Deep-tech firms spun off from NTU research are worth $820m

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Take the work of ACM Biotech, whose research aims to make more stable mRNA vaccines that can be stored in typical refrigerators, unlike the minus 80 deg C cold needed to transport and store some Covid-19 mRNA vaccines during the pandemic.

It is trying to achieve this by developing a way to contain the mRNA in polymer to deliver to the cells, rather than with the tiny lipid particles used now, said chief executive and founder Madhavan Nallani on Thursday.

De Nallani added: “Our delivery is not limited to just mRNA vaccines. This could become an essential component for many therapeutics that can target different organs within the human body.”

The company’s research was highlighted at Thursday’s inaugural technology roadshow by NTUitive, an NTU business incubator.

NTU said it filed 358 technology inventions and disclosures and licensed over 40 of them — up 40 per cent from five years ago. It has licensed more than 800 intellectual properties, including patents, to companies over the last decade.

Aside from the 70 spin-offs, NTUitive has also successfully incubated 260 start-ups since 2015. NTU said such start-ups are usually founded by students and alumni with a good business idea that usually may not involve intellectual property developed by the university, unlike the spin-offs.

Another spin-off featured at the roadshow was Mindsigns Health, which developed a way to analyse electroencephalogram waveforms for patients with epilepsy or life-threatening neural conditions.

Doctors can securely access and monitor these waveforms, which represent brain activity changes, in real time to follow patients’ recovery progress remotely.

Antibody company Dotope is aiming to allow numerous antibody molecules to be rapidly developed in parallel for testing as potential cancer treatments.

Said chief executive Ignacio Asial: “The process is similar to what the Housing and Development Board has done for housing in Singapore. Instead of building one building at a time, they prefabricate the components before-brick the components before-assembly into different final build-structures.

The firm, launched as an NTU spin-off in 2018, has secured US$20 million (S$13.6 million) in funding from partnering pharmaceutical firms, investors and grants.

In the securing of its latest investment... we have passed the most challenging phase of company creation and establishment, and we are gearing up for our growth phase,” Dr Asial added.