Cellesce case Study
Why?

- Over 90% of new cancer drugs fail in clinical trials
- Cancer organoids are miniature, simplified copies of patients' tumours grown from their adult stem cells in the lab
- Organoids recapitulate 3D tissue structure of tumours and their cancer-like pathology more faithfully than conventional 2D cell lines. Tumour organoids mimic the relevant pharmacology of cancer drugs
- Compound and antibody screens often require 100k organoids or more and manual expansion methods cannot meet the growing demand
- Cellesce set out to develop proprietary bioreactor technology to resolve this bottleneck.
- Now pursuing a potential $1.5bn p.a. market opportunity
Cellesce founded to develop and commercialise bioprocessing technologies for the scale-up of new biology

2013

Early development funded by sweat equity and a grant of £213k from InnovateUK and NC3Rs

2015

Seed funding round raises £91k

Two Marie Curie Studentships won (value £350k)

Successful development of organoid expansion technology

‘Freedom to Operate’ and patentability investigated
Cellesce Value Milestones (1)

Cellesce founded to develop and commercialise bioprocessing technologies for the scale-up of new biology

2013

Early development funded by sweat equity and a grant of £213k from InnovateUK and NC3Rs

2015

Seed funding round raises £91k

Two Marie Curie Studentships won (value £350k)

Successful development of organoid expansion technology

‘Freedom to Operate’ and patentability investigated
Cellesce Value Milestones (2)

2016

- Technology validation by independent 3rd party (OcellO)
- Co-operation agreement signed with OcellO (specialist CRO)

2017

- Move to labs and offices on the GE Innovation Village campus (Cardiff)
- Patent application filed (July 2016)
- Raised £500k in Feb. 2017 (pre-money valuation of £1.75m)
- Secured a license to use technologies of the Hubrecht Institute (HUB)
- Validation of colorectal cancer organoids from Cellesce organoid technology
Cellesce Value Milestones (2)

- Co-operation agreement signed with OcellO (specialist CRO)
- Move to labs and offices on the GE Innovation Village campus (Cardiff)
- Validation of colorectal cancer organoids from Cellesce organoid technology
- Technology validation by independent 3rd party (OcellO)
- Patent application filed (July 2016)
- Raised £500k in Feb. 2017 (pre-money valuation of £1.75m)
- Secured a license to use technologies of the Hubrecht Institute (HUB)
Cellesce Value Milestones (3)

- Raised £600k at a valuation of £3M
- Appointed CEO with pharmaceutical marketing experience and extensive contacts
- Further investment round
- Strong revenue growth (colorectal and other tissues)

2018

First revenues secured, targeted business development, sales pipeline building

2019

Grant funding won to develop additional tissues (breast, lung, other)

Larger scale bioprocess (CXP2) secures and protects margins
Cellesce Value Milestones (3)

- **2018**
  - Raised £600k at a valuation of £3M
  - First revenues secured, targeted business development, sales pipeline building

- **2019**
  - Appointed CEO with pharmaceutical marketing experience and extensive contacts
  - Further investment round
  - Grant funding won to develop additional tissues (breast, lung, other)
  - Larger scale bioprocess (CXP2) secures and protects margins
  - Strong revenue growth (colorectal and other tissues)

Confidential © Viadynamics 2019
Prioritisation and focus

Drug discovery

Personalised Medicine

Regenerative Medicine
Business model

**Equipment supplier**
(bioreactors and consumables)

**Contract Research Organisation**
(‘fee for service’ to drug discovery industry)

**Drug discovery company**
(high regulatory risk, high potential reward)
Build and protect technology

**Patent or trade secret?**
(investors in life science business will require a patent)

**Know-how**
(experience and expertise – at least as important as what is in the patent)

**Freedom to operate**
(operating in ‘white space’ and licensing in of key inputs)
Key milestones

MVP
(focus on what is possible, given time and resources constraints)

Technology validation
(proof of technology)

First revenues
(proof of market)
Cellesce Soft Funding

Founders sweat equity + £11k

InnovateUK and NC3Rs £213k
Cardiff University - £125k
Cellesce - £93k, + £32k 'matched'

Subsequent awards £990k
Marie Curie - £350k
Imaging capability - £240k
Breast Organoids - £400k
Cellesce Fund Raises

Seed round
£91k
Friends and Family

Second Seed Round
£500k
Development Bank of Wales, High Net Worth individuals, Angel Investors

Third Seed Round
£600k
Development Bank of Wales, High Net Work individuals
Due diligence

**Technical**
Company’s own data, independent validation by 3rd party, patents and licenses

**Market**
Company’s own market estimates, market research data, report from independent 3rd party market expert

**Financial & Legal**
Financial plan spreadsheet, contracts, employee biographies – made available to investors and ‘warranted’
Cellesce cash flow management

Accountant / bookkeeper
part time - claiming grant income, supplier payments, payroll, VAT, annual accounts

Financial spreadsheet
calculations for income & expenditure leading to P&L, Balance Sheet, cash flow and future projections

Monthly reporting
to management team and board, particular focus on cash flow and cash management
People and culture

**Academics in business**
(& how to make that work)

**Team dynamic**
(technocrats working together towards a shared goal)

**Leadership**
(the right person at the right time)
Thank you!