SERENATIS: Three Novel Therapeutics for OCD

$1.3M pre-seed at $3.9M pre-money valuation with lead VC secured and signed term sheet

Serenatis is developing three novel small-molecule drugs, each with a unique mechanism of action targeting different pathways implicated in OCD.

Serenatis is positioned to revolutionise OCD treatment, opening a multi-billion market.

Nick Sireau, PhD
CEO & Co-founder,
Serenatis Bio, Cambridge, UK
nick@serenatisbio.com

OCD: A Global Mental Health Crisis

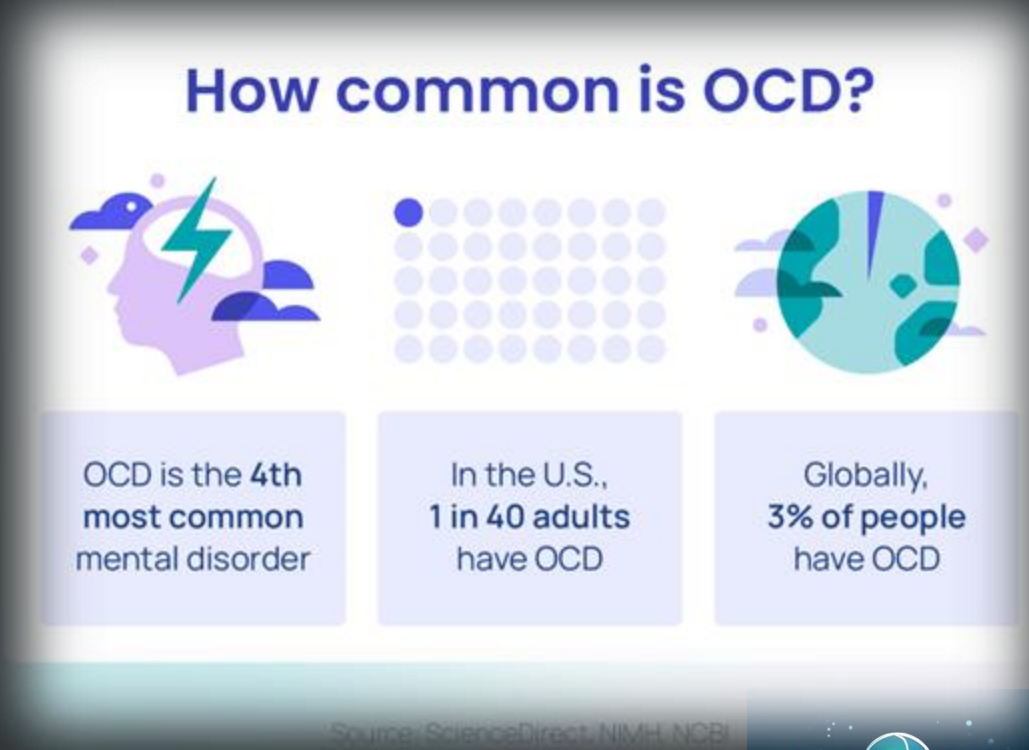
Prevalence: Obsessive-compulsive disorder (OCD) affects 240 million people worldwide

Impact: High suicide rates, billions in healthcare costs

Current Treatments:

- Outdated medications (SSRIs) take months to show effects, often ineffective
- Cognitive Behavioural Therapy (CBT) is difficult to access and has high dropout rates

Unmet Need: A critical gap exists for new, faster-acting, and more effective treatments



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The Opportunity
Serenatis Bio: Game-Changing Therapies for OCD

Our Solution: Three small molecule, novel mechanism drugs that target the root cause of OCD

