



## **OLON ANNOUNCES THE CREATION OF A NEW INTERNATIONAL NETWORK OF SCIENTIFIC EXCELLENCE FOR LARGE-SCALE BIOCATALYSIS.**

### **THE PARTNERSHIP BRINGS TOGETHER SOME OF THE MOST ADVANCED EXPERTISE IN THE FIELD**

Milan, 25<sup>th</sup> October 2021 - The Olon Group announces the creation of an international network of scientific excellence to launch large-scale biocatalysis as an industrial technology used within its production facilities in Italy and around the world. The partnership, bringing together some of the most advanced expertise in the field of biocatalysis from both academic and industrial spheres, unites the Olon Group, Biosphere — an Italian SME specialised in fermentation and industrial biotechnology — and the Biocatalysis Group of the Van't Hoff Institute for Molecular Sciences (HIMS-Biocat) at the University of Amsterdam (UvA). The HIMS-Biocat group, headed by Prof. Francesco Mutti, has pioneered ground-breaking research in the area of enzyme engineering and the use of enzymes for performing novel, sustainable and “green” chemical reactions.

The partnership forms part of a wider Olon Group strategy involving long-term investment in the in-house development of advanced technology, applied in the production of active ingredients, with biotechnology as one of its highest priorities. *“Biotechnology enables us to develop more sustainable chemical processes, reducing environmental impacts and increasing cost-effectiveness, to the benefit of our partners. The process certainly becomes more efficient and the reduction in environmental impacts is considerable”* commented **Olon Group CEO, Paolo Tubertini**.

*“We have acted as a catalyst and aggregator for international excellence, thanks to a rapid and flexible approach that enables us to introduce top expertise to our processes, quickly and sustainably, and make this available to our partners. In our vision, this is a first step that, over the coming years, will lead us to convert a portion of our existing reactions to biocatalysis, and to develop new reactions with this new technology”* continued Tubertini.

With the leading expertise implemented by the University of Amsterdam and Biosphere, it will be possible to identify the most effective enzyme for the type of reaction required before scaling up its production to industrial levels. Biosphere is an Italian leader in the sector, with a mission to implement biotechnology in industrial processes with a circular economy approach.

*“We are proud to be members of this strategic partnership promoted by Olon. Biocatalysis is surely one of the most promising solutions to introduce innovation in chemical synthesis, and the aim of this project is to put together solid outstanding academic research and industrial vision and capabilities, to develop new production routes that will be both environmentally and economically sustainable.”* commented **Marco Pistocchi, Chief Operating Officer of Biosphere**.

*“We joined this partnership with great enthusiasm as it will also allow us to make a wider impact on society, industry and environment. Our major aims are to develop new biocatalysts and biocatalytic systems for the sustainable and efficient synthesis of organic molecules that are relevant for the chemical industry as well as to address fundamental questions of bioorganic chemistry and biochemistry. We believe that the advancement in the field of biocatalysis can meet the changing needs of industry and has a decisive impact on the future of the next generations on our planet”* commented **Prof. Francesco Mutti from the University of Amsterdam**.



Bioconversion is the transformation of a substrate, catalysed by an either free or immobilized enzyme, obtained from cellular cultures followed by different type of purification depending of the grade of enzyme needed for the specific process.

With a 2020's Turnover of 530 Mio\$, OLON supplies 34 Chemical Intermediates and more than 295 APIs for the Generic market.

Thanks to all the 2.200 employees, and to highly qualified R&D team – more than 200 people – OLON can offer complete integrated packages and services to support the full development of APIs based on strong knowledge in both Chemical and Biological process, all of them under a full cGMP and regulatory coverage – holder of about 160 active US DMFs and 79 granted CoS.

Always considering human safety and environmental security, OLON handles different and not-common manufacturing process technologies, such as Cyanation, Bromination, Fluorination, Carbonylation, and Fermentation – combined with chemical synthesis to produce APIs proteins, high-potent small molecules and therapeutically active peptides for pharma application and proteins and small molecules for food, feed, and other bio-industrial markets.

Headquartered in Rodano (Milan, Italy), OLON has 11 manufacturing facilities - 8 located in Italy, 1 in Spain, 1 in USA and 1 in India, designed in compliance with the strictest international requirements, and 3 branch offices in Hamburg (Germany), Florham Park NJ (USA) and Shanghai (China).

The manufacturing sites are regularly inspected by the most important national and international Authorities, and regularly audited by our partners and customers. The facilities are FDA-inspected and self-identified under GDUFA.

Besides pharmaceutical certifications, OLON complies with ISO standards (14001), has dedicated areas for food-grade manufacturing and complies with Kosher, Halal and within 2018-Q3 also with FSSC 22.000.

To be highlighted OLON's growing cooperation with Universities: University of Milan (Italy), Milan Politecnico (Italy), University of Pavia (Italy), and University of Murcia (Spain).

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Biosphere is an Italian SME operating in the field of industrial biotechnology, with a focus on the development and scale-up of fermentation processes for the production of different biomolecules. Biosphere offers R&D services for the development and scale-up of biotechnological processes, from laboratory to pilot and pre-industrial scale, for recombinant protein and metabolites generation in bacteria and yeasts. The company also provides a qualified contract manufacturing service for the production of microbial biomass, enzymes and metabolites. The company's own research and innovation activities are focused on the development of new processes, based on fermentation, for the valorization and re-use of by-products of the agro-food industry and the production of bio-based molecules and materials.

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The van 't Hoff Institute for Molecular Sciences (HIMS) at the University of Amsterdam (UvA) is organized in four complementary research themes: Synthesis & Catalysis, Analytical Chemistry, Computational Chemistry and Molecular Photonics, which provide a unique synergy for designing, creating, characterizing and understanding molecular systems to address important societal and industrial challenges. The Biocatalysis Group is part of the research theme Synthesis & Catalysis (SC) that focuses on the development of sustainable technologies that will enable to carry out chemical transformations in a more efficient manner. In this context, the Biocatalysis group carries out cutting-edge research at the interface between the chemical and the biological sciences. The research focuses on: 1) fundamental studies of enzyme catalysis and mechanisms; 2) engineering of enzymes to improve existing activities or create new activities or improve stability under industrially relevant conditions; 3) the development of novel biocatalytic systems (e.g., cascades) for the sustainable manufacture of chemical products in batch or continuous flow systems; 4) biocatalysis *in vivo*; 5) bio-photocatalysis and bio-electrocatalysis.

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