Jacques Loeb Centre
for the History and Philosophy
of the Life Sciences
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Joint seminar with the Department of Chemistry

Sunday, April 3rd, 4:00 p.m.
Alon Hi-Tech Building (Bldg. 37) (map), Lecture Hall 202
(Coffee and refreshments served at 3:45 p.m.)

# Elie Metchnikoff (1845-1916): The Man Who Wanted Us to Live 150 Years

**Luba Vikhanski**, Science Writer, Media Relations, Weizmann Institute of Science

Around Christmas of 1882, while peering through a microscope at starfish larvae in which he had inserted tiny thorns, Russian-Jewish zoologist Elie Metchnikoff had a brilliant insight: what if the mobile cells he saw gathering around the thorns were nothing but a healing force in action? Metchnikoff then formulated the very first modern theory of immunity, which was to earn him a Nobel Prize in 1908. But this happened only after a protracted "immunity war": a confrontation between the camp of cellular immunity – with headquarters at the Pasteur Institute in Paris, where Metchnikoff had moved – and scientists in Germany, who developed a rival theory, that of chemical immunity. These scientific battles were fueled in part by the rising political tensions between France and Germany.

Moving on to the study of aging in the early 20th century, Metchnikoff shocked the world with his sensational theories on longevity. He believed that harmful bacteria in the human intestines caused premature aging and death; to counter this damage, he suggested that people consume beneficial microbes, for example by eating yogurt. These ideas launched a global craze for yogurt, which eventually led to the establishment of the modern yogurt industry.

The talk will examine how Metchnikoff's studies were shaped by his personality and by the social and political climate of his time. I will also discuss how it

happened that in the early 21st century, after almost a century of oblivion, his studies have suddenly made a remarkable comeback in modern science.

Metchnikoff today is viewed as the founding father of innate immunity research, one of the hottest fields in immunology. As for the possible link between aging and intestinal microbes, ridiculed by other scientists a hundred years ago, it has recently become the object of serious scientific investigations.

The Jacques Loeb Centre seminars provide an interdisciplinary forum in which scientists and historians and philosophers of science present and discuss new science-related research with a special focus on the life sciences. Case studies and surveys examine the impact of political, socio-economic and personal factors on the conduct of science, the ethics of research, and the causes of progress and setbacks.

**Faculty and students from all disciplines are invited!**