

## PRESS RELEASE

# Dan\*na launches a pilot plant of bioplastic production for biomedical and technological sector in the Barcelona Science Park

- Dan\*na, a technology-based startup dedicated to the development of advanced biomaterials and bioplastics for the biomedical and technological sector, is expanding its facilities at the Barcelona Science Park with the launch of a pilot plant for the industrial scaling of its products.
- It is the only company in the bioplastics sector recognised with the “Social and Environmental Impact Company” accreditation from the Ship2B Foundation; It also has the recognition of "Innovative SME" from the Ministry of Science and Innovation; and is among the 5 TOP startups in the world that develop sustainable plastics, in a recent report by StartUs Insights.
- Dan\*na is a company committed to SDGs and circular economy, upon which its R & D & I business plan is based. It develops its biomaterials and bioplastics from the valuation of organic waste, through the combination of molecular technologies, green chemistry, and artificial intelligence. Currently, its main products are biomaterials for health (regeneration of tissues, bones, cartilage, and nerves, bioengineering and *bioprinting*) and technological bioplastics for agriculture and microelectronics.
- Founded in 2017 by Xavier Marin - an entrepreneur with more than 20 years' experience in the management of major technological projects and vice-president of the Advanced Materials Cluster of Catalonia- Dan\*na has invested more than €1.3 million strictly from its own and public funds, without resorting to private investors to develop its technology.
- Now, the start-up has opened its first round of impact investment totalling €2 million to continue expanding its scaling toward an industrial plant and position itself as world leader on circular economy and sustainable development within the framework of the 2030 Agenda.
- According to the European- Bioplastics association, the bioplastic market accounts for only 1% of the 368 million tonnes of plastic produced annually in the world, with a market potential of €360,000 million in Europe alone.

**Barcelona, 31 May 2021.** Dan\*na a technological startup dedicated to the development of high-value biomaterials for the biomedical and technological sector - has expanded its facilities at the [Barcelona Science Park \(PCB\)](#) with the launch of a pilot production plant for industrial scale-up of its bioplastics.

The bioengineering company -which will increase its surface area in the park to 100 m<sup>2</sup> to increase its operational capacity- it has a multidisciplinary and multicultural team of 10 professionals, including 5 doctors in the technical area, with more than 20 years of experience in the technological development of sustainability and circular economy, headed by **Xavier Marin** (CEO), **Dr Sejin Oh** (CTO), **Oriol Pla** (CFO) and **Carles Ortiz** (COO).

*"Expansion of our facilities allows us to consolidate our R&D centre at PCB to advance with the development of new biomaterials and, at the same time, offer services to help companies reduce their CO<sub>2</sub> emissions and introduce more sustainable materials and processes into their production and final product models", explains Xavier Marin, CEO and founder of the company.*

### **Impact investment to promote the circular economy**

Founded in 2017 by Xavier Marin, an entrepreneur with over 20 years of experience in the management of major technological projects, Dan\*na has invested more than 1.3 million euros in the development and validation of its technology and the beginning of industrial scaling, a capital that only comes from the company's own funds and public capital, without resorting to private investors. Its founder continues to be the main shareholder.

Now, the startup has opened an initial round of financing of €2M to continue expanding its scale toward an industrial bioplastic PLA (lactic acid polymer), a 100% biobased and biodegradable material created from organic by-products or waste, which has great potential in sectors such as those of containers, microelectronics, biomedicine, 3D printing, cosmetics, primary sector and in the food industry.

There is a high demand in the plastics market and there is little on offer in the field of bioplastics, mainly due to the rapid impact of transition into a more sustainable model promoted by governments and society itself which is increasingly made aware of the environment and health.

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*"Our mission is to accelerate the global transition towards sustainable technological materials. We therefore focus our interest on the venture capital that shares our social and environmental protection values. We seek a relationship with our investors in the medium and long term. A relationship that allows us to generate financial return, but that also has a social and environmental impact. Our growth and internationalisation plan is in response to an ever-increasing global demand with the sustainable development objectives covered in the 2030 Agenda ", comments Marin.*

Dan\*na is the only company in the bioplastics sector recognised with the "Social and Environmental Impact Company" accreditation from the [Ship2B Foundation](#). In 2020, it was one of the 11 companies selected, which included more than 250 candidates, to participate in the [S2B Tech4Climate](#) programme, sponsored by Ship2B Foundation, Aigües de Barcelona, Repsol Foundation, Griñó and Nestlé Spain.

