



Press release

Genopole presents the eleven innovative laureates of the fourth Shaker and Booster programs

Évry (Genopole), France, 15 April 2019

A committee of independent experts met on 19–20 March to choose five biotech projects and six young start-ups for the fourth editions of Genopole's Shaker and Booster accompaniment programs. The innovations proposed by the eleven laureates will bring scientific and technological advances to the fields of healthcare, cosmetics, the environment, industrial biotechnologies, and beyond.

The Shaker and Booster programs were developed by Genopole and launched in 2017 to give biotech innovations with strong industrial potential the environment and accompaniment they need to effloresce. The shaker empowers projects at the proof-of-concept phase and the Booster gives impetus to young start-ups.

- **The Shaker**: The five chosen teams will join the equipped (supplied consumables, reagents, chemicals etc.) and mutualized **Biotech Lab**, where they will find the means to validate their proofs of concept. The program also provides an introduction to entrepreneurship, so that the teams can lay a solid foundation for business creation.

- **The Booster**: The six start-ups (aged <3 years) will be able to **accelerate their businesses and raise funds successfully** thanks to personalized services, intensive biotech-specific training, mentor support and personalized coaching by Genopole Enterprises' project managers.

Jean-Marc Grognet, Chief Executive of Genopole: *"We are very happy to welcome these new teams to Genopole. It's always exciting for us, especially since our results speak for themselves. Three laureates of past Shaker classes have created their businesses and joined the Booster, which is a gratifying demonstration of the pertinence of our accompaniment programs. A would also like to underline another important and satisfying aspect: more than 70% of the teams chosen for the two most recent Shaker and Booster classes had members who were students at the universities or grandes écoles of the south Ile-de-France basin. Genopole is increasingly opening its doors for the young talent within Évry-Courcouronnes and Paris-Saclay, and offering them the scientific, technological and human environment they need to develop their professional projects."*

DISCOVER THE FIVE INNOVATIVE PROJECTS JOINING THE SHAKER



Innovations in healthcare

- **Andrey Pichugin: a novel production method for minicircle DNA**

Andrey Pichugin is developing an **innovative *in vivo* method for the production of DNA minicircles**. Intended for the gene therapy and biotech markets, the production method will be distributed in the form of a kit for research laboratories or through a licensing agreement for pharmaceutical companies. The innovative vector could also find use in synthetic biology, Crispr-Cas9 applications, cellular therapies and more.

- **Marie Cambot and Pablo Bartolucci: an innovative hemoglobin assay kit**

Within their project **InnovHem**, Marie Cambot and Pablo Bartolucci are developing a **kit to assay hemoglobins** (HbS, HbA and HbF) within single red blood cells. The technology is of major interest for the monitoring of innovative treatments for hemoglobinopathies, which are among the most-frequent genetic disorders, and particularly for sickle-cell diseases, which affect 300,000 newborns every year across the globe.

- **Paolo Bonomi: new molecules to combat antibiotic resistance**

Paolo Bonomi is forwarding the project **Quibiotic**, which involves a process for the synthesis of novel molecules for the beta-lactam group, the base structure of many antibiotics. The objective is to give β -lactam nuclei the ability to **combat bacterial antibiotic resistance** in a new bank of derivatives with narrow or wide activity spectrums or with mechanisms to counter bacterial defenses.

- **Manel Tari and Aram Gyulkhandanyan: rapid RNA purification**

Permedikit is a project carried by Manel Tari, a molecular biologist, and Aram Gyulkhandanyan, a post-doc at Inserm-Paris Diderot University. Their goal with it is to develop a **new, rapid and selective mRNA purification technique for diagnostics and personalized medicine**. *"We are developing a new technology for the extraction of RNA from biological samples that will enable rapid and selective purification, furthermore adapted to the desired type of diagnostic. Ultimately, we will propose diagnostic kits for human diseases."*

Innovations in agro-industry and environmental technology

- **Xavier Becuwe, Yacine Kerkouche and Gauthier Flagel: an innovative air purification technology**

Xavier Becuwe, Yacine Kerkouche and Gauthier Flagel are behind the project **Greenwell**, which unites technologies and pollution-counteracting plants **to improve the quality of indoor air**. *"Our product is the first biophilic and bio-inspired air purifier to offer veritable performance to the general public. We use air purification technologies in combination with an innovative plant-based filter."*

