

# 30 Years of Megazyme:



## Innovation in Analytical Technology

Think Quality • Expect Excellence • Choose Megazyme

1988



1996



2005



**With state-of-the-art laboratories and a new training facility opened in 2017, it's hard to imagine that Megazyme - a pioneering two-acre R&D centre based in Ireland - started life in a garage on the outskirts of Sydney.**

That was in 1988, when Megazyme's co-founder, Prof. Barry McCleary, left his job as a principal research scientist for the New South Wales Department of Agriculture - a dream job by any standards. So what happened? In true entrepreneurial fashion, necessity was the catalyst for the creation of Megazyme.

"Every time I went to do some research I realised that the methods were archaic," Professor McCleary explains. "Methods in the cereals-based industries were not keeping up with analytical methodology in any other field, so I needed to develop the methods before I could do the research."

Barry went on to publish papers on these methods, only to discover a much greater appetite for the methods than the actual research he was doing. There was, he quickly realised, a promising commercial opportunity at stake.

### **Beginnings: from garages to garlands**

While Megazyme got underway, Barry consulted for five different biotechnology/cereal giants and invested everything he earned into buying the necessary equipment..

"I had no money coming in to begin with, so I set up in my two garages," Barry recalls. "I purchased a high-speed centrifuge, gas liquid chromatograph and other equipment from consultancy income. I had the best-equipped garages in the suburb, that's for sure!"

In those early days Megazyme developed products related to cereals and agricultural areas only - areas where analytical methodology was decades out of date. This work remains a core part of what the company does today.

By 1993, Megazyme had grown to four people and was very much a flourishing small business. With the company finally

moving out of the garages and into a local factory unit, Barry's mother-in-law suggested he put the business forward for the New South Wales Small Business of the Year Awards. The team won two awards: the award for manufacturing and the overall state award.

"I just couldn't believe that it happened," recalls Barry. "It was a game-changing moment for the company. It gave us great confidence in what we were doing - that it was a good business plan."

### **Ireland's call**

Three years later he moved the business to Ireland - a decision that made sense for both personal and business reasons.

"The Irish government was offering a lot of support to new businesses, and it made sense to be situated in the same time zones as our clients." Amazingly, the company made the change from Sydney to Bray, Ireland, over a single weekend.

The first factory was finished in early 1997 and took up an area of 10,000 square feet, but by 2002 the team had already outgrown the space and the tools available. Three



2013-14



2015



2017



further facilities, totalling an additional 40,000 square feet, have since been built.

"Our growth was restricted by the availability of enzymes - the biological catalysts we needed to develop our kits. So, I invested in a Molecular Biology Division that allowed us to produce essentially any enzyme we needed."

### New departments, new horizons

Diversification has been the theme for Megazyme's growth. While the core product services have remained the same, the company has expanded into new sectors - becoming the industry standard along the way.

"We've been at the forefront in the development of new methodology for the measurement of enzymes fundamental to cereal and food processing."

"This has involved production of highly purified polysaccharides, and chemically modified polysaccharides. Our tests have been the industry standards for over two decades," explains Barry. "And, more recently, in the synthesis of novel, well-defined, colourimetric oligosaccharide substrates for measurement of the key enzymes involved in biomass conversion."

Today you'll find a whole host of food items that are directly impacted by Megazyme's testing kits - and at varying points of the manufacturing cycle, too, such as grain harvesting.

"This has been a major research initiative," explains Barry. "Too much rain at the time of grain harvesting means that  $\alpha$ -amylase accumulates and that flour from that grain can't be used for baking. Our new testing allows automated measurement of this enzyme in plant breeding programs and in the field at grain collection."

The new  $\alpha$ -amylase test is just one of over 600 different products that the company has developed, and the team is making great strides in test technology across industries as diverse as infant formula, animal feed, nutraceuticals and winemaking.

"We continually update and improve our traditional test kits. We've even forged an alliance with a US instrument manufacturer, Awareness Technologies, so that we can offer our customers the complete solution: exceptional reagents with possibilities for automation."



