



## RetinaReadRisk : a spin-off to share a better screening practice of a diabetes-related eye-disease

**Diabetic retinopathy, an eye disease linked to diabetes which can cause blindness, is challenging to detect in early stages, especially in remote areas. The European Retina Read Risk consortium has been working for over a year on a screening solution, based on a mobile system and artificial intelligence (AI). Following a full-scale test in Spain, a spin-off was in February to sustain the deployment of the solution and distribute it to medical staff.**



In order to improve the screening process for diabetic retinopathy, a leading cause of blindness in Europe, the Retina Read Risk project was built by a consortium of European organizations. Its aim is to provide a solution to doctors following diabetic patients, with a device allowing a better assessment of the patients' risk of developing the disease.

At the end of the first year of the project, a prototype was finalized and is currently being tested. The first impact assessments indicate a significant medico-economic contribution in the screening for diabetic retinopathy. The use of the system seems to diminish the cost of screening for health care payers, decrease the pressure on health care organizations and to improve patient willingness to undergo screening.

In order to disseminate these benefits and commercialize the product, the consortium decided to create a spin-off company named RetinaReadRisk, like the project.

### RetinaReadRisk, the spin off

Following the project's progress, and encouraged by its results, a spin-off was created in February 2023, to market the innovation issued from the Retina Read Risk project for medical use. The founding partners include the following members of the consortium: IISPV, Grupo TRC (Telefónica) and GENESIS Biomed; and also by UP2Smart company. The spin-off company will market the software and mobile system based on AI, to detect and treat diabetic retinopathy in the early stages.

The spin-off will apply to a call by the Department of Health of the Generalitat de Catalunya, which selects the most innovative technological solutions to integrate them into the public network of primary care centers. Furthermore, as the spin-off was created within the framework of the Retina Read Risk project supported by ~~the~~ EIT Health (which is part of the European Institute of Innovation and Technology -EIT-, a body of the European Union), it has adapted the solution to facilitate screening in other European countries.

GENESIS Biomed has invested in the spin-off through its investment vehicle (GENESIS Tech Transfer Boost) and is currently assuming the duties of interim CEO of the company. In the words of Josep Lluís Falcó, CEO of GENESIS Biomed: "We are facing a huge opportunity that can change the paradigm of diabetic patient management, anticipating their potential evolution towards diabetic retinopathy. We offer a powerful tool that will end up leading to significant savings for the national health system."

Entrepreneurial initiatives such as this one are key to addressing diseases with a high incidence in our society in a more efficient and personalized way.

To learn more about the spin-off, [click here](#) to read the official press release on its creation.

### Retina Read Risk, the project

The project was launched in January 2022 for three years, to create a portable, easy-to-use and reliable screening solution, benefiting both patients and the medical staff.



The Retina Read Risk solution (represented on the left) consists in: (i) a device, containing a lens, which is placed on a smartphone camera, to capture the fundus images, (ii) a program to define a patient profile and (iii) an application with an AI for analysis.

The application gives a recommendation to the medical professional, which will help them to evaluate the patient's risk of developing the disease. It lets them know when the next check-up should be carried out, and whether an exam with a specialist physician is needed. The goal is not to replace specialist physicians, but to facilitate the work of the medical staff, to help them orient patients.

Retina Read Risk has already allowed for more than 1005 screenings in Spain. It detected retinopathy in 196 at-risk patients and addressed 93 patients for further testing. The clinical study continues in 2023, but a medico-economic study already shows a lot of benefits to the use of Retina Read Risk for cost-saving in health prevention.

### What is diabetic retinopathy?

The number of diabetics is on the rise: in Europe, there are an estimated 61 million<sup>1</sup>, representing roughly one in ten people<sup>2</sup>. Diabetes represents a leading cause of blindness in Europe<sup>3</sup>. It can lead to an eye disease called diabetic retinopathy: excessive blood sugar concentration causes small blood vessels in the retina to become permeable, which impacts vision. According to the World Health Organisation (WHO), nearly a million people have vision impairment or blindness because of this pathology in the European region<sup>4</sup>.

