



# BioOrbit

**Hospital to home *via* space**

*Dr. Katie King, CEO*  
*ESA Space for Inspiration 2024*



**SERAPHIM**  
SPACE ACCELERATOR



**BUSINESS**  
INCUBATION  
CENTRE

United  
Kingdom

**BSGN**  
Business to Space Growth Network

**UK SPACE**  
AGENCY  
ACCELERATOR

**1 in 2** people

will develop cancer in their lifetime

Current treatment takes **4-6 hours** and has to be  
given every **3-4 weeks**



SERAPHIM  
SPACE ACCELERATOR



BUSINESS  
INCUBATION  
CENTRE

United  
Kingdom

BSGN  
Business In Space Growth Network

UK SPACE  
AGENCY  
ACCELERATOR

# A PARADIGM SHIFT

HOSPITAL



CURRENT

COSTLY

DEPENDENCE

LONG  
HOURS

HOME



SIMPLE SHOT

↓ COSTS

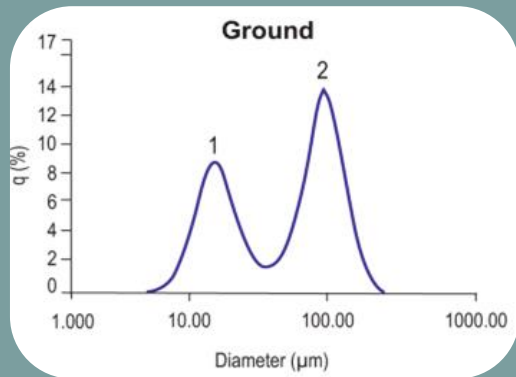
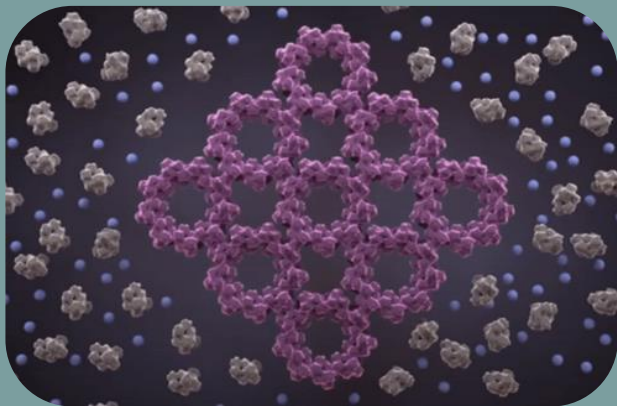
AUTONOMY

QUICK

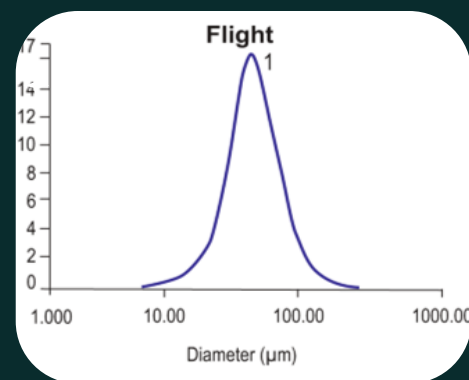
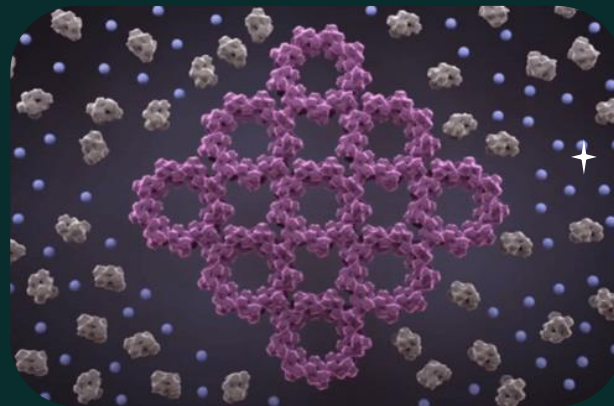
Cost of  
administration  
**90%**  
reduced

# THE SCIENCE IS KNOWN

## ON EARTH



## IN SPACE



**Keytruda**  
(\$21Bn/yr  
revenue)

# WHY PRODUCTION **NOW**?

## → **ACCESSIBILITY**

## → **CHEAPER**

80% reduction in launch costs vs space shuttle.