DISCOVER THE SIX INNOVATIVE START-UPS JOINING THE BOOSTER

Innovative start-ups in agro-industry and environmental technology

- **Azuvia: plants to treat pool water**

Tristan Bauduin and Paul-Etienne Fontaine founded **Azuvia** in February 2019. Their company develops ecological alternatives to chemical products for the treatment of residual water. Particularly, Azuvia proposes an **unprecedented pool-water phytoremediation concept involving an above-ground greenhouse**. The technology uses naturally-filtering, hydroponically-cultivated plants growing within a vertical greenhouse designed to be compact, durable and esthetic.



- **Suprême: fois gras from cell cultures**

Building upon their participation in the third Shaker class, Nicolas Morin-Forest, Victor Sayous and Antoine Davydoff, are continuing their Genopole adventure at the Booster. The mission of their company, **Suprême**, is to **develop foods from cell cultures, starting with foie gras** as the first product. **Suprême** seeks to be the pioneer of cellular agriculture in France and Europe. The company's objective is to reinvent meat production with the goal of considerably reducing its impact on the environment.

Innovative start-ups in healthcare

- **MedicalTronic: a global monitoring system for the early detection of disease**

Alain Vidal, Bernard Bernu and Viet Hung Nguyen are associates within the start-up **Medicaltronic**, an eHealth specialist. The company is developing a global system, easily usable by the public at large, to monitor physiological data (blood sugar, pressure, oxygen saturation, etc.) in real time. The data from medical sensors, the communications networks, necessary algorithms, and data analysis mechanisms are all centralized in synergy with medical professionals. The objective of Medicaltronic's big data approach is to contribute to the **early detection of physiological decline and disease**.

- **WhiteLab Genomics: artificial intelligence to speed the development of gene therapies**

WhiteLab Genomics was founded by David Del Bourgo, engineer at the University of Technology of Compiègne, Julien Cottineau, doctor in genetics, and Jean-Philippe Buffet, doctor in molecular biology. Their goal is to use artificial intelligence to help pharmaceutical companies **accelerate the preclinical development of gene therapies**. WhiteLab Genomics provides their clients with the most pertinent protocols and precise analytical means for the optimization of experimental designs and the rapid advancement of efficacy and toxicity trials.

Innovative start-ups in industrial biotech

- **SynHelix: a bio-inspired DNA printer**

Having validated their proof of concept in the third edition of the Shaker, Irina Gbalou and Ahmed Saïd founded **SynHelix** with the objective of developing a **prototype bio-inspired DNA printer** able to generate ultra-pure synthetic genes in quantities unmatched by any existing technologies. SynHelix targets the biotech market (gene therapy, medicine development, etc.) and actors in synthetic biology who need large quantities of synthetic genes.

Innovative start-up in cosmetics

- **Lotaëmi: the West Indies as a source for hair and skin treatments**

Laëtitia Pronzola, doctor of pharmacy, has made headway since her participation in Genopole's first Shaker class. She has created her company and hired two employees, Aïcha Krama and Eva Jimenez, both specialized in marketing and communication. Her company **Lotaëmi** calls upon the traditional pharmacopoeia of the West Indies **to conceive products for dry skin and curly, frizzy and afro-textured hair**. Lotaëmi keeps a hand on all business aspects, from research to sales in a network of distributors. The company's first product, Baume Essentiel, is available at www.lotaemi.com.

Genopole thanks the industrial property consulting firm IPaz and the Paris-Reims foundation, sponsors of the Shaker; and Chimex, sponsor of the Booster.

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About Genopole On its grounds in Évry-Courcouronnes just south of Paris, the French biocluster Genopole unites 87 biotech businesses, 17 research laboratories, 27 technology platforms, and several higher-learning programs (University of Évry, Paris Saclay). Genopole's objectives are to create and support biotech companies and the transfer of technologies to the industrial sector, favor the development of life sciences research, and promote advanced training programs for those domains. Headed by Jean-Marc Grognet, Genopole is funded primarily by the French State, the Ile-de-France Administrative Region, the Essonne Administrative Department, the Grand Paris Sud Urban Area, the city of Évry-Courcouronnes and the AFM-Téléthon

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