



NOVAVIDO IS BORN, THE START-UP THAT WILL STUDY THE FIRST ARTIFICIAL LIQUID RETINA ON HUMANS

Alfasigma, Utopia SIS, Istituto David Chiossone and Club2021 will invest 6 million euros with two rounds of seeding to initiate the final clinical phase of experimentation of this possible solution for neurodegenerative diseases of the retina.

The project will focus on the development of an injectable and biocompatible device, called 'liquid retina', which would allow the partial recovery of sight of people suffering from partial blindness due to retinal degenerative diseases.

Novavido S.r.l stems from the research activity of the **Italian Institute of Technology (IIT)** and the **Sacro Cuore Don Calabria Hospital** in Negrar (Verona) and from the technological skills of **ALFASIGMA**.

Bologna 22 June. The incubation phase of this innovative start-up was accelerated thanks to the **G-Factor** environment of the **Golinelli Foundation**, which aims to develop a new, potentially revolutionary therapeutic proposal for retinitis pigmentosa and macular degeneration. The proposal is based on the result of a research project developed over 10 years by the **Center for Nano Science and Technology (CNST-IIT Milan)** led by **Guglielmo Lanzani** and by the **Center for Synaptic Neuroscience and Technology (NSYN-IIT Genova)** led by **Fabio Benfenati**, in collaboration with **Grazia Pertile** and **Maurizio Mete** of the **Sacro Cuore Don Calabria Hospital** in Negrar (Verona). This technology consists in a suspension of biocompatible and photoactive – they react to light – polymeric nanoparticles injected directly into the retro-ocular area and which replace damaged photoreceptors by restoring the stimulation of retinal neurons that send visual information to the brain. Encouraging experimental results were obtained in rodents suffering from spontaneous blindness due to a disease similar to retinitis pigmentosa, published in 2019 in *Nature Nanotechnology*. This technology does not require any kind of glasses, cameras or power sources and is administered locally as a drug by injection, and therefore is minimally invasive.

The operational team of Novavido S.r.l. is made up of **Giovanni Manfredi** (CEO) and **Sara Perotto**, IIT researchers, experts in nanomaterials, and three scientific advisors, **Fabio Benfenati** (NYSN – IIT), **Guglielmo Lanzani** (CNST-IIT) and **Grazia Pertile**, head of ophthalmology at the **Sacro Cuore Hospital Don Calabria** of Negrar. The start-up has reached the license agreement for the use of the 3 patents filed during the research activities of IIT and the Sacro Cuore Hospital. The operational team will benefit from the collaboration of **Alfasigma** lab experts coordinated by dr. **Emilio Merlo Pich**, Alfasigma Research and Development Director.

Once the technology is validated in the first clinical tests, the Novavido start-up will follow the patients from the preliminary stages to the final rehabilitation and, at the same time, will continue the research activity for the optimization of this treatment and the development of other solutions to address the variety of vision-related neurodegenerative diseases.



Novavido founders comment: *<<We are very pleased to have completed this operation and honored by the trust that the partners have placed in our project which aims to transfer the artificial retina to humans. The interest aroused and the caliber of the subjects involved represent a strong push to transform Novavido S.r.l. into a successful reality. This initiative is an example of all-Italian synergy between actors from different realities working for a common purpose. It is the result of the collaboration between public research, industrial research, the health system, exponents of the business and financial world and patient associations. The founders of the Novavido start-up believe that the close collaboration between the many parties involved will lead to concrete results in a short time >>.*

<<Alfasigma's investment in Novavido represents a concrete sign of confidence in this innovative technology and the start-up team, within the G-Factor environment. Alfasigma is proud to contribute to the development of the project by bringing its expertise and specific skills in the development of innovative therapies>> comments **Stefano Golinelli**, Chairman of the Board of Alfasigma.

<<Novavido represents for us the ideal type of project to try our hand at from now on: once again we have invested in the highest scientific quality, guaranteed in this case by a research center of excellence such as the IIT in Genoa. At the same time, "the how" we built the "deal" constitutes a reference model to always bear in mind for the future: I also hope that this "model" will be replicable and disseminated throughout the country: "research, business and finance" and "Public, private and social private" "all together at the starting line". A combination that is still very rare, but which has been proven possible; we managed to understand each other and to harmonize, with fruitful mediations, their respective prerogatives in the name of the development and the ultimate goal of the new Novavido company, and we are now convinced that this is the right way forward>>, declares **Antonio Danieli**, Vice President of the **Golinelli Foundation** and Sole Director of **G-Factor SrL**