## → **RETURNS VEHICLE TECHNOLOGY**

(Space Forge, The Exploration Company, Atmos, Varda)

INFRASTRUCTURE IS **READY**



# OUR SOLUTION

## SPACE-OPTIMISED **CRYSTALLISATION PLATFORM**



Novel hardware (our IP)

- **Miniaturised** - can be hosted on a range of platforms.
- **Easy scale up** - no hardware redesign saves time and money
- **Mode of production** - once a target molecule has been identified, 70% cost reduction to customers.

# THE MARKET OF OUR BUSINESS MODEL

Total Addressable Market

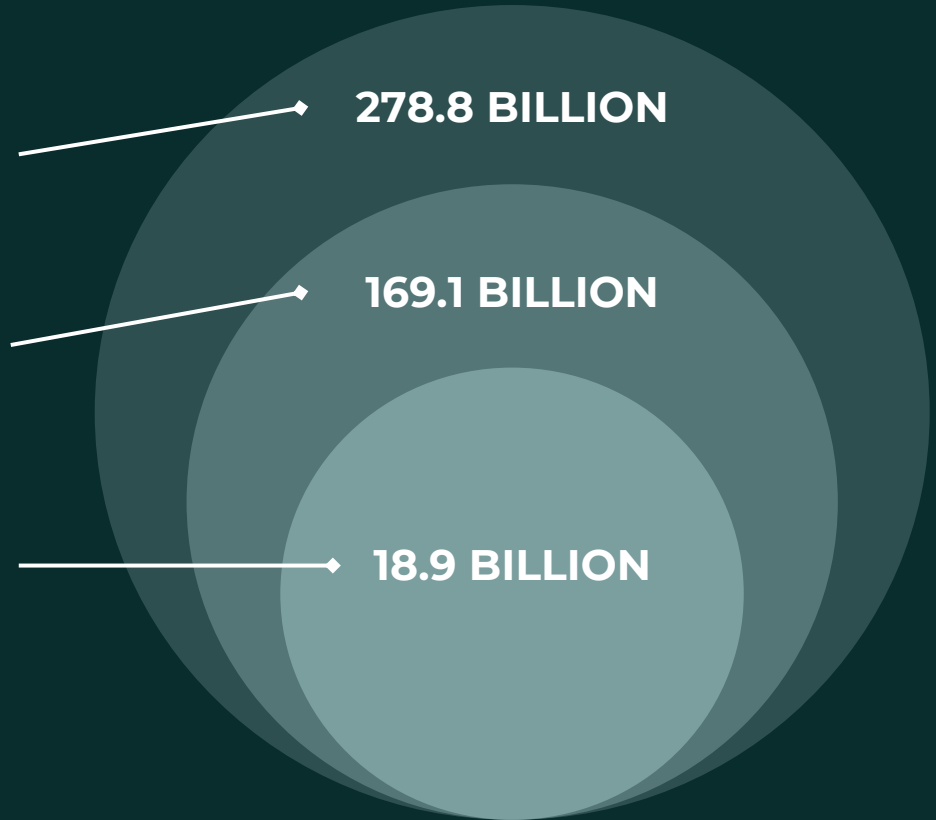
→ **Contract Development and Manufacturing Organisations (CDMOs)**

Serviceable Addressable Market

→ **API manufacturing CDMOs**

Serviceable Obtainable Market

→ **Biologic API manufacturing**



USD, 2026

Predicted market size (2032 for SAM)



