

The Gerhard Herzberg

Canada Gold Medal for Science and Engineering

Nobel laureate Gerhard Herzberg's lifetime of achievement in molecular spectroscopy moved Canada to the international forefront of the field. A dedicated scientist, whose original contributions in the natural sciences and engineering continued into his early 90s, Gerhard Herzberg was as inspiring as his work was innovative. Many of the young scientists who worked with him have themselves followed in his footsteps to become internationally recognized researchers.

In tribute to the lifelong pursuit of excellence in research that the late Gerhard Herzberg exemplified and inspired, NSERC is proud to dedicate its highest award in his honour.

The winner of the NSERC Herzberg Medal is guaranteed **\$1 million** to use for his or her own university-based research or to direct in some related way such as the establishment of research scholarships, fellowships or chairs in Canadian universities. The monetary award will be distributed over a five-year period.

If the winner already has an NSERC Discovery Grant, his or her grant will be increased to \$200,000 for each of the five years. If the grant is currently greater than \$150,000, it will be topped up by \$50,000.

A winner who is not an NSERC Discovery Grant recipient may direct the full \$200,000 to university research endeavours such as scholarships.

The NSERC Herzberg Medalist will be selected from three finalists who will each receive an NSERC Award of Excellence. The two finalists who are not selected will receive \$50,000, applicable to their university research or to the establishment of research scholarships, fellowships or chairs in Canadian universities.

Selection criteria and eligibility

The NSERC Herzberg Medal will be awarded for both the sustained excellence and the overall influence of a body of work conducted in Canada in the natural sciences or engineering. The nominee's work must demonstrate a high degree of expertise, creativity, imagination, leadership, perseverance and dedication.

The recipient may be a scientist or engineer from a Canadian university, government lab or private firm.

Candidates may be nominated by any Canadian citizen. Posthumous or self nominations will not be accepted. Current NSERC Council members are not eligible for nomination.

An individual may win the NSERC Award of Excellence and the NSERC Herzberg Medal only once.

The nominations will be reviewed on the basis of contributions to the areas of the natural sciences or engineering supported by NSERC. The Council reserves the right to rule on the eligibility of nominees.

Two-step selection process

The NSERC Herzberg Medalist will be chosen in two steps.

A selection committee of distinguished representatives from the university, government and corporate research communities will review the nominations received and recommend three finalists to the President of NSERC. Later, the committee will select the Herzberg Medalist from among the three finalists. The names of the winner and the finalists will be announced at a public ceremony.

For more information, or to submit a nomination, please contact us at:

The NSERC Herzberg Medal

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Gerhard Herzberg

"Scientific research is a creative endeavour, like art, which underscores man's basic need for understanding the truth."

Gerhard Herzberg was already one of the world's leading molecular physicists when, in 1935, facing imminent dismissal by the Nazi government from his position in Germany, he came to the University of Saskatchewan. He remained at the University for the next ten years, carrying out groundbreaking work in molecular and atomic spectroscopy. In 1945, the University of Chicago invited him to continue his work at its Yerkes Observatory. Within three years, the laboratory he established for investigating planetary spectra had developed pioneering methods that became standard around the world.

In 1948, Dr. Herzberg returned to Canada to create a laboratory for fundamental research in spectroscopy at the National Research Council of Canada. In addition, he established new groups in solid state and theoretical physics, quickly positioning Canada as the world leader in spectroscopy.

Although a physicist, Dr. Herzberg won the 1971 Nobel Prize in Chemistry "for his contributions to the knowledge of electronic structure and geometry of molecules." An indefatigable innovator, his research continued at a high level throughout the next two decades, and included such award-winning work as, in the 1980s, his discovery of triatomic hydrogen. In his early 90s, he was still pursuing the identification of complex spectra.

Dr. Herzberg passed away in March 1999, at the age of 94. The Gerhard Herzberg Canada Gold Medal for Science and Engineering recognizes the ideals demonstrated by his life and work.