Rosalyn S. Yalow Biography

Rosalyn S. Yalow

The following sections of this BookRags Literature Study Guide is offprint from Gale's For Students Series: Presenting Analysis, Context, and Criticism on Commonly Studied Works: Introduction, Author Biography, Plot Summary, Characters, Themes, Style, Historical Context, Critical Overview, Criticism and Critical Essays, Media Adaptations, Topics for Further Study, Compare & Contrast, What Do I Read Next?, For Further Study, and Sources.

(c)1998-2002; (c)2002 by Gale. Gale is an imprint of The Gale Group, Inc., a division of Thomson Learning, Inc. Gale and Design and Thomson Learning are trademarks used herein under license.

The following sections, if they exist, are offprint from Beacham's Encyclopedia of Popular Fiction: "Social Concerns", "Thematic Overview", "Techniques", "Literary Precedents", "Key Questions", "Related Titles", "Adaptations", "Related Web Sites". (c)1994-2005, by Walton Beacham.

The following sections, if they exist, are offprint from Beacham's Guide to Literature for Young Adults: "About the Author", "Overview", "Setting", "Literary Qualities", "Social Sensitivity", "Topics for Discussion", "Ideas for Reports and Papers". (c)1994-2005, by Walton Beacham.

All other sections in this Literature Study Guide are owned and copyrighted by BookRags, Inc.



Contents

Rosalyn S. Yalow Biography.....1

Contents.....2

Biography.....3

Biography

Rosalyn S. Yalow is the co-developer of radioimmunoassay (RIA), an extremely sensitive isotopic method of measuring hormones and other substances in blood. Her work earned her part of the 1977 Nobel prize in physiology or medicine.

Rosalyn Sussman was born in New York, New York where her father owned a small paper and twine business. Neither of her parents had attended high school, but they encouraged her studies. Interested in mathematics from childhood, she graduated from Hunter College in 1941, the first woman to receive a degree in their recently established physics department, and was the only woman in her entering class of 400 at the University of Illinois College of Engineering, earning her Ph.D. in nuclear physics there in 1945. There, also, she met her future husband, fellow physics student Aaron Yalow.

In 1947, Yalow established the radioisotope laboratory at the Bronx (New York) Veterans Administration Hospital, where she spent her entire career. Until 1950, she also taught physics full-time at Hunter College. That year, Solomon A. Berson, a resident in internal medicine at the hospital, became interested in her work. They worked together for twenty-two years, until his untimely death in 1972 (making him ineligible to share the Nobel prize). Their first research was using isotopes to study blood volume and diagnose thyroid diseases by measuring iodine metabolism. Yalow and Berson then adapted the same method to hormones, including insulin, which was widely available. By 1959 they had perfected their method, which they called *radioimmunoassay* (RIA), so that it was sensitive enough to detect one thousand billionths of a gram of material per milliliter of blood. In the process, they discovered that hormones bind with antibodies and also that, contrary to the prevailing theory, Type II (adult onset) diabetes is caused by the body's inefficient use of insulin, not by failure to produce the hormone.

RIA rapidly became a standard laboratory technique. Medical uses include diagnosis of cancer and measurement of blood levels of hormones, **vitamins**, and other substances. It is also used in forensic work, for example, to determine narcotics and poison levels in blood.

Besides being a pioneer in her own field, Yalow is a strong supporter of women in science. Among her honors is the 1976 Albert Lasker Basic Medical Research Award, of which she was the first woman recipient.