BORMIOLI PHARMA

Supporting scientific progress within the pharmaceutical industry - with a new Glass Research Center

Bormioli Pharma is a world-renowned player in the packaging industry in the production of containers for pharmaceutical, biopharmaceutical and nutraceutical use, including glass and plastic bottles, caps and accessories. This article takes a look at the recently-signed a five-year agreement with IMEM-CNR, and the opening of a new Glass Research Center, to promote materials research concerning the pharmaceutical industry.

The international leader in the production of containers for pharmaceutical use has signed a five-year agreement with IMEM-CNR to promote materials research.

The health emergency due to the Covid-19 pandemic and the subsequent search for a vaccine have further highlighted the importance of glass containers in the drug supply chain, both from the point of view of performance and compatibility with new formulations.

As a result, the company has opened a new Glass Research Center at the headquarters of the Institute of Materials for Electronics and Magnetism (IMEM) - National Research Council

(CNR), a reference point for national and international research in materials science.

In the new laboratories, Bormioli Pharma will conduct sophisticated analyses on the chemico-physical characteristics of its glass bottles and will promote research programs to identify alternative formulations and special surface treatments.

"With this project, we aim to create a centre of excellence for innovation in glass containers for drugs with high therapeutic value," said Andrea Lodetti, CEO of Bormioli Pharma. "We will thus be able to reverse the paradigm in which the packaging supplier intervenes only at the end of the development process of new formulations, providing our contribution from the earliest stages of clinical trials."

In the coming months, Bormioli Pharma and CNR will also fund a PhD grant for the development of a new generation of glass bottles, capable of offering chemical neutrality, shock absorption and assembly line flow characteristics superior to any packaging solution on the market today.

WORKING FOR THE FUTURE OF GLOBAL HEALTHCARE

As a world-renowned player in the packaging industry, Bormioli Pharma serves the pharmaceutical and biopharmaceutical market with complete solutions, including glass and plastic bottles, plastic and aluminium closures and accessories. Each product is a unique combination of rigorous studies, cutting-edge technologies, advanced testing, industrial processes and high-end materials.

Bormioli Pharma has a global presence in over 100 countries, with more than 1,300 employees and nine plants in Europe specialized in the production of glass and plastic packaging. Each year, the company produces more than seven billion items, and in 2019 it reported annual sales of approximately EUR 250 million. As a partner to the pharmaceutical industry, Bormioli Pharma invests and innovates with one goal in mind: to improve people's lives.

THREE MAIN CATEGORIES TO IMPROVE PEOPLE'S LIVES

Bormioli Pharma's commercial offer is, today, organized in three main categories: forTherapy, forHealth, forLife. The three portfolios reflect the purpose of the packaging solutions, which include, correspondingly, high value-added drugs, over-the-counter medicines, and wellness products. Through this organization and the relentless pursuit of innovative solutions, Bormioli Pharma reaffirms the objective that guides and inspires all the Group's strategic choices: to improve people's lives.

Bormioli Pharma's production, industrial and commercial capabilities have and will constantly be strengthened through a growth plan, which has included, on one hand, the renewal of plants and, on the other, a specific process of acquisitions. In fact, important renovations have recently been completed in several plant and two acquisitions have been finalized: the one of GCL Pharma – a company specialized in the production of plastic, rubber and aluminium caps for pharmaceutical applications – and the one of ISO GmbH – a German company specialized in the production of tubular glass vials. These investments have enabled Bormioli Pharma to better support the demand of the pharmaceutical industry, especially in such a difficult and unprecedented period.

INSTITUTE OF MATERIALS FOR ELECTRONICS AND MAGNETISM

The Institute of Materials for Electronics and Magnetism

(IMEM) is part of the National Council of Research (CNR) and is headquartered in Parma, Italy. IMEM develops interdisciplinary research approaches in the field of materials science, including advanced materials preparation and processing methods and device fabrication technologies. IMEM carries out these activities by linking together basic research with applied and technological research, in collaboration with several relevant national and international research institutions, but also in collaboration with many companies. IMEM employs about 80 staff members, and more than 30 research associates collaborate closely with the Institute.

SPEAKING TO BORMIOLI

Glass Machinery Plants & Accessories (GMP&A): What started this agreement between Bormioli and IMEM-CNR and how will the collaboration be structured?

Bormioli Pharma: The initiative arose from the Group's desire to continually expand its analysis capabilities on glass bottles for the pharmaceutical industry, thus laying the foundations for the

constant performance evolution of its products. To do this, it was essential to expand the range of analytical instruments available and to promote the development of in-house scientific knowledge.

