According to the United Nations, over 800 million people went hungry in 2016, and with the global population expected to reach nearly 10 billion by 2050, global food supplies are under increasing strain, especially at a time when the climate emergency is putting the sustainability of meat production under the spotlight.

Polish start-up, NapiFeryn BioTech, aims to play their part in the solution to this most visceral of challenges.

Approximately 18 million tonnes of rapeseed is produced per year, primarily for the oil extracted from the crop. A by-product, known as rapeseed cake, is also produced, but despite the high protein content of this by-product, it is typically only used for animal feed due to the difficulties human beings have in digesting it in its natural form.

NapiFeryn’s technology extracts food-grade protein from rapeseed cake so that it can be a viable alternative to both meat- and soy-based proteins. The system is able to extract, purify and isolate the proteins in the oilseed for use in food. The company has a patent on the extraction process, with additional patents on the purification process also in the pipeline.

The idea for the technology came from a project at a previous employer on “proteins for the future”, and the idea for alternative sources of protein was born. They are confident that the protein from rapeseed, which they call ‘Raptein’, could eventually surpass soy as the dominant plant-based protein on the market. This is because rapeseed proteins have much more interesting technological properties compared to soy proteins, such as solubility, emulsifying capacity or their foaming capacity.

The company works with rapeseed producers and other stakeholders in the food value chain, licensing their technology to help partners extract more value from their produce. This process of finding and working with industry partners was greatly helped in 2016 when the Polish Academy of Sciences recommended they join the the RisingFoodStars network.

The opportunities for networking began almost immediately, and the company instantly began discussions with industry players about potential partnerships to develop the technology and bring it to market.

‘EIT Food supports partners in one year impactful innovation project close to the market, where they can work together,’ Magdalena Kozlowska CEO of NapiFeryn said. ‘We have been invited to two innovation projects so far and they’re a great opportunity to work with partners from across the European Union.’

As well as EIT Food actively facilitating connections for partnerships, there are also clear reputational benefits from being part of the EIT network when it comes to brokering partnerships independently.

‘Oh absolutely yes, I can see that organisations outside of the EIT see the RisingFoodStars membership as a seal of quality, as it means we’ve been validated by the experts within the EIT Food network,’ Kozlowska said.

The ability to forge these networks is the key piece of advice Kozlowska would pass on to budding entrepreneurs, as it’s impossible to achieve anything at scale without working closely with the ecosystem of industrial, governmental, academic and financial partners. The European Union has been a key ally, not only in providing initial funding to help develop what is a capital intensive technology, but also in helping to scale the technology and develop relationships across the continent.

The company is still in the pre-commercialisation phase, and will need all of those partners to work together to ensure the technology makes it out of the lab and delivers on its clear potential. A global go-to-market partner is being chosen to bring the rapeseed proteins to the food and beverage manufacturing sector, with the aim of ensuring Europe’s lead in the oilseed market continues.

Website: www.napiferyn.pl/

Country: Poland