

Structural proteins for the development of sustainable materials: BRAIN Biotech and AMSilk cooperate to develop high-performance bio-based protein fibers

Zwingenberg/Neuried, February 8, 2023 – Creating a better future with biotechnology – this vision is shared by BRAIN Biotech AG (BRAIN Biotech), a leader in the development and manufacture of bio-based solutions and products for industry, and AMSilk GmbH (AMSilk), the world's first industrial supplier of innovative biomaterials for more sustainable applications in the textile, medical and consumer goods industries. As part of a strategic collaboration, BRAIN Biotech and AMSilk are combining their expertise to drive the development of high-performance fibers for the performance materials market.

Bio-fabricated products hold enormous potential as sustainable material solutions for the future. New developments, such as those currently being developed by BRAIN Biotech and AMSilk, could revolutionize the performance materials market. Petroleum-based textile fibers made of polyethylene or polyamide, well known to be a main source of microplastics as well as causing the unsustainable disposal of old clothes in landfills.

AMSilk produces biotechnological materials based on renewable carbon structural proteins that are not only fully recyclable, but also 100% biodegradable and contain no microplastics. Due to their exceptional mechanical as well as biochemical properties, these biomaterials are extremely versatile and therefore particularly attractive for use in a wide variety of applications including the apparel, medical and automotive industries, among others.

To expand its protein technology platform to further markets and applications, the Company is now drawing on the expertise of BRAIN Biotech. The aim here is to further optimize specific properties of the structural proteins for various high-performance-oriented fields of application in the textile sector.

Dr. Alexander Pelzer, Head of Research & Development at BRAIN Biotech's Zwingenberg site, emphasizes: “In this collaboration, our protein engineering experts are once again demonstrating their capabilities in protein development, especially in particularly challenging tasks that require novel approaches. Our protein optimization

technologies, based on rational sequence- and structure-driven design, have already proven themselves in many optimization processes. Our enzyme technology unit will further develop these structural proteins in close collaboration with AMSilk to achieve the desired properties for higher-performance fibers.”

Dr. Andreas Schmieder, Head of Business Opportunities & Development at AMSilk, said: “AMSilk's bio-fabricated fibers have immense potential, as the underlying structural proteins can be modified at the molecular level. This makes it possible to tailor products to meet specific market requirements. We believe we have found the optimal technology partner for the expansion of our protein platform in BRAIN Biotech. In addition to BRAIN's excellent expertise in protein development, the shared purpose of AMSilk and BRAIN – to create a sustainable future through bio-based solutions – in particular enables an inspiring and successful collaboration.”

About AMSilk

AMSilk GmbH ("AMSilk") is the world's first industrial supplier of vegan silk proteins and is based in Neuried/Munich, Germany. Through a patented biotechnological process, these silk proteins are used in application forms such as powders, hydrogels, fibers and coatings, giving the resulting products unique properties. Among other things, the materials are not only particularly robust, but also especially environmentally friendly in that they are biocompatible and fully biodegradable. Learn more at www.amsilk.com.

About BRAIN Biotech

BRAIN Biotech AG ("BRAIN Biotech") is a leading European specialist in industrial biotechnology with a focus on nutrition, health and environment. As a technology and solution provider, the company supports the biologization of industry with biobased products and processes. From contract research and development with industrial partners to the development of own disruptive incubator projects and customized enzyme products: BRAIN's broad, innovative biotech know-how and its agile teams are the key to its success.

The German BRAIN Biotech AG is the parent company of the international BRAIN Group, which distributes B2B specialty products, including enzymes and bioactive natural products. The BRAIN Group has its own fermentation or production facilities in continental Europe, the UK and the USA, which, together with the associated biotechnological production know-how, complete the value chain within the Group.

As a participant in the United Nations Global Compact, BRAIN Biotech AG is committed to aligning its strategies and activities with universal principles on human rights, labor, the environment and anti-corruption, and to actively promote common social goals. Our products and services directly target at least five of the UN SDGs.

Since its IPO in 2016, BRAIN Biotech AG has been listed in the Prime Standard of the Frankfurt Stock Exchange (ISIN DE0005203947 / WKN 520394).

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Forward-looking statements are not guarantees of future performance and involve known and unknown risks and uncertainties. The actual future results of BRAIN Biotech AG and the BRAIN Group and developments concerning BRAIN Biotech AG and the BRAIN Group may therefore differ materially from the expectations and assumptions expressed herein due to various factors. These factors include, in particular, changes in the general economic situation and the competitive situation. In addition, developments on the financial markets and exchange rate fluctuations, as well as national and international changes in legislation, particularly with regard to tax regulations, and other factors may have an impact on the future results and developments of BRAIN Biotech AG.

BRAIN Biotech AG assumes no obligation to update the statements contained in this release.