

Meet Neo Px: the super plant that attacks air pollution

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Vincent Nallatamby holds his Neo Px plant at his home in San Francisco, California.

It may look like an innocent green plant, but its name evokes something far closer to a robot or interstellar rocket.

Neo Px is a bioengineered plant capable of purifying [indoor air](#) at an unprecedented scale, the first in a potentially long line of such super-powered organisms.

"It's the equivalent of up to 30 regular houseplants in terms of air purification," said Lionel Mora, co-founder of startup Neoplants.

"It will not only capture, but also remove and recycle, some of the most harmful pollutants you can find indoors."

Five years ago, the entrepreneur met Patrick Torbey, a genome editing researcher, who dreamed of creating living organisms "with functions."

"There were plants around us, and we thought that the most powerful function we could add to them was to purify the air," said Mora, during a tour of a rented greenhouse in Lodi, California, two hours from San Francisco.

Protected from the elements, several thousand modified pothos plants, green speckled with white, awaited their turn to be potted, packed and shipped.

The French startup began selling its first products in the United States in April.

The United States was a particularly promising first market, since many Americans already widely use air purifiers.

"We do our best to send as many plants as possible every week, but it's not enough to meet demand for now," said Mora.



Workers pack pothos plants for French startup Neoplants in Lodi, California.

Wildfires

Americans have a keen appreciation for cleaner air given all the recent "problems associated with wildfires," which have become a "bigger and bigger" problem in the country, Mora said.

"One of the pollutants that comes from combustion is benzene, which we're targeting," he added.

Indoor air can be two to five times more polluted than outdoor air, according to the US Environmental Protection Agency, mainly due to

[volatile organic compounds](#), or VOCs.

VOCs are gaseous pollutants that can accumulate indoors and negatively impact air quality and health.

Opening windows won't help much because the VOC pollution can come from solvents, glues and paints, and therefore could lurk in cleaning products, furniture and walls.

"These chemicals are associated with a range of adverse health effects, including cancer," especially for the young, the elderly and people who are already vulnerable, said Tracey Woodruff, a professor of reproductive sciences at the University of California, San Francisco.

"They can bring respiratory related effects or reproductive health effects... like adverse pregnancy outcomes, preterm birth, miscarriages, as well as neurological disorders like Parkinson's," she said.

Neo Px does not itself absorb the chemicals. The plant is sold at a starting price of \$120 with packets of powder that contain a microbiome, essentially a bacterial strain.

"This bacteria colonizes the plant's roots, soil and leaves," said Torbey, the company's chief technology officer, at its research lab in Saint-Ouen, France, just outside Paris.



Lionel Mora, co-founder of French startup Neoplants, poses for a portrait inside the greenhouse where they grow the Marble Queen pothos plants in Lodi, California.

Bacteria powder

The bacteria "absorbs the VOCs to grow and reproduce. The plant is there to create this ecosystem for the bacteria. So we have a symbiotic system between plants and bacteria," he said.

In the future, Neoplants plans to produce genetically modified plants whose metabolism will directly do the work of air purification.

And in the longer term, it hopes to tackle problems linked to global

warming.

"We could increase the capacity of trees to capture CO₂," Torbey said.

Or "develop seeds that are more resistant to drought," added Mora.

Their vision, coupled with the team's scientific expertise, led Google product manager Vincent Nallatamby to invest in the startup from the outset.

He now owns his own bacteria-boosted pothos plant, which sits unnoticed in his San Francisco living room, already well-stocked with houseplants of all sizes.

"It's more my wife who takes care of them, except this one. This one's me!" he joked, pointing to his Neo Px.

"I'm often seduced by technological objects and I want to bring them home," he said.

"This was one of the first times I had no trouble convincing my wife."

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