Benevolent AI

Because it Matters

Innovation, accelerated

Interim Results

For the six months ended 30 June 2024

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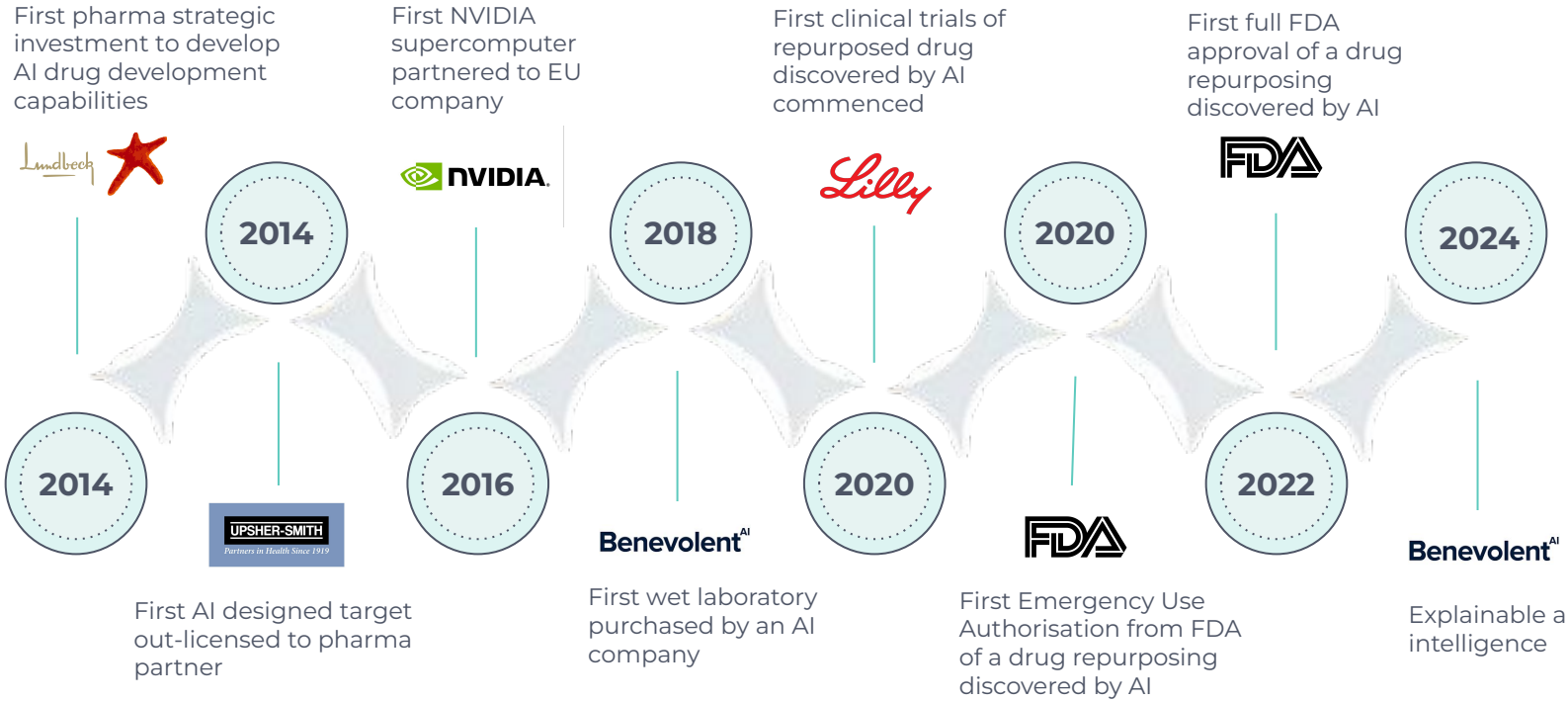
Industry firsts

Creating the future of AI in drug discovery and development



Leading AI innovations in Drug Discovery and Development

Strengthened leadership for innovation and growth

Dr. Joerg Moeller
CEO

Dr. Ivan Griffin
CBO and co-founder

Dr. Anne Phelan
CSO

James Malone
CTO

Supported by an experienced Board of Directors at the forefront of their fields...

Peter Allen
Chair

Kenneth Mulvany
Deputy Chair and founder

Ian Nicholson
Non-Executive Director

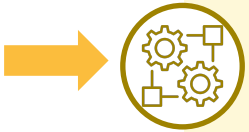
Jeremy Sohn
Non-Executive Director

Benevolent Platform™: The Industry's Most Established and Validated AI Solution

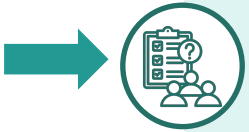
Lilly
FDA
AstraZeneca
MERCK

Proprietary pipeline of novel drug programmes in areas of high unmet need

Business model



Collaborations:
External commercial offerings enabled by the Platform: **TargetID - Molecular Design/Chemistry - Indication Expansion/Drug repurposing**



