



ImmuPharma

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BioEquity Europe May 2023

ImmuPharma Snapshot

- Listed on UK AIM (LSE:IMM)
- Pipeline of innovative peptide-based therapies
- 2 therapy areas - Autoimmunity/Inflammation and Anti-infection
- 4 core assets & 1 non-core asset for high medical need markets
 - **Lupuzor[®]** (P140) for Lupus (Ph 2/3)
 - **P140** for CIDP (Ph2/3)
 - **BioAMB**, a novel, improved amphotericin-B (Preclinical)
 - **BioCIN**, a novel, improved vancomycin (Preclinical)
 - **IPP-20410**, radiopharmaceutical for cancer (Pre-clinical, non-core)
- Company strategy is to out-license at value inflection points
- New board and management in August 2021



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Team



NEW TEAM



ImmunoPharma



Tim McCarthy FCCA, MBA
Chief Executive Officer



Tim Franklin, PhD, MBA
Chief Operating Officer



Dr Sanjeev Pandya MBA
Senior Non-Executive Director

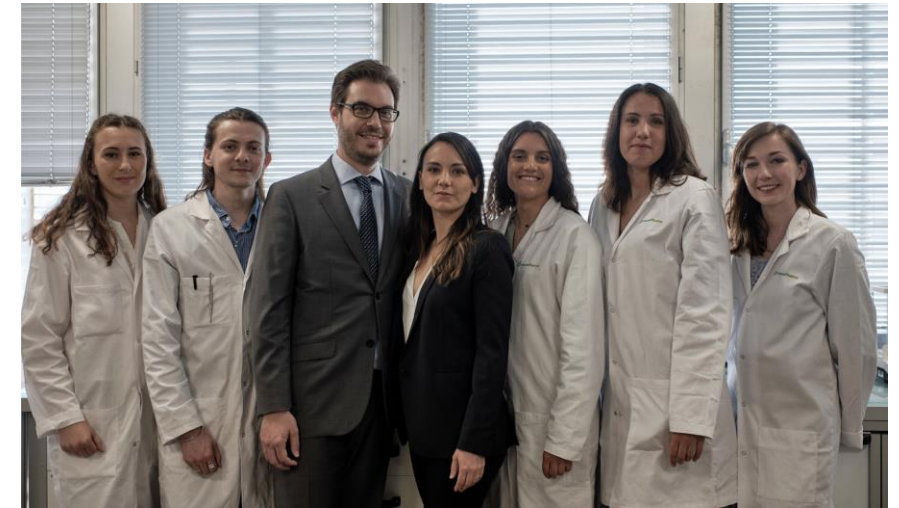


Lisa Baderon
Non-Executive Director
and Head of Investor Relations



ImmuPharma Biotech R&D Unit in Bordeaux

- A wholly-owned subsidiary of ImmuPharma PLC
- Dr Sebastien Goudreau – CEO
- Dr Laura Mauran – CSO
- Team of 7 scientists
- Specialising in peptide science and technology
- Key focus on developing peptide-enhanced versions of P140, amphotericin-B and vancomycin



Prof Sylviane Muller & CNRS

- Prof Muller is the discoverer of P140 and scientific advisor to ImmuPharma
- Research Director at CNRS (The French National Centre for Scientific Research) & Co-founder of ImmuPharma France
- CNRS Laboratory of Therapeutic Immunology and Chemistry at the Institute of Molecular and Cellular Biology in Strasbourg
- Expertise in peptide immunochemistry, molecular and cellular pathways behind autoimmune disease
- For her contributions to understanding immune-inflammatory diseases she was recently awarded the prestigious Legion D'Honneur
- Prof Muller continues to support and advise on all scientific aspects for P140 across all potential therapeutic applications



