



Prof. Sune K. Bergström

Emeritus Professor at the Karolinska Institute. 1982 Nobel Laureate in Physiology or Medicine



Most important awards, prizes and academies

Academies: Royal Swedish Academy of Sciences, Stockholm (1965); Swedish Academy of Engineering Sciences, Stockholm (1965); American Academy of Arts and Sciences, Boston, MA (1965); National Academy of Sciences, Washington, DC (1973); USSR Academy of Sciences, Moscow (1976); USSR Medical Academy, Moscow (1982). *Awards:* The Albert Lasker Basic Medical Research Award, New York (1977); The Robert A. Welch Award in Chemistry, Houston, TX (1980); Nobel Laureate in Physiology or Medicine, Stockholm (1982).

Summary of scientific research

His thesis (1943) was concerned with the mechanism of cholesterol oxidation. From 1947-58 he was Professor of Medical Chemistry at the University of Lund, when extensive work was done on elucidating the mechanism of cholesterol degradation to bile acids and their further metabolism as well as the mechanism of intestinal fat absorption. During the last twenty-five years his main work was the isolation and structure determination of the prostaglandins - hormonal bioregulators that are found in all types of cells and are involved in the control of blood pressure, kidney function, motility and protection of the gastrointestinal tract and every aspect of the reproductive process as

well as in certain neural and brain functions and such general reactions as inflammation.

Main publications

Bergström, S., 'Ueber die Wirkungsgruppe des Heparins', *Naturwiss.*, 23, p. 706 (1935);
 Bergström, S., 'On the oxidation of cholesterol and other unsaturated sterols in colloidal aqueous solution by molecular oxygen', *Arkiv. K.M.G.*, 16A, p. 10 (1942); Theorell, Bergström, S. and Akesson, 'On the combination of the peroxidase protein with various hemins', *Arkiv K.M.G.*, 16A, p. 13 (1942); Bergström, S., 'On the oxidation of linoleic acid with lipoxidase', *Arkiv K.M.G.*, 21A, p. 15 (1945); Arvidsson, Eliasson, Hammarsten, Reichard, Ubisch and Bergström, S., 'Orotic acid as a precursor of pyrimidines in the rat', *J.B.C.*, 179, p. 169 (1949); Bergström, S. and Danielsson, 'The regulation of the bile acid production in the liver', *Acta Physiol. Scand.*, 43, p. 1 (1958); Gustafson, Bergström, S., Lindsted and Norman, 'On the turnover and nature of fecal bile acids in germ free and infected rats fed cholic acid-24-¹⁴C', *Proc. Soc. Exptl. Biol. Med.*, 94, p. 467 (1957); Bergström, S. and Sjövall, 'The isolation of prostaglandin F from sheep prostate glands', *Acta Chem. Scand.*, 14, p. 1693 (1960); Bergström, S., Ryhage, Samuelsson, Sjövall, 'The structures of prostaglandin E₁, F_{1α} and F_{1β}', *J. Biol. Chem.*, 238, p. 3555 (1963); Bergström, S., Danielsson and Samuelsson, 'The enzymatic formation of prostaglandin E₂ from arachidonic acid', *Biochim. Biophys. Acta*, 90, p. 207 (1964); Bergström, S., Carlson and Weeks, 'The prostaglandins – A family of biologically active lipids', *Pharm. Review*, 20, pp. 1-48 (1968).