Proprietary preclinical & clinical **pipeline** targets identified & developed in-house - commercial approach to **out-license/partner at value inflection points**

H1 2024 key business highlights
(inc. post period)

Leadership updates

- **Jan'24 -** appointed **Joerg Moeller, CEO**
- **Apr'24 -** appointed **Dr. James Malone, CTO**
- **May'24 -** appointed **NEDs Peter Allen (Chair), Ken Mulvany (founder, Deputy Chair) Ian Nicholson** and **Jeremy Sohn**
- **Jun'24 - Michael Brennan** - co-founder returned, consultancy basis
- **Jul'24 - Dr. Ivan Griffin** co-founder, transitioned to **CBO**

Business development

- **Revitalised approach**
- **Strengthened and reorganised** - enhanced **focus** on **execution**
- **Supported** by **R&D leadership network of CEO** and the **Board**
- **Initial indicators are positive** - pipeline of active collaborations and out licensing **discussions significantly increased**

Capital markets adviser

- **Jul'24** - Appointment of **Deutsche Numis** as **UK and pan-European capital markets adviser**
- **Significant step** in initiating **more effective market engagement**

Proprietary pipeline

- **Mar'24 - BEN-8744 (UC) - positive topline Phase I** (safety/PK)
- **BEN-34712 (ALS) - IND enabling studies progress,** IND-ready H2'24
- **BEN-28010 (GBM) - completed regulatory toxicology studies** and is ready for onward partnering/out licensing
- **Ten additional programmes** regularly evaluated to replenish pipeline as assets are successfully out licensed

Collaborations

AstraZeneca - target identification

- **May'24 - HF target** moved into **AZ discovery portfolio**
- **Jun'24 - SLE target** moved into **AZ discovery portfolio**

Merck KGaA - chemistry

- Newer collaboration made **progressing well**

Drug development is failing patients

Expensive & high risk

$160bn+
spent per year on drug R&D

$2.6bn
in average R&D and to market cost per drug

96%
overall failure rate in drug development

Long R&D cycles

10 years
to market

9,000
diseases with no effective treatment

Poor efficacy & high societal cost

Leading drugs effective on
30-50%
of patients

Approved cancer drugs have poor response rates, with only
7%
showing an OS advantage

- Pharma R&D has become **slower and more expensive over time**, despite more investment and improvements in technology
- Primary reasons for failure are **poor understanding of disease biology,** unexpected **toxicity**, and inability to **identify the most suitable patient** to treat with a given drug

Business model — multiple routes to value creation

BenevolentAI Platform™

COLLABORATIONS

Disease & modality agnostic

Target identification & validation	Molecular design/Chemistry	Indication expansion/drug repurposing

AstraZeneca · MERCK · Lilly

*Example **multi target, multi compound***

Target identification & validation
Molecular design/Chemistry

- **Upfront payment**
- **Milestones**
- **Royalties**

→ High value; Short-medium term cash generation

Indication expansion/drug repurposing

- **Upfront**
- **Potential milestones**

→ Significantly less resource intensive

PROPRIETARY PIPELINE

Complex diseases: Immunology, neurology, oncology therapeutic focus

Evergreen technology **powering** an **ever-replenishing proprietary pipeline** ensuring **substantial growth potential**

Development to IND, end PI or PII

OUT LICENSE/PARTNER
pipeline asset at value inflection points

Commercial approach
Mid-long term value creation

Out licensing performance-based payments to BenevolentAI

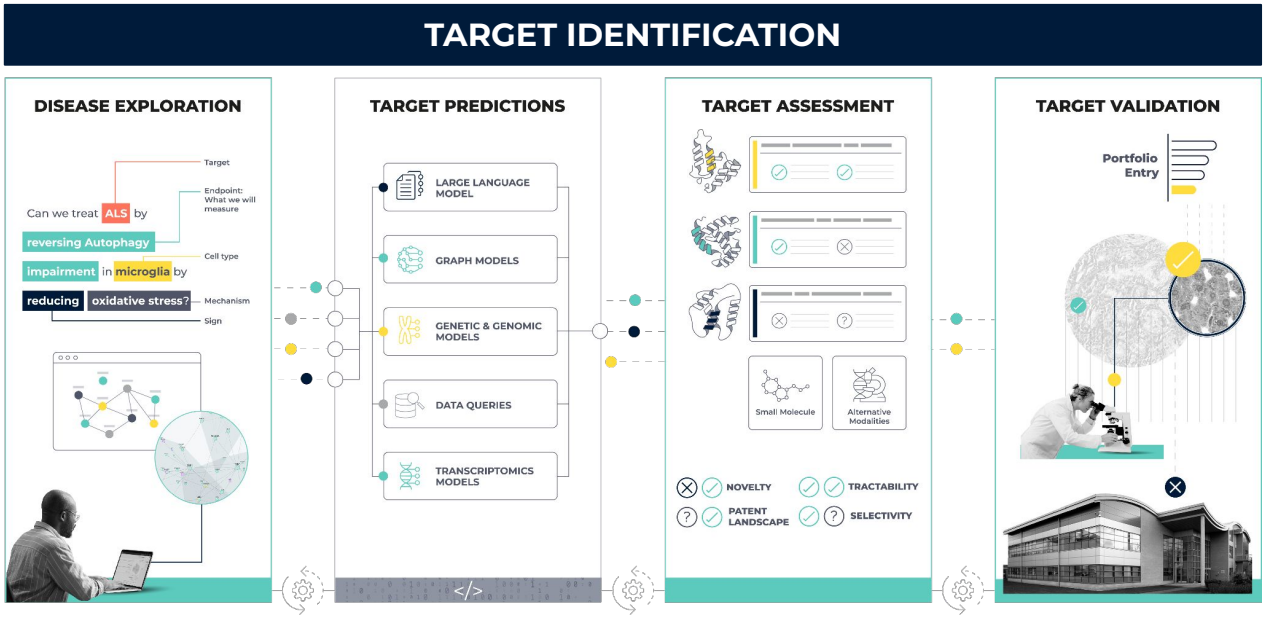
	Upfront	Development Milestones	Royalties
Pre-Phase I (IND)	**~$15m**	**~$400m**	**~8%**
Post-Phase I	**~$30m**	**~$500m**	**~10%**
Post-Phase II	**~$75m +**	**~$600m**	**~12%**

