

Neurosciences at the University of Minnesota



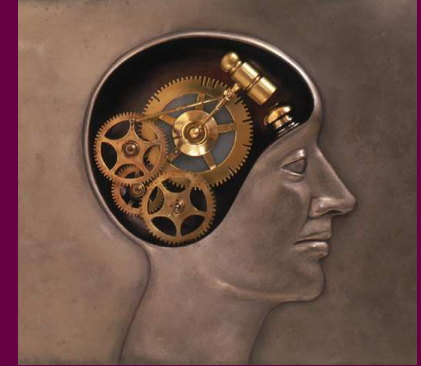
Potential Neuroscience Partnerships

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University of Minnesota

Neurosciences at the University of Minnesota

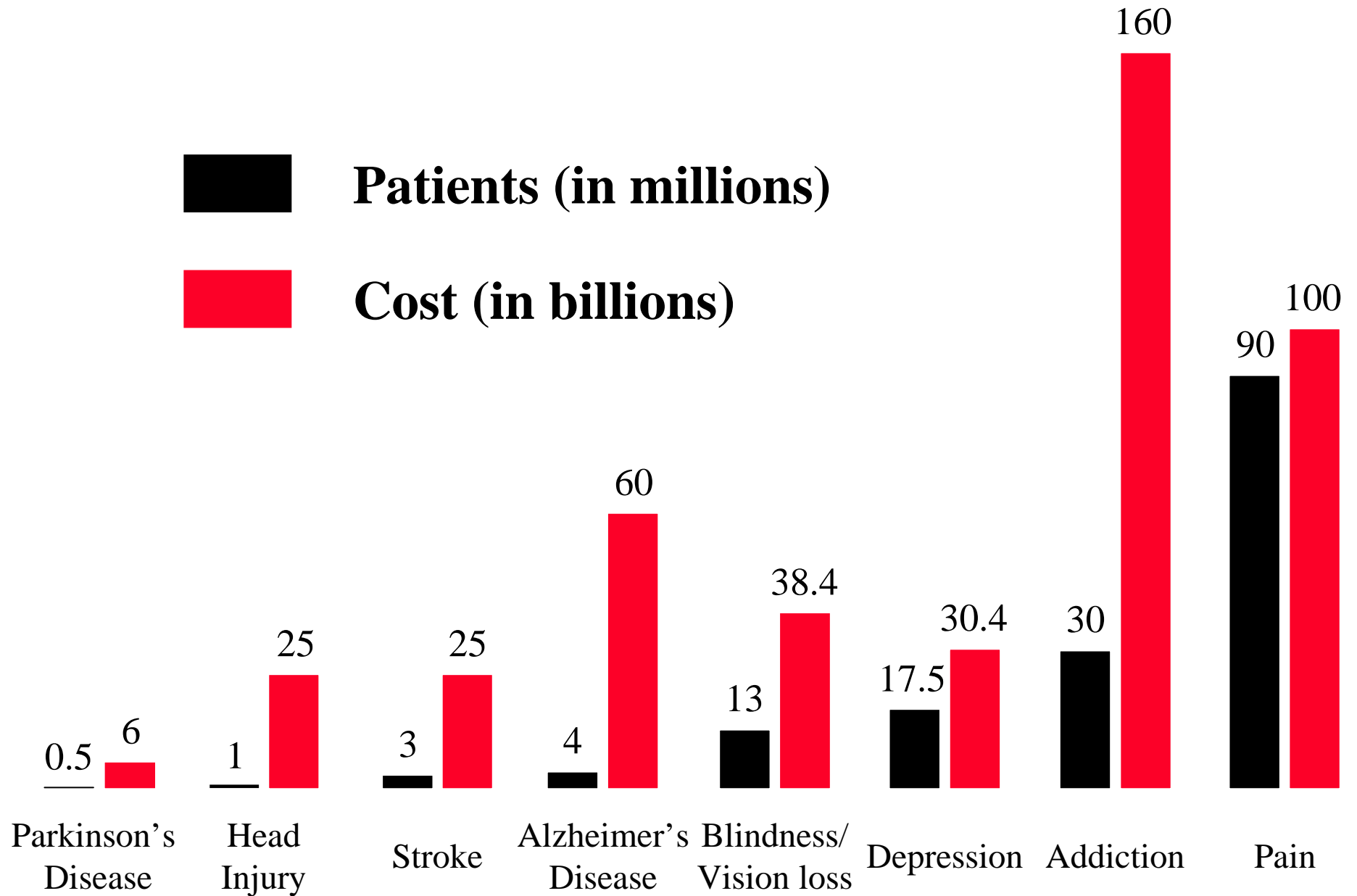


Fundamental Nature of Brain Sciences

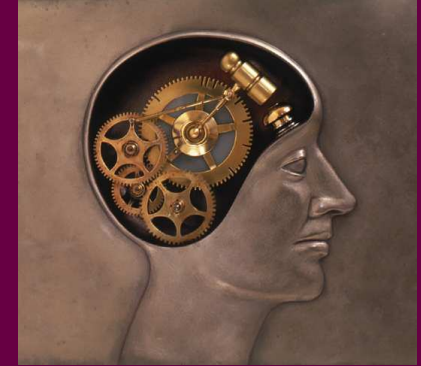
Health Care Issues - Size of the Problem

- 100 million Americans will suffer from a brain-related disease
- Total annual costs, \$579 billion in 1998

Cost and Impact of Neurological and Psychiatric Diseases



Neurosciences at the **University of Minnesota**



Ambitious Task of Understanding How the Brain Works

- Must understand the brain at every level
- Must use multiple techniques / approaches
- Must understand normal function to understand brain dysfunction

Neurosciences at the University of Minnesota

MEDICAL SCHOOL SUCCESS STORY



- Major research focus of the Medical School faculty (> 120)
- Over \$30 Million annually in external funds
- 10 faculty with NIH Merit /Javits/Eureka awards

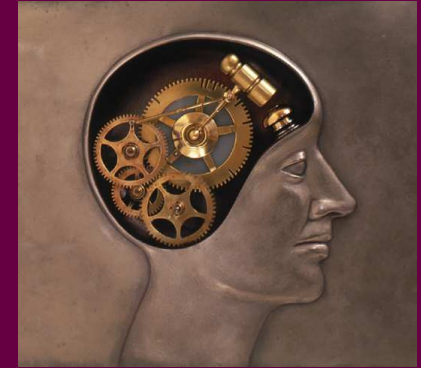
Neurosciences at the University of Minnesota

MULTI-DISCIPLINARY ENDEAVOR



- Departments
 - Neuroscience
 - Neurology
 - Neurosurgery
 - Psychiatry
 - Radiology
 - ENT
 - Ophthalmology
- Graduate Program in Neuroscience