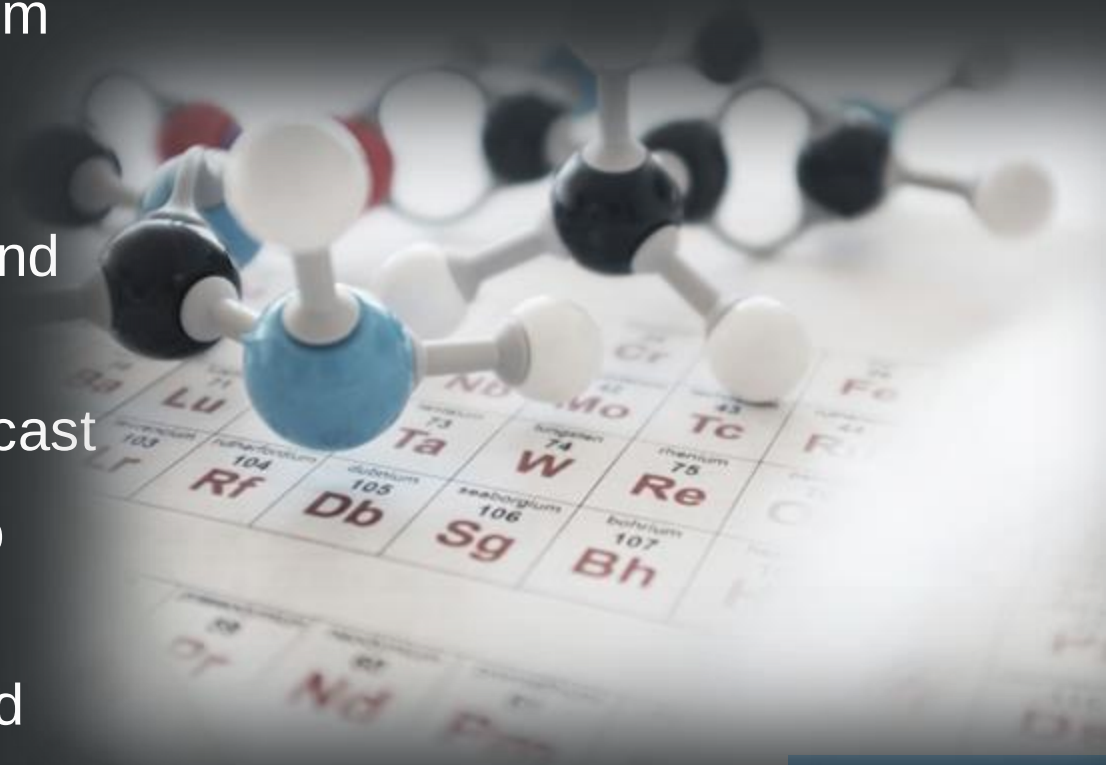
Novel Mechanisms: Address imbalances in brain chemistry using the latest neuroscience discoveries and precision medicine

Market Potential: $4.5 billion peak annual sales forecast

Funding Required: Raising $1.3m pre-seed round to carry out preclinical work

Lead for pre-seed: lead confirmed, term sheet signed

Potential exit in 2027 for first drug (SB001), and 2029-30 for SB002 and SB003 (after phase 2 trials)



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Personal Case Study
The Devastating Reality of OCD

Jim, a Cambridge graduate and close friend of CEO Nick Sireau – they met at their OCD support group

Suffered from OCD since childhood

Six months in psychiatric care, endless CBT sessions, tried many medications – to no avail

Tragically took his own life in 2020 at age 47

Why This Matters: Jim's story is representative of millions suffering from this devastating disorder

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OCD: A Major Untapped Market

Prevalence: 3% of the global population; half are severely affected

US Addressable Market: 5m people, growing at 0.2% annually

Forecasted Sales: $4.5bn peak sales for our first drug

Financial Projections: $2.6bn rNPV at end of phase 2 for our first drug alone

Expansion Potential: Application to other disorders (body dysmorphic disorder, trichotillomania, skin picking, anxiety, pathological gambling)

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SB001: A novel mGluR2 Receptor Modulator

