Ernst Felix Hoppe-Selyer Biography

Ernst Felix Hoppe-Selyer

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.



BOOKRAGS

Contents

Ernst Felix Hoppe-Selyer Biography.....1

Contents.....2

Biography.....3

Biography

Ernst Hoppe-Selyer was one of the leaders in making biochemistry (or physiological chemistry, as it was then called) a scientific field distinct from medical physiology. He performed the first study of the nucleic acids, gave the name hemoglobin to the red blood cells, and discovered the enzyme invertase.

Hoppe-Selyer was born Ernst Hoppe in Freiburg-an-der-Unstrut, Germany. His father was a minister. His mother died when he was a child. After he was adopted by his brother-in-law, he added Selyer to his name. He received his medical degree from the University of Berlin in 1851, then combined a medical practice with scientific research. Hoppe-Selyer's interest shifted gradually from physiology to chemistry. After serving on the faculties of the Universities of Berlin and Tubingen, in 1872 he became professor of physiological chemistry at the University of Strasbourg (then part of Germany). He established the first independent biochemistry laboratory in 1877 and the first biochemical journal.

Hoppe-Selyer's first important discovery came in 1862, when he used the newly invented spectrograph to determine the structure of the red blood cells, which he called hemoglobin. He later showed how hemoglobin binds and releases oxygen and how carbon monoxide can take oxygen's place in the blood cell. He also demonstrated some of the chemical similarities of hemoglobin and chlorophyll.

Hoppe-Selyer began studying the nucleic acids after they were discovered in 1869 by one of his students, the Swiss biochemist Johann Friedrich Miescher. Hoppe-Selyer showed that nucleic acids were present in yeast, and his work was extended by his one-time assistant, Albrecht Kossel.

Hoppe-Selyer's other research included the discovery in 1871 of invertase, the enzyme that converts sucrose (table sugar) into the simpler sugars glucose and fructose. He helped determine that lecithin is composed of nitrogen, phosphorus, fat, and choline (one of the B vitamins). And he demonstrated that lecithin and the steroid cholesterol are found in every cell.