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Portfolio & pipeline

Pipeline

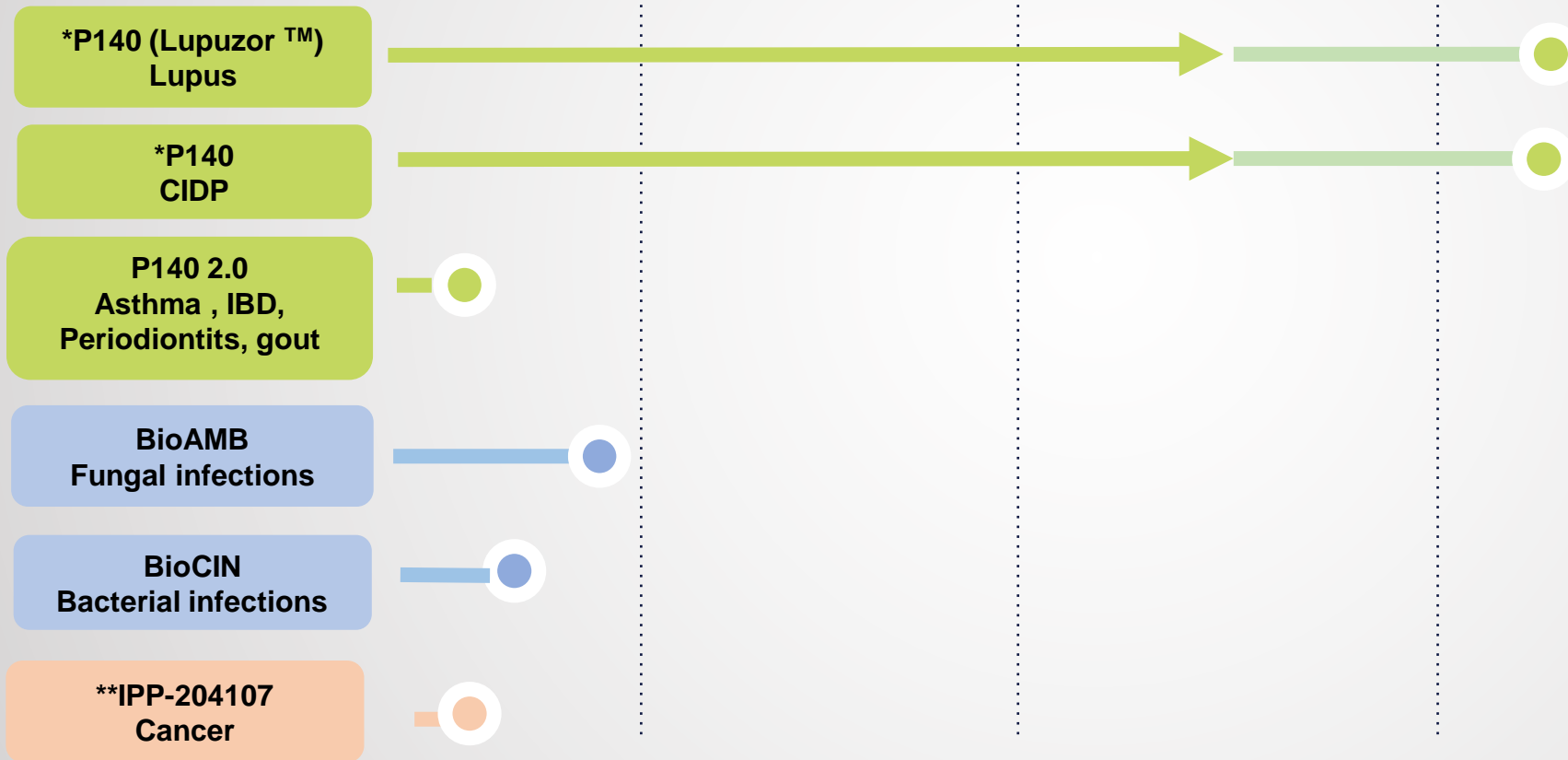
Preclinical

Phase I

Phase II

Phase III

Partners



*Phase 2/3 adaptive study **Radiopharmaceutical



Autoimmune/anti-inflammatory



Anti-infection



Non-Core

Pipeline Objectives & News Flow 2023

Autoimmunity & inflammation

- Lupus - Type-C FDA meeting for Phase 2/3 adaptive study on 7th June 2023
- Lupus - *commence Phase 2/3 adaptive study (H2 2023)
- CIDP - Pre-IND Type B FDA meeting for Phase 2/3 adaptive study on 16th May 2023
- CIDP - IND approval for phase 2/3 adaptive study and Orphan Drug designation (H2 2023)
- P140 2.0 - Preclinical studies