illustrative** deal terms

***based on LEK analysis/management's view*

The Benevolent Platform™ empowers scientists with industry-leading drug discovery AI

Comprehensive data foundations **Biology first** **Hypothesis driven**



- Proprietary AI models reason across multi-modal data to **discover novel targets**
- Enables scientists to **assess** & **select** only the **most promising targets** to take into wet lab experiments
- Efficiently **surfaces scientific evidence** to support higher confidence decisions
- **Data fed back** into the Knowledge Graph to enhance future predictions

Target ID: Continue to deliver and extend over many years

- 2019 **Multi-year collaboration** - Chronic kidney disease (CKD) and idiopathic pulmonary fibrosis (IPF)
- 2020 **Milestone hit** for CKD
- 2021 **Milestone hit** for IPF
- 2022 Collaboration **extended** to Heart Failure (HF) and Systemic lupus erythematosus (SLE)
- 2022 **Second milestone hit** for CKD
- 2022 **Second and third milestone hit** for IPF
- May 2024 HF target moves into AZ discovery portfolio
- Jun 2024 SLE target moves into AZ discovery portfolio

AstraZeneca

Therapeutic areas - Current focus

Chronic kidney disease (CKD)

Heart failure

Systemic lupus erythematosus (SLE)

Milestones

- 7 Novel targets accepted for development

Financial terms

- Initial and extension collaboration on similar financial terms
- **Upfront payment** and research **funding**
- Discovery, development and commercial **milestone payments**

Tiered royalties on net sales

Generated revenue of c.$40m (2019-2023)

Chemistry: New collaboration off to a strong start

- Sept 2023 **Multi year / multi compound collaboration**
- Using our **chemistry capabilities** to bring forward pre clinical development compounds **into the Merck pipeline**
- Opening up **new offering in chemistry**

MERCK

Therapeutic areas - initial delivery of three novel small molecule drug candidates

Oncology

Neurology

Immunology

Substantial financial upside

Up to $594 million of total value, including:

- Upfront payment
- Discovery, development and commercial **milestones**

Tiered royalties on net sales

High potential proprietary and partner pipeline

Programme	Indication	Target	Preclinical	IND enabling	Phase 1
BEN-8744	IBD: Ulcerative Colitis	PDE10	**Phase 1a completed Q1 2024, delivering positive result**		
BEN-28010	Glioblastoma/ Solid Tumours	CHK1	**Completed regulatory tox studies**		
BEN-34712	ALS	RARαβ	**IND-ready: H2 2024**		
Parkinson's Disease		Novel Target			
Fibrosis		Novel Target			
Chronic Kidney Disease		Novel Target	AstraZeneca		
Heart failure		Novel Target	AstraZeneca		
Systemic Lupus Erythematosus		Novel Target	AstraZeneca		
Oncology, neurology, immunology		Multiple Targets	MERCK		

Regular review of >10 programmes and potential new pipeline entries

Proprietary pipeline

Partner pipeline

- *Novel Targets progressed into portfolio in **Heart Failure and Systemic Lupus Erythematosus***
- *Initial delivery of 3 **novel small molecule drug candidates***

BEN-8744 (PDE10 inhibitor) - significant opportunity in IBD

BEN-8744 is expected to provide an **efficacious disease modifying oral treatment** for UC/CD

Dual effect: barrier/inflammation

BEN-8744 will **target moderate and severe UC/CD patients**, addressing the unmet need left by existing therapies including:

- Patients' refractory to anti-TNFs or other biologics
- Improved safety and tolerability profile compared to competitors