The disease progresses without symptoms until very late in its development. This makes screening crucial, but many patients (33% in France, 67% in Spain) do not get tested as often as recommended, in part due to the harder access to qualified professionals in rural areas.



## NewsLetter

The Retina Read Risk solution aims at solving this issue, by making screening effective and accessible even in remote areas. This innovation should help achieve a better screening coverage and frequency, and thus allow earlier detection and management of diabetic retinopathy.

*For more information on diabetic retinopathy, you can read [our previous newsletter](#).*

*To stay in touch with the Retina Read Risk project, please [subscribe to the newsletter](#).*

**This project (reference 220718) is supported by [EIT Health](#), a knowledge and innovation community of the European Institute of Innovation and Technology (EIT).**



Co-funded by the  
European Union

### About the Institut d'Investigació Sanitària Pere Virgili (IISPV)



The IISPV is a biomedical research institute placed in the province of Tarragona (Catalonia, Spain) that combines clinical and basic research in order to accelerate the translation of knowledge to the benefit of patients. Founded in 2005, the institute integrates the Hospital Universitari de Tarragona Joan XIII, the Hospital de Tortosa Verge de la Cinta, the Hospital

Universitari Sant Joan de Reus, the Hospital Universitari Institut Pere Mata and the Universitat Rovira i Virgili, in order to bring together and manage biomedical research and innovation in the territory. The IISPV aims to be a national and international reference centre in biomedical research and translation, at the service of the population, linking the health centres to the community.

For more information visit: <https://www.iispv.cat/en/>

### About the Institut Català de la Salut (ICS)

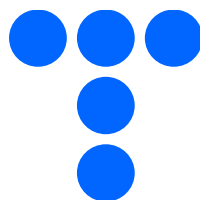


The Catalan Institute of Health (ICS) is the largest public health services company of Catalonia

with a staff of over 51,700 professionals, that provides health care to nearly six million people across the country. As a reference entity of the public health system, the aim of ICS is to improve people's health and quality of life, through the provision of innovative and excellent health services, regarding both the promotion of health and the treatment of diseases, from the most prevalent to the most complex ones. ICS structure includes 949 primary care centers and local consultancy, 8 Hospitals and 7 research institutes, including IISPV as a one of them. Our organization mission states to be a model that, through its structure and participants, responds to projects of strategic relevance to the ICS, guaranteeing the capacity and sufficient knowledge to execute them in short terms and obtaining fast returns in the form of results and value for the organization. ICS' vision would become a reference and reliable model for all management structures, corporate and territorial, and ICS professionals to promote innovative projects, advise on their approach and relate, if necessary, external agents that collaborate in its deployment and / or provide resources. Since mid-2021, Mr Francesc Iglesias, currently responsible of the Research and Innovation support office of ICS, is the chairman of the Governing Board of EIT Health Spain.

For more information visit: <http://ics.gencat.cat/es/inici/index.html>

### About Telefonica



**Telefónica**

Telefónica is one of the world leaders integrated operator in the telecommunication sector, providing communication, information and entertainment solutions, with operations in 12 countries in Europe and Latin American. As of the end of 2021, Telefónica's total number of customers amounted more than 369 million and 103,000 professionals. Telefónica spends more 4,600 million euros each year on technological innovation, including more than 950 million euros on R&D of new products, services and management systems and improvement of existing ones. In the health sector, Telefonica is working in several areas like

Telemedicine, geo-localised transport of living tissue between hospitals, assisted surgery operations with 5G and VR, etc.

For more information visit: <https://www.telefonica.com/en/>

### About the Grupo TRC



Grupo TRC has over 30 years of experience working hand in hand with groups of hospitals, developing applications to optimize and integrate all activities and processes of a health center in a unified platform.

The experience in the integration of advanced telecommunications systems, in the deployment of voice operator and connectivity services and in the development of customized software, both public and private sectors, national and international, are the guarantee of the commitment to the quality of our deployments, solutions and services.

