



Joana Isabel dos Santos Paiva

CTO and Co-founder at iLoF

ilof.tech
@iLoF_tech

joanaspava
iloftech



Boosting clinical trials to fight Alzheimer's

Main product:
iLoF

Aim:
To significantly improve the process of clinical trials relating to Alzheimer's treatment

Generated funding:
EUR 2 000 000

Challenge:
Alzheimer's disease

Prizes:
Global Deep-Tech Winner of Female Founders Competition 2020 by M12 and Mayfield Fund, Future Unicorn Award at Digital Freedom Festival & Rockstart 2019, Altice International Innovation Award 2019, EIT Health-KIC Jumpstarter Programme Winner 2019



Powered by:



THE PROJECT

The idea

iLoF's (intelligent Lab on Fiber) technology detects biomarkers of various neurodegenerative diseases, creating accurate optical 'fingerprints' representative of a patient's phenotype and stage of disease. By improving efficiency to the screening and the stratifying of Alzheimer's patients for clinical trials, iLoF contributes to finding a cure for the disease.

Inspiration

Former colleagues established that tiny biostructures found in the bloodstream of patients, called extracellular vesicles, are key predictors of how a disease can develop. I decided to combine photonics with Artificial Intelligence to find patterns in the light reflected by these vesicles, allowing us to map the information they carry.

Unique selling points

iLoF tackles a burning problem that hinders efforts in Alzheimer's treatment development. The non-invasive, portable, cheap technology will transform Alzheimer patient's experience and make clinical trials convenient and patient-centric.

Societal impact

Forty-four million people live with Alzheimer's disease, a number that is expected to triple by 2050. Over 400 clinical trials failed in past years, mostly due to patient drop out and unsuitability. iLoF hopes to successfully address this situation.

EIT Community support

The EIT Health Wild Card programme was paramount in defining a clear application field for our technology. Events such as "Biobanks and Registers" or "Digital Sandbox" were extremely helpful in enlarging our dataset of disease fingerprints. EIT Health also supported the recruitment process of highly qualified engineers and connection with all types of stakeholders.

Overcoming adversity

As a female PhD student, the challenge of translating innovative ideas in the academic environment was made even greater by the male-dominated environment of physics, engineering and computer science. A serial patented inventor with a passion for innovation, I focused on impact and ensuring that my technology would not end up on a shelf after the findings were published.

THE NOMINEE

The beginning

I was a research fellow with a scientific career and a promising future in academia, but I saw the big impact amazing new technologies could have on patients if brought to the healthcare setting.

Rewarding moments

Winning the 2019 EIT Health Wild Card was an extremely rewarding moment - a recognition of our work and mission by international experts who believed we could achieve it. A milestone that jumpstarted our entrepreneurial journey.

The EIT Health Wild Card programme was paramount in defining a clear application field for our technology.