- Efficacy - **20-40% of Moderate-severe UC patients do not respond** to anti-TNF (main treatment paradigm)[1]
- Safety - current treatments have **many side effects**, from steroids to anti-TNF and JAK inhibitors (black box warnings)[2]

Recent **deal activity** in IBD driven by **desire for oral small molecules** (vs. more expensive biologics) and **novel targets**

- Lilly/Morphic & Abbvie/Landos - oral small molecules
- Merck / Prometheus & Abbvie/celsius - novel targets

High unmet need for an alternative **oral small molecule** treatment option with **improved safety profile** AND **efficacy in treatment of refractory patients**

BEN-8744 dual effect, **addresses**

- Patients' **response to current treatments** AND **safety issues** - **very attractive** from a **deal perspective**
- **BEN-8744** offers **rational combination** with **all currently approved drug classes** - **attractive to companies with products**

(1) Roda et al. Clin Transl Gastroenterol 2016; (2) Kobayashi et al Nat Rev Dis Primers 2020 and US FDA Drug Safety Communication 2021

IBD attracts deals in early clinical stage with increasing value

Date	Acquirer	Acquiree	Stage at time of deal	Asset	Values USDm inc. upfronts
Jul'24	Lilly	MORPHIC	Completed Phase 2a in UC, ongoing Phase 2b in UC/Crohn's	Oral small molecule (selective α4β7 inhibitor)	**c.$3.2bn**
Jun'24	abbvie	celsius	Completed Phase 1a (healthy volunteers)	Antibody (TREM1 antagonist)	**$250m**
May'24	abbvie	LANDOS BIOPHARMA	Completed Phase 1b in ulcerative colitis	Oral, small molecule (NLRX1 antagonist)	**$138m**
Dec'23	Roche	Telavant	Completed Phase 2b for IBD	Antibody (TL1A antagonist)	**$7.1bn**
Jun'23	MERCK	Prometheus Biosciences	Completed Phase 2b in both UC and Crohn's disease	Antibody (TL1A)	**$10.8bn**

Source: Company announcements

Business Development pipeline/ landscape

Collaborations

Commercial landscape

- Big Pharma do the majority of AI deals; c. 75% to date
- Mid-tier pharma/biotech also a target as less internal AI capabilities

BD Collaborations pipeline

- Pipeline of active collaboration discussions **trebled since the end of 2023**
- Active discussions Big Pharma and Mid-tier pharm/biotech

Leveraging Benevolent Platform™ for **access to insights** and provide **validation** for Partners

Out-licensing

Commercial landscape

- Big / mid-tier Pharma

BD out-licensing pipeline

BEN-8744 (UC), BEN-28010 (GBM) BEN-34712 (ALS)

- Pipeline of active out-licensing opportunities **more than doubled since start of 2024** - under NDA
- **Recent early stage IBD deals** has **aided discussions** (BEN-8744; UC/Crohn's)
- Industry standard, **long-term** out-licensing **discussions continue - shapes the development of the assets**

Proprietary preclinical & clinical **pipeline** assets targets identified and developed **in-house - out-license/ partner at value inflection points**

Financial Highlights (unaudited) - as at 30 June 2024

Reported operating loss

£32.3m

(H12023: £45.9m)

Reduction of 30% reflecting both the impact of reduced restructuring costs and the prioritisation of research and development activities.

Revenue

£2.8m

(H12023: £5.3m)

Revenue decrease as expected, with the initial target identification efforts for the AstraZeneca collaboration now reducing, the newer Merck collaboration is now generating revenue to replace it, with additional revenue expected from this collaboration in the second half of 2024 through to 2026, once the development milestones are received, for work already completed.

Cost of Sales[1]

£3.6m

(H12023: £0.8m)

Cost of sales consists of research and development expenditures that directly relates to work carried out on revenue generating collaboration agreements. The 364% increase reflecting the costs of operating the chemistry collaboration which are similar to those incurred by the Group on a proprietary programme basis.

Research and development (R&D) spend[1]

£19.9m

(H12023: £36.3m)

Primarily driven by reduction in cost base due to restructuring programs announced in May '23 and April '24 and reflects the company's prioritisation of certain programmes in its proprietary pipeline.

[1]The comparative information for the six months to 30 June 2023 has been adjusted to reflect cost of sales being presented for the first time in the period.

Cash, cash equivalents and short term deposits

£38.1m

(31 December 2023: £72.9m)

(30 June 2023: £84.3m)

Post period receipt of £12.1m for R & D Tax credits claimed during H1 2024.

