Transforming mental health care

COMPASS Pathways plc March 2021





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COMPASS's leadership team



George Goldsmith Chairman, CEO and Co-founder





Ekaterina Malievskaia, MD Chief Innovation Officer, Co-founder



Icahn School of Medicine



Lars Wilde



President, Chief Business Officer, Co-founder





Piers Morgan Chief Financial Officer





Verona Pharma



Nate Poulsen

Cooley

General Counsel and Head of Legal, IP, and Licensing



Marco Mohwinckel





Chief Commercial Officer MONITOR GROUP

Medscape



Trevor Mill Chief Development Officer









Tracy Cheung Chief Communications Officer





Sue Stansfield, PhD Senior Vice President, Clinical Operations





Stephen Schultz

Senior Vice President, Investor Relations





Greg Ryslik, PhD

Stanford

Continuing Studies mindstrong T=5L=

Senior Vice President, Data Science, Machine Learning and Digital Health Research



Gary Gilmour, DPhil Vice President, Preclinical Research





Steven Levine, MD Vice President, Patient Access





EXETER



Sarah Bateup, Prof Doc Head of Therapy Research and Training







Dr Stephen Wright Senior Scientific Advisor





Emilio Arbe, MD Interim Clinical Sciences Director





We are a mental health care company



Dedicated to accelerating patient access to evidence-based innovation in mental health care

- Significant unmet need: 100m people¹ with treatment-resistant depression (TRD)
- Committed to transforming the patient experience



Developing COMP360 psilocybin therapy for TRD

- COMP360 designated a FDA Breakthrough Therapy for TRD
- Completed phase I healthy volunteers trial, largest psilocybin therapy clinical trial to date
- Phase IIb ongoing, with 216 patients expected to have completed the trial by late 2021
- Planned expansion into additional indications



Driven by science and rigour

- COMP360 differentiated mechanism of action, activating the 5HT_{2A} receptor²
- Signals from academic studies have shown that psilocybin therapy can improve outcomes for patients
- IP strategy combining patent protection with regulatory and market exclusivity

Source: 1. Depression and Other Common Mental Disorders: Global Health Estimates and Cleare, A. et al - 2015 - Evidence-based guidelines for treating depressive disorders with antidepressants: A revision of the 2008 British Association for Psychopharmacology guidelines. These sources state that 1/3 of those suffering with major depressive disorder (MDD) are estimated to be TRD. Therefore, we approximated 100 million from 320 million people with MDD 2. Halberstadt and Gever - 2011



Transforming the patient experience in mental health care

Our vision

A world of mental wellbeing

FDA Breakthrough
Therapy designation
for COMP360 in TRD;
New indications and
compounds in
development







Health systems and payer partnerships
Value-based models, real-world evidence



Innovative care delivery models

Centres of Excellence, digital technologies

TRD treatment pathway: significant unmet need for 100 million patients

Treatment pathway stage	New onset depression Major depressive disorder (MDD)	Persistent depression Major depressive disorder (MDD)	Treatment-resistant depression (TRD)
Line of therapy	First line	Second line	Third line +
Estimated no of patients (worldwide)	320 million	200 million	100 million (~33% of total)
Available treatments	 Antidepressants Psychological interventions, eg CBT* 	 Antidepressants Antidepressant combinations Psychological interventions 	 Antidepressants Augmentation therapy (antidepressants, mood stabilisers, anticonvulsants, atypical antipsychotics, esketamine) Ketamine Somatic therapy (rTMS*, tDCS*, ECT*, DBS*) High-intensity psychological interventions
% relapse	60-70%	50-75%	80-90%

Note: *CBT = cognitive behavioural therapy; rTMS = repetitive transcranial magnetic stimulation; tDCS=transcranial direct current stimulation; ECT=electroconvulsive therapy; DBS=deep brain stimulation

We need a new treatment model in TRD



Depression: leading cause of disability worldwide

- MDD estimated to account for 7.5% of years of life lost due to disability globally, as defined by DALYs¹
- Approx sevenfold increase in suicide rate for TRD patients compared with non-TRD MDD patients



