

PANGAIA and Avantium partner to bring sustainable apparel collection based on Avantium's 100% plant-based PEF to the market

AMSTERDAM, 29 November 2023, 18:00 hrs CET – Avantium N.V., a leading technology provider in renewable chemistry, announces that it will partner with PANGAIA, a purpose-driven materials science and apparel company. Under this partnership, PANGAIA will purchase Avantium's plant-based and recyclable material PEF (polyethylene furanoate) for use in their apparel collection with the goal of creating fossil-fuel free and recyclable materials and products. PEF is made from FDCA (furandicarboxylic acid), which will be produced in Avantium's FDCA Flagship Plant. This world's first commercial facility for FDCA is currently under construction in Delfzijl (the Netherlands), and large-scale production is set to start in the second half of 2024.

Avantium's PEF is a 100% plant-based polymer with a wide range of applications such as bottles and packaging, films and textiles. Over the past year, Avantium has increased its focus on the development of PEF for fibres and yarns, which can be used in different applications including fashion. PEF-based fibres can replace PET fibre, which accounted for ~54% of global fibre production in 2021¹ (60.5 million tonnes). PEF fits current polyester infrastructure for both production and recycling; presenting a scaleable future for renewable alternatives to fossil-fuel derived PET. PEF-based fibre has a significantly lower carbon footprint compared to fossil-fuel based synthetic fibres, and can also be recycled in existing assets.

Consumers are making more and more conscious choices when it comes to their apparel purchases and this offers a promising market opportunity for plant-based alternatives, including PEF.

PANGAIA, a certified B Corporation², brings problem-solving innovations to the world through its premium lifestyle products. As part of its Positive Earth philosophy, PANGAIA is committed to embracing a future where renewable outputs are prioritised, minimising its reliance on fossil fuels. As PANGAIA prioritises a transition to preferred materials, it sees this development as a significant step towards improving its synthetic portfolio as a brand. PANGAIA Collective comments: "PANGAIA has a huge emphasis on identifying innovation opportunities that help us replace conventional fossil fuel-based materials with materials that utilise renewable feedstocks. Feedstocks tackle one part of the puzzle however and only by producing these at scale and building into circular business models do they really create impact, which is what Avantium is on a mission to do. By working with Avantium and their PEF material there's incredible scaling potential to utilise PEF across a range of product categories which has led us to this partnership agreement. We look forward to introducing this innovative material once Avantium's Flagship Plant is operational."

"We are pleased to partner with PANGAIA, a leading innovator in the materials and fashion industry, enabling consumers to wear PEF-based clothing. Together we will demonstrate that PEF-based clothing has great potential to play a key role in reducing the fashion industry's impact on the

¹ Textile Exchange, Preferred Fiber & Materials Market Report 2022.

² Certified B Corporations, or B Corps, are companies verified by B Lab to meet high standards of social and environmental performance, transparency, and accountability.

climate. We look forward to our continued collaboration with such an innovative brand and to supporting PANGAIA's strong sustainability journey in the coming years. It will be truly exciting to see consumers wearing PANGAIA's PEF-based sustainable fashion in the future," said Tom van Aken, CEO of Avantium.

About PANGAIA

PANGAIA is a purpose-driven lifestyle company bringing problem-solving materials science innovations to the world. We are a global collective of one heart and many hands - scientists, technologists, designers – using nature's intelligence to create apparel from innovative tech and bio-engineered materials powered by nature.

Our vision is to inspire and accelerate an earth positive future. Every product we create is born from science and purpose, each solving an environmental problem of the industry. From the materials we use to the colors we create, we are committed to protecting and preserving nature, pioneering and using materials that consider the delicate balance between planet, functionality and purpose.

About Avantium

Avantium is a leading technology development company and a frontrunner in renewable chemistry. Avantium develops and commercialises innovative technologies for the production of materials based on sustainable carbon feedstocks, i.e. carbon from biomass or carbon from the air (CO₂). The most advanced technology is the YXY® Technology that catalytically converts plant-based sugars into FDCA (furandicarboxylic acid), the key building block for the sustainable plastic PEF (polyethylene furanoate). Avantium has successfully demonstrated the YXY® Technology at its pilot plant in Geleen, the Netherlands, and has started construction of the world's first commercial plant for FDCA in 2022, with planned large-scale production of PEF in 2024. The second technology is Ray Technology™ and catalytically converts industrial sugars to plant-based MEG (mono-ethylene glycol) and plant-based MPG (mono-propylene glycol): plantMEG™ and plantMPG™. Avantium is scaling up its Ray Technology™ and the demonstration plant in Delfzijl, the Netherlands opened in November 2019. Avantium's Volta Technology uses electrochemistry to convert CO₂ into high-value chemical building blocks and sustainable plastic materials, including PLGA (polylactic-co-glycolic acid). Avantium also provides R&D solutions in the field of sustainable chemistry and is the leading provider of advanced catalyst testing technology and services to accelerate catalyst R&D. Avantium works in partnership with like-minded companies around the globe to create revolutionary renewable chemistry solutions from invention to commercial scale.

Avantium's shares are listed on Euronext Amsterdam and Euronext Brussels (symbol: AVTX). Avantium is incorporated in the Euronext Amsterdam SmallCap Index (AScX). Its offices and headquarters are in Amsterdam, the Netherlands.

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