



Support for research on the preservation of the atmosphere carried out by the Carnegie Institution for Science (U.S.)

press release

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Air Liquide Foundation

With a budget of €3 million over five years, the **Air Liquide Foundation** supports corporate philanthropy actions in **three areas**: scientific research for the preservation of the environment, scientific research for the improvement of the respiratory function and support for micro-initiatives for local development in the countries where the Group is present. Since it was established, the Foundation has supported 56 projects, accompanied by 90 Group employees based in more than 30 countries.

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Air Liquide is the world leader in gases for industry, health and the environment, present in over 75 countries with 42,300 employees.

The Carnegie Institution for Science

is a private, non-profit research organization that was founded in **1902** by the American philanthropist **Andrew Carnegie**. Its mission is to conduct research projects in the Life and Earth Sciences field, as well as in Atmospheric Sciences and Astrophysics. It currently has more than 450 employees working in six research departments. Since it was established, three of its researchers have been awarded a Nobel Prize.

Understanding the various ecosystems of the planet involved in atmospheric exchanges enables the refinement of models for simulating climate change, which in turn can help to improve the resources allocated to fighting against global warming. The analysis of **trace molecules in the atmosphere**, such as **ammonia**, has turned out to be a **major source of improvement** on existing atmospheric models.

The Air Liquide Foundation supports the **Carnegie Institution for Science**, a private, non-profit research organization based in the United States, in its work related to understanding the atmosphere. This research will focus on **assessing the ammonia concentration of the atmosphere** and the various processes by which ammonia enters and leaves the atmosphere.

As ammonia is a **marker for various atmospheric phenomena**, this study will allow refinement of current climate models. This molecule intervenes at **three levels, which could lead to the development of new climate models**:

- in **atmospheric chemistry**,
- in the **formation of stratospheric aerosols** that influence climate change,
- in the **metabolism of plants**, which itself is linked to the fixation of atmospheric CO₂.

The work will be carried out over a **3-year period** by the *Department of Global Ecology* of the Carnegie Institution, based at **Stanford in California**. The objective is to **collect data in real time** on the concentration of ammonia present in the atmosphere; to **conduct laboratory studies** on the exchange of ammonia by plants; and to develop large-scale **atmospheric flow models for ammonia**.

The Air Liquide Foundation is providing **€60,000** to support this study as part of its philanthropic efforts for scientific research aimed at atmospheric preservation.