Anti-infection

- Complete Bio-AMB (novel amphotericin) efficacy/tox study versus voriconazole in Aspergillosis rodent model to realise immediate value inflection (2023)
- BioAMB Pre-clinical toxicology to commence in 2023
- BioCin (novel vancomycin) Pre-clinical PK/PD and toxicology to commence in 2023



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Autoimmunity & Inflammation

The P140 platform

P140 MOA is relevant to several diseases

- P140 core action is in chaperone-mediated autophagy
- P140 binds to the constitutively-expressed HSPA8/HSC70 protein
 - P140 hampers its chaperone functions *in-vitro*
 - *P140* reduces the HSPA8 HSP90 interaction
 - Restricts stimulation of autoreactive T cells and consequently autoreactive B cells
 - Not immunosuppressive. Does not affect whole immune system
- Positive clinical insight already in Lupus patients
- New Phase 2/3 programs underway for lupus and CIDP
- Animal models published to support therapeutic potential in:
 - CIDP *Journal of Autoimmunity* 92 (2018) 114–125
 - IBD *Journal of Autoimmunity* 128 (2022) 10281
 - Asthma *Cells* 2021, 10, 2468
 - Gout *Cells* 2022, 11, 3709
 - Periodontitis *Cellular and Molecular Life Sciences* (2022) 79:518

LUPUZOR™ for Lupus

Lupuzor™, (P140) is ready for a new phase 2/3 adaptive study in lupus patients in H2 2023

Lupuzor™, has the potential to be a novel first-line drug therapy for the treatment of lupus.

Lupuzor™, binds to heat shock protein, overexpressed on autoimmune cells. It has a novel action distinct from all other therapeutic strategies.

Lupuzor™, modulates the immune system. Unlike other therapies it is not an immunosuppressant. It “normalizes” what is otherwise a hyperactive immune response.

Clinical data provides an indication of efficacy, extreme safety and tolerability

Target profile is a convenient single, monthly, injection.

About Lupus



Systemic lupus erythematosus (SLE) is a chronic, life-threatening autoimmune, inflammatory disease with a pattern of flares and remission. It can affect multiple organs such as skin, joints, kidneys, blood cells, heart and lungs.

About 50% of SLE patients develop Lupus nephritis : an inflammation of the kidney that is caused by SLE.



Treatment: Unmet market need due to the lack of safe and effective treatments. Current monoclonal drugs Benlysta and Saphnelo have serious side-effects and limited effectiveness.



Market: 5 million people globally suffer from lupus (1.5 million lupus sufferers in Europe/US/Japan).

***Peak annual global sales potential > \$2bn**

SLE Clinical Activity for P140 in 2023

- Agreed Phase 2/3 study design with US partner Avion in Jan 2023
- Agreed with Avion on key submission points for FDA in Feb
 - Key guidance point from FDA is dosing regime/higher exposure
 - PK study results in 2022 provided steer on right P140 exposure levels for P140
 - Phase 2/3 adaptive study provides dose range result
 - Seamless commencement into phase 3 part of study post-phase 2
- Submitted to FDA for a Type C guidance meeting
 - Addresses all key guidance points from FDA
- FDA Type-C meeting feedback expected around 7th June 2023
- *Commence phase 2/3 study in H2 2023



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P140 for CIDP

P140 for CIDP

P140 shows efficacy in *pre-clinical model of Chronic Inflammatory Demyelinating Polyneuropathy (“CIDP”)

P140 MOA on the autoimmune mechanism is proven in CIDP, an inflammatory condition of the nerves

A phase 2/3 adaptive pivotal study protocol will be submitted for an IND. Regulatory approval and orphan drug designation is expected 2023

Orphan drug status provides market exclusivity for 7-yrs post-approval

P140 offers potential to:

- reduce the frequency of CIDP disease flares
- reduce the need for hospital IV IgG therapy
- Improve convenience through IV injection 1/month vs long infusion
- reduce costs for patient and healthcare system

About CIDP



CIDP is neurological autoimmune disease targeting the nerves. Symptoms include: fatigue, areas of numbness, slow reflexes, weakness in arms and legs. It is characterized by a relapsing-remitting or progressive course. Demyelination of nerves. Similar to but not the same as MS



Treatment: Currently no effective approved drug on the market. IgG is the only successful treatment. Hospital visits every 4-6 weeks and long IV duration of several hours



Market: The prevalence of CIDP ranges from 0.7 to 10.3 cases per 100,000. There is a male predominance, with a gender rate ratio ranging from 1.5 to 4. CIDP primarily affects adults, and the incidence rises with advancing age. P140 could be granted ‘Orphan Drug Designation’ + fast approval.

