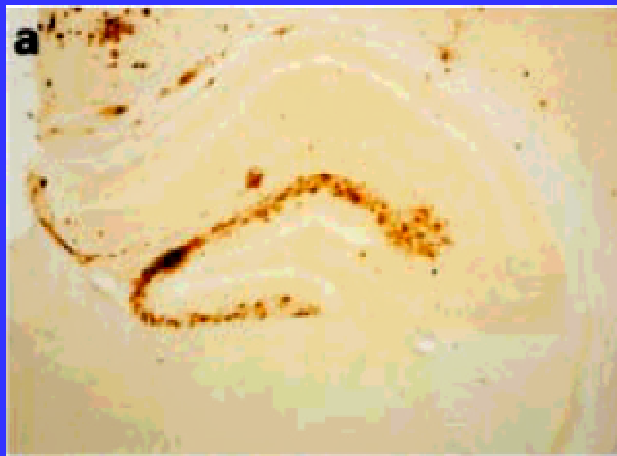
Selected Current NNA Program Announcements (PAs)

- **PA-02-003: Neurotechnology Research, Development, and Enhancement**
- **PA-01-115: The Management of Chronic Pain**
- **PA-01-078: The Biology of Non-Human Stem Cells in the Environment of the Nervous System**
- **PA-00-081: Aging, Oxidative Stress and Cell Death**

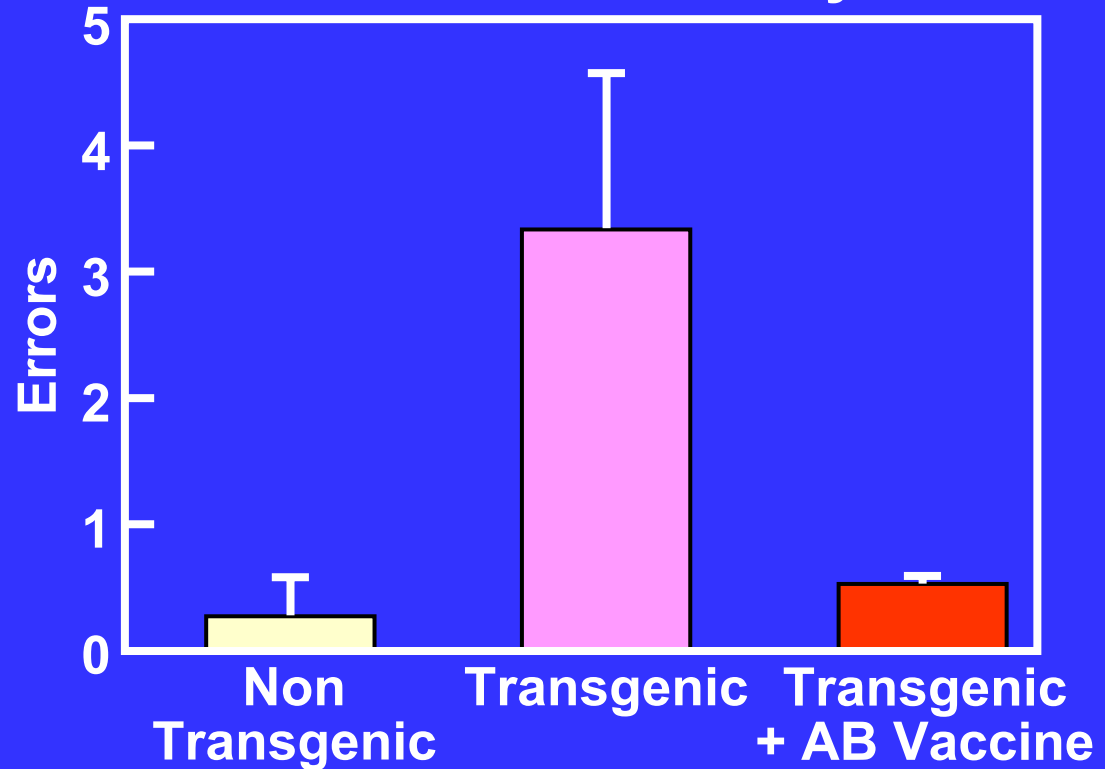
Selected NNA Bullets for Pilot Research Grants

- **Stems Cells, Tissue Repair, and Cell Replacement in Aging**
- **Sensory and Motor Processing**
- **Alzheimer's Disease Drug Discovery**
- **Psychoneuroimmunology**

Immunization with A β reduces A β Deposition in Hippocampus of Mice and Prevents Memory Deficit



Immunized Mice Perform Better than Controls in Memory Tests



Schenk et.al, Nature, 400:173-177, 1999

Morgan et.al, Nature, 408:932-935, 2000

Ongoing AD Prevention Trials

Vitamin E, Aricept										
Vitamins E, C, B6, B12, Folate, B-Carotene										
Aspirin, Vitamin E										
Estrogen, Estrogen + Progesterone										
B-Carotene, Vitamins E, C										
Aricept										
Celecoxib, Naproxen										
Ginkgo Biloba										
Vitamin E, Selenium										
1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008