### Looking ahead: training facility and ongoing research

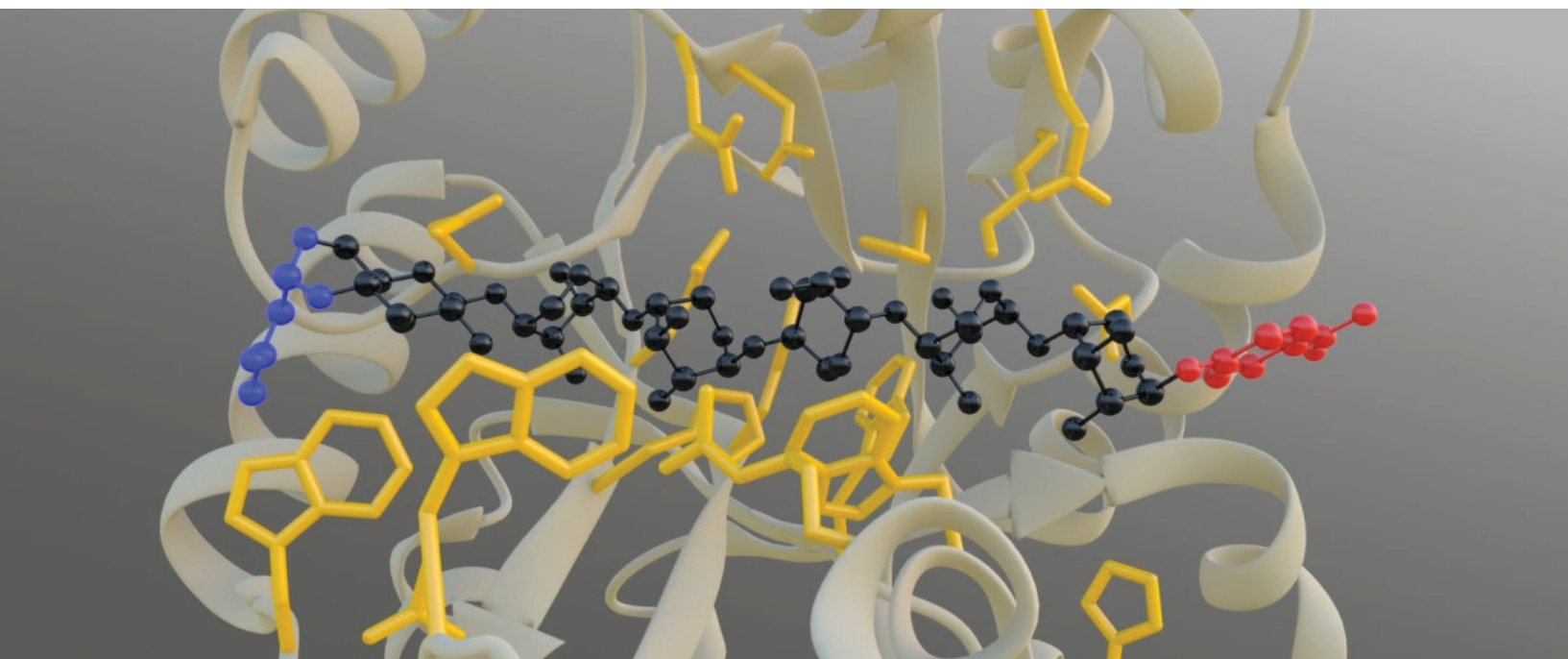
To keep developing, Barry invests heavily in R&D; 15% of the company's annual turnover goes back into research, and huge investments are made in production equipment. The team has grown to 50 and a satellite office was set up in 2015 to serve Megazyme's US customer base.

Barry is incredibly proud of his crew of scientists and administrative staff. He puts his incredible staff retention rate down to keeping his team engaged, supported and well remunerated. As for Barry, he believes his skills lie in "seeing the bigger picture" in the fields in which Megazyme operates.

"This insight comes from reading scientific literature, attending relevant conferences and becoming involved in discussions, and finally, being able to relate current research to needs that have been identified and are still relevant today."

"There are challenges that Megazyme couldn't address five to 10 years ago, which we can now look at. That's incredibly exciting."

*Adapted from 2017 case study in 'Winning Business: What Europe's best businesses look like', RSM 2017.*



# Megazyme

[www.megazyme.com](http://www.megazyme.com)