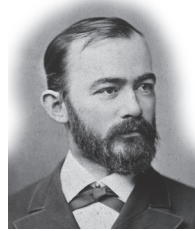


1890–1899

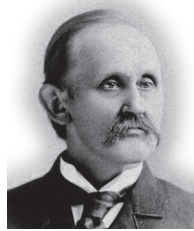
AAA Presidents



1891-1894
Harrison Allen



1894-1895
Thomas Dwight



1895-1897
Frank Baker



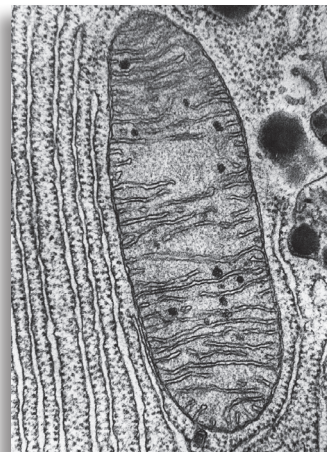
1897-1899
Burt Green Wilder



1899-1903
George S. Huntington

1890

Cytological identification of mitochondria



Mitochondria photo by Keith Porter

Two significant publications by Richard Altmann (1890) and Carl Benda (1898) argue for the existence of a kind of organelle that sometimes appears threadlike and at other times more granular. Benda names them mitochondria, from the Greek words *mitos* (thread) and *khondrion* (little granule), to reflect his claim that the long, narrow shape of the organelles could result in very different microscopic images depending on the angle at which they happened to be sliced. If so, some of the bafflingly diverse forms observed within the microscopic image of a single cell could be attributed to this distinct organelle. By the turn of the century, it is generally accepted that the mitochondrion is not an artifact of cytological methods but a genuine organelle with multiple exemplars in each cell.

Wilder brain collection

The Wilder Brain Collection is the inspiration of Burt Green Wilder, Cornell University's first animal biologist and founder of the university's Anatomy Department. Wilder sets out to determine if differences can be detected in size, shape, weight, and amount of convolution between the brains of "educated and orderly persons" and women, murderers, racial minorities, and the mentally ill. Eventually, it is concluded that such differences cannot be detected — at least not by the naked eye or any 19th-century tools. Wilder served in the Civil War as a surgeon for the 55th Massachusetts Infantry, a black regiment. Inspired by his comrades, he became a strong advocate for African-American civil rights.



Wilder lecturing at Cornell

1891

AAA Constitution

The AAA constitution is amended to include honorary membership for elected, distinguished foreign anatomists.

1892

G. Carl Huber



Gottlieb Carl Huber

G. Carl Huber publishes *Directions for work in the histological laboratory, for the use of medical classes in the University of Michigan*.

Huber's major contributions are to the knowledge of the finer structure of the sympathetic nervous system, the structure of sensory nerve endings, the degeneration and regeneration of peripheral nerves and nerve endings, the development and structure of the uriniferous tubule, the blood supply of the mammalian kidney, the structure of the seminiferous tubule, the development of the albino rat, the notochord in mammalian embryos, and the comparative neurology of vertebrates.

1894

First female member of AAA

Mary Blair Moody is the first female member of AAA.



Mary Blair Moody

Charles Judson Herrick

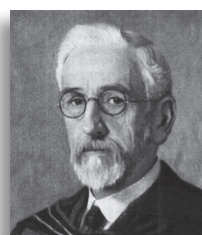
Charles Judson Herrick becomes the Editor-in-Chief of *The Journal of Comparative Neurology* at age 24. He is the author of five editions of *Introduction to Neurology*, the *Laboratory Outline of Neurology*, and the widely respected *The Brain of The Tiger Salamander, Ambystoma tigrinum*.



Charles Judson Herrick

Foundation laid for Comparative Neurology

James Playfair McMurrich is appointed head of the Department of Anatomy at the University of Michigan. McMurrich introduces a well-organized course in the anatomy of the nervous system as a subject separate from that of gross anatomy. This lays the foundation for that division of anatomy now known as Comparative Neurology.



James Playfair McMurrich

1895

Discovery of X-rays

On November 8, 1895, German physics professor Wilhelm Röntgen stumbles on X-rays while experimenting with Lenard and Crookes tubes. His initial report, titled "*On a new kind of ray: A preliminary communication*" and submitted to the *Würzburg's Physical-Medical Society* journal, is the first paper written on X-rays. Röntgen refers to the radiation as "X" to indicate that it is an unknown type of radiation. The name sticks, over Röntgen's objections. For his discovery, Röntgen is awarded the first Nobel Prize in Physics.

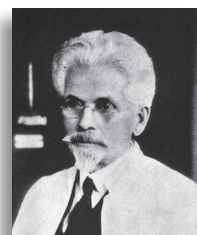


Wilhelm Röntgen

Röntgen realizes the medical importance of his discovery when he takes a picture of his wife's hand on a photographic plate with X-rays. This is the first ever photograph of a human body part using X-rays. When Röntgen's wife sees the picture, she says, "I have seen my death."

"I did not think, I investigated."