Operating cash outflow

£35.3m

(H12023: £45.6m)

Operating cash outflow before changes in working capital

£29.3m

(H12023: £37.9m)

BenevolentAI - overview and H1 2024 summary

- **Pioneer and leader** in AI drug discovery and development - **multiple proof points** - strongly **positioned to benefit** from rapid and promising evolution of the sector
- **Strengthened** Executive Leadership and Board - **innovation and execution**
- **Positive top line Phase 1 data report for lead asset BEN-8744** - full data to be presented at upcoming leading medical conference
- **Advancements** in **target identification** and **chemistry collaborations - validate the Benevolent Platform™**
- **Strong business development** activities **boosting collaboration and out licensing opportunities**
- **Cash runway extended to late Q3 2025**

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Appendix

H1 2024 - Financial Highlights

- Reported operating loss reduction of 30% from £45.9 million (H1 2023) to £32.3 million, reflecting both the impact of reduced restructuring costs and the prioritisation of research and development activities.
- Revenue has decreased by 46% from £5.3 million in H1 2023 to £2.8 million, primarily due to the anticipated scaling down of the target identification efforts within our AstraZeneca collaboration and the newer Merck collaboration now generating revenue to replace it. Additional revenue is expected from the Merck collaboration in the second half of 2024 through to 2026, once the development milestones are received, for work already completed. Since its inception in 2019, the AstraZeneca collaboration has generated approximately £32 million, and BenevolentAI continues to be eligible for discovery, development, and commercial milestones, as well as tiered royalties on net sales.
- Reported research and development spend[1] reduction of 45% from £36.3 million (H1 2023) to £19.9 million, reflecting continued and focussed investment in the proprietary pipeline and innovation of the Benevolent Platform™ and excluding directly attributable cost of sales.
- Normalised research and development spend[1] reduction of 39% from £32.2 million (H1 2023) to £19.5 million, consistent with the reported research and development spend, but excludes the one-off costs of restructuring in the period.
- Normalised operating loss reduction of 26% from £40.6 million (H1 2023) to £30.0 million.
- Operating cash flow before changes in working capital reduced by 23% from £37.9 million (H1 2023) to £29.3 million.
- Cash, cash equivalent, and short-term deposits reduced by 48% from £72.9 m (FY 2023) to £38.1 m with the cash runway extended to late Q3 2025.

	H1 2024 '000	H1 2023 '000	% Change
Revenue	**2,834**	**5,297**	**(46%)**
Cost of sales	(3,551)	(765)	364%
Reported research and development spend	(19,927)	(36,282)	(45%)
Normalised research and development spend	(19,534)	(32,230)	(39%)
Reported administrative expenses	(12,245)	(14,209)	(14%)
Normalised administrative expenses	(10,282)	(12,971)	(21%)
Reported operating loss	**(32,311)**	**(45,850)**	**(30%)**
Normalised operating loss	**(29,955)**	**(40,560)**	**(26%)**
Reported basic and diluted EPS, expressed in pence	(20.3p)	(31.2p)	(35%)
Normalised basic and diluted EPS, expressed in pence	(18.4p)	(27.0p)	(32%)

	30 June 2024	31 December 2023	
Cash, cash equivalents and short-term deposits	38,078	72,906	**(47.8%)**

[1] The comparative information for the six months to 30 June 2023 has been adjusted to reflect cost of sales being presented for the first time in the period. See note 3 of the interim condensed consolidated financial statements for further details

Reported to Normalised[1]

	Six months ended 30 June 2024 £'000	Six months ended 30 June 2024 £'000
Reported operating loss	(32,311)	(45,850)
Adjustments for:		
R&D - Restructuring programme expenses	393	4,052
Administrative - Restructuring programme expenses	427	1,238
Revaluation of investments	1,536	-
Normalised[1] group operating loss	**(29,955)**	**(40,560)**

The HY 2024 reported operating loss driven in part by £0.8m non-recurring provision for restructuring programme undertaken across R&D and Administrative, reflecting full year costs recognised at the point of committing to the plan April 2024

The reported operating loss also includes a £1.5m one-off charge relating to the fair value reduction in one of the Group's unlisted equity investments, not present in the comparative period.

The HY 2023 reported operating loss included £5.3m non-recurring provision for restructuring that was committed to in May 2023.

1. Excludes exceptional costs related to the restructuring programme and revaluation of investments.

Cash flows for underlying Operating activities

	Six months ended 30 June 2024 £'000	Six months ended 30 June 2023 £'000
Normalised[1] operating loss	(29,955)	(40,560)
Depreciation & amortisation	1,074	1,530
Equity SBP expense	875	6,211
Foreign exchange loss	102	391
Cash flows from changes in working capital	(12,239)	(20,117)
Cash expended from underlying operating activities	**(40,143)**	**(52,545)**
Opening cash balance[2]	72,906	130,182
Closing cash balance[2]	38,078	84,320

Cash expended from underlying operating activities has reduced to £40.1m from £52.5m in H12023 consistent with the reduced operating loss.

1. Excludes exceptional costs related to the restructuring programme and revaluation in one of the Group's unlisted equity investments.
2. Includes cash, cash equivalents and short-term deposits (maturity between 3 and 12 months).