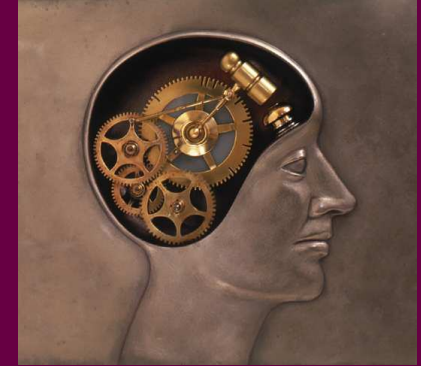
Neurosciences at the University of Minnesota



CENTERS AND INSTITUTES

- Brain Science Center (V.A. Hospital)
- Center for Cognitive Sciences
- Center for Magnetic Resonance Research
- Center for Neurobehavioral Development
- Center for Pain Research
- Institute of Human Genetics
- Obesity Center
- Stem Cell Institute

Neurosciences at the University of Minnesota



CENTERS AND INSTITUTES

- Institute for Translational Neuroscience

Neurodegenerative and Neuromuscular
Diseases

Center for Memory Care and Research

Neuroengineering

Neurodevelopment and mental health

Neurosciences at the University of Minnesota

GRADUATE PROGRAM IN NEUROSCIENCE



- 120 Faculty
 - 24 Departments
 - 7 Colleges
- Research interests span all areas of neuroscience
- ~ 65 Ph.D. neuroscience students
- Training over 85 postdoctoral fellows

Neurosciences at the University of Minnesota

NEUROSCIENCE TRAINING GRANTS



- Predoctoral Training in Neuroscience
- Drug Abuse
- Vision
- Neuro-physical-engineering and computational sciences
- Translational Neuroscience



CENTRE FOR
MOLECULAR BIOLOGY
AND NEUROSCIENCE

Senter for molekylærbiologi og nevrovitenskap



Norwegian
Centre of
Excellence

-Synaptic Neurochemistry Laboratory
Jon Storm-Mathisen, Linda Bergesen, Vidar Gundersen