Depression: burden on health systems²

- US annual cost of depression: >\$200 billion³
- A large proportion can be attributed to direct costs (eg outpatient and inpatient medical services and pharmaceutical services)



TRD: increased economic and

US medical costs for TRD patients are
 ~2-3x costs for non-TRD MDD patients

societal costs

- TRD patients have ~2x inpatient visits relative to non-TRD MDD patients
- Average US annual healthcare cost between \$17-25k per TRD patient per year

Need for a new treatment paradigm

- ✓ New mechanisms of action
- ✓ Fewer side effects
- ✓ Rapid-acting and durable response

Note: TRD = treatment-resistant depression; MDD = major depressive disorder; 1. DALY = disability-adjusted life years; 2. Indirect costs are associated with the expenses incurred from the cessation or reduction of work productivity due to morbidity and mortality; 3. Accounting for comorbid physical and psychiatric conditions

Source: WHO (2017); Depression Therapeutics by David Thomas and Chad Wessel, Bio Industry Analysis (2019); Johnston KM, Powell LC, Anderson IM, Szabo S, Cline S (2018). The burden of treatment-resistant depression: a systematic review of the economic and quality of life literature. Journal of Affective Disorders

Our COMP360 psilocybin therapy



COMP360 (GMP drug substance and drug product)

Synthetic, high-purity, polymorphic crystalline psilocybin formulation 1mg, 5mg and 25mg oral capsule formulation (for phlll and commercialisation) Stability testing in place with adequate shelf life for clinical trials/commercialisation UK CMO ready for full scale commercial manufacture (MHRA accreditation in place) CMC development package designed to meet regulatory standards in the US, EU, UK and in Canada



Psychological support

COMP360 is combined with psychological support from specially trained therapists

Psilocybin session is preceded by preparation and followed up with integration



COMP360 psilocybin therapy: clinical status

- Designated Breakthrough Therapy for TRD in 2018
- Preclinical genotoxicity and cardiotoxicity studies completed
- Phase I trial completed: COMP360 generally well-tolerated in healthy participants (n=89)
- Phase IIb trial in TRD: underway in 22 sites in 10 countries (n=216)

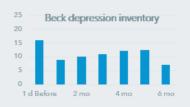


Clinical signals: early indicators from academic-sponsored trials show rapid reductions in symptoms in TRD and other mental health conditions



UCLA¹ Grob et al $n = 8^2$

Existential distress



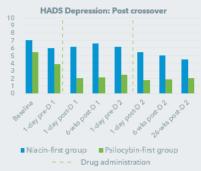
Significant reduction in BDI scores at six months, compared with baseline

Effect size not reported p-value = 0.03

2016

New York University Ross et al $n = 23^2$

Existential distress



Significant reduction in HADS-D scores at 26 weeks post-dose 2, compared with baseline

Effect size (Cohen's d): niacin-first group = 0.66psilocybin-first group = 0.81 p-value < 0.05

2016

Johns Hopkins Griffiths et al $n = 46^2$

Existential distress



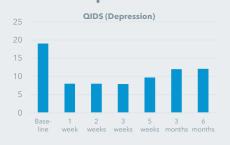
Significant reduction in **GRID-HAMD** scores at six months across both groups, compared with baseline

Effect size (Cohen's d) = 2.98p-value < 0.001

2016, 2018

Imperial College Carhart-Harris et al $n = 19^3$

Treatment-resistant depression



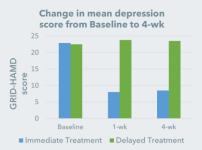
Significant reduction in QIDS score at six months, compared with baseline

Effect size (Cohen's d) = 1.6p-value = 0.0035



Johns Hopkins Davis et al $n = 24^4$

Major depressive disorder



Significant reduction in GRID-HAMD scores in Immediate Treatment group at one and four weeks, compared with Delayed Treatment group

Effect size (Cohen's d):

