

Third International Biotechnology Forum (RIB)**20 healthcare startups and 18 pharmaceutical companies ready to join forces to expand the therapeutic arsenal in the fight against cancer**

Following on from rare diseases and neurological diseases, this third International Biotechnology Forum (RIB) is bringing together pharmaceutical groups and startups on 7 February 2018 to accelerate innovation in the field of immuno-oncology. Set up as an initiative of Leem and Bpifrance, the purpose of the RIB is for global manufacturers to interface with French biotechnology companies. The 20 participating biotechnology companies have been selected on the basis of their research theme, the excellence of their project and their desire to forge alliances with pharmaceutical groups.

Cancer is a leading cause of death worldwide. According to figures from the WHO (World Health Organization), it accounted for 8.2 million deaths in 2012, i.e. around 13% of all deaths. Deaths from cancer are projected to continue to rise to over 13.1 million deaths in 2030. In France, cancer has become the leading cause of death, ahead of cardiovascular disease (INCA Report 2016).

Faced with these colossal public health challenges, collaborative ventures between healthcare startups and industry are essential in order to accelerate innovative breakthroughs for patients. Startups are agile, often have a background in academic research, and are the first to explore new areas of research.

"Large companies and startups share the same ecosystem. It is important to give them the opportunity to meet and compare notes. These are essential links in the therapeutic innovation chain created to deliver new treatments quickly to patients", according to **Philippe Lamoureux, Director General of Leem.**

Several therapeutic avenues have opened up in recent years to combat cancer, the most recent of which being immunotherapy, which has made headway as a result of advances in scientific knowledge concerning the biological mechanisms implicated in immunology.

Immunotherapy involves using the patient's natural defences by mobilising the immune system to recognise and destroy cancer cells or amplify its response. A number of scientific and therapeutic approaches are under development.

Leem and Bpifrance have been working with 8 partners across the entire French healthcare ecosystem to bring the expertise accrued in this field to the RIB. Health clusters and regional networks of cancer research and care (Cancéropôles), the Gustave Roussy Cancer Research Centre, Matwin financial funding, and the immuno-oncology sector (MabDesign) have all rallied to support these forums and have come up with 45 innovative startup proposals in France. These proposals have been assessed and the candidates interviewed by a jury of 17 leading figures* comprising investors, manufacturers and academic researchers, chaired by Christian Deleuze (President of Sanofi Genzyme France and Leem Board Member). At the end of this assessment process, 20 companies were shortlisted to take part in 100 B-to-B meetings and 14 companies to make a 7-minute pitch to the panel of manufacturers and investors.

A total of 20 biotech companies, 18 major pharmaceutical companies and 8 venture capital firms are taking part in the 2018 RIB.

The profiles of the 14 selected biotechnology companies vary enormously in terms of development phase - from the fledgling stages to clinical trials - and core expertise (pharmaceuticals, combination therapies, devices, information technology, etc.).

"The French healthcare sector is brimming with highly innovative companies and is one of the country's centres of research and industrial excellence. Besides contributing to the financing of these budding companies, we firmly believe that support is crucial to accelerate their growth and gain global reach. For this reason we have launched a dedicated "Health Tech" programme within the business platform Le Hub de Bpifrance. This support primarily involves building relationships between startups and major groups. As such, the International Biotechnology Forums are a flagship event that helps bring French startups into contact with the R&D heads of international pharmaceutical groups," concluded **Nicolas Dufourcq, Chief Executive Officer of Bpifrance**.

14 startups making their pitch

Affilogic (Nantes) - Development of Nanofitins, molecules that combine the features of antibodies with the advantages of small chemical molecules. They are extremely stable and 20 times smaller than antibodies, resistant to the tumour environment, and easy to administer (oral).

B-Cell design (Limoges) - Mucosal immunotherapy based on a new class of monoclonal antibody. Two molecules currently in development, an immunotherapy drug candidate for colorectal cancer and an HIV vaccine candidate.

ElyssaMed (Paris) - Active immunotherapy treatment consisting of several antigenic peptides (epitopes) specifically targeting lung cancer (among others), derived from the antigen preprocalcitonin (ppCT) and an adjuvant. Due to its original mode of action, this immunotherapy could prove effective in multi-resistant patients.

GamaMabs (Toulouse and Paris) - Therapeutic monoclonal antibodies that destroy tumour cells by activating the immune system. The most advanced project is an antibody that targets the anti-Mullerian hormone type II receptor (AMHRII), currently being tested in gynaecological cancer patients.

Gliocure (Angers) - A company dedicated to the treatment of glioblastoma, the most common and most aggressive brain tumour. Gliocure is developing a next-generation anti-mitotic peptide for the treatment of glioma cells and glioblastoma stem cells.

HalioDx (Marseille) - Haliodx designs diagnostic tests to measure immune response in and around the tumour. This test will allow oncologists to determine the degree of severity of the patient's tumour, predict the response to treatment and thus decide the optimal therapeutic strategy.

H-Immune Therapeutics (Paris) -The company has developed a proprietary in vitro immunisation (IVI) platform capable of generating a series of human antibodies against the entire epitope map of any therapeutic target by taking direct advantage of the in situ affinity maturation processes of B cells. H-IMMUNE is deploying its IVI platform to build its first-in-class I/O drug pipeline, including a novel immune checkpoint - Galectin-9 - implicated in the TIM3 and CD44 signalling pathways.

