

# IBioIC Bioprocessing Scale-up Centres



## RapidBio Facility Bioprocess Scale-up & Culture Improvement

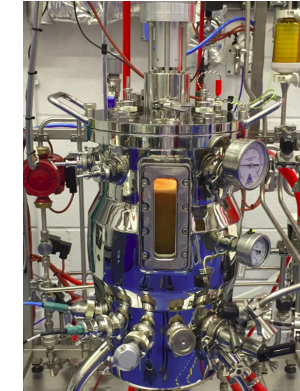
RapidBio, Glasgow



Hosted at University of Strathclyde, Glasgow

- Culture and media improvement through process scale-down, cell-line selection and optimisation (up to 2L)
- In-process analytical services
- Harnessing the innovation of our technical network to improve your process efficiency

## FlexBio Facility Optimising Scale-up of Upstream and Downstream Bioprocesses FlexBio, Edinburgh



Hosted at Heriot-Watt University, Edinburgh

- Offers scale-up of **upstream and downstream bioprocesses** using equipment at semi-pilot (up to 30L) scale
- Specialising in various microorganisms such as yeast, bacteria, algae and plant cells
- Professional and cost-effective service with access to discounts for SMEs to help scale your process from mL's to litres



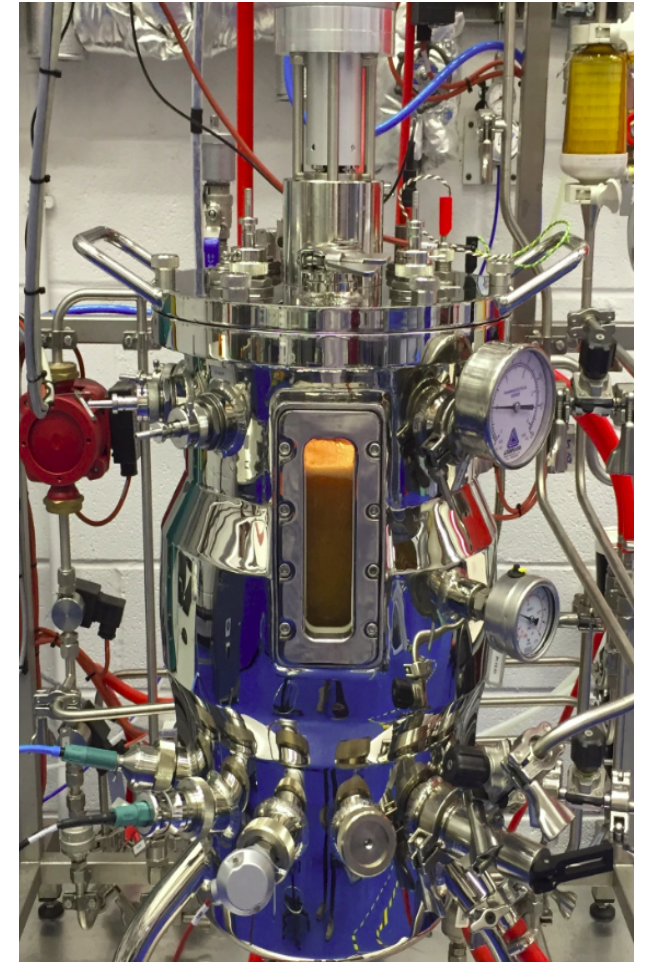
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# Bioprocessing Scale-up Centres