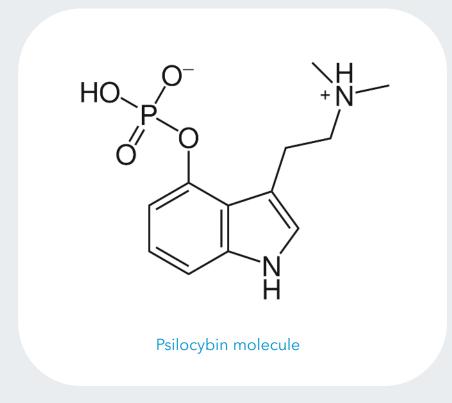
1-wk = 2.5

4-wk = 2.6

p-value = < 0.001 (1-wk and 4-wk)



Psilocybin is a psychoactive substance





An active ingredient in some species of mushrooms

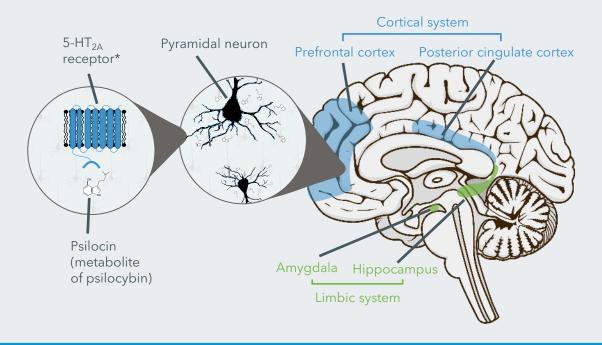


Established knowledge of subjective effects



A generally well-tolerated serotonergic psychedelic

COMP360 mechanism of action



Modulation of cortical and limbic systems via 5-HT_{2A} receptors

- 1. Stimulation of 5-HT_{2A} receptors¹ results in downstream cascades via G-protein signalling²
- 2. Altered extracellular release of dopamine^{3,4} and leading to enhanced positive mood
- 3. Downregulation of the default mode network, or DMN*5, and de-synchronisation of cortical activity as well as the emergence of new patterns of functional connectivity across the brain⁶
- 4. Sustained cellular changes leading to neuroplasticity⁷ and "window of opportunity" for therapy

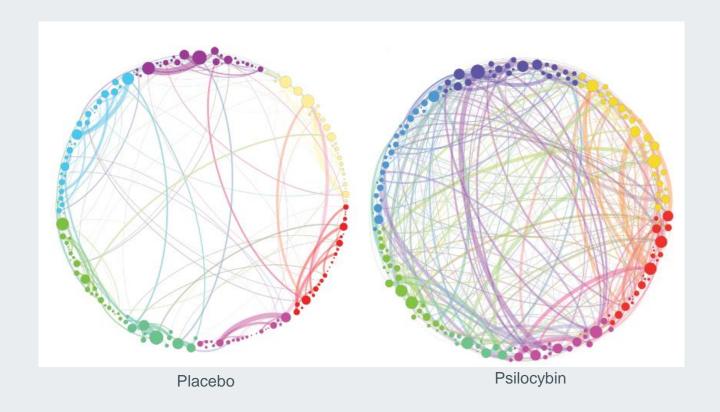
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Note: *5-HT_{2A} = 5-hydroxytyryptamine 2A; DMN = default mode network; mPFC = medial prefrontal cortex

Source: 1. Halberstadt et al (2011); 2. Lopez-Gimenez et al (2018); 3. Vollenweider et al (1999); 4. Sakashita et al (2015); 5. Carhart-Harris et al (2012a);

6. Petri (2014); 7. Ly et al (2018) © COMPASS Pathways 2021

Simplified visualisation of the acute changes in brain network connectivity



Brain network alterations may indicate the emergence of novel patterns of connectivity, following downregulation of the DMN

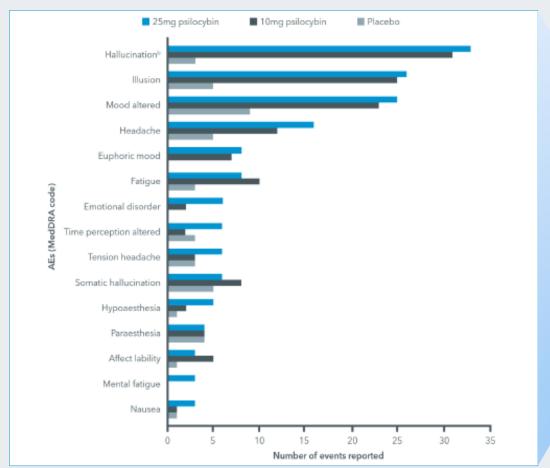
Note: Figure adapted from Petri et al, 2014; study analysed fMRI (functional magnetic resonance imaging) data from healthy volunteers to compare resting-state functional brain connectivity after intravenous infusion of placebo and psilocybin