COMPANY INFORMATION

Listed on EuroNext; April 2022
(Euronext Amsterdam: BAI)

Offices in London and laboratories in Cambridge UK
c.180 employees

Key Shareholders (Sept '24):

Ken Mulvany (co-founder) - 26.7%
Temasek Life Sciences - 14.8%
Zaoui - 7.1% (Odyssey sponsors)
Ally Bridge Group - 6.7%
Link - 5%
Lansdowne Partners - 4.5%
Schroders - 3.8%

Strategic/partnership shareholders:

Lilly | AstraZeneca

BenevolentAI: Leading AI innovations in Drug Discovery and Development

Strengthened leadership for innovation and growth

Dr. Joerg Moeller
CEO

Dr. Ivan Griffin
CBO and co-founder

Dr. Anne Phelan
CSO

James Malone
CTO

Supported by an experienced Board of Directors at the forefront of their fields...

Peter Allen
Chair

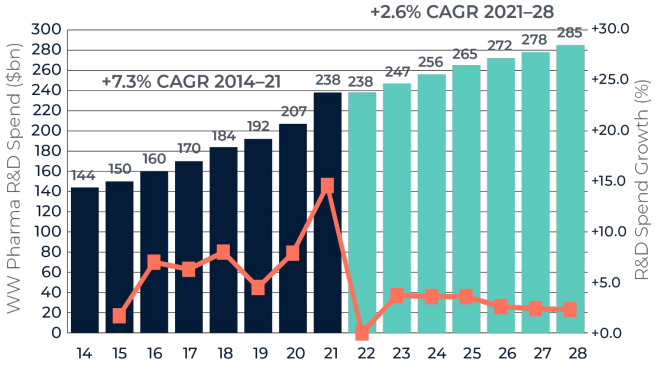
Kenneth Mulvany
Deputy Chair and founder

Ian Nicholson
Non-Executive Director

Jeremy Sohn
Non-Executive Director

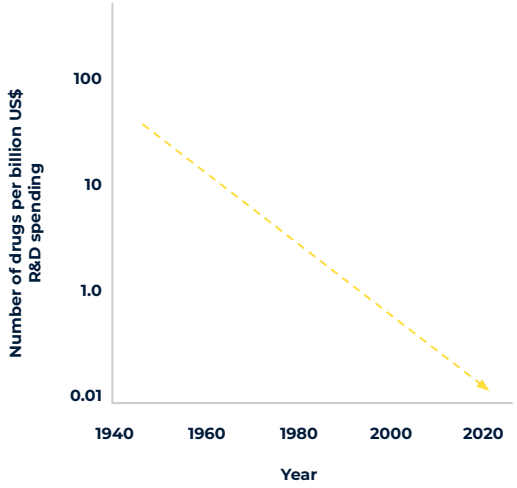
Discovering and developing medicines is challenging

Worldwide Total Pharmaceutical R&D Spend in 2014-2028



Source: Evaluate Pharma

Industry R&D Productivity "Eroom's law"



- Pharma R&D has become **slower and more expensive over time**, despite more investment and improvements in technology
- Primary reasons for failure are **poor understanding of disease biology,** unexpected **toxicity**, and inability to **identify the most suitable patient** to treat with a given drug

96%
overall failure rate in drug development

30-50%
efficacy for leading drugs

10 years
to market

$2.6 bn
in average R&D and to market cost per drug

The AI value proposition for pharma R&D

Direct R&D Cost Savings

Discovery & Preclinical

Increasing Probability of Success

Clinical Development

"Faster and cost effective"

INDUSTRY STANDARD	AI-ENHANCED
$33m over 5.5 years	$15m over 3-3.5 years

Based on industry benchmarks and papers

Reduce pre-clinical cost by >50% and time to market by 2-2.5 years

Note
Lab research and target identification costs and time not captured in industry data - likely to add significantly to the industry standard time and cost

"Get it right more often"

Highest attrition is at Phase II (current 34% success rate)[2]

~50% Phase II/III trial failures due to **lack of efficacy**[3]

	INDUSTRY STANDARD	AI-ENHANCED (ILLUSTRATIVE)
PoS from Phase I to Market	12%	24%
# Phase I Candidates Required for 1 Approved Drug	9	4
Illustrative NPV[1]	c$60m	c$200m

Illustrative 25% PoS improvement at each clinical stage (Phase I-III)

Context

- Phase II trials with **pre-selection biomarkers** already **>50%** more likely to succeed[4]

Sources: Paul et al, 2010, Biomed Report 2021, Harrison, 2016
Note: For illustrative purposes only; (1) Illustrative NPV for a theoretical $750m peak sales drug during initial 10Y on the market (assumes (i) peak sales reached 5 years post-launch, (ii) 90% gross margin, (iii) 20% S&M expenses, (iv) 20% tax, (v) a 10% discount rate) and (vi) excludes any terminal value). (2) Based on Paul et al Nat Rev Drug Discov 2010. (3) Based on Harrison, Nat Rev Drug Discov 2016. (4) Based on Biomed Report 2021.