## FlexBio





# Bioprocessing Scale-up Centres



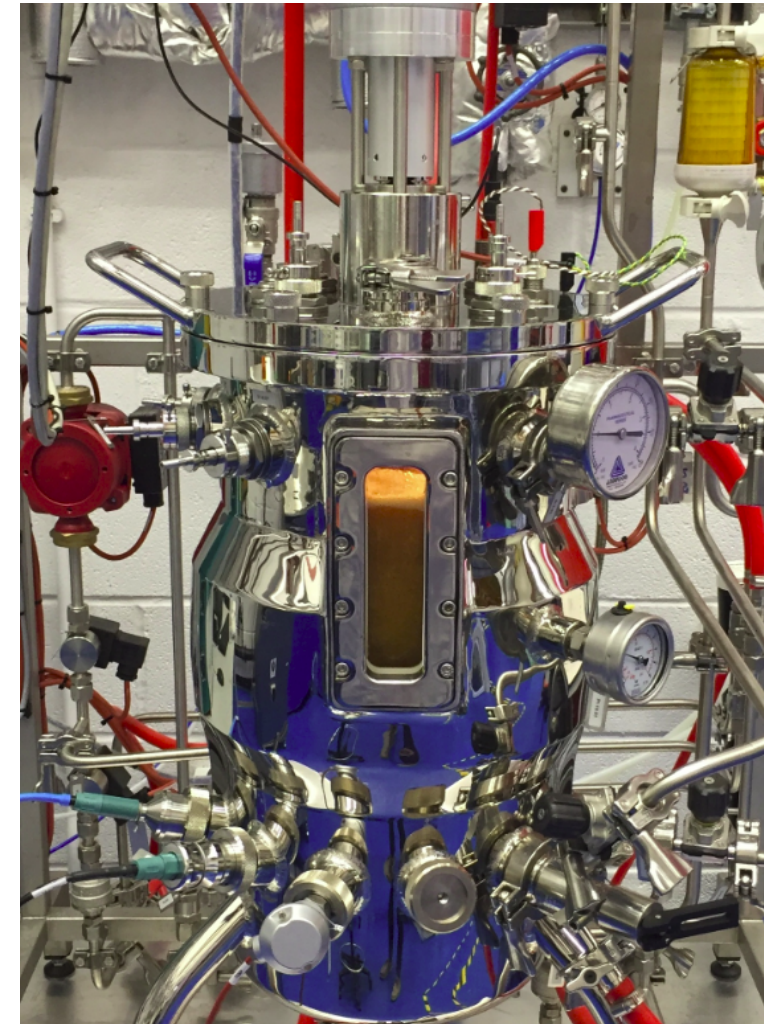
## FlexBio

### Layout (total: 127 m<sup>2</sup>)

- Main fermentation & DSP HG2 area (60 m<sup>2</sup>) + communal (11 m<sup>2</sup>)
- Microbial HG2 clean lab (15 m<sup>2</sup>) + ante-room (8 m<sup>2</sup>)
- Cell Processing HG2 clean lab (14 m<sup>2</sup>) + ante-room (4 m<sup>2</sup>)
- Analytical & support clean lab (15 m<sup>2</sup>)

### Facilities

- Plant steam (270kW), air, gases, HVAC, O<sub>2</sub>/CO<sub>2</sub> gas alarms
- Cooling water loop (1500L)
- 100L RO type II water production capacity



# Bioprocessing Scale-up Centres



## FlexBio

### Microbial culture equipment

- Applikon fermenters – 1L, 2x 7L autoclavable
- 30L SIP fed-batch system with off-gas & online OD measurement
- 100L fermentation capacity (available soon)
- 4 x 2 L parallel DASGIP vessels
- Single-use wave bag (50L)

### Downstream processing equipment

- Continuous Disc-stack cell centrifugation (1.4L bowl, 60L/hr)
- Micro & diafiltration rig (0.02 – 3.5 m<sup>3</sup>)
- AKTA Avant chromatography – (0.1 – 150 mL/min)
- Homogenisation (3L/hr) – coming soon
- Freeze drying – full process control





# Bioprocessing Scale-up Centres



## RapidBio

### Facility Layout

- RapidBio (total: 63 m<sup>2</sup>)
- Divided into main lab (50 m<sup>2</sup>) + analytical (13 m<sup>2</sup>)

### Utilities

- Plant steam (32kW), air, gases

### General Lab Equipment (in facility)

- pH
- Balances (mg – 1000gs)
- MBSC II
- Water bath
- Drying oven
- Glass oven
- UV/Vis Spectrophotometer



# Bioprocessing Scale-up Centres



## RapidBio

### Microbial down-scale culture equipment

- Omnilog media improvement plate system
- DASGIP 8 x 2L parallel system
- UHPLC

### Microbial up-scale culture equipment

- 2x 15L parallel Applikon fermenters
- Off-gas & online OD measurement
- Media depletion analysis (YSI biochemistry)
- Raman probe

### Equipment in nearby labs with agreed access

- Large autoclave & washup facilities
- Type 1 & 2 water systems
- 0.5mL to 1L centrifuge capacity capabilities

