

**Hosted By:**  
**The Division of Nutritional Sciences and  
The College of Agriculture and Life Sciences**

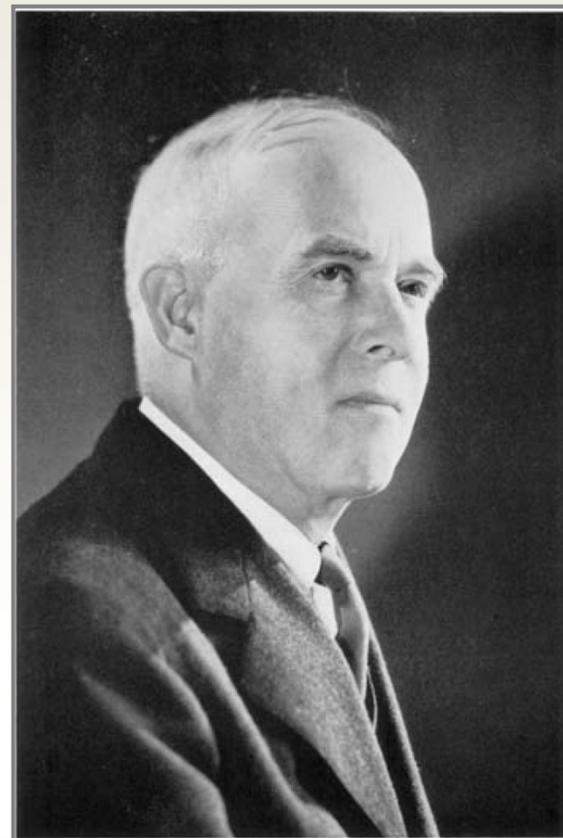
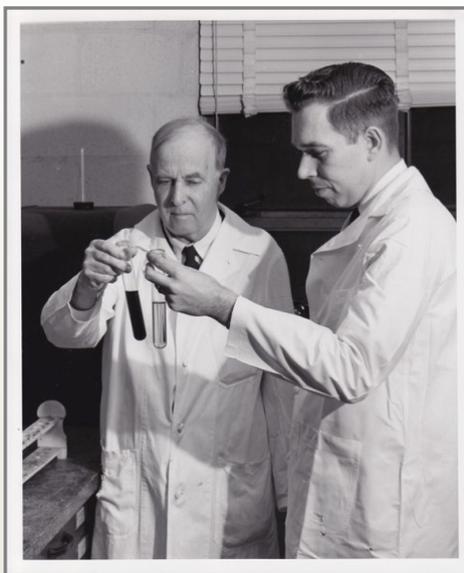
**About the American Chemical Society**

With more than 163,000 members, the American Chemical Society (ACS) is the world's largest scientific society and one of the world's leading sources of authoritative scientific information. A nonprofit organization, chartered by Congress, ACS is at the forefront of the evolving worldwide chemical enterprise and the premier professional home for chemists, chemical engineers and related professions around the globe. The Society publishes numerous scientific journals and databases, convenes major research conferences and provides educational, science policy and career programs in chemistry. We also give more than \$22 million every year in grants for basic research in petroleum and related fields.

ACS also plays a leadership role in educating and communicating with public policy makers and the general public about the importance of chemistry in our lives. This includes identifying new solutions, improving public health, protecting the environment and contributing to the economy.

**Sumner Publications**

*Textbook of Biological Chemistry* ▪ *The Chemistry and Methods of Enzymes*  
*Laboratory Experiments in Biological Chemistry* ▪ *The Enzymes, Chemistry and Mechanism of Action* ▪ *The Isolation and Crystallization of the Enzyme Urease*



**James B. Sumner**

---

The Division of the History of Chemistry of the American Chemical Society presents the "2010 American Chemical Society Division of the History of Chemistry's Citation for Chemical Breakthrough Award"

September 22, 2011  
Cornell University  
Savage Hall



Cornell University  
Division of Nutritional Sciences

# About James B. Sumner

1887-1955

In 1914 Sumner began his teaching and research career at Cornell, a career in which he remained active until a few months before his death. For fifteen years he served as Assistant Professor and for nine as Professor in the Department of Physiology and Biochemistry of the Ithaca Division of the Medical College. With the discontinuance of this Division in 1938 he was given an appointment as Professor of Biochemistry in the Department of Zoology of the College of Arts and Sciences. In 1945 a Department of Biochemistry, later named Biochemistry and Nutrition, was established in the College of Agriculture and he was appointed to its staff. In 1947 a Laboratory of Enzyme Chemistry was organized in that department with Sumner as its director. He also held an appointment in the School of Nutrition from its founding in 1941. Thus Sumner was the pioneer in the field of biochemistry at Ithaca and remained the outstanding leader in its development for over forty years.

Sumner had become interested in urease from his previous studies and he had found the jack bean (*Canavalia ensiformis*) to be a rich, readily available source. Thus this enzyme was selected for study. In the early course of these investigations, various chemical compounds were isolated from the beans, including two globulins which were obtained in crystalline form. Sumner was particularly interested in the proteins of the beans because he felt that enzymes must be protein in nature. Sumner published a paper in the *Journal of Biological Chemistry* in August, 1926, in which he announced the isolation of a new crystalline globulin from the jack bean and presented evidence for his belief that the globulin was identical with the enzyme urease. Sumner followed up his original report with some ten additional papers during the next five years, in which he furnished additional data supporting his position and replied vigorously to his critics. Sumner's enzyme research was by no means limited to urease. In 1937 he succeeded in isolating and crystallizing a second enzyme, catalase; establishing its protein nature. His studies also dealt with more than a dozen other enzymes and resulted in several publications. He was also interested in the general field of protein isolation.

His successful research brought him to full professorship at Cornell in 1929. Sumner received a Nobel Prize in 1949 for crystallization of enzymes, was elected to the National Academy of Science in 1948, and was elected a Fellow of the American Academy of Arts and Sciences in 1949.

On May 25-26, 1955, Cornell University held a symposium in joint honor of Sumner and of L. A. Maynard, who were retiring on July 1<sup>st</sup>. Sumner was taken to the hospital the next day and never returned. He died of cancer on August 12, 1955, at the Roswell Park Memorial Institute, Buffalo, New York.

*Biographical Memoir by Leonard A. Maynard*

## AGENDA

**3:30PM:**

**Refreshments**

**4:00PM:**

**Presentation**

Introduction:

Dr. Patrick Stover, Cornell

Division of Nutritional Sciences Director

Speakers:

Dr. Malden Nesheim, Cornell

Professor Emeritus; Provost Emeritus

Leah Solla, Cornell

Physical Sciences Library Chemistry Librarian and  
American Chemical Society member

James C. White, Cornell Alumnus '44

Retired Assistant Dean of School of Hotel Administration and  
Former Student of Sumner

Plaque Unveil:

Dr. Patrick Stover

**Special thanks to:**

**The Division of the History of Chemistry of the American Chemical Society**

**Kent Fuchs, Provost**

**Dean Kathryn Boor, College of Agriculture and Life Sciences**

**Professor Emeritus Roald Hoffmann, Nobel laureate**

**Professor Bruce Ganem**