Mechanism: Targets glutamate:GABA imbalance, a key factor in OCD

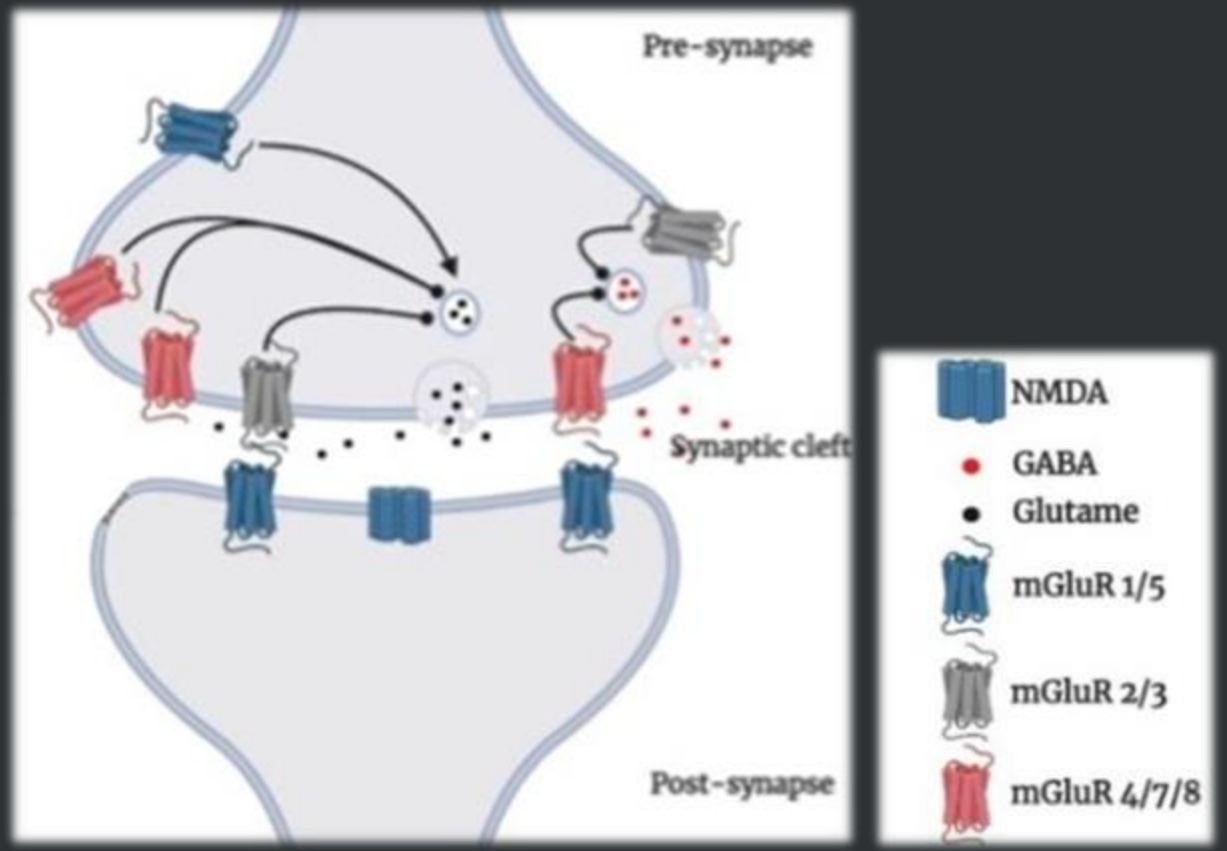
Selective Action: Modulates glutamate release through mGluR2 receptor only during neurotransmission

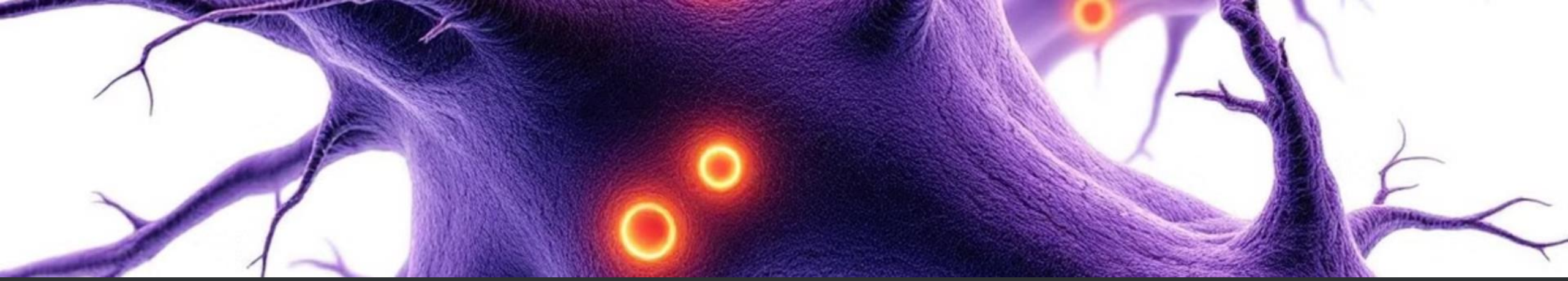
Preclinical validation: Excellent results with analogous compounds in a compulsive-checking OCD rat model with Cambridge University