Proprietary pipeline products are highly differentiated

Asset	MoA	Target market	Market size and recent deals
BEN-8744: Ulcerative Colitis (UC)	PDE10 inhibitor	Moderate-to-severe Ulcerative Colitis (and Crohn's)	• **Potential first-in-class**, **peripherally restricted**, oral PDE10 inhibitor • UC predicted market size of $9.6bn by 2030[1], with potential expansion to Crohn's disease ($13bn by 2030[2]) • Robust recent IBD deal activity for assets at a similar stage; Lilly's $3.2bn Morphic buyout, AbbVie $250m Celsius and $212.5m Landos Biopharma acquisitions
BEN-28010: Glioblastoma (GBM)	CHK1 inhibitor	Naive and recurrent GBM regardless of MGMT methylation status	• **Potential first-in-class CNS penetrant** CHK1 inhibitor, for GBM and other solid tumours (e.g lung) with brain metastases - vastly increasing market potential • Life-changing potential in a high unmet space (SoC only extends survival by 15 months[3] and only ~65% of patients respond to SoC[4]) • $868.5M market in GBM alone by 2030[5], potential to expand into broad brain metastases market - significant opportunity - underdeveloped market with lack of effective treatments
BEN-34712: Amyotrophic Lateral Sclerosis (ALS)	RARαβ agonist	Sporadic and familial forms of ALS	• **Potential first-in-class, CNS-penetrant RARαβ agonist; broad potential across multiple ALS subtypes** • Limited treatment options and potential to greatly add value for patients (SoC only extends survival by ~6 months[6]) • ALS market $1bn by 2030[7] with significant potential and high recent deal activity; Lilly paid $45m upfront for preclinical ALS asset (QurAlis Jun 24)
Parkinson's Disease	Novel Target	Parkinson's and related synucleinopathies	• **Potential first-in-class CNS-penetrant** inhibitor of neuroinflammatory target • Parkinson's predicted market size $11.5bn by 2029[8]
Fibrosis	Novel Target	Fibrotic indications including MASH	• **Potential first-in-class antifibrotic target** • MASH global market size of $10.7bn by 2030[9], with potential to expand to other fibrotic indications.

1, 2. GlobalData Market Size Database, 8MM; 3. Tamimi et al. 2017; 4. Hegi et al. 2005; 5. GlobalData Report 2021 Glioblastoma Multiforme Forecast; 6. Mead et al. 2022; 7. GlobalData Market Size Database, 8MM; 8.GlobalData Market Size Database, 7MM; 9. Evaluate Pharma WW sales

BEN-8744 – Ulcerative Colitis (UC) (PDE10 inhibitor) – on track for demonstrating clinical efficacy

✓ Novel (potential first-in-class)

Programme goals in UC
- Novel
- Dual effect (barrier/inflammation)
- Oral small molecule

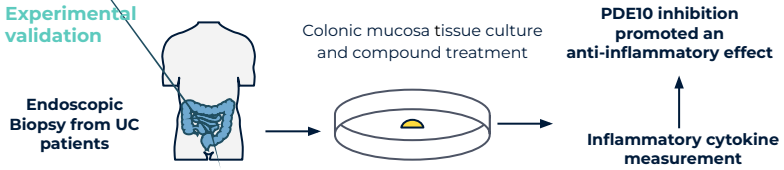
PDE10 - **no prior linkage to UC** in all available biomedical literature

✓ Significant commercial opportunity (IBD)

- **UC** predicted market size of **$12.7bn by 2030[1],** with potential expansion to Crohn's disease, predicted market size of **$20.7bn by 2030[2]**
- **Robust recent IBD deal** activity for assets at a similar stage[3]; Lilly's **$3.2bn** Morphic buyout, AbbVie **$250m** Celsius and **$212.5m** Landos Biopharma acquisitions

✓ Rapid development, well validated, efficacious goal

- **Rapid** and **efficient** preclinical candidate delivery - **2 years in chemistry** compared **to industry standard of 3-5 years**
- **Patient *ex vivo* biopsies** - refractory patient biopsy samples respond to PDE10 inhibition (ie. exact patient group would market to first)
- Comparable efficacy demonstrated in Crohn's patient biopsies, more than 2x market opportunity
- **Clinical - Positive Phase 1a results** - safe and well tolerated
- Devoid of CNS side effects that have been an issue for other PDE10 inhibitors for other diseases - enabled by chemistry platform



1, 2. Evaluate Pharma, WW, 3, Company announcements

BEN-8744 Phase Ia - positive topline data announced Mar'24

Primary objective: investigate the safety and tolerability of multiple doses and the effect of food on pharmacokinetic profile of BEN-8744 in healthy volunteers, aged 18-65 years

