CTNNB1 Foundation awarded €1M as Slovenia backs nonprofit gene therapy - a first step toward equitable cures for rare diseases

URBAGEN, an AAV-based gene therapy for CTNNB1 Syndrome, moves toward clinical trials with EU recognition, preclinical success, and political support to ensure affordable access compatible with public healthcare systems.

LJUBLJANA, Slovenia, March 26, 2025 / - In a move that could reshape how advanced therapies for rare disease are developed and distributed globally, the Slovenian government has awarded €1 million in public funding to a nonprofit CTNNB1 Foundation to support translational development of URBAGEN, a first-in-class viral vector-based gene augmentation (gene addition) therapy for CTNNB1 Syndrome. The funding provides critical support for clinical-grade manufacturing in final preparation for clinical studies and sets a new precedent: public investment in early-stage, non-commercial gene therapies for paediatric rare genetic diseases.

"This is a powerful signal of trust and shared responsibility," said Špela Miroševič, Founder and CEO of the CTNNB1 Foundation**.** *"It doesn't cover all our costs, families still have to keep fundraising; but it means we are not doing this alone anymore. This is how funding for rare diseases should work: governments helping their own citizens / patients, and in return securing better access and fairer pricing once treatments reach the market."*

A life-changing therapy, built from the ground up

URBAGEN uses an AAV9 vector to deliver a functional copy of the CTNNB1 gene directly to the central nervous system (CNS). This one-time treatment targets the devastating neurological impact of CTNNB1 syndrome at its source. By restoring β-catenin expression, URBAGEN holds the potential to reverse or dramatically improve the most debilitating symptoms: profound intellectual disability and severe motor and speech impairments.

"Our team was responsible for the rational design of the URBAGEN expression cassette, to ensure efficient, widespread CTNNB1 transgene expression in the CNS," said Prof. Leszek Lisowski, Head of the Translational Vectorology Research Unit at CMRI. *"This construct was engineered with clinical translation and manufacturability in mind from day one."*

The program has received positive scientific advice from the Slovenian National Regulatory Agency and was selected by the European Medicines Agency (EMA) Innovation Task Force (ITF) as one of the most promising gene therapies in development in Europe. In March 2025, the CTNNB1 Foundation successfully submitted an application for Orphan Drug Designation (ODD) to the EMA. This designation, intended to support the development of therapies for life-threatening or chronically debilitating rare diseases, marks a critical regulatory milestone on the path toward clinical trials and eventual patient access in Europe. Clinical trials are expected to begin in late summer 2025**,** with clinical manufacturing (in accordance with current Good Manufacturing Practices, cGMP) already completed.

From one family crisis to a national movement

Diagnosed at just 9 months of age, Urban Mirosevic's condition moved his family into a world of uncertainty and impossible choices. *"People see fundraisers on the news or social media, but they can't imagine how hard it is for families. Emotionally, physically, and financially. We did it because we had no other choice*," Urban's mother, Spela Miroševič, shared.

Together with a team of researchers and clinicians she assembled, Spela created the CTNNB1 Foundation, left her career, earned a PhD in Biomedicine, and raised over €3 million through private donations, including donations from her family. The €1 million public investment is the first to come directly from a government.

"With rare disease gene therapies, we need to move into clinical trials as soon as we have satisfactory safety and efficacy data. Only then will we know if the therapy truly works. And if it doesn't, we want to fail

fast and fail cheap. That's how we save both time and money, and most importantly, give answers to families waiting for hope" Miroševič added.

Spela Mirosevic is now working to change the system, not just for Urban, but for children affected by CTNNB1 Syndrome and other genetic disorders everywhere: "We don't want other families to go through what we went through. This new law proves that governments can lead - not follow - in rare disease innovation. And I believe many other countries are ready to take similarly impactful steps"

A scalable model for global access at nonprofit prices

Unlike many commercial therapies developed for ultrarare and rare diseases, URBAGEN is being developed by a nonprofit, with the explicit goal of making the treatment affordable and accessible to public healthcare systems.

"By co-investing early, governments can ensure nonprofit pricing for their citizens once the positive clinical proof-of-concept is achieved. This is how we build equity into the system from the start," said Miroševič.

Slovenian government involved in this legislative change, Prime Minister Dr Robert Golob, President of the National Assembly Dr Urška Klakočar Zupančič and Minister of Higher Education Dr Igor Papič highlighted the scientific excellence of involved researchers. "State support is especially critical for therapies where no or little commercial interest exists" added Dr Papič, citing European directives as a legal basis.

The hidden prevalence and untapped urgency

Though only discovered in 2012, CTNNB1 Syndrome is estimated to affect 2.6 to 3.8 per 100,000 newborns, placing it among the more common ultra-rare diseases. Yet fewer than 500 patients have been diagnosed worldwide, often only after years of misdiagnosis or missed opportunities for early intervention.

"If an approved therapy existed, CTNNB1 Syndrome would already have been included in prenatal screening panels, just like Spinal Muscular Atrophy (SMA) for which AAV-based therapy has been developed" said Dr Damjan Osredkar, Principal Investigator of the upcoming European clinical trial. *"This is a hidden public health issue. With better awareness and diagnostics, we will uncover many more children in urgent need of help."*

"The numbers are clear: this isn't just a rare disease, it is a more common condition hiding in plain sight," added Špela Miroševič. "*Thousands of affected children are out there, and they all deserve a path to a treatment."*

Call for partners: nonprofit-led, globally scalable

With early funding secured and clinical-grade manufacturing already completed, the CTNNB1 Foundation is now seeking co-investors, public funders, and aligned biotech partners to bring this therapy through final stages of translational development and into clinical implementation.

"This isn't just a Slovenian success story," said the CTNNB1 Foundation. *"It's a global proof of concept - for how families, scientists, and governments can come together at a time of need to develop and deliver cures that are not only innovative, but equitable."*

About the CTNNB1 Foundation

The CTNNB1 Foundation is a nonprofit biotech organization dedicated to developing the world's first gene therapy for CTNNB1 Syndrome. By uniting families, scientists, and clinicians, the Foundation leads different stages of drug development with a focus on scientific excellence, community-driven innovation, and equitable global access. Its mission is clear: to treat every single patient in the world diagnosed with CTNNB1 Syndrome — and to ensure no patient is left behind.

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