Phase I safety and feasibility trial - data published in December 2019

- Largest randomised controlled study of psilocybin completed, in 89 healthy volunteers
- COMP360 psilocybin was generally well-tolerated with no serious adverse events
- No clinically-relevant negative effects on cognitive and emotional functioning
- Feasibility of simultaneous administration to up to six people, with 1:1 support
- Clinical training for phase IIb trial therapists

COMP360 induced psychedelic experiences that correlate with therapeutic effect

Most frequently reported AEs* (MedDRA Code)^a in our phase I trial with healthy volunteers



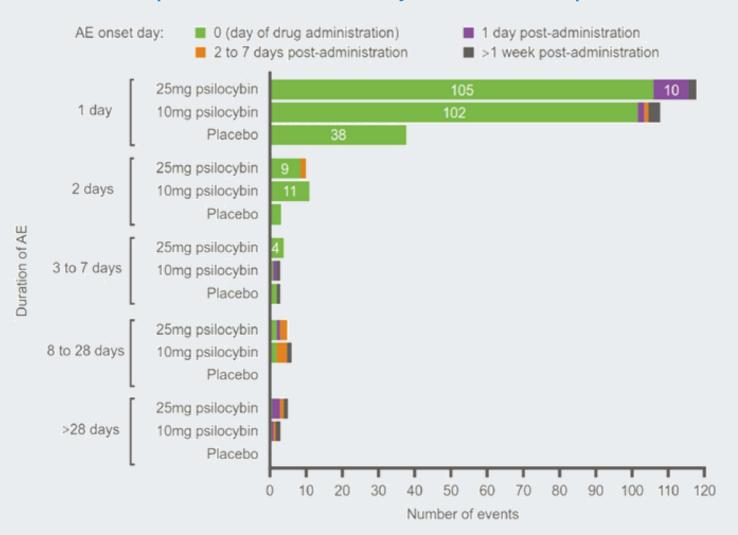
- a. Ranked by incidence in the 25mg psilocybin group
- b. Includes auditory, gustatory, olfactory, tactile and visual hallucinations

Mood altered AEs ranked by incidence in the 25mg psilocybin group

	25mg COMP360 (n=30)	10mg COMP360 (n=30)	Placebo (n=29)
Any "mood altered" AE	15 (50.0)	13 (43.3)	6 (20.7)
Introspection	7 (23.3)	5 (6.7)	1 (3.4)
Reflections	3 (10.0)	2 (6.7)	2 (6.9)
Increased empathy	2 (6.7)	3 (10.0)	0
Sense of oneness	1 (3.3)	4 (13.3)	0
Introspection/reflection	1 (3.3)	1 (3.3)	1 (3.4)
Laughter	1 (3.3)	1 (3.3)	0
New perspective	1 (3.3)	1 (3.3)	0
Awareness of importance of considering others	1 (3.3)	0	0
Clarity of thought	1 (3.3)	0	0
Contemplative state	1 (3.3)	0	1 (3.4)
Increased compassion	1 (3.3)	0	0
Increased creativity	1 (3.3)	0	0
Increased sense of connectedness	1 (3.3)	0	0
More socially upbeat	1 (3.3)	0	0
Reflections and new perspectives	1 (3.3)	0	0
Sense of oneness and connectedness	1 (3.3)	0	0
Being less judgmental	0	1 (3.3)	0
Feeling more moody/sensitive	0	1 (3.3)	0
Feeling rested	0	1 (3.3)	0
Increased wit	0	1 (3.3)	0
Reflections and new perspective on relationships and society	0	1 (3.3)	0
Sense of oneness	0	1 (3.3)	0
Calm	0	0	1 (3.4)
Feeling of adrenaline release	0	0	1 (3.4)
Negative mood	0	0	1 (3.4)
Unusual appreciation of music	0	0	1 (3.4)

