



## Translate Bio

On Aug 3, 2021 French Biopharma giant Sanofi agreed to buy the company for \$3.2 billion. We have sold the position as in our view all the good news was priced in. Translate Bio was the largest position in the Technology of the Future Fund with a 7.4% weight.

Our research note from July 2, 2021

### The company

Translate Bio is a clinical-stage US biopharmaceutical company developing new generation messenger RNA (mRNA) based vaccines to save human lives. The company's approach is to instruct cells in the body to make specific proteins that then produce an immune response. mRNA-based therapeutics are used by established COVID-19 vaccine manufacturers such as Pfizer, BioNTech, and Moderna. The key factor behind the success of mRNA technology is that it "turns on" sleeping genes.

Translate Bio and French vaccine giant Sanofi have jointly initiated a Phase 1 clinical trial evaluating an mRNA-based investigational vaccine against seasonal influenza. **Translate Bio is the only company in the world which has an mRNA-based vaccine targeting influenza under development.** Clinical trials of an experimental vaccine against COVID-19, which is also being developed together by Sanofi and Translate Bio, showed favorable immune responses in mice and monkeys against different mutations of the virus. Human clinical trials began in 2Q 2021. The company is also preparing for large-scale vaccine manufacturing. It has its own production site and is building another facility with the help of its subcontractors to increase its output.

### The market

In June 2021 French vaccine giant Sanofi announced plans to set aside around €400 million (USD 476 million) per year in research and development efforts focusing on mRNA-based vaccines. Sanofi plans to accelerate its mRNA-based vaccine portfolio, developed through its partnership with Translate Bio.

### Where our research differs from others

Our core assumption about COVID-19 is that the virus behaves similarly to influenza, and that the world will have to learn to live with it. The virus will mutate, disappear, and reappear, with different mutations. Thus, a COVID-19 "2.0" mutation might appear next year and require a different vaccine. But with each mutation, the virus will become weaker and its effects less severe.

Translate Bio is the largest position in the "Technology of the Future" fund. We considered the following when making a large, focused bet on the company:

1. The risk/reward ratio is very compelling.
2. The mRNA method is well understood, and the overall costs are low. Sanofi has effectively confirmed the validation of the method and the technology. The pricing of the vaccines can be very competitive.
3. Translate Bio has an industrial base and the scale to produce enough drugs to cover the whole US population within 12 months if the COVID 19 vaccine is successful.
4. Despite the high competition in the COVID-19 vaccine market, the company offers a unique mRNA segment approach in producing a COVID vaccine. Other companies using mRNA technology for COVID vaccines include Moderna and Pfizer.



We think the company is a disruptor and is an acquisition target.

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**M.I. Achkasov & Co**

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