

The EPFL spin-off ND BioSciences receives CHF 100'000 to fight neurodegenerative diseases

The biotech start-up based at Biopôle is developing innovative technologies for early diagnostics and therapies for neurodegenerative diseases. ND BioSciences has just received a Tech Seed loan of CHF 100'000 from the Foundation for Technological Innovation (FIT).

Neurodegenerative diseases such as Alzheimer's or Parkinson's disease affect elderly people, debilitate their lives, ultimately leading to their death. With an increasing number of senior citizens, Alzheimer's alone is projected to affect 135 million people by 2050, instead of the current 40 million. Besides the tough consequences on individuals, families, and societies, this increasing number of Alzheimer's patients will also entail a tremendous economic burden, expected to reach one trillion Dollars per year in the USA alone. To date, there is no test for early diagnoses, no cure, and the exact triggers of many neurodegenerative diseases are still unknown. With no diagnostic marker that can predict the onset of neurodegenerative diseases, accurate monitoring of disease progression and efficacy response in clinical trials is also impossible.

“Previous drug development efforts for neurodegenerative diseases have failed as they have shied away from embracing the complexity of neurodegenerative diseases and their associated pathologies, explains Prof. Hilal Lashuel, Founder and CSO. This is due to the lack of technologies capable of reproducing the pathological diversity of proteins implicated in neurodegenerative diseases and the lack of cellular models that recapitulate the human pathology and allow to target key processes that cause neurodegeneration.”

ND BioSciences addresses these issues with its patented technologies that enable the development of innovative therapies and novel biomarkers using disease-relevant protein engineering approaches and translatable cellular models. The start-up reproduces the conformation and diversity of pathological species found in the brain and biological fluids as well as the complexity of the process of pathology formation in living neurons. This will allow undertaking more holistic and innovative approaches for new therapies and identify novel biomarkers for neurodegenerative diseases.

Founded in 2019 by Prof. Hilal A. Lashuel and Dr. Bilal Fares at the heart of the Swiss Health Valley, ND BioSciences benefits from the solid experience of its team in neurodegeneration, international research projects and biomarker discovery. Within three months of operations, the start-up has already obtained support from the Vaud Office for Economic Affairs and Innovation (SPEI), and received multiple grants from the American Michael J. Fox Foundation. ND BioSciences now aims to complete key proof of concept studies to demonstrate the power of its technologies and validate its diagnostic and therapeutic approaches.

“The FIT Tech Seed loan will allow us to develop novel agents that target different pathological conformations leveraging our experience and specific technologies. Proof of concept studies will then be performed to demonstrate the potential of these novel agents as therapeutics, or for biomarker detection, explains Dr. Bilal Fares, co-founder and director of R&D. We also aim to utilize some of the FIT funds to acquire some key instruments in-house to advance our projects and realize the full potential of our technologies. “

<https://nd-biosciences.com>

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