-Laboratory of Molecular Neuroscience
Ole Ottersen, Mahmood R. Amiry-Moghaddam, Erlend Nagelhus

-Laboratory of Cellular Physiology and Ion Channel Function
Johan Storm

-Cellular and Genetic Therapy Research Group
Stefan Krauss



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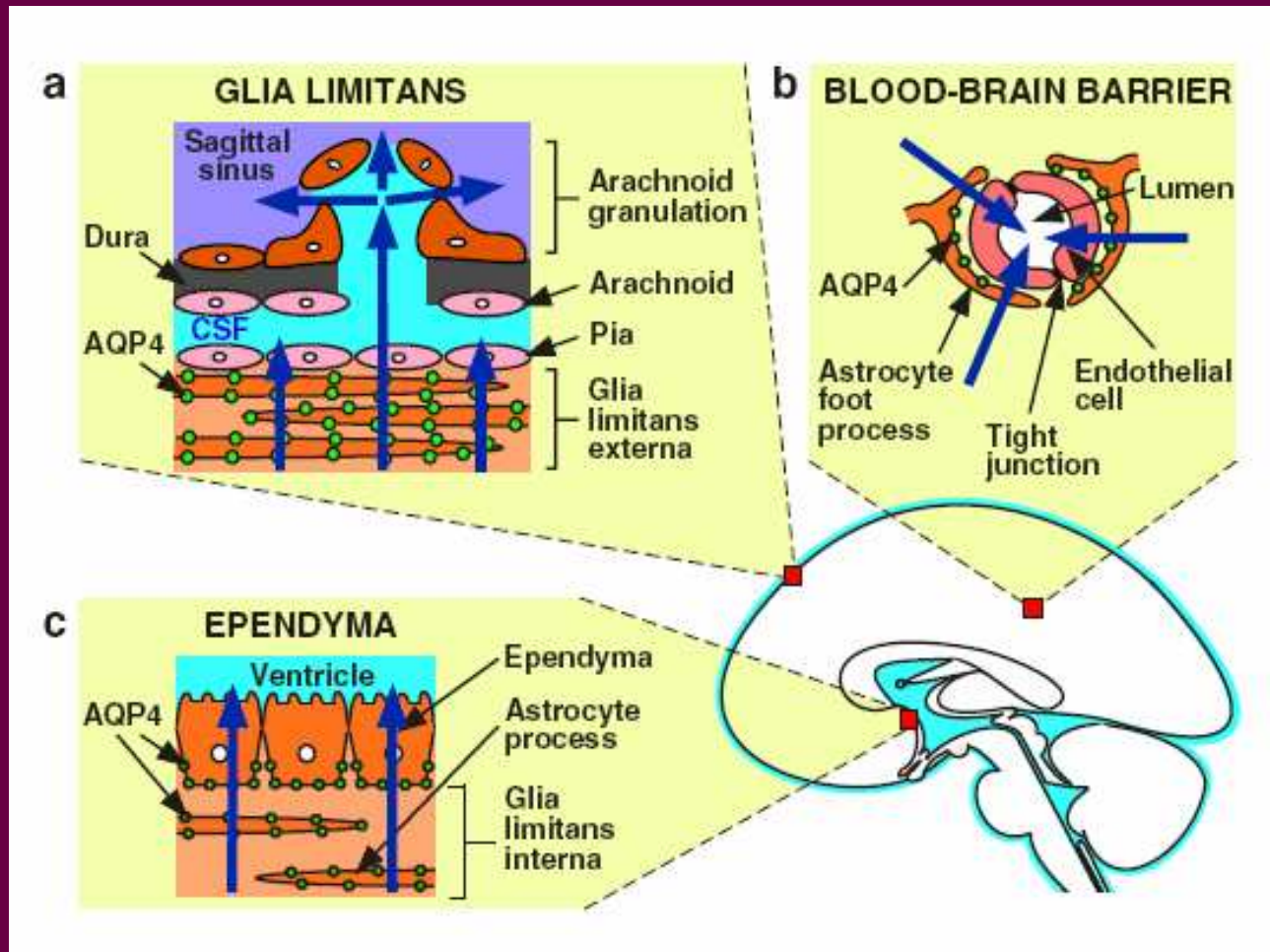
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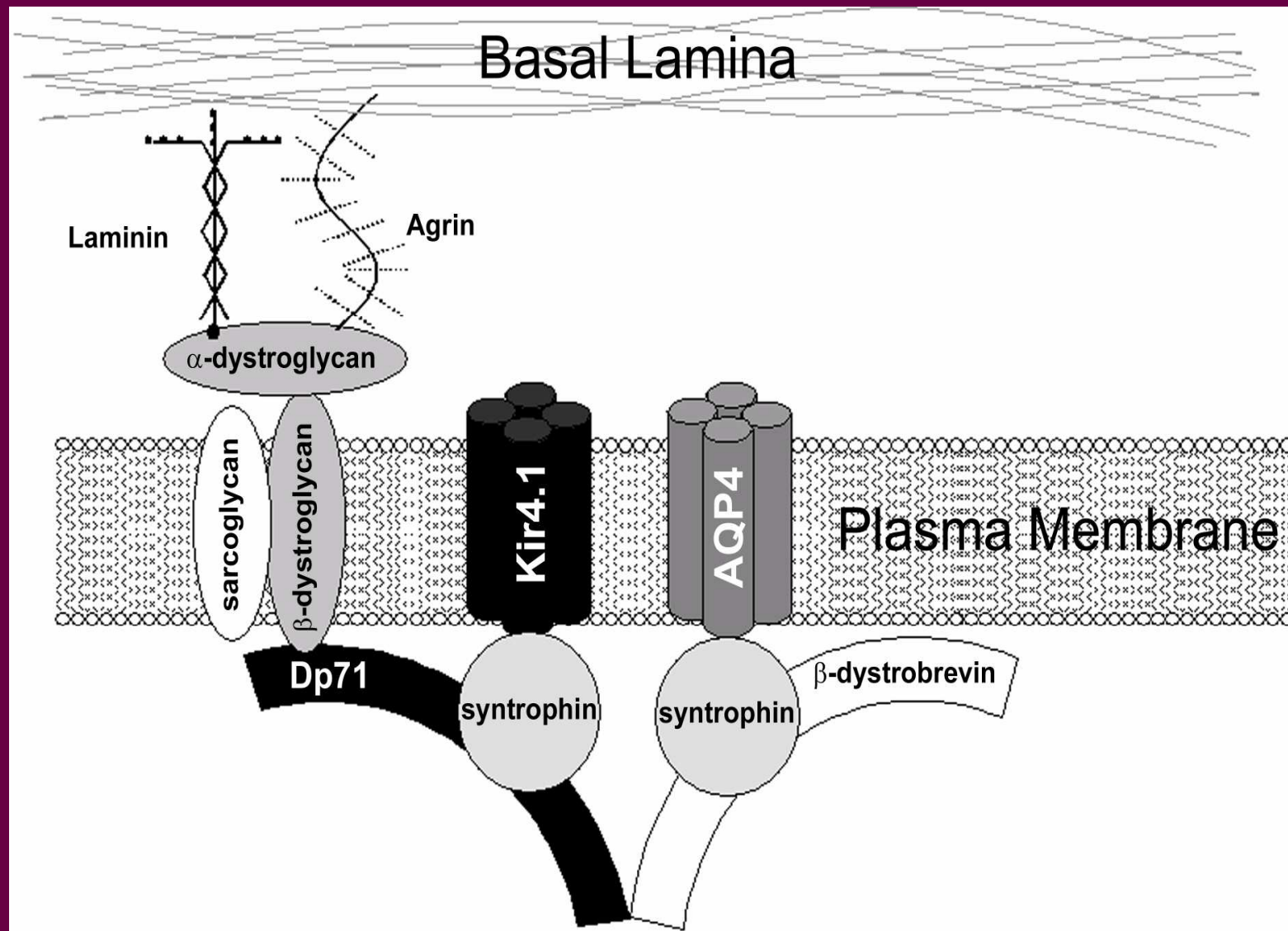


Norwegian
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- Nordic Center for Research in Water Imbalance Related Disorders

Routes of Water Exit From the Brain in Brain Edema





- **NEURON-GLIA INTERACTIONS:
FROM PERISYNAPTIC TO
PERIVASCULAR
COMMUNICATION SYMPOSIUM**

- **September 30, 2009**

- **3-125 Mayo Memorial Building**

Implementing Partnerships?

- **Facilitate Researchers Exchanges**
- **Support Early Phase Collaborative Projects**
- **Enable Shared Student Supervision**