Good human safety: new chemical entity (NCE) with derisked safety profile

Patent Filed: Strong IP protection for SB001 in OCD and related disorders

Next Steps: Preclinical work underway, then Phase 2 trials (investor lined up for clinical phase)





SB002: An AMPA Receptor Modulator

Mechanism: SB002 targets a key OCD pathway, enhancing neuroplasticity

Preclinical validation: excellent results in OCD animal model

Clinically Validated: AMPA receptor modulation proven effective in OCD

Strong Safety Profile: De-risked, based on clinical data of this mechanism of action

IP: NCE with composition of matter patent

Next Steps: further preclinical work and IP expansion, then GLP toxicology

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SB003:
A new COMT Inhibitor with Enhanced Brain Penetrance

Mechanism: catechol-O-methyltransferase (COMT) inhibition modulates dopamine in the prefrontal cortex, reducing OCD symptoms

Innovation: we are developing an NCE drug that will outperform older COMT inhibitors by improving brain penetration and reducing side effects

Clinical validation: Our advisor Prof Jon Grant has shown clinically that COMT inhibition reduces OCD symptoms

Next Steps: Development started with top-tier contract research organisation (CRO), preclinical work in OCD mouse model, then IP with composition of matter

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Pioneering EEG and Genetic Biomarker Precision Medicine for OCD

Electroencephalography (EEG) is a portable, affordable and effective means of measuring biomarkers for OCD

The two key EEG biomarkers for OCD are Error Related Negativity (ERN) in the anterior cingulate cortex and Readiness Potential (RP) in the supplementary motor area - both key brain regions for OCD

Both the ERN and RP are associated with the glutamate:GABA ratio, as shown by our collaborators at the University of Cambridge

The ERN and RP can be used to select OCD patients with high glutamate levels who should respond to SB001 and SB002 in clinical trials

The single nucleotide polymorphism (SNP) Val-158-Met, which appears to significantly relate to changes in OCD symptoms and cognition from COMT inhibition, will be used to select OCD patients for SB003 clinical trials

