

Topic Page: [Bergström, Sune](#)

Summary Article: **Bergström, Sune Karl**

From *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

Swedish biochemist who was awarded a Nobel Prize for Physiology or Medicine in 1982, together with John Vane and Bengt Samuelsson, for the purification of prostaglandins. Prostaglandins are chemical messengers that regulate many processes in the body, such as blood pressure, blood platelet aggregation, and inflammatory response; they have many clinical applications.

Swedish physiologist Ulf von Euler discovered the first prostaglandin in 1935 after noting that human semen and extracts of sheep seminal vesicular glands caused contraction of smooth muscle and sharp decreases in the blood pressure of experimental animals. Euler called the active agents in these substances prostaglandins, as he believed them to be made primarily in the prostate gland.

Prostaglandins are synthesized in all cells that have a nucleus and provide a general regulatory mechanism in mammalian physiology. The purification of the prostaglandins was complicated by the very low amounts present in the seminal substances and their extremely short half lives. In 1957, Bergström and his student Bengt Samuelsson managed to obtain crystals from two prostaglandins, PGE1 (alprostadiil) and PGF1a. They characterized these two chemicals in 1962 and went on to unravel their function.

Bergström was born in Stockholm and graduated in medicine and chemistry from the Karolinska Institute, where he was to return to work 1948.

The synthesis of prostaglandins is inhibited by aspirin and other anti-inflammatory drugs. Prostaglandins control the aggregation of blood platelets and therefore can be used to prevent heart disease and stroke. Prostaglandins can also function homeostatically, lowering blood pressure or constricting bronchial airways. They have inflammatory actions that are more potent than those of histamine and are known to cause contraction of intestinal and uterine muscles.

APA

Chicago

Harvard

MLA

Bergström, Sune Karl. (2018). In Helicon (Ed.), *The Hutchinson unabridged encyclopedia with atlas and weather guide*. Abington, UK: Helicon. Retrieved from https://search.credoreference.com/content/topic/bergstrom_sune_1916



© RM, 2018. All rights reserved.



© RM, 2018. All rights reserved.

APA

Bergström, Sune Karl. (2018). In Helicon (Ed.), *The Hutchinson unabridged encyclopedia with atlas and weather guide*. Abington, UK: Helicon. Retrieved from https://search.credoreference.com/content/topic/bergstrom_sune_1916

Chicago

"Bergström, Sune Karl." In *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*, edited by Helicon. Helicon, 2018. https://search.credoreference.com/content/topic/bergstrom_sune_1916

Harvard

Bergström, Sune Karl. (2018). In Helicon (Ed.), *The Hutchinson unabridged encyclopedia with atlas and weather guide*. [Online]. Abington: Helicon. Available from: https://search.credoreference.com/content/topic/bergstrom_sune_1916 [Accessed 20 October 2019].

MLA

"Bergström, Sune Karl." *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*, edited by Helicon, 2018. *Credo Reference*, https://search.credoreference.com/content/topic/bergstrom_sune_1916. Accessed 20 Oct. 2019.