***Peak annual global sales potential \$1.2 billion**



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P140 2.0

for autoimmune/inflammatory diseases

P140 2.0 is the next generation P140

- Same active peptide, same MOA
- Proprietary peptide-based Bio-Drug engineering
- More favorable PK/PD profile
- Easier to administer (dose/frequency), lower absolute amount of drug
- New IP and new product life cycle following 1st generation P140
- Allows expansion into other indications beyond Lupus and CIDP



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BioAMB

for systemic fungal infections

BioAMB for systemic fungal infections

BioAMB is a novel biomodified peptide-based drug that offers a potential improvement on Amphotericin-B (“Amp-B”).

Currently marketed AMB-B formulations may cause serious kidney toxicity and other severe reactions

BioAMB aims to:

- Significantly reduce toxicity and improve tolerance to amphotericin-B therapy
- Simple injection vs IV infusion
- Improve the frequency & duration of therapy
- Provide a more powerful alternative to existing 1st line azole antifungal therapy where there is increasing resistance

About Anti-Infectives



Anti-infectives : Increased antibiotic and anti-fungal resistance is one of the biggest threats to global health, cost and mortality (WHO).

Despite the obvious threats, anti-infectives is a therapy area that attracts one of the lowest R&D spends in the biopharma industry: 80% of biopharma are focused on oncology and orphan drugs, while drug development for anti-infectives is shorter and less costly. -> big opportunity.

A significant problem in immunosuppressed patient are serious fungal infections. Significant resistance is emerging to another antifungal class, the azole class of antifungals (1st & /2nd line).



Treatment : Amp-B is one of the few effective treatments for serious and life-threatening fungal infections such as aspergillosis.



***Peak annual global sales potential \$800 million**



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BioCIN

for severe bacterial infections

BioCIN for severe bacterial infections

BioCIN is a novel biomodified peptide-based drug that offers a potential improvement on Vancomycin

Vancomycin, a generic drug, is a last resort therapy for the treatment of sepsis and lower respiratory tract, skin, and bone infections caused by Gram-positive bacteria and the killer bug methicillin-resistant *Staphylococcus aureus* (MRSA) and

Marketed since 1954 it is poorly absorbed from the gut and currently requires carefully controlled IV therapy over many hours

BioCIN aims to:

- Act on Gram-negative bacteria for the first time
- Significantly reduce toxicity and improve tolerance to vancomycin therapy
- Simple injection &/or oral admin vs IV infusion
- Improve the frequency & duration of therapy
- Improve efficacy through improved tolerance



About Anti-Infectives

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Despite the obvious threats, anti-infectives is a therapy area that attracts one of the lowest R&D spends in the biopharma industry: 80% of biopharma companies are focused on oncology and orphan drugs. Drug development for anti-infectives is shorter and less costly.

There is an increasing risk of resistance to existing antibiotics. Better tolerance to last line therapies such as vancomycin, should help to treat more patients, without side effect problems.

Treatment : Vancomycin is last-line treatment for serious and life-threatening bacterial infections such as MRSA. There is nothing else. Vancomycin has a long list of side effects and rare but serious allergic reaction to infusion.

***Peak annual global sales potential \$400 million**



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IPP-204107

Radiopharmaceutical for cancer

IPP-204107 a potential breakthrough in cancer therapy

- IPP-207107 is a pseudopeptide that binds to a receptor on cancer cells
 - Transported to the cancer cell nucleus
 - Previously studied PC and to Phase I
- 12-month collaboration with OranoMed subsidiary of Orano
 - Orano funding the program
- IPP-207107 modifications to carry a radioisotope bullet
- Orano a leader in nuclear materials
 - Rare radioisotope provides power at short distance to destroy cancer cells and limit impact on healthy cell tissue
- Expect lead candidate within 12 months
- Global radiopharmaceutical market sales forecast is *\$8.5bn by 2031



