

## Mario Molina, 1995 Nobel Prize winner for Chemistry

One of the positive effects of the Nobel prize in chemistry awarded to researcher Mario Molina, a graduate of UNAM's former National School of Chemical Sciences, is the reawakening of concern among the Mexican scientific community for the development of science and technology in this country.

The first Mexican to be honored with such an outstanding recognition in the area of science and one of the very few Latin Americans to achieve this distinction, Molina shares the prize with Holland's Paul Kurtzen and the American Frank Sherwood, for their discoveries on the effects of the gases known as chlorofluorocarbons (CFCs) on the ozone layer of the earth's stratosphere. Such

gases, also known as freons, mainly come from the use of aerosols, refrigeration and air-conditioning systems, and have a damaging effect on the ozone layer. As demonstrated by Molina and Sherwood, these gases are in fact the main cause for the destruction of the ozone layer, which has disastrous consequences for life on this planet. Breaking the natural shield that protects us from dangerous ultraviolet rays emitted by the sun leads to such phenomena as the proliferation of skin cancers, severe sunburns and global warming.

Molina's discoveries, made in 1974, caused alarm in the international community. In 1987, the Montreal Conference decided to support research and development for clean technologies and to work out a protocol prohibiting the industrial use of CFCs, to be signed by all countries in 1996.

Although Molina, who is 53 years old, became an American citizen and has carried out a large portion of his scientific activity in the United States, he maintains close ties with the Mexican scientific community through his participation in conferences as well as being a doctoral thesis advisor at UNAM's School of Chemistry. His being awarded the prize shows that there are top-notch scientists and researchers in Mexico, although infrastructure conditions for scientific and technological research are not optimal.

After graduating as a chemical engineer from UNAM, Molina, with support from the university, carried out post-graduate studies at the University of Freiburg in Germany and obtained a doctorate in physical chemistry at the University of California/Berkeley. He has been a researcher and professor at several universities in the United States and now works at the Massachusetts Institute of Technology. Molina has received 14 international awards for his work and is a member of several scientific organizations, among them the U.S. National Academy of Sciences and the Mexican Academy of Scientific Investigation. He has also published more than 45 articles in specialized magazines.

Mario Molina is not just a dedicated and rigorous scientist, but also a committed researcher —committed in the first place to scientific truth, but also to the well-being of humanity and the protection of the environment, as demonstrated by his constant denunciations of the effects of chlorofluorocarbons on the ozone layer and the terrible consequences for life on earth. This has led him to confront powerful industrial interests, such as the Dupont company, the main producer of these lethal gases, and even to testify before the United States Congress in order to explain the results of his research.

Molina is also a man of exceptional human qualities, concerned not only about the development of science in his native country, but also the welfare of society as a whole and the state of the environment, above all for the inhabitants of Mexico City. His love for the homeland that provided his basic professional training was demonstrated in his first statements to the media after hearing the news that he had won the Nobel prize, in which he said that he felt proud to be Mexican.<sup>v</sup>

Photo: Garcia-UNAM

