



AM SILK

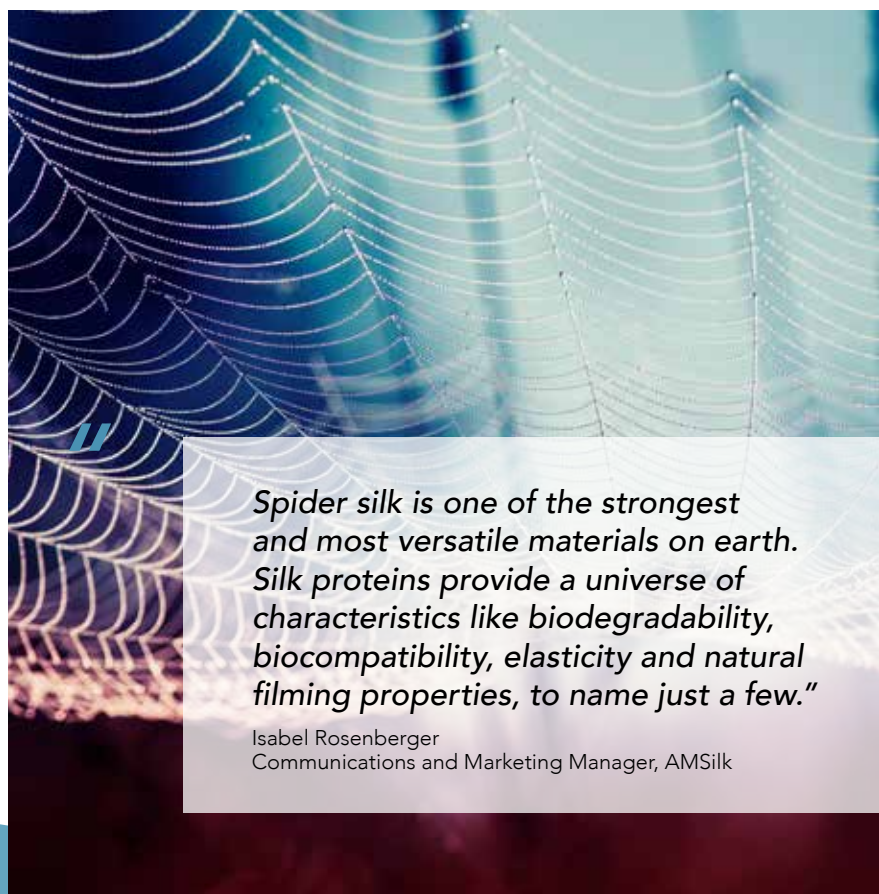
REDUCED TIME TO MARKET

AMSilk GmbH, headquartered in Neuried on the southwestern outskirts of Munich, was founded in 2008 as the world's first industrial supplier of biotech-produced materials based on silk proteins.

Because of its attractive properties, numerous attempts have been made to scale up spider silk production, such as farming them. Unfortunately, none of these have proven feasible.

Until AMSilk approached the domain in an entirely different way by using biotechnology.

By programming material properties at a molecular level, AMSilk turns man-made proteins into silk formulations, including fibres and yarns for textile applications, but also as sprayable formulations, hydrogels, and silk powder for medical use or consumer goods. AMSilk thus makes the superior characteristics of silk molecules available for endless applications that can benefit mankind.



Spider silk is one of the strongest and most versatile materials on earth. Silk proteins provide a universe of characteristics like biodegradability, biocompatibility, elasticity and natural filming properties, to name just a few."

Isabel Rosenberger
Communications and Marketing Manager, AMSilk



// We can customise the silk proteins according to the final application or properties required. That's how we can deliver intelligent bio-fabricated materials – based on renewable raw materials, biodegradable, fully recyclable, with a lower carbon footprint, and superior performance to the petroleum-based, animal-based or other natural alternatives.

Gudrun Vogtentanz
Chief Scientific Officer, AMSilk

PAPER NOTEBOOKS AND EXCEL SPREADSHEETS

Given the unlimited, advantageous applications and increasing demand for man-made silk, AMSilk runs a comprehensive laboratory operation.