Majority of adverse events resolved on day of administration, with a median duration of one day

Most frequent AEs: onset and duration by treatment arm in our phase I trial



- ✓ Of all AEs, 68% reported as starting and resolving on the day of administration
- ✓ The median duration of AEs in all treatment arms across the 12-week trial was one day

Psilocybin therapy: described by most patients in one study as being among the top five most meaningful experiences of their lives¹



Preparation



Psilocybin session



Integration

- Establish therapeutic alliance
- Demonstrate and practise selfdirected inquiry and experiential processing
- Online preparation platform to remind patients what to expect and how to prepare

- Supported by therapist and assisting therapist throughout 6-8 hour session
- Room designed for non-clinical, calming atmosphere
- Specially-designed music playlist, eyeshades to help focus internally
- Patients often experience sense of connectedness, emotional breakthrough and acceptance

- Therapists help patients process the emotional and physical experiences facilitated by psilocybin
- Generate insights that can lead to cognitive and behavioural changes
- Patients often experience a sense of agency and a separation from their symptoms, and report feeling empowered to make changes in their lives

Developing and researching technology applications to improve the safety, efficacy and accessibility of our therapy

COMPASS solutions in development

Patient preparation platform

Online therapist training and learning platform Al-assisted therapist feedback and monitoring

Research

Analyse digital biomarker data with the goal of predicting relapse and modelling disease course

Develop technologies to augment or complement our therapies

Building a strong in-house team



Greg Ryslik - SVP Data Science, Machine Learning and Digital Health Research

 Former Chief Data Officer at Celsius Therapeutics; VP of Data Science at Mindstrong Health; Service Data Science Lead at Tesla Motors



Bob Dougherty - VP, Digital Health Research

- Former VP of Research at Mindstrong Health; Research
 Director at the Stanford Center for Neurobiological Imaging
- Published 50+ peer-reviewed articles in psychology and neuroscience



Sarah Bateup - Head of Therapy Research and Training

- Former Chief Clinical Officer at leso Digital Health
- Top 100 Business Leaders Award (2019); top 50 women in healthcare leadership (2018)

A rigorous therapist training programme

Developed with leading experts in mental health and psychedelic research

4 components

Online learning platform

In-person training

Applied clinical training

Ongoing clinical supervision and professional development

Manualised methodology drawing from evidence-based psychotherapeutic approaches

Used to train therapists in our phase IIb trial of COMP360 psilocybin therapy for TRD

Formal and scalable methodology for psychological support in psilocybin therapy

Training programme will continue to evolve

Programme details shared in a paper written jointly with academic researchers and published in peer-reviewed *Frontiers in Psychiatry*¹

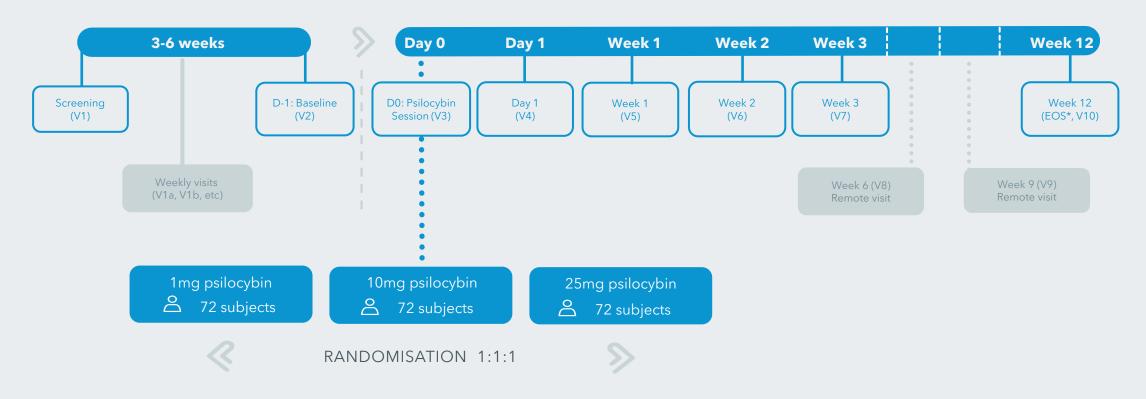
Phase IIb clinical trial: COMP360 psilocybin therapy for TRD Target enrolment of 216 patients; data expected late 2021

