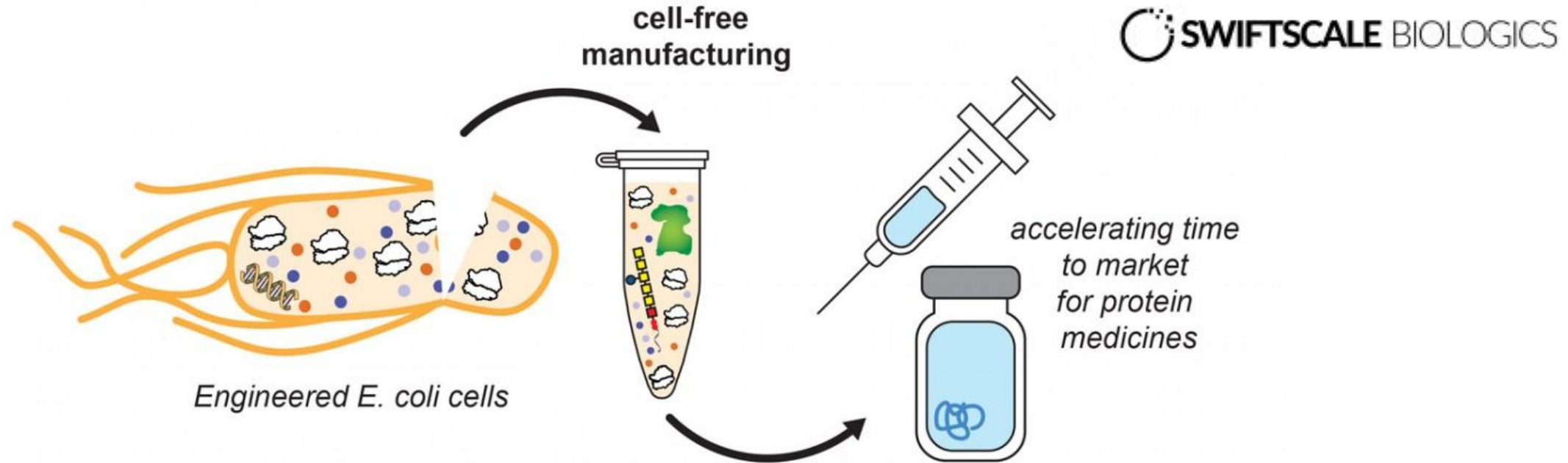




# ABPDU Scale-Up Supporting the Fight Against COVID-19

**Deepti Tanjore, PhD**  
**Director, ABPDU**  
**May 7, 2020**

# Project #1: Cell-Free Antibody Manufacturing



- Bay area startup founded in 2019
- Using innovative cell-free platform to accelerate the timelines for antibody production
- ABPDU will generate cell-pellets for Swiftscale to optimize biocatalysis process

# ABPDU Project #1: Scale up Strategy

Cryoculture  
from  
Swiftscale  
Biologics



1 mL



Seed  
1



100 mL



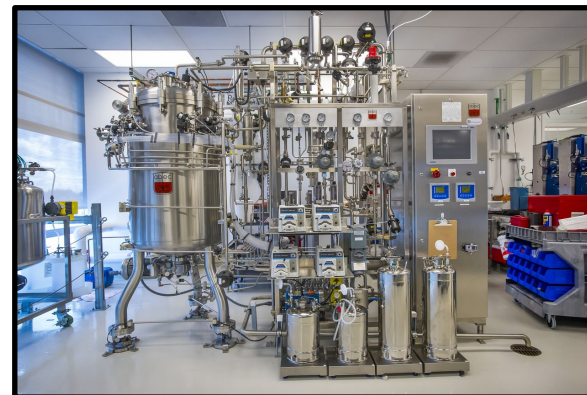
Seed 2



10 L



Large-Scale  
Fermentation



300L



Separation



Centrifuge



1-week process to deliver cell pellets for cell-free biocatalysis



# ABPDU Project #2: Enzymes for Rapid SARS-CoV-2 detection

- **Caspr Bio:**

- Founded in 2018 for rapid Zika virus detection
- Proprietary CRISPR-Cas12 platform
- **Rapid results**, minimal training and equipment

- **ABPDU role:**

- Produce and purify Cas12 enzyme to accelerate testing and deployment of diagnostic kits



**Ambr 250 process development**



**10L fermentation**



**Protein purification**

How do we minimize COVID-19 exposure?

- **Safety training:** BE-0200, “ABPDU COVID-19 Exposure Prevention”
- **Minimally staffed:** no affiliates, only critical projects, necessary personnel only
- **Social distancing:** always 6 ft. apart (applies to hallways, cubicles, all lab rooms)
- **PPE:** cloth masks always required , gloves in lab, wash hands before/after lab
- **Close-proximity tasks:** trained personnel, full-face respirator, mask on exhaust