Dan\*na also accounts for the [Innovative SME](#) seal granted by the Ministry of Science and Innovation in 2019, and a recent [StartUs Insights](#) report includes it among the 5 TOP start-ups in the world that develop sustainable plastics, from a total of 332 analysed companies.

Recently, Dan\*na has also acquired and assumed the management of [Bioplasticos.com](#), a platform to create and boost a cluster of professionals, companies, public institutes, universities, and technological centres aimed at promoting sustainability and circular economy via the potential of bioplastics.

Xavier Marin is vice-president, in addition to the [Advanced Materials Cluster of Catalonia](#).

### **Combining green biotechnology with artificial intelligence**

Dan\*na is an expert in the design and development of new biomaterials and bioplastics from organic derivatives, such as lactic acid or organic residues. By combining molecular, green chemical technologies, computational calculation, and disruptive AI technologies, such as the *digital twin* system - its use functions for the primary, technological and biomedical sector.

The company has developed and patented a new, 100% biocompatible and bio-based biomaterial to be used in the health sector (regeneration of tissues, bones, cartilages, and nerves, bioengineering and bioprinting). This material can also be used as a microelectronic substrate for the development of biodegradable sensors and biosensors in the technological or primary sector of the economy.

*"Dan\*na represents a true revolution to a sustainable economy through innovation, from our product concept, and its production to the end result and its impact on the environment. Our development is an efficiency and sustainability model. We work with 100% environmentally-friendly materials that are an alternative to plastic, but that also have similar properties to plastic while being cleaner. Our objective is to introduce a highly technical and sustainable biomaterial into the market, reducing organic residue and providing sustainability to material technology", states Xavier Marin.*

In the last 3 years, Dan\*na has gained more than 10 competitive private and public projects, both nationally and internationally, all related to the sustainability of materials. These include: **CATCO2NVERS** (to reduce the effect greenhouse gases in the biological-based industries) and **BIOCON-CO2** (to convert CO<sub>2</sub> into value bioproducts), financed with €6.9 million and €6.6 million, respectively, by the H2020 program; **BioPrintIA** (to generate personalised bioimplants using artificial intelligence and 3D bioimpression), subsidised with €5.2 million by the Centro para el Desarrollo Tecnológico Industrial [Centre for Industrial Technological Development] (CDTI); and others related to digitalisation of processes for the management and control of environmental impact (LCA, LCC).

#### ■ Videos

**Health biomaterials:** [https://www.youtube.com/watch?v=kVnUId\\_iqT0](https://www.youtube.com/watch?v=kVnUId_iqT0)

**Bioplastics for technology:** <https://www.youtube.com/watch?v=R9YqjfqqVx8>

**Bioplastic flexibility tests:** <https://www.youtube.com/watch?v=XVsR0YB-kAw>

#### ■ About Dan\*na

Dan\*na (<https://artificialnature.com/>) is a bioengineering company, headquartered at the Barcelona Science Park dedicated to the development of advanced biomaterials and bioplastics for the technological and biomedical sector, through molecular technology, green chemical processes, and artificial intelligence.

It was created in 2017 by Xavier Marin, with the aim of improving and promoting biobased materials, as a clear sustainable alternative to the technological evolution of our society.

The company provides solutions adapted to the challenges of new technologies, through the engineering of materials, for sectors such as electronic mobility and regenerative medicine (tissue engineering).

To implement its business project, Dan\*na was supported by the Ship2B Foundation; the Government of Catalonia, through the Agency for Business Competitiveness (ACCIÓ), the Agency for Management of University and Research Grants (AGAUR) and the Waste Agency of Catalonia; and the Spanish Ministry of Science and Innovation, through the Centre for the Development of Industrial Technology (CDTI.)

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