Primary endpoint

♦ Reduction of symptoms of depression as measured by MADRS* from Baseline to 3 weeks

Secondary endpoint

♦ Proportion of responders who maintained ≥ 50% improvement in MADRS up to week 12

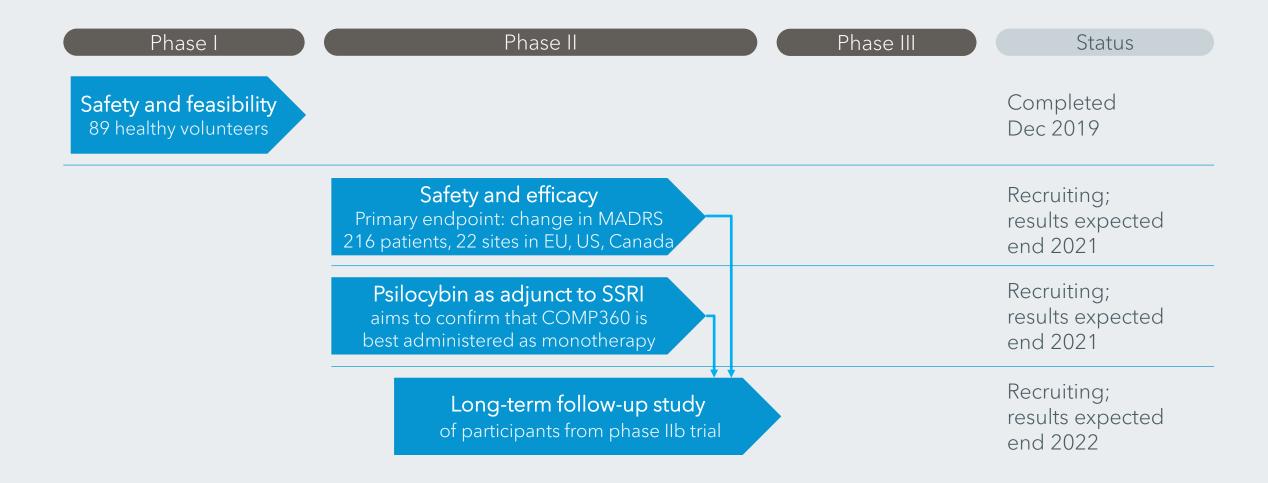


Sites engaged for phase IIb TRD study have the reputation and capability to recruit patients



Note: TRD = treatment-resistant depression

Our clinical development programme for COMP360 psilocybin therapy in TRD Getting ready for phase III



COMPASS Pathways: leader in psilocybin therapy research

IISs using COMP360: signal-generating, exploratory studies looking at indications in areas of unmet need

- COMPASS has pending patent applications that include the indications listed
- COMPASS has the right to exclusively license new IP generated through these studies
- Studies may provide signals that we can explore further and expand in a portfolio approach to different indications

MDD comparative mechanism of action	Imperial College London	
MDD	University of Zurich	
טטועו	Aquilino Cancer Center	
Chronic cluster headache	University of Copenhagen	
Severe TRD	Sheppard Pratt	
Bipolar disorder II	Sheppard Pratt	
Body dysmorphic disorder	Columbia University	
Anorexia	UC San Diego	
TRD	King's College London	
Suicidal ideation	Sheppard Pratt	
Autism	King's College London	

Our first Centre of Excellence, in collaboration with Sheppard Pratt, to accelerate research in a range of mental health illnesses

A world-class institution

One of the world's leading research institutions in mental health and one of the top psychiatric hospitals in the US

A leader in clinical service delivery, supporting 70,000+ patients in 42 states and 19 countries

Part of the COMPASS phase IIb TRD clinical trial, and long-term follow-up study

Also using COMP360 psilocybin in two IISs in psilocybin therapy for severe TRD and for bipolar type II depression

Centre of Excellence (CoE): a research facility and innovation lab to model the clinic of the future

