LEONARD ORTIZ/The Orange County Register

THE GAS MEN: Donald Blake, left, and Sherwood Rowland, atmospheric chemists in research at UCI, show a canister of air collected for study. They say Mexico City's smog consists largely of propane gas.

Half UCI chemist team famous, the other isn't

SCIENCE: Other researcher sometimes gets lost in the glare of the spotlight on well-known counterpart.

By PAT BRENNAN
The Orange County Register

Sherry Rowland stands 6 feet 5, a stature appropriate to the respect he commands at the University of California, Irvine, department of earth system science.

The discovery that Mexico City's smog is largely caused by propane leaks is one Rowland shares with Don Blake, who was a graduate student when he began working with Rowland in the late 1970s.

But Blake, now a respected atmospheric researcher in his own right, says he doesn't mind being less well-known than Rowland — even when news accounts of his work with the famous scientist often omit his name.

"It happens all the time," he said. "There is a tendency to assume that this is the person who is solely responsible."

Rowland, 68, earned international fame when he and another scientist predicted, in 1974, that the use of chlorofluorocarbons in aerosol cans could damage the Earth's ozone layer, which shelters the planet from harmful ultraviolet rays.

A few years later, British researchers discovered a gaping hole in the ozone shield over Antarctica. Thinning of ozone over North America and other continents has been observed as well.

For two decades, Rowland and Blake, 42, have gathered a mountain of information about the mix of gases over cities throughout the world. Their data have been used by other scientists worldwide who create computer models of the Earth's climate in the hope of teasing out its secrets — perhaps one day finding answers to such vexing questions as whether human pollution is heating the planet.

Researchers working under Rowland's and Blake's direction ride National Aeronautic and Space Administration planes all over the world, drawing air into small canisters that are taken back to UCI for analysis.

The Mexico City findings may have implications for other cities in Central and South America, Europe and almost every continent, where gases such as propane are used for cooking and heating water.

The findings also may have importance for adjusting the balance of gases in some regional computer models, although that is so far uncertain, Blake said.

In the United States, natural gas in most cities is distributed by a network of pipes that feed directly into homes and businesses. Leaks are carefully monitored by the utility companies that supply the gas.

And Rowland and Blake's measurements of Orange County air show what they expected — tiny amounts of propane compared with Mexico City.

Since linking up with NASA planes in 1988, Rowland said, UCI researchers have drawn samples from the air over Alaska, northern Canada, Japan, the Arctic, Brazil, Namibia, the Azores islands and other places.

This week, even as the Mexico City finding was being announced, UCI researchers left for Santiago, Chile, to look for evidence of liquid petroleum gas pollution there.

But it isn't just smog the researchers seek. They want to know everything the atmosphere is made of, and where it goes.

"There are a whole lot of atmospheric chemistry problems that are interesting," said Rowland, who officially retired last year but remains deeply involved in the research work he started.

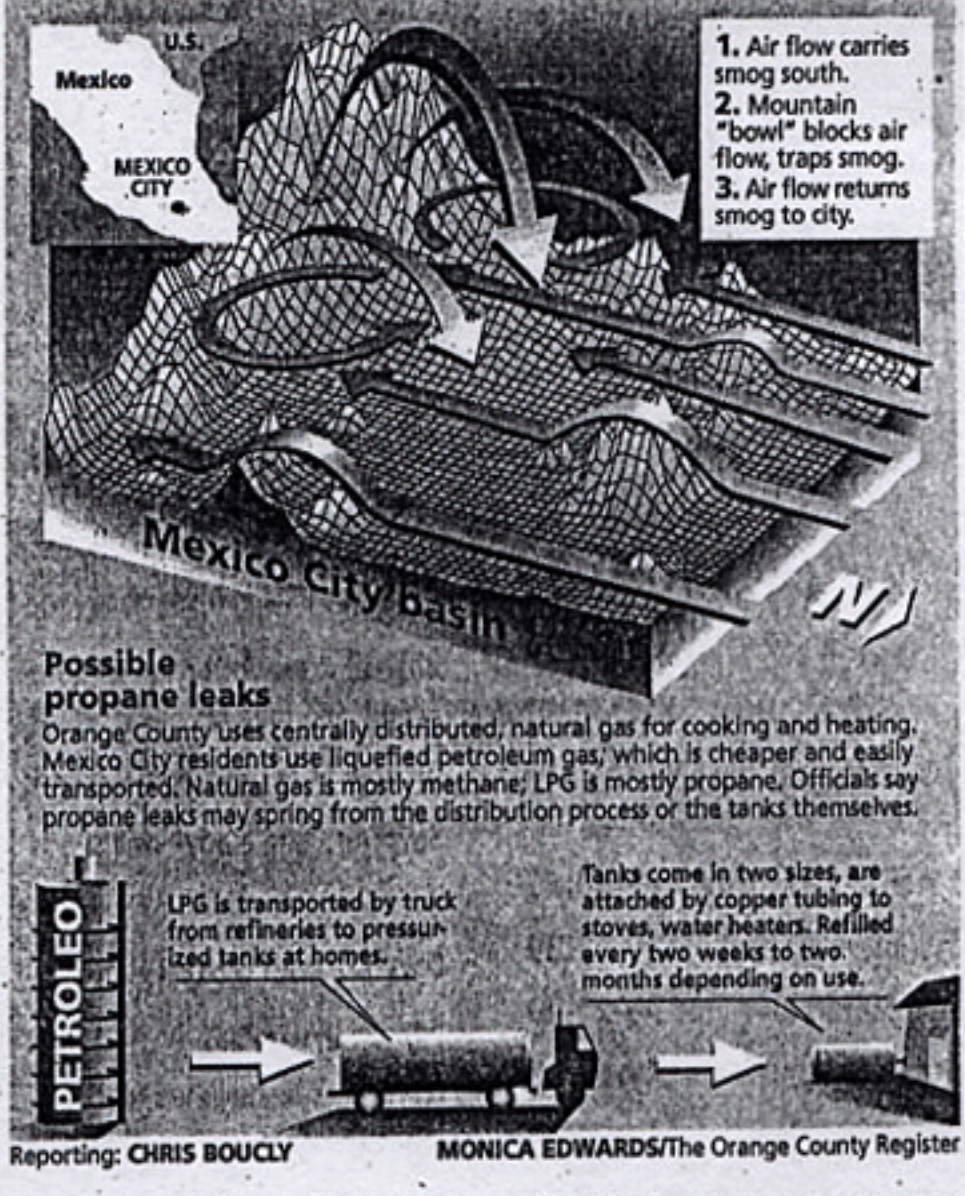
He thought a moment when asked whether the Mexico City findings have any implications for the planet as a whole.

"It probably has local significance on a global basis," he said. "It's of local significance in almost all countries."

▶ **STUDY:** Scientists say Mexico City smog full of propane. **Page 1**

SMOG IN MEXICO CITY

UC Irvine scientists have determined that propane gas leaking from residential tanks may be causing much of Mexico City's smog. Until now, officials have mostly targeted cars and factories in their fight to bring smog levels down. The city's altitude, climate and terrain make it difficult for the smog to clear.



Possible propane leaks

Orange County uses centrally distributed, natural gas for cooking and heating. Mexico City residents use liquefied petroleum gas, which is cheaper and easily transported. Natural gas is mostly methane; LPG is mostly propane. Officials say propane leaks may spring from the distribution process or the tanks themselves.

Reporting: CHRIS BOUCLY

MONICA EDWARDS/The Orange County Register