For more information visit: <https://www.grupotrc.com/>

### About GENESIS Biomed



GENESIS Biomed is a consultancy firm in the biomedical healthcare sector specialized in providing consulting services in the genesis and first phases of lifecycle of biomedical spin-off and start-up companies, entrepreneurs, and research centers.

Based in its expertise GENESIS Biomed helps entrepreneurs and researchers to shape their business plan and support them in the private fundraising process. GENESIS Biomed has raised >67,5 M€ in the last years in 19 rounds.

GENESIS Biomed expertise domains are biopharmaceutical, biotechnological, medical devices, in vitro diagnostic, nutraceutical and cosmetic. With more than 20 years of expertise in the healthcare sector, GENESIS Biomed is born in May 2017, and it is located in the Barcelona Science Park and Madrid center.

For more information visit: <https://genesis-biomed.com/>

### About E-senior



E-Seniors is a French non-profit association, founded in 2004 by Monique EPSTEIN. E-Seniors aims at fighting against e-exclusion by providing access to and training in ICT to seniors and/or disabled people. Its main objectives are bridging and shrinking the digital gap between generations, caring for elders by fighting against senior isolation, and opening new horizons for efficient use of free time. Besides teaching “basic computer skills”, E-Seniors has opened more thematically oriented workshops for “advanced” students, dealing with, for example, digital images and sounds, interactive messaging and chat, “writing memories”, and meetings dealing with the fight against e-exclusion. Through its work for

elderly people and with them, the association tries as well to enhance awareness of the importance of ICT solutions in everyday life.

For more information visit: [https://www.e-seniors.asso.fr/en\\_main.htm](https://www.e-seniors.asso.fr/en_main.htm)

### About Fondation de l'Avenir



**Fondation de l'Avenir**  
*Accélérons la recherche en santé*

The Fondation de l'Avenir aims to support and promote applied medical research for the benefit of patients. Created in 1987 by the Mutualité, it has been recognized as a public utility since 1988. Today, the Foundation is the link between the mutualist movement and public health actors. The Fondation de l'Avenir can count on more than 50,000 donors and 40 partners from the social and solidarity economy, all of whom are mobilized to advance medical progress. The Foundation has financed more than 1,200 projects since its creation, including many world firsts. It is managed by an Executive Board, chaired by Marion LELOUVIER, under the control of a Supervisory Board, chaired by Daniel HAVIS.

For more information visit: <https://www.fondationdelavenir.org/>

### About EIT Health



Co-funded by the  
European Union



EIT Health is a network of best-in-class health innovators with approximately 150 partners and is supported by the European Institute of Innovation and Technology (EIT), a body of the European Union. We collaborate across borders to deliver new solutions that can enable European citizens to live longer, healthier lives.

As Europeans tackle the challenge of increasing chronic diseases and multi-morbidity, and seek to realise the opportunities that technology offers to move beyond conventional approaches to treatment, prevention and healthy lifestyles, we need thought leaders, innovators and efficient ways to bring innovative healthcare solutions to market. EIT Health addresses these needs. We connect all relevant healthcare players across European borders – making sure to include all sides of the “knowledge triangle”, so that innovation can happen at the intersection of research, education and business for the benefit of citizens.

*EIT Health: Together for healthy lives in Europe.*

For more information visit: [www.eithealth.eu](http://www.eithealth.eu).

### Disclaimer

The Retina Read Risk project is funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the EIT. Neither the European Union nor the granting authority can be held responsible for them.

---

<sup>1</sup> International Diabetes Federation Diabetes Atlas 10th edition, 2021 – [link](#)

<sup>2</sup> World Health Organization (WHO), Health topics: Diabetes – [link](#)

<sup>3</sup> Hristova et al. Diabetic Retinopathy Screening and Registration in Europe-Narrative Review. Healthcare (Basel). 2021. doi: 10.3390/healthcare9060745.

<sup>4</sup> Flaxman et al. Vision Loss Expert Group of the Global Burden of Disease Study. Global causes of blindness and distance vision impairment 1990-2020: a systematic review and meta-analysis. Lancet Glob Health. 2017. doi: 10.1016/S2214-109X(17)30393-5.