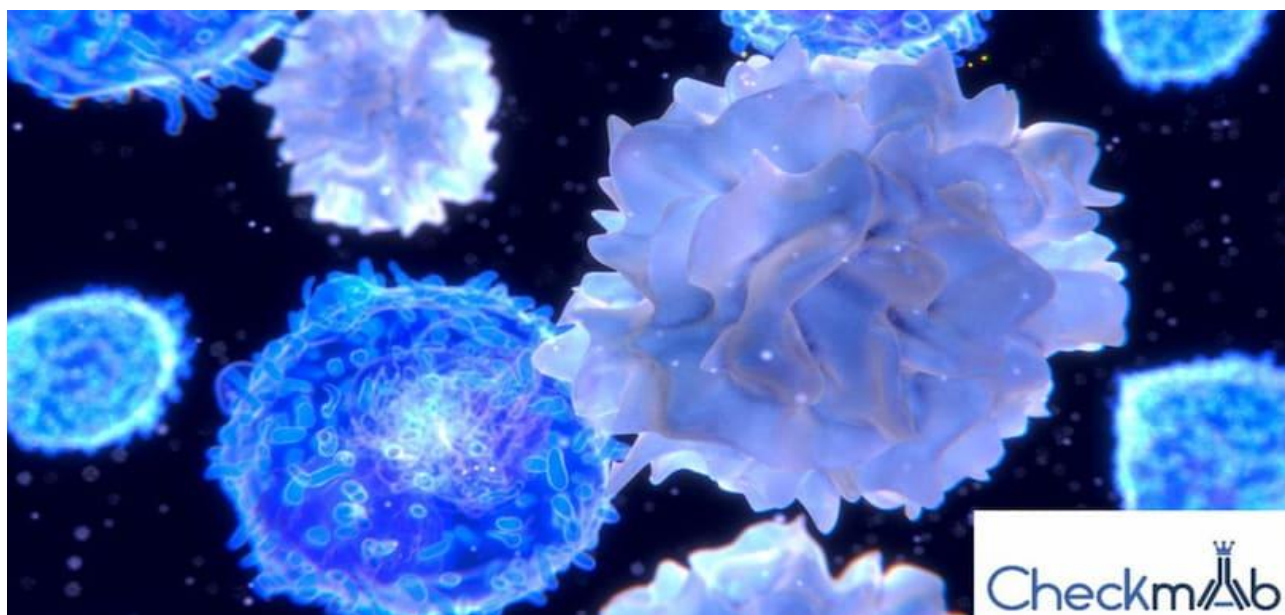


When the Nobel Prize Speaks Italian: T Regs and the Italian Startup's Gamble

CheckmAb, founded by the University of Milan and the Invernizzi Institute, is transforming the Stockholm-awarded discovery into an innovative drug

by Francesca Cerati

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Key Points

- **Phase 1 begins**
- **A signal for a change of pace**

The 2025 Nobel Prize in Medicine honored the discovery of regulatory T lymphocytes—the famous T Regs—which control the balance of the immune system and prevent the body's defenses from turning against itself. But behind the news is also an Italian story about technology transfer, patient capital, and science capable of becoming an industry. This is the story of CheckmAb, a spin-off of the University of Milan and the National Institute of Molecular Genetics "Invernizzi," founded by Professors Sergio Abrignani and Massimiliano Pagani, and directed by Dr. Renata Grifantini.

The company, founded in 2018 and backed by Primo Capital's Health fund, with a participation from Fondazione Enpam, has built its therapeutic platform around T Regs, the immune system's brake cells. The principle is simple and revolutionary: eliminate the T Regs that nest in the tumor microenvironment, without affecting those that protect against the risk of autoimmunity. This unleashes the antitumor immune response, avoiding the side effects that often force the suspension of current immunotherapies.

Phase 1 begins

"Being in the same field that the Nobel Prize winner today recognizes as one of the most promising in modern medicine is a great satisfaction for us," says Abrignani. "It confirms that we're on the right path." Confirmation has also come from the market: in 2024, CheckmAb signed an agreement with German company Boehringer Ingelheim worth up to €240 million, including milestone payments and royalties of up to 7%, for the clinical development of their monoclonal antibody. Phase 1 trials will begin within the year in Germany and the United States.

Behind this success, explains Grifantini, is "a precision strategy: we have identified molecules expressed only by intratumoral T Regs, so our antibody acts almost exclusively in the tumor. The next step will be to make it even more closely matched to the physical and chemical conditions of the tumor microenvironment, such as pH."

CheckmAb is one of the rare examples of Italian academic research successfully transformed into an international industrial project. This is thanks to a team accustomed to working between universities and companies. "Pagani, Grifantini, and I," Abrignani continues, "all come from years of industrial research: we've learned to ask the right questions, to think in terms of product and clinical value, not just knowledge."

A sign of a change of pace

A model that remains an exception in Italy. "We have 160,000 researchers, but we attract one billion in venture capital a year, compared to 7.5 billion in France," Abrignani observes. "We need to train people who truly know how to transfer technology, or attract those who do."

The success of CheckmAb, however, demonstrates that a change of pace is possible. A network has formed around the company, uniting academia, pension funds, and industry: "The Enpam Foundation believed in the project because it's an investment that improves people's health," the professor recalls. And it's not just a financial result. "Seeing a molecule born in the lab reach humans is the greatest satisfaction."

The drug developed by CheckmAb targets "hot" solid tumors—lung, colon, head and neck, and melanoma—where the immune infiltrate is most active. Preclinical studies show encouraging results, even in combination with other immunotherapy treatments. If clinical data confirm these promises, Italy will be able to claim a leading role in the new generation of cancer therapies based on fine-tuning the immune system.

Ultimately, as Abrignani suggests, the Nobel Prize's message is precisely this: "The discoveries that deserve the prize are those that change medicine. And we are trying to do so, starting from here."