NEUROME

FOR IMMEDIATE RELEASE
Tuesday, April 15, 2003

CONTACT: Floyd E. Bloom, M.D.
Chief Executive Officer
(858) 677-0466

Neurome announces publication of ground-breaking research findings on Alzheimer's disease in the Proceedings of the National Academy of Sciences

Paper reveals that the same key memory circuit affected in human Alzheimer's disease is devastated in a transgenic mouse model of the disease.

LA JOLLA, CA - Neurome, Inc. recently completed the second phase of its analysis of Elan's mouse model of Alzheimer's disease (AD), which is to be published today in the Proceedings of the National Academy of Sciences of the United States of America (PNAS), Vol. 100, No. 8, p.p.4837-4842 (2003). The paper by John F. Reilly et al. is entitled "Amyloid Deposition in the Hippocampus and Entorhinal Cortex: Quantitative Analysis of a Transgenic Mouse Model" and is also available in the online edition of PNAS at www.pnas.org.

Using Neurome's proprietary microscopy software, the Neurome team has developed the first 3D reconstruction of the brains of these mice, with the pathologic amyloid deposition displayed in 3D register with key brain structures. This 3D portrayal of pathology reveals sheets of amyloid deposition that correlate perfectly with circuits known to be the most vulnerable to degeneration in human AD. The paper also reveals findings that – in contrast with previous hypotheses – indicate compact plaques form prior to significant deposition of diffuse amyloid, suggesting that different mechanisms are involved in the deposition of diffuse amyloid and the aggregation into plaques.

The paper is co-authored by Dora Games, Ph.D. (Elan Pharmaceuticals), Russell E. Rydel, Ph.D. (Elan Pharmaceuticals), Stephen Freedman, Ph.D. (Elan Pharmaceuticals), Dale Schenk, Ph.D. (Elan Pharmaceuticals), Warren G. Young, Ph.D. (Neurome), John H. Morrison, Ph.D. (Neurome and Mount Sinai School of Medicine) and Floyd E. Bloom, M.D. (Neurome and The Scripps Research Institute).

"Using our newly developed tools for visualizing brain structures, we were able to completely reconstruct the brains of the mice that model human Alzheimer's disease," said Floyd E. Bloom, M.D., Founding CEO and Chairman of the Board of Neurome and Chairman of the Department of Neuropharmacology at The Scripps Research Institute. "In fact, embedded in the brain reconstruction, we generated a 3D reconstruction of the deadly deposits of amyloid, showing for the first time, how the amyloid deposits precisely correspond with key memory circuits – the same key memory circuits that are affected early in human Alzheimer's disease."

"Not only does this greatly strengthen the validity of this particular model of Alzheimer's disease, but it lays the groundwork for a precise quantitative analysis of amyloid deposition over time as the animal ages, and more importantly, precise measurements of the extent and location of the removal of amyloid from the brain as we test interventions," continued Dr. Bloom. "This launches a very different and far more accurate way to visualize pathology in mouse models, and potentially in human brains as the technology is developed further."

"Neurome's findings will be greeted by the Alzheimer's community as a major scientific contribution," commented Dr. Paul Greengard, Ph.D., Nobel Laureate, Astor Professor and Head of the Laboratory of Molecular and Cellular Neuroscience at The Rockefeller University in New York, and a member of Neurome's Scientific Advisory Board.

Alzheimer's disease is a progressive, neurodegenerative disease of the brain characterized by memory loss, language deterioration, impaired visuospatial skills, poor judgment, indifferent attitude, but preserved motor function. Symptoms of Alzheimer's disease usually manifest after age sixty-five; however, onset may occur as early as age forty, appearing first as memory decline and, over several years, destroying cognition, personality, and ability to function. There is no known cure for Alzheimer's disease, which affects at least 20 million people worldwide.

About Neurome

Neurome, Inc., develops standardized, quantitative databases that accurately depict and integrate gene expression patterns in the three-dimensional context of the brain's structures, circuits, and cells, and deploys these databases in primary research directed toward the discovery and development of gene targets for enhancement of brain function and treatment of brain-based disease. Neurome performs contract brain research for pharmaceutical and biotechnology companies while at the same time pursuing its own in-house and collaborative research protocols. The data collected from these efforts will populate an evolving, comprehensive database available by subscription and useful on a broad level for analyses of mouse models of brain function and disease. In this regard, the application of the Neurome technologies will provide rigorous, quantitative data that are optimally suited to the measurement of subtle cell-type specific shifts in gene expression, as well as progression and prevention of degenerative events affecting specific cell classes and brain regions. For more information, please visit Neurome's website at www.neurome.com.