# More manufacturing and a more complete workflow

#### Aseptic filling -----

(Vanrx Pharmasystems, acquired by Cytiva in February 2021) Drug product aseptic filling solutions which automate the preparation of small batches of biologic medicines, well suited to the manufacture of cell and gene therapies.

### **Expanded hardware** manufacturing, US

(Announced by Cytiva in December 2020) Shrewsbury, Massachusetts build completed in less than five months.

#### **Digital simulations** · · · ·

(GoSilico, acquired by Cytiva in June 2021) Mechanistic modelling software can create "digital twins" which simulate downstream bioprocessing steps for more efficient chromatography work and drug manufacturing process development.

#### **Increased capacity for liquid** cell culture media

(Intermountain Life Sciences, acquired by Cytiva in June 2021) A fully-operational manufacturing site in Logan, Utah will rapidly boost liquid cell culture production by millions of liters.

**Additional single-use** manufacturing

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manufacturing facility, US

(Announced by Pall Corporation in April

2021) in South Carolina, to manufacture single-use bioprocessing technologies.

(Austar joint venture, fully acquired by Pall in March 2021) Additional single-use technology manufacturing capabilities in China to help meet need for regional vaccine manufacturing, driven by COVID-19.

(Precision NanoSytems, acquired by Pall in June 2021) Manufacturing and development of lipid nanoparticles for the delivery of genetic medicines, including mRNA vaccines and therapeutics.

## **Developing genomic medicines**

### **Global capacity expansion**

(Announced by Cytiva in September 2020) 500 million USD pledged over five years to expand Cytiva's global manufacturing capacity.

(Exothera, announced by Pall in July 2021) Manufacturing partnership enables suspensionbased manufacture of gene therapies and viral vectorbased medicines.

**Manufacturing** 

new modalities