

PYC Therapeutics says COVID vaccines are putting RNA on the map

Danielle Le Messurier | The West Australian
Wed, 1 September 2021 8:59AM | [+](#)



 PYC Therapeutics Australia CEO Dr Rohan Hockings and Chief Scientific Officer Professor Sue Fletcher. Credit: Justin Benson-Cooper/The West Australian



The buzz around mRNA vaccines to protect against COVID-19 is bringing greater awareness to the work of Perth-based PYC Therapeutics.

But the development-stage biotechnology company is still struggling to bridge a gap between the understanding of life sciences in the US and Australia that is proving a barrier to investment and growth.

PYC's market capitalisation has jumped fivefold in the last few years – sitting at \$477.13 million today – with much of the success driven by the hiring of Perth medical researcher and respected RNA therapeutics pioneer Sue Fletcher.

Professor Fletcher and colleague Steve Wilton created a pioneering world-first treatment for a fatal childhood muscle-wasting disease, Duchenne muscular dystrophy, which was given accelerated approval by the US Food and Drug Administration in 2016.

After first listing in March 2005 as a fee-for-service company called Phylogica, PYC rebranded in 2018 when it pivoted to start developing its own drugs.

It brought on chief executive Australia Dr Rohan Hockings at the time and Prof Fletcher in 2019, officially appointing her chief scientific officer the following year.

Prof Fletcher said the hype around mRNA or “messenger” RNA vaccines, which teach cells how to make a protein that triggers an immune response, had been a boon for PYC.

PYC is initially using its technology to treat two rare inherited eye diseases that cause progressive vision loss – retinitis pigmentosa type 11 and autosomal dominant optic atrophy – but plans to eventually apply it to the central nervous system.

Its two lead drug candidates to address the eye conditions, VP-001 and VP-002, will continue undergoing safety testing until about the middle of next year before starting human clinical trials with the Lions Eye Institute.

“If you think of the gene as being the hardware and the RNA as being the software, we’re modifying the software that provides the instructions for building proteins and cell components,” Prof Fletcher explained.

PYC in June established a new US headquarters to better reach partners and investors in the well-established American life sciences market. The sector consists of biotech, pharmaceuticals and other companies that create products to improve the lives of people.

Dr Hockings said that as a pre-clinical company with a sizeable market cap, PYC was considered expensive in Australia and cheap in the US.

He said this was because US investors understood that for “precision medicine” companies like PYC – which seek to control the cell from the inside – the chance of success is about seven times higher than for conventional drug development pathways.

PYC’s drug discovery and laboratory operations remain in Perth at the Harry Perkins Institute, where the number of the company’s scientists has jumped from 25 to over 60 in the past year.

“We do like to think the buzz and the excitement and the interest around this will add weight to the push to get RNA manufacturing facilities and RNA capability in WA or in Australia more generally,” Prof Fletcher said.