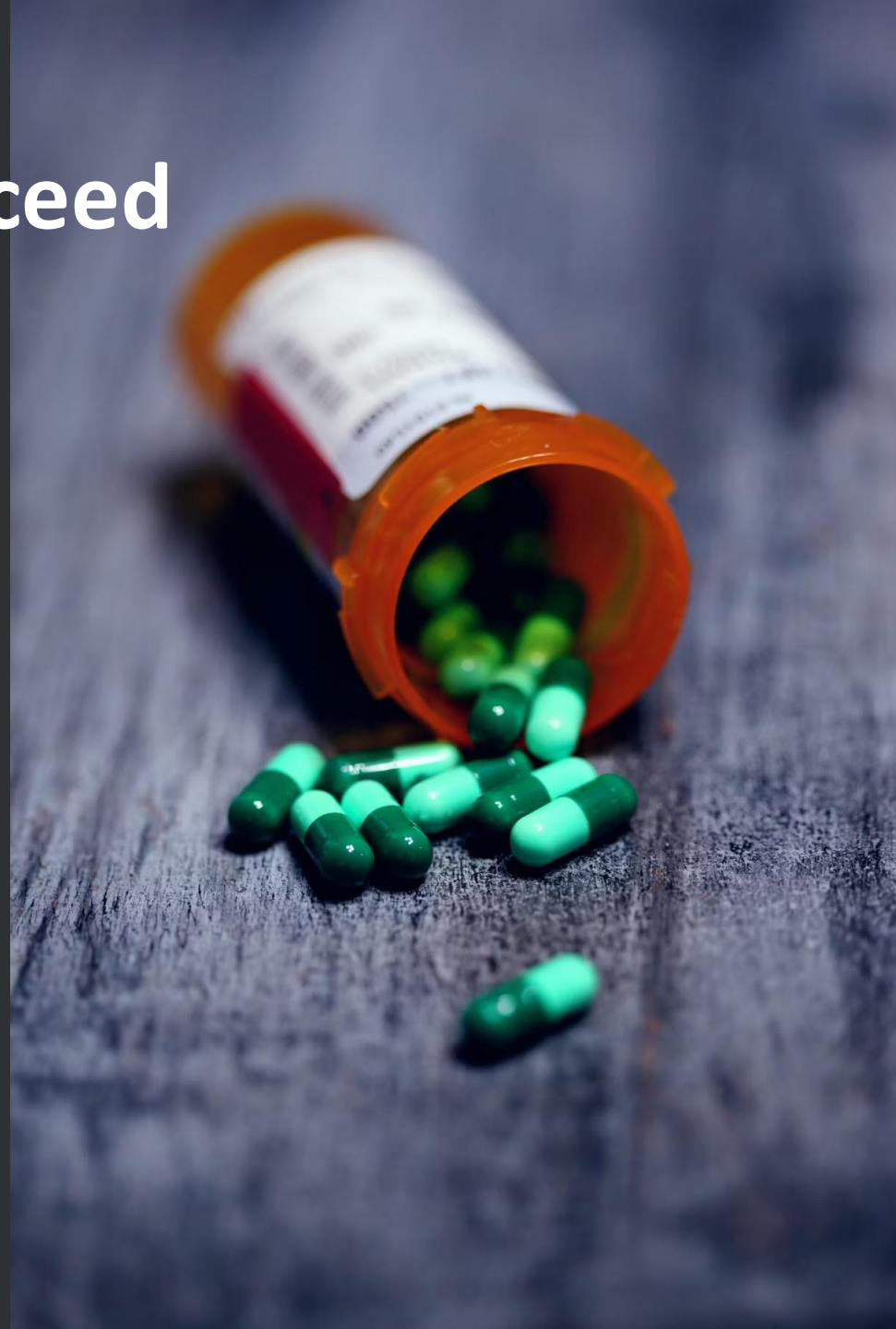
Competitive Landscape
Why Serenatis Bio Is Poised to Succeed

Current Treatments:

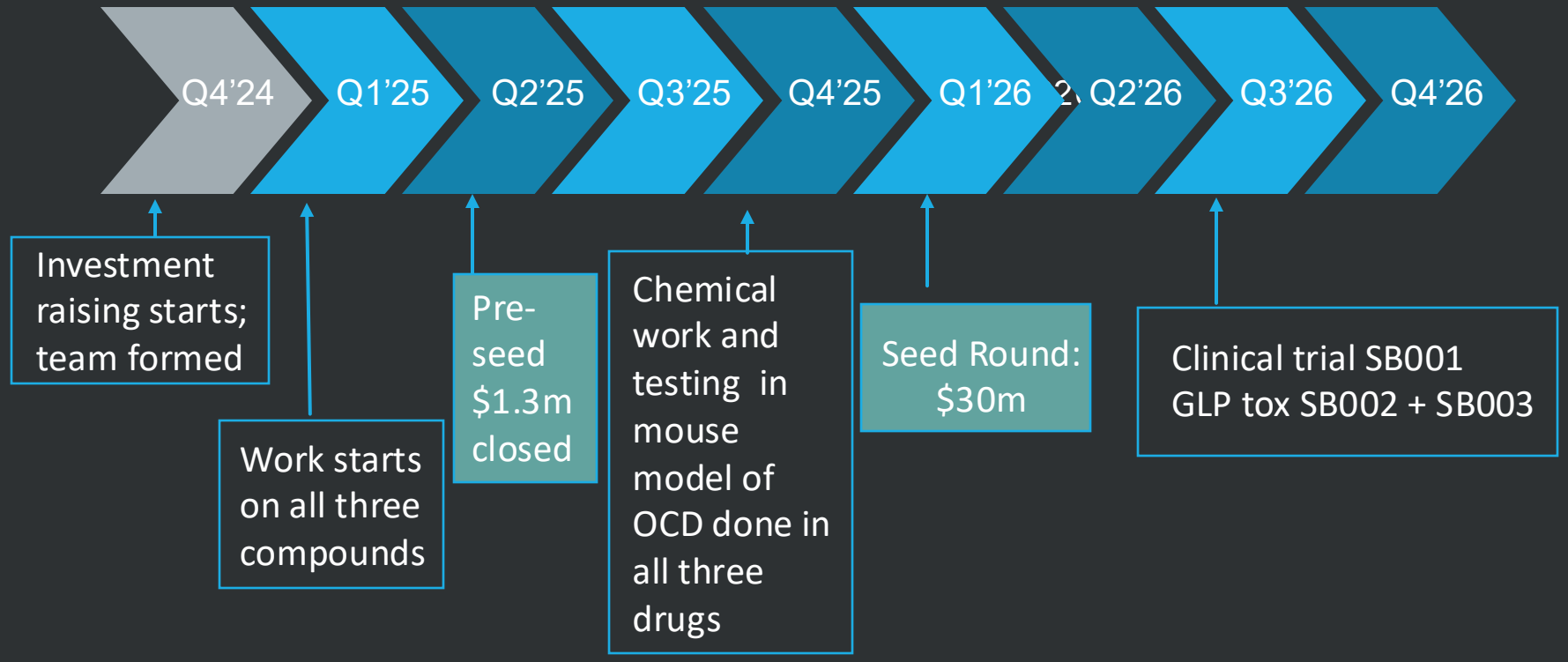
- SSRIs: only 40% response rate, significant side effects
- Antipsychotics: limited efficacy, heavy side effects
- Cognitive behavioural therapy (CBT): high dropout rates, lengthy process