SERAPHIM  
SPACE ACCELERATOR



BUSINESS  
INCUBATION  
CENTRE

United  
Kingdom

BSGN  
Business to Space Growth Network

UK SPACE  
AGENCY  
ACCELERATOR

# THE MARKETS WE ADDRESS

## Cancer mAbs

*Beachhead*

**87 Bn**  
projected  
**282 Bn**  
2030

## mAbs general

**218 Bn**  
projected  
**450 Bn**  
2030

## Patent Expiry Extension

Prevent  
**200 Bn**  
Annual loss





**Space  
Pharma**  
(multiple launches)

**Redwire**  
PIL BOX  
(launch Nov 2023)

**Varda Space**  
(launched July  
2023)

<b>R&amp;D</b>	✓	✓	✓	✓
<b>Large-scale</b>	✓			
<b>Orbital Flights</b>	✓			✓
<b>Space Stations</b>	✓	✓	✓	
<b>Antibodies</b>	✓		✓	

**Innovative technology** - designing with world experts in protein crystallisation

**Not platform limited** - flexibility to work with the whole ecosystem

**Cancer drugs focused** - blockbuster drugs bring in multiple billions in revenue annually



**SERAPHIM**  
SPACE ACCELERATOR



BUSINESS  
INCUBATION  
CENTRE

United  
Kingdom

**BSGN**  
Business In Space Growth Network

**UK SPACE  
AGENCY  
ACCELERATOR**

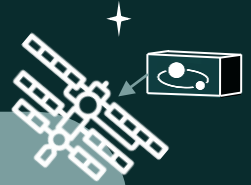
# ROADMAP



**Phase 1**  
Demo Mission



**Phase 2**  
Scale up



**Phase 3**  
Permanent facility

Pre-seed - £ 1.5 million

Seed - £ 8 million

Series A - £ 15 million

TRL 3

TRL 7

TRL 9

**Validate core technology on ISS**  
Secure pilot customer

**Test HW on various platforms with customers**  
**Identify drug for mass manufacture**

**Produce large quantities of key cancer drug**

Q4 2025

2030



**SERAPHIM**  
SPACE ACCELERATOR



BUSINESS  
INCUBATION  
CENTRE

United  
Kingdom

**BSGN**  
Business in Space Growth Network

**UK SPACE  
AGENCY  
ACCELERATOR**

# TRACTION LAST 6 MONTHS

## FUNDING



BUSINESS  
INCUBATION  
CENTRE

United  
Kingdom

€~200k

**BSGN**  
Business In Space Growth Network

## TECHNOLOGY

Prototype  
TRL3

Protein  
Crystallisation  
Experts

## FUTURE PARTNERSHIPS

NDA

**AXIOM**  
SPACE

LOI

  
The  
Exploration  
Company

LOS

AstraZeneca 

\* Secured €50k non-dilutive funds (European Space Agency, ESA)  
Additional €150k non-dilutive funding available (ESA) once co-funding is secured.



**SERAPHIM**  
SPACE ACCELERATOR



BUSINESS  
INCUBATION  
CENTRE

United  
Kingdom

**BSGN**  
Business In Space Growth Network

**UK SPACE  
AGENCY  
ACCELERATOR**

# THE TEAM



**DR. KATIE KING**  
CEO



**DR. LEONOR TELES**  
CSO



**THOMAS GANZEBOOM**



**CLÉMENT ROUMEGOUX**



**DÍDAC CABÚS**



## 2 PHARMACEUTICAL ADVISORS

**Ret. SVP** - Global Patient Safety & Pharmacovigilance (21y exp.)

**Ret. SVP CFO** - Head of Corporate Economics (24y exp.)



## PROTEIN CRYSTALLISATION EXPERTS

Owners of patent of interest

# SUMMARY AND **ASK**



Hugely **disruptive** technology



**Multi-billion dollar** opportunity



Achievable plan for launch 2025



**Opening £ 1.5 million pre-seed for Phase 1**

Bringing the **hospital to home *via* space**



# PRICE POINTS KEYTRUDA

Price of one course  
(multiple doses) Keytruda

~ **\$150,000**

Price of one batch mission  
(upper limit for 10 courses)

~ **\$600,000**

Price of one batch per  
course (upper limit)

~ **\$60,000**

*40% increase in price if added  
directly on as a premium*

Darzalex SC vs IV

**300% price increase**



SERAPHIM  
SPACE ACCELERATOR



BUSINESS  
INCUBATION  
CENTRE

United  
Kingdom

BSGN  
Business In Space Growth Network

UK SPACE  
AGENCY  
ACCELERATOR