"We work with our clients on customising the proteins for their specific applications," says Gudrun Vogtentanz, "but we also steadily improve production scalability, increasing volume and lowering unit costs. Thus, we are a very research and lab-intensive company."

// The company had grown rapidly. Processes were heterogeneous and paper-based, while data was stored in Excel files linked to the individual projects. I found that the time was right for a unified solution that streamlined processes and made data more easily accessible across projects and applications.

Michael Hösl
Senior Manager Process Development, AMSilk

When Michael Hösl joined AMSilk in 2023 as a senior manager for process development, he saw an opportunity to improve laboratory productivity and increase staff working conditions simultaneously.

"The company had grown rapidly," says Michael Hösl. "Processes were heterogeneous and paper-based, while data was stored in Excel files linked to the individual projects. I found that the time was right for a unified solution that streamlined processes and made data more easily accessible across projects and applications."

Michael Hösl wrote a business case for the initiative and convinced the CFO that the investment was worthwhile. While it was difficult to calculate precisely how fast the investment would be paid back, the return should be months rather than years.

Given the green light, Michael Hösl scanned the market. After comparing the solutions identified with the requirements, AMSilk decided to run a pilot project with Scifeon.

"We knew that Scifeon was a new player on the market," says Michael Hösl. "However, we liked their product vision, their offering had most of the functionality we needed, and their references were relevant and positive. They were also very accommodating in including new features in their development plan based on our input."

The two-and-a-half-month pilot went well, so AMSilk decided to roll-out the system fully. Twenty-four users are currently on the system, and the remaining sixteen will be onboarded at the beginning of 2025.



THE SOLUTION

With Scifeon, AMSilk has a fully transparent digital representation of all laboratory processes and data. The system enforces proper indexing, tagging, and categorising experimental data, protocols, results, and metadata. It also avoids duplication of effort by allowing multiple users to access and contribute to shared datasets.

Scifeon provides tools for data retrieval, making it easy to locate specific information quickly. Having all data available across projects reduces the risk of errors associated with manual data entry, transcription, or loss of physical records. AMSilk uses the system's version control, ensuring all users work with the most recent and accurate

data. It also enables audit trails to track data changes, ensuring transparency and reliability.

The platform dramatically increases the value of information and enables researchers to access data from any connected device. Thus, seamless collaboration across teams, departments, and geographically dispersed locations is accommodated.

In short, the platform enhances transparency, minimises the effort required for project administration and turns data into valuable information assets.

"One of the huge advantages of Scifeon is its support for modular bioprocess design centred around precision fermentation," says Michael Hösl. "The system can handle the processes and data



associated with the preparation of culture media, selection, optimisation of microorganisms, and scale-up, as well as the extraction, purification, and formulation of the desired product."

SEAMLESS IMPLEMENTATION AND HAPPY COLLEAGUES

The implementation of the pilot project and the full-scale roll-out were completed according to plan without any surprises or delays.

"I have done other ELN implementations", says Gudrun Vogtentanz, "and Scifeon was by far the most seamless."

Introducing new systems requires new working methods, which can be burdensome for busy people. The team responsible for implementing the Scifeon-based platform praises the product's user-friendliness, contributing to its swift acceptance by the laboratory staff.

"The close match between AMSilk's requirements and Scifeon's functionality is the main reason why the implementation was without major hiccups," says Michael Hösl, "But Scifeon's responsive support and the product's user-friendliness also deserve recognition."

// *With Scifeon, we've streamlined and digitalized these essential processes and data management tasks. This allows our team to focus on what they're passionate about and enhances our overall efficiency and capacity.*

Gudrun Vogtentanz
Chief Scientific Officer, AMSilk

GEARED FOR GROWTH

AMSilk is better prepared for the growing demand for its expertise and products by investing in new processes and digitally transforming laboratory workflow and data management.

"Our researchers and laboratory staff aspire to dedicate their time to product- and client-focused challenges, rather than being bogged down by Excel sheets and paper-based bureaucracy," emphasises Gudrun Vogtentanz. "With Scifeon, we've streamlined and digitalized these essential processes and data management tasks. This allows our team to focus on what they're passionate about and enhances our overall efficiency and capacity."

Introducing Scifeon reduces the time required to get a new product or application to the market.