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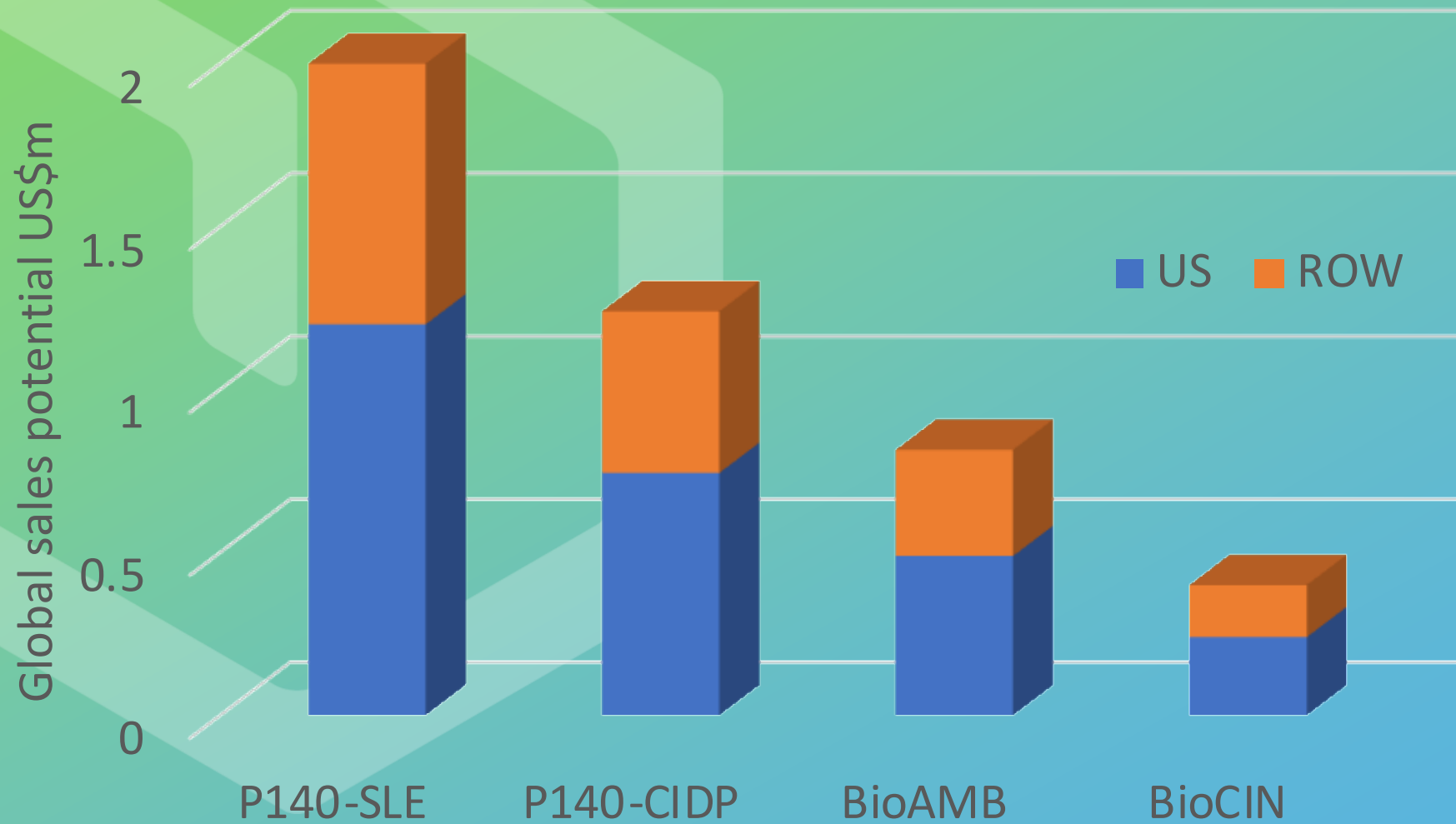
Company Value

A significantly undervalued stock

ImmuPharma value will be realised because....