- Met primary objective
- BEN-8744 was **safe and well tolerated,** with no Serious Adverse Events (SAEs) reported in any dose cohorts
- **Importantly**, given liabilities associated with PDE10 inhibitors previously in clinical development for other CNS indications, **no evidence of CNS-associated adverse events**
- Pharmacokinetic profile of BEN-8744 generated **suggested twice daily dosing** should achieve desired PDE10 target coverage to elicit potential therapeutic effect in subsequent clinical studies in UC patients

BEN-8744 Phase Ia

Study objectives: assess the safety and tolerability of single and multiple oral doses, and the effect of food on pharmacokinetic profile of BEN-8744 in healthy volunteer subjects (18-65 yrs)

Part A	Part B	Part C
Single Ascending Dose (SAD)	**Food Effect**	**Multiple Ascending dose (MAD)**

- MAD study, subjects were dosed twice daily for 14 consecutive days
- BEN-8744 or placebo was administered to 8 healthy subjects (BEN-8744 n=6; placebo n=2) in both the single and multiple dose cohorts
- In total 6 SAD and 2 MAD cohorts were completed. A total of 54 subjects were exposed to BEN-8744; 36 in the SAD, 12 in the MAD and 6 in the food effect study

Importance of Phase Ia results

- **PDE10s** previously studied for CNS indications - failed to progress due to dose limiting CNS mediated side effects
- A **clean safety profile** through **SAD and MAD** doses is a **big step forward** for the use of PDE10 inhibitors as a therapeutic treatment
- Results from this study inform the preferred dose for the next stage of development

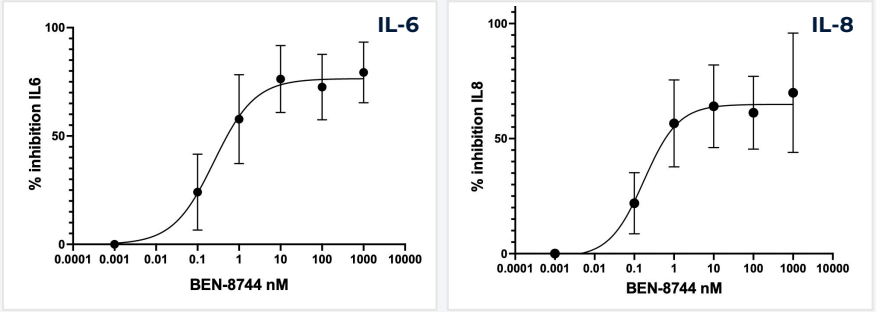
Increased confidence to clinical translation

Ex vivo human UC and CD patient biopsy samples retain inflammatory phenotype:

PDE10 demonstrates robust efficacy in 80% of biopsies, irrespective of tofacitinib response.

Literature explicitly links cGMP signalling to gut homeostasis, barrier integrity and clinical symptoms of IBD

BEN-8744 potently inhibits inflammatory cytokine release from UC & Crohn's ex-vivo colon biopsies
Summary data: % inhibition (biopsies from 15 IBD patients)

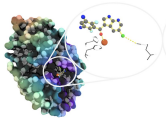


Molecular Design — expertise in structure-based design, virtual screening and machine learning

We combine deep expertise in drug discovery with innovative techniques in structure-based design, virtual screening and machine learning.

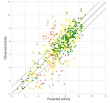
- ✔ Highly experienced drug discovery team with a proven track record of taking nascent programme ideas and delivering drugs to the clinic
- ✔ Chemoinformatic and AI tools impacting all stages of a drug programme from target selection through to candidate nomination
- ✔ Empowering chemists to design better drugs in fewer cycles – **candidate drugs delivered in as little as 2 years** from programme inception **compared to 3-5 year industry standard**

Druggability scoring to prioritise targets



Binding site comparison to identify Hit matter and evaluate selectivity

Proprietary pharmacophore building methodology

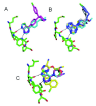


ML models of activity and ADMET endpoints

Target ID → **Hit Identification** → **Hit Expansion** → **Lead Optimisation** → **Candidate Seeking**

Binding site detection to identify differentiating chemistry opportunities

Customisable **virtual screening** pipeline now on >10 billion compound scale



Protein-Ligand interaction mining to surface protein-centric bioisosteres

Programme visualisation

Indication expansion - capability validation

NOVEL RAPID EFFECTIVE

Backdrop to baricitinib approval

- >4,000 clinical trials related to COVID were registered with the FDA
- 485 repurposed drugs were registered for COVID clinical trials
- Tens of billions was spent on developing treatments

FDA emergency use approval in Nov 2020 and full approval in May 2022

Benevolent Platform

Our technology and AI workflows identified a **previously unknown antiviral mechanism of Baricitinib**

48hrs to identify, 9 months to emergency approval, 14 months to full approval

38% **Reduces mortality by a significant 38%**

x1 **Only one** repurposed drug proposed by AI was approved by the FDA and recommended by WHO

BARICITINIB — *Antiviral mechanism* — *2019-2Cov*

How we did it so fast

5 years spent building data + Foundations + Connections + Platform + Insights + Way of querying