This led Bormioli Pharma to turn to Imem-CNR, a prestigious research centre located on the University campus in Parma. Thanks to this collaboration, which has already enabled the development of various research topics, Bormioli Pharma will have access to the most advanced analytical instruments, such as electron microscopes, mass spectrometers and gas chromatographs.

In particular, the five-year agreement allows Bormioli Pharma to benefit from the exclusive use of a research center housed at IMEM-CNR headquarters. It also guarantees the possibility of using all the analysis tools available at national level in the CNR network. On its side, Imem-CNR, as its statute states, has the possibility of developing specific research projects alongside the company.

GMP&A: Your press release talks about 'analyses on the chemical-physical characteristics of its glass bottles' and research to identify 'alternative formulations and special surface treatments'. What will this research lead to?

Bormioli Pharma: The research will allow the achievement of innovative performances across all the characteristics of Bormioli Pharma's glass containers, in order to be able to foresee the important challenges of the pharmaceutical market in terms of resistance, chemical-physical stability, machinability and compatibility with the latest generation of pharmaceutical formulations.

GMP&A: Could it be implemented in other types of glass containers? If so, which ones?

Bormioli Pharma: In the new research centre, all analyses will specifically target glass bottles for the pharmaceutical industry. It is possible that, in the future, this research and its outcome may also be implemented in glass containers for other uses.

GMP&A: You also mention the 'development of a new generation of glass bottles' through a PhD grant. Who is this grant dedicated to and how will the development of bottles evolve?

Bormioli Pharma: Both Bormioli Pharma and Imem-CNR will provide 50 per cent funding for the PhD scholarship, that will involve a PhD student from the Imem-CNR network. The research project will start in November 2020 and will cover different aspects of bottle characteristics; the analysis results will guide the progress of the research project. As of today, it is not possible to predict how the development of the bottles will evolve, but it is safe to say that they will feature significantly improved chemical neutrality, impact resistance and in-line performance, compared to any solution on the market today.

COMPANY DEVELOPMENTS

Glass Platform

Bormioli Pharma has a total annual production capacity of over two billion glass containers. More than 150 million of these are also fully compatible with the stability requirements associated with the various types of vaccine, in particular those against the Covid-19 Virus.

Bormioli Pharma has four plants dedicated to the production of glass containers, with over 600 employees: two of which are in Italy, in San Vito al Tagliamento (Pordenone) and Bergantino (Rovigo), and two in Germany, in Altenfeld (Thuringia) and Bad Koenigshofen (Bavaria).

KEY PEOPLE AT BORMIOLI PHARMA

Andrea Lodetti – CEO

Andrea Lodetti was appointed CEO of Bormioli Pharma in March 2018. In 1996 he graduated in Aeronautical Engineering at Politecnico di Milano and then obtained an MBA in Economics and Administration at Bocconi University. He began his career as an engineer for aeronautical production companies, such as Alenia Aeronautica, Fairchild Dornier and Pilatus Aircraft, gaining international experience in Italy, Switzerland, and Germany. He then joined the international consulting firm Bain & Company, where in 2008 he began his managerial career. Before joining Bormioli Pharma, he was managing director of Ceramiche Richetti S.p.a., a group then listed on the Italian Stock Exchange. In this role, Lodetti was responsible for a crucial organizational and financial restructuring project. Previously, he had been COO of Snaidero Cucine from 2010 to 2015 and CEO of the German subsidiary Rational Einbauküchen, achieving remarkable results throughout his executive positions.

Andrea Sentimenti – Marketing & Innovation Director

Andrea Sentimenti was appointed Marketing & Innovation Director of Bormioli Pharma in September 2019. Prior to joining Bormioli Pharma, he was Executive Vice President and Global Marketing Director of Vibac Spa. Previously, he had been Chief Marketing & Strategy Officer of Gruppo Fabbri Vignola S.p.a. for more than 10 years.

He obtained a master degree in Applied Physics and Nanotechnology at the University of Bologna and a Master in Business Administration at Bologna Business School.

Davide Faverzani – Head of Engineering

Davide Faverzani is Head of Engineering at Bormioli Pharma and has personally supervised the development of the Glass Research Centre project with IMEN-CNR.

Previously, he had been Technical Director Glass and Plastic for more than two years and prior to that he had held other important roles in the company, including European Project Manager Hot-End Department and R&D. ■