



Leproni, the Italian engineer hunting invisible bacteria

Posted on October 31, 2026 by Rosy Sandri

CAMBRIDGE, England — At the [University of Cambridge](#), where he trained as an engineer, Amedeo Leproni is chasing an enemy nobody can see. His startup [Unburden](#), fresh from [King's College's SPARK 2.0](#) incubator and its September 23 demo day, wants bacteria tests on the factory floor in hours, not days.

The Italian, whose parents are both from Turin, has founded a soup kitchen for homeless guests, worked as a ranch hand and riding guide in Argentina, Uruguay, and Romania, and speaks four languages. He's now building Unburden from London as a founder in residence at [Entrepreneurs First](#), which backs founders before they have a company. Italy Now spoke to Leproni in Cambridge.

Q. What is Unburden, and what problem does it solve?

"Unburden is a startup specialising in lab automation for manufacturing," Leproni said. "The people who make the food, cosmetics, and medicines we all need run quality control during production, so that nothing that could harm the consumer lands on the shop shelves. We give them a more robust system, and better productivity and cash flow."



Laboratory testing of foods (Credits: Italy Now)

Q. How do companies test for contamination today, and what would you change?

“The gold standard is cell cultures,” he said. “You take one sample from whole pallets, put it on a dish of nutrient broth, and wait days to see if spots grow. We replace that with DNA methods, especially polymerase chain reaction, going straight to the signal the bacteria leave in the food without waiting for them to grow.”

Q. Why does speed matter so much to your customers?

“I’ve spoken to people who make pharmaceutical creams, skincare, food, and beverages, and lead time is a main concern,” he said. “Microbiology testing can add up to 50 per cent to it. They’ve made the product, then it sits waiting to be released. That eats warehouse space and locks up cash they could put back into the business. A robust system also cuts the risk of a costly recall.”

“Every day a finished product waits on a lab result is a day of shelf life the store never gets, and for independent retailers that shows up as tighter sell-through windows and more markdowns,” said Joel Goldstein, president of [Mr. Checkout Distributors](https://italynow.co.uk/leproni-the-italian-engineer-hunting-invisible-bacteria/), a US distributor that sits between consumer brands, independent distributors and stores. “Catching a problem on the line means a recall



becomes a handful of pallets instead of cases that have already spread across distributors and store shelves. For shoppers it means fewer products reach the shelf that should never have left the plant.”



Screenshot







Screenshot

Leprone and lab tests (*Credits: Italy Now*)

Q. Give us a real example.

“One manufacturer got a positive result and instantly had to freeze all production,” he said. “Costly people and machines sat idle for at least three days waiting for a second test, burning cash. We could tell them straight away whether it was truly positive. Another had a warehouse full of pallets waiting weeks for results. We’d deliver them the same day.”

Q. Where are you today?

“I kept it simple,” he said. “I took shop food into the lab. Luckily nothing from the shop was contaminated, so I had to spike it, and I verified the method works on a variety of foods. Then I visited factories to see how the product must work to be easy to adopt.”

Q. If Unburden succeeds, what does the world look like?

“Quality control becomes invisible,” he said. “It sits on the production line, no longer outsourced. It’s seamless and robust, people don’t get ill, and manufacturers can focus on making products.”

Q. After all that travelling, what does Italy mean to you?

“My family,” he said. “My parents are both from Turin, in Piedmont, and my grandparents, cousins, aunts, and uncles are all there. I visit regularly and it always feels like home. Everywhere I go, I feel like an ambassador for Italy, sharing the best it can offer.”

Next time you open a yogurt, spare a thought for the tests that got it to you safely.

Source: <https://italynow.co.uk/leproni-the-italian-engineer-hunting-invisible-bacteria/>