Competitors:

- **Troriluzole (Biohaven):** failed phase 2 clinical trial, limited potential despite ongoing phase 3 clinical studies
- **Generic Glutamate Modulators:** lack regulatory approval, and inconsistent results



Timeline and investments needed



Investor and Big Pharma interest

Engagement already underway with big pharma

Three letters of intent + one follow-on VC

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Budget, activities and value milestones for $1.3m pre-seed raise

Activities	Costs	Value milestone
SB001 Preclinical work (drug synthesis, mouse testing)	$75k	Strong negotiating position for license deal
SB002: Preclinical work (drug synthesis, animal testing)	$170k	Achieve strong preclinical efficacy data and safety profile to de-risk entry into pre-clinical GLP tox studies
SB003: drug discovery, compound optimization, chemical synthesis	$435k	Lead compound ready for mouse studies
SB003: Preclinical work (drug synthesis and mouse testing)	$100k	Achieve strong preclinical efficacy data and safety profile to de-risk entry into pre-clinical GLP tox studies
Patent filings for all three drugs and regulatory preparation (FDA/EMA) for SB001	$130k	SB001: Stronger patent with added data SB002: New patent for method of use alongside securing of existing composition of matter patent. SB003: New composition of matter and method of use patents. Clear regulatory pathway for SB001.
SB001: Phase 2 Clinical Trial Preparation (Finalizing trial design. Selection of clinical research organization (CRO).)	Included in salaries	Ready to begin clinical trial
Team Expansion & Operational Scaling	$340K	Build a robust team capable of supporting clinical trials and commercialization efforts.
Legal work, admin, accountancy, travel and reserves	$50k	

World-class team with a proven track record

Experienced,

Passionate,

Driven by Impact

Nick Sireau, PhD *CEO & Co-founder*	• Founder of Orchard OCD research charity • OCD patient and advocate • Led successful clinical trials for first approved treatment for rare disease alkaptonuria	
David Cavalla, PhD *Executive Chairman & Co-founder*	• 35+ years in pharma • Three clinical phase 2 successes • Co-founded Exvastat	
Julia Jones *CFO*	• Chartered Accountant, formerly at PwC • Founder and MD of Archangel Accounting • Helped secure and manage $350m of VC investment	
Prof Jon Grant *Clinical Advisor*	• Professor of Psychiatry at Uni of Chicago • Director of clinic and research lab on addictive, compulsive and impulsive disorders	
Prof Trevor Robbins *Scientific Advisor*	• Prof Cognitive Neuroscience, Uni of Cambridge • Director of Behavioural Clinical Neurosci Inst (BCNI) • Widely cited neuroscientist (h-index of 245) • Research leader in OCD and other cognitive disorders	
Ekaterina Malievskaia *Advisor*	• Co-Founder at COMPASS PATHWAYS • Clinical Instructor, Mt Sinai School of Medicine • Research Professor at City University of New York	

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