- Mid to late-stage pipeline with significant product differentiation
- High medical need and commercially attractive markets
- Biotech company peers are valued at least 100x higher on average by the markets
 - Biotech's with similar stage products valued ~\$680-1750m
 - ImmuPharma ~\$10m
- Actively exploring new collaborations
- News flow quality will be a major catalyst to unlocking value in 2023

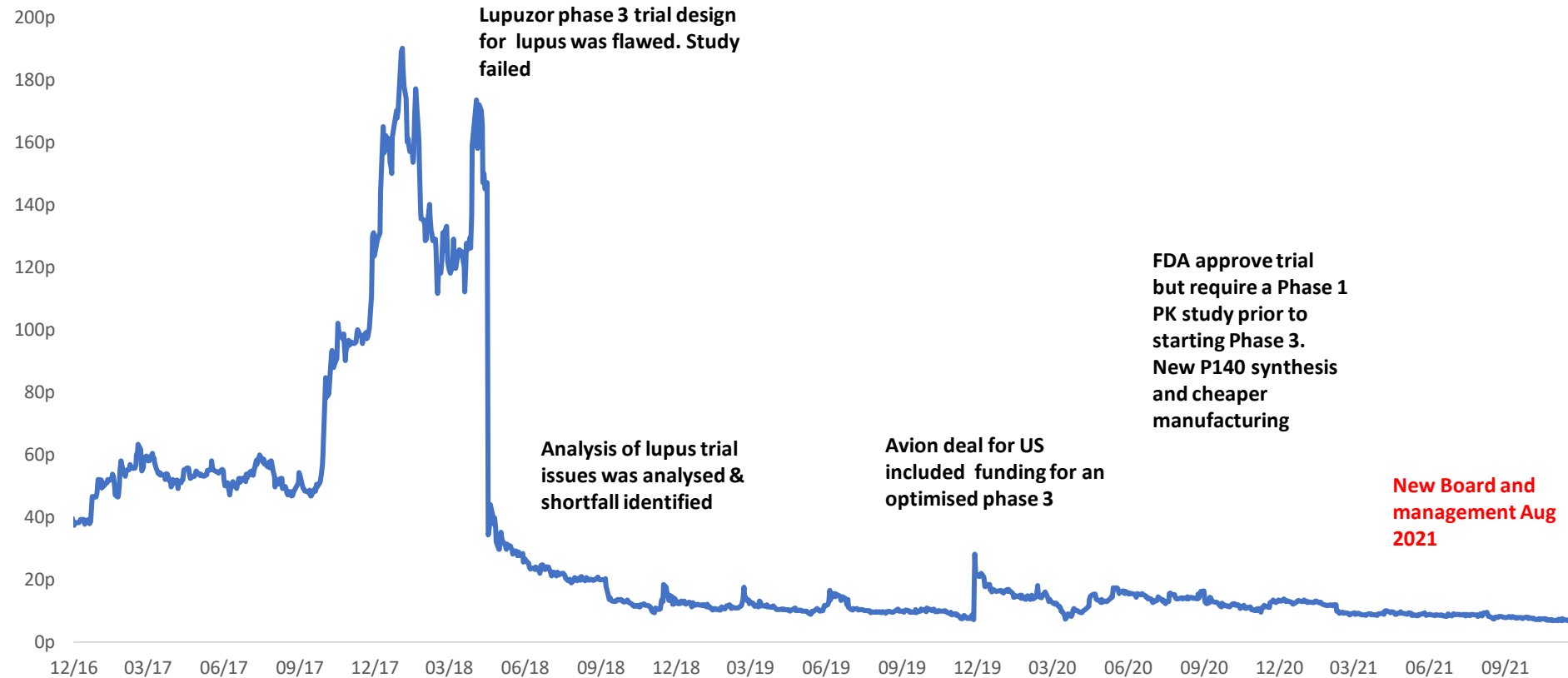
PORTFOLIO FORECAST SALES POTENTIAL OF ~\$4bn



Potential News Flow 2023

- P140 updates on regulatory progress of Phase 2/3 for lupus
- Lupuzor lupus adaptive 2/3 pivotal study *commencement
- Positive IND outcome for new CIDP study and orphan drug designation
- BioAMB efficacy, safety data and toxicity data versus voriconazole
- BioAMB preclinical toxicity commences
- BioCIN PK/PD data in animals & commence preclinical toxicity
- Partnering activities across the portfolio

