

STARTUP CITY

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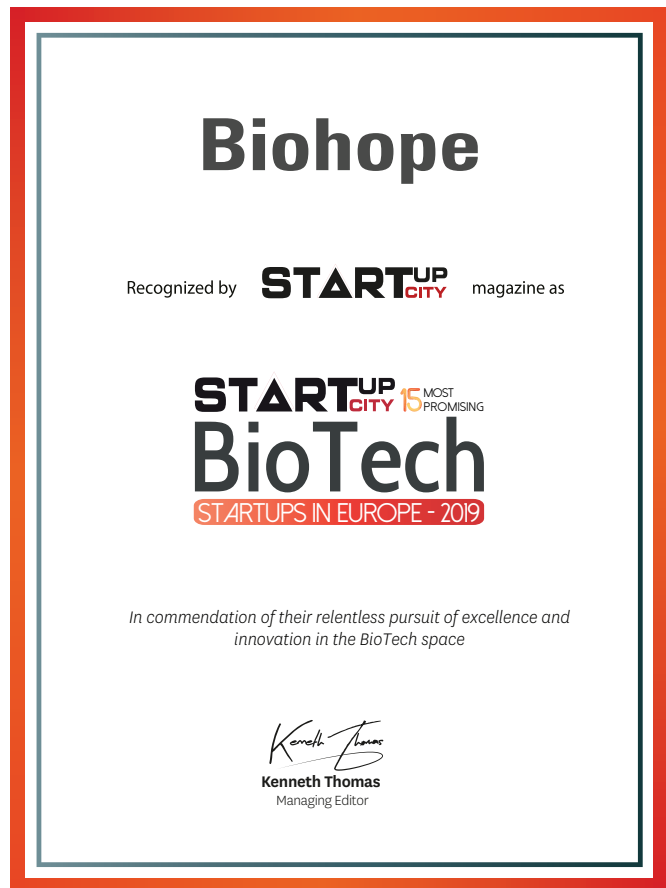
15 MOST PROMISING BIOTECH STARTUPS IN EUROPE - 2019

As new technologies emerge, numerous biotech startups are launched across Europe every year. With specialised venture capital firms and technology companies pouring money into the sector, biotech startups now attract a record amount of investment. Most of these investments focus on predicting which drugs will work and be safe for humans, well before the testing process begins. In the case of diseases such as Alzheimer's, current animal models do not ensure effective evaluation of whether a drug will work in humans. But with today's biotech offerings in the market, scientists are able to convert any human cell into a stem cell to create custom 'disease in a dish' models for enhanced predictability.

By leveraging modern technologies, biotech startups have also significantly reduced the expenditure of reading the entire sequence of a person's genome. With cost-effective genome sequencing, researchers are now able to screen the DNA of patients to find genetic biomarkers and in turn, select the most suitable treatment for a person based on their genetics. Building on this trend, technologies such as organoids, organs-on-chips, and 3D bioprinting are helping mimic the real behaviour of human tissues in the lab, thus improving the entire testing process.

As biotech startups continue to evolve by embracing new technologies, organisations must opt for solutions and services most relevant to their business requirements. To assist them with the same, our distinguished panel comprising key decision makers and experts along with StartupCity's editorial board has shortlisted some of the most promising biotech startups in Europe.

We present to you StartupCity's "15 Most Promising BioTech Startups in Europe - 2019."



COMPANY:
BIOHOPE

DESCRIPTION:
A RESEARCH AND DEVELOPMENT COMPANY DEDICATED TO THE DEVELOPMENT OF UNIQUE PRECISION MEDICINE IVD TOOLS TO PERSONALISE CURRENT AND FUTURE TREATMENTS

KEY PERSON:
ISABEL PORTERO
CEO
RICARDO BRAGE
BUSINESS DEVELOPMENT
DIRECTOR

WEBSITE:
BIOHOPE.EU

Biohope

Reimagining Precision Medicine Treatment for Chronic Inflammatory Conditions



Isabel Portero

Precision medicine enables doctors to select treatments that are based on the genetic understanding of a patient's disease. However, this approach is yet to make a significant mark in treating chronic inflammatory conditions as use of immunosuppressive drugs (ISDs) is largely prevalent in this area, and it is based on clinical guidelines, drug blood levels, and trial/error approaches. When ISDs are administered to the patients in a non-personalised way, it can cause problems such as metabolic toxicities, serious adverse events like malignancies and opportunistic infections, and graft failure after the organ transplant. Besides, it fails to efficiently control the disease activity in patients with rheumatoid arthritis. In a nutshell, such medication leads to loss of time, increased healthcare costs, rise in side effects, and worsened prognosis. On the other hand, the medtech industry is lacking a tool to determine the potency (efficacy) of the immunosuppressive drugs on the patients. Fulfilling this need is Biohope, an R&D company, dedicated to the development of unique precision medicine In Vitro Diagnostic (IVD) tools to personalise current and future treatments in the field of chronic inflammatory conditions, to improve clinical outcomes and healthcare costs.



Our scientific ambition is to become a worldwide reference in personalising medicine



Biohope's core product, Immunobiogram is an IVD Immunoassay that combines biotechnological kit and software for comparative evaluation of the patients' sensitivity and resistance profile allowing physicians to predict and monitor the patients' response to a specific ISD. "Immunobiogram will be the only IVD test in the market that allows the selection of the optimal immunosuppressive therapy (a combination of drugs/dosage) for each patient at a specific point in time to optimize therapy in patients with kidney transplantation and rheumatoid arthritis," extols Ricardo Brage, Business Development Director, Biohope. "More than 22 million patients worldwide can benefit from this unique technology."

The data gathered from the

Immunobiogram is consequential and beneficial for patients, physicians, as well as health care providers. In patients with the renal transplant, a personalised immunosuppression regimen could substantially reduce the graft rejection rates and avoid adverse events like metabolic disorders, opportunistic infections, and malignancies. For patients with rheumatoid arthritis, a product currently under R+D development at Biohope, the Immunobiogram would help the physician to individualise ISD therapy to reach clinical remission and reduce the side effects of the treatment. The physicians reap the benefits of the Immunobiogram by helping them select the adequate ISD for each patient to improve clinical outcome. The use of Immunobiogram by healthcare providers would help them reduce the risk of graft failure and adverse events, thereby generating savings.

Clinical studies conducted by Biohope show that their customers witnessed an individual patient response pattern to the immunosuppressive medication. The studies further exhibit the sensitivity or the resistance profile of each patient for every tested drugs. Also, the Immunobiogram allows identifying patients with bad prognosis probably due to low sensitivity to their specific immunosuppressant. According to the expert panel at Biohope, in patients who used Immunobiogram a reduction in kidney rejection could be expected by establishing an individualized treatment regimen.

"Our scientific ambition is to become a worldwide reference in personalising medicine because we provide innovative, first in class practical solutions that improve clinical outcomes in autoimmune-related conditions with unmet needs," remarks Isabel Portero, CEO, Biohope. The company has a granted patent, published in the EU and submitted PCT in many countries for the IVD kit.

In recent years, Biohope raised \$4.5 million non-dilutive grant from the European Commission and is currently seeking \$3.3 million and \$2.5 million from Innovation European Grant and NIH Grant respectively. The company has won Entrepreneurship Award by the Spanish National Television Network, Entrepreneurship Award by Madrid City Hall, and received several other recognitions. In the coming years, the company plans to establish sales in the EU and the U.S. for renal transplant and rheumatoid arthritis/other inflammatory based conditions. In 2019, Biohope will settle in Boston. [©]



Ricardo Brage