Imcheck Therapeutics (Marseille) - Drawing on its in-depth knowledge of the molecular communications networks that control the anti-tumour action of innate and adaptive immune system cells, Imcheck Therapeutics has identified two immunomodulatory antibodies that could make the tumour cells visible once again to the T cells.

Inovactis (Evry) - Inovactis has gone off the beaten track and chosen to work with synthetic biology tools to create a yeast (*S. cerevisiae*) capable of producing tumour antigens and triggering an immune response against cancer cells. First targeted cancer: colorectal cancer.

Nanobiotix (Paris) - A pioneer in nanomedicine, Nanobiotix is developing a revolutionary approach to cancer treatment: nanoparticles used in radiotherapy to enhance X-ray absorption inside the cancer cells so they can be more effectively destroyed. 7 clinical trials are in progress across the world. The Company is also running several immuno-oncology research programmes with its lead product NBTXR3, which could potentially add a new dimension to cancer immunotherapy. Nanobiotix has received approval from the US Food and Drug Administration (FDA) for a new clinical trial of radiation-activated NBTXR3 administered in combination with an anti-PD1 antibody to treat lung, head and neck cancers.

NovaDiscovery (Lyon) - Specialist in in silico clinical trials to predict treatment efficacy upstream of human trials, Novadiscovery develops mathematical and computational models that incorporate knowledge published in millions of original scientific research papers. The tool has already been used successfully in numerous therapeutic areas, including immuno-oncology.

Stimunity (Paris) – Based on research conducted at the Institut Curie and Oxford University, Stimunity is developing a novel biopharmaceutical class to reactivate the body's immune defences against advanced or metastatic cancers. It uses a harmless virus-like particle (VLP) technology that activates innate immunity (STING) to produce a good T cell response and kill cancer cells remotely.

Theraclion (Malakoff) - A pioneer in the use of high-intensity focused ultrasound (HIFU), Theraclion has developed an innovative echotherapy solution that combines HIFU therapy and real-time ultrasound monitoring. This solution can be used with immune checkpoint inhibitors (PD-1).

TheraVectys (Paris/Cambridge US) - Leveraging its expertise in lentiviral vectors, the company is developing immunotherapies used in a wide range of applications: infectious diseases and virally-induced and other cancers.

6 other biotechnology companies present at the afternoon B-to-B meetings: AltevAx (Paris/Londres), CarThera (Paris), ElsaLys Biotech (Lyon), Medsenic (Strasbourg), Oregon Therapeutics (Paris), Vaxeal (Evry)

The pharmaceutical companies taking part: Abbvie, Astra Zeneca, Biomérieux, Boehringer Ingelheim, BMS, GSK, Ipsen, Janssen, Merck, MSD, Novartis, Pfizer, Pierre Fabre, Roche, Sanofi, Servier, Takeda, Transgene, UCB.

Third RIB Forum partners : Medicen Paris, Eurobiomed, Cancéropole Clara, Cancéropole Grand Ouest, France Biotech, Genopole, Gustave Roussy, Mabdesign et Matwin.

The Jury: (Scientific Advisor - Gustave Roussy Drug Development Department - DITEP), (Chair of the Executive Management Board - Inserm Transfert), (Chief Executive Officer of BMS France), . (Senior Investment Officer - Life Sciences, Bpifrance), (Director of the Pierre Fabre Antibody Physical Chemistry Department), (Biotherapy - Pharmaceutical Biotechnology - Immuno-Oncology Laboratory (L.I.O) Gustave Roussy), (Director of Strategic Alliances - Pfizer France), (R&D Director - Matwin), (President of Sanofi-Genzyme France), (Director of the Roche Institute for Research and Translational Medicine), (Director of Cancéropole Grand Sud-Ouest), , (Special Advisor),

About Leem: As an association of pharmaceutical companies, Leem is right at the heart of major health challenges. Against a background of unprecedented scientific and industrial change, it works actively with its 260 members and their 100,000 employees to promote innovation and progress for the benefit of patients, and to further enhance French excellence in research and manufacturing. By promoting responsible behaviour across the sector, Leem's quality control process strives to ensure safety and transparency and build trust in pharmaceuticals.

For more information: www.leem.org-

Find us on Twitter @LeemFrance on 7 February for the 14 competing pitches live-streamed in their under-a-minute version!

About Bpifrance : Bpifrance finances businesses - at every stage of their development - through loans, guarantees and equity. Bpifrance supports them with their innovation projects and on international markets. Bpifrance now also assists them with their export business via a wide range of products. Advisory and university services, networking and an acceleration programme for start-ups, SMEs and midcaps are among the other options offered to businesses.

Thanks to Bpifrance and its 48 regional branches, businesses benefit from a single, efficient local player to help meet their challenges.

For more information: www.Bpifrance.fr

Follow us on Twitter: @Bpifrance- BpifrancePresse

Leem press contacts :

Stéphanie Bou – Tel.: +33 (0)1 45 03 88 38 - e-mail: sbou@leem.org/ Virginie PAUTRE - Tel.: +33 (0)1 45 03 88 87 – email: vpautre@leem.org/Jean Clément VERGEAU – Tel.: +33 (0)1 45 03 86 82 - e-mail: jcvergeau@leem.org

Bpifrance press contact:

Nathalie POLICE – Tel.: +33 (0)1 41 79 95 26 -email: nathalie.police@bpifrance.fr