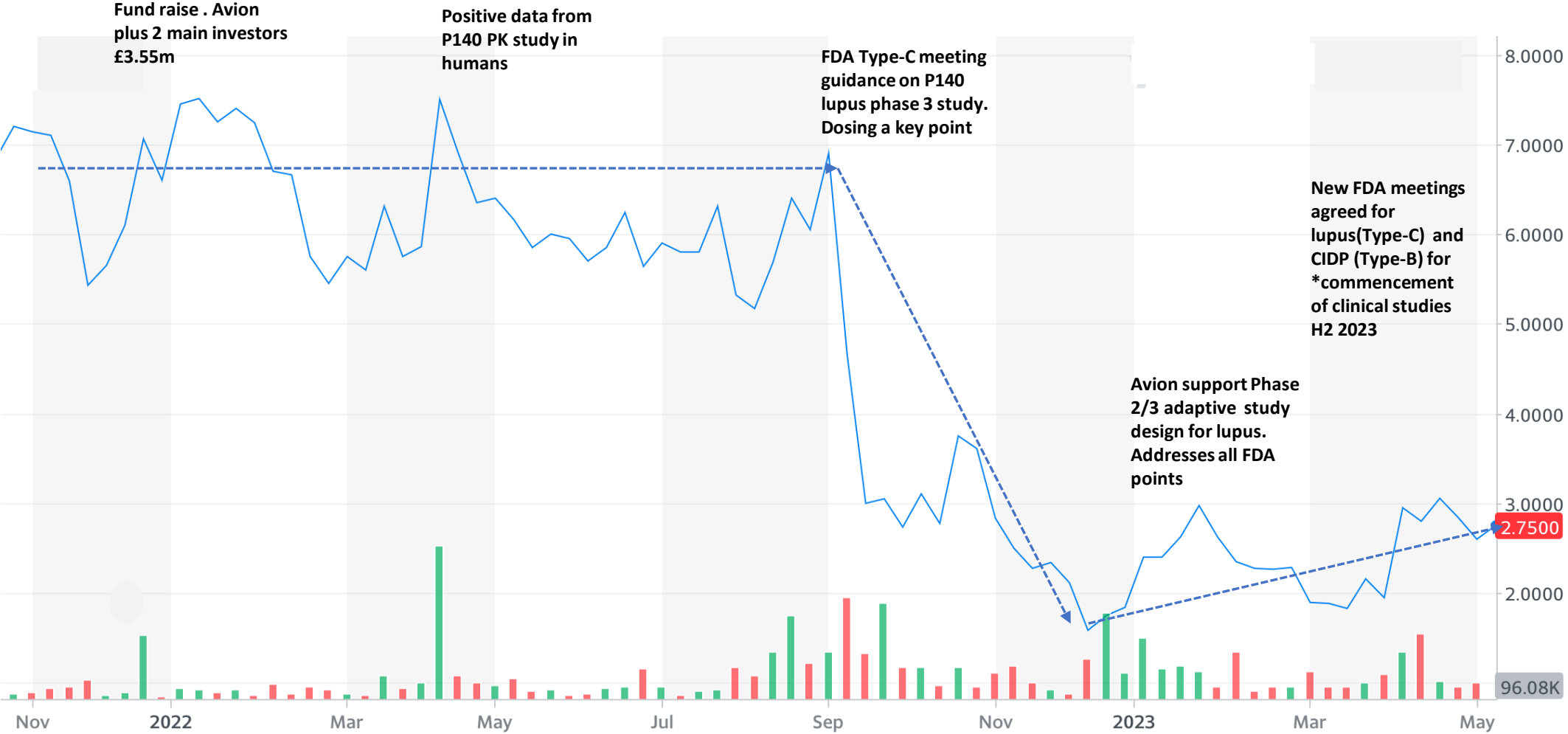
ImmuPharma PLC share price is an opportunity



1 product company
Lupuzor (P140) in lupus phase 3

4 product company
Lupuzor (P140) in lupus phase 3
P140 in CIDP phase 2/3
BioAmb antifungal late preclinical
BioCin antibacterial early preclinical

The last 2 years.....getting it right with the FDA



* Definition is CRO is chosen & first steps begin to confirm study sites & prepare study materials (CRFs, site manuals), CTM, Reg & ethics committee submissions

IMMUPHARMA UNDERVALUED ON GLOBAL PEER COMPARISON