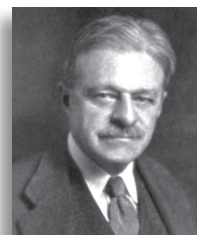
—Wilhelm Conrad Röntgen



Henry H. Donaldson

Henry H. Donaldson

Henry H. Donaldson is a prominent neurologist whose thorough studies of the brain are published as a book, *The growth of the brain: a study of the nervous system in relation to education*.



Oliver S. Strong

Oliver S. Strong

Oliver S. Strong begins his initial detailed studies on the structure and function of cranial nerves, a topic for which he will become well known.

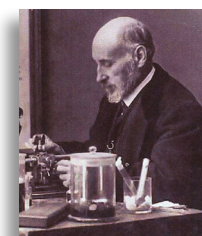
"There are no small problems. Problems that appear small are large problems that are not understood"

—Santiago Ramón y Cajal, *Advice For A Young Investigator*

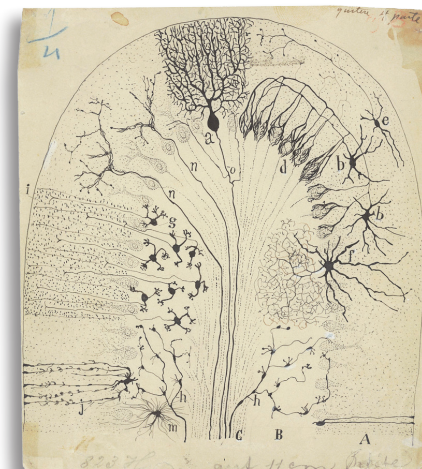
1899

Early paper on the structure of the nervous system

Santiago Ramón y Cajal publishes an early paper, "*Textura del Sistema Nervioso del hombre y de los vertebrados*," on the structure of the nervous system.



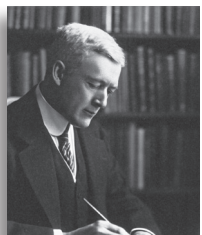
Santiago Ramón y Cajal



Cajal illustration

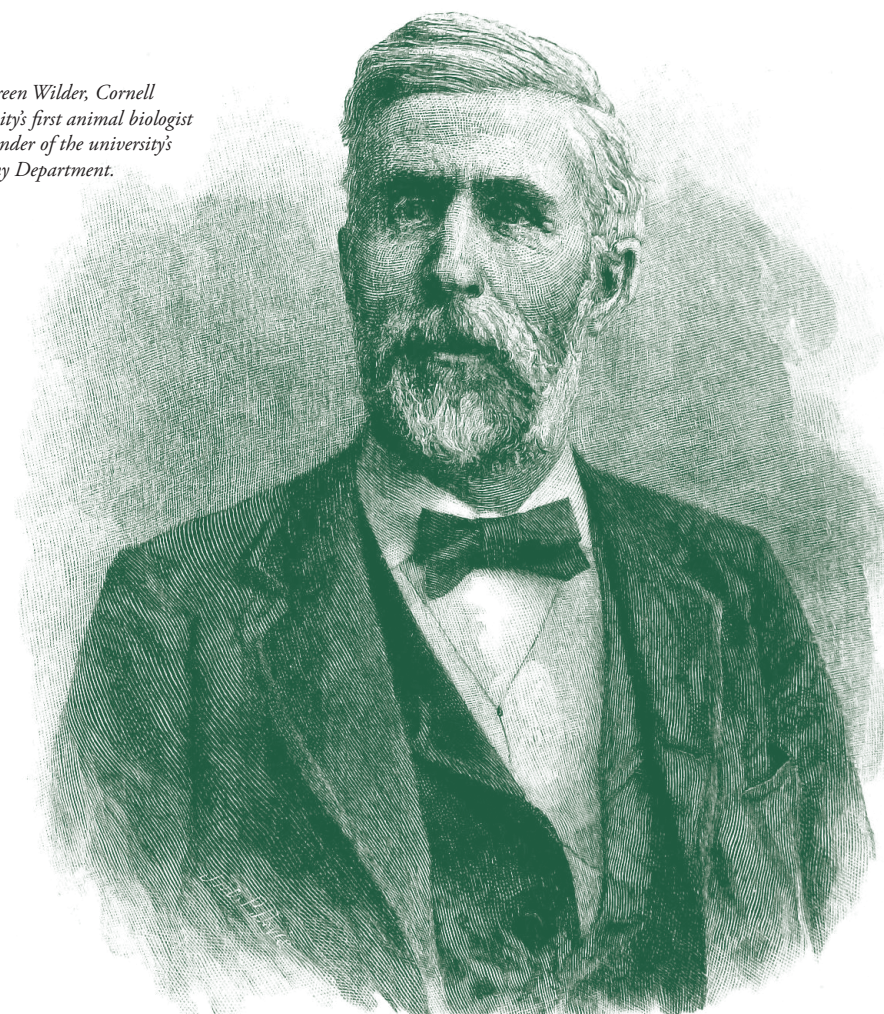
Lewellys Franklin Barker

Lewellys Franklin Barker's early research is published and becomes an important reference book titled *The Nervous System and its Constitutional Neurons*.



Lewellys Franklin Barker

Burt Green Wilder, Cornell University's first animal biologist and founder of the university's Anatomy Department.



Hand mit Ringen (Hand with Rings): a print of one of the first X-rays by Wilhelm Röntgen of the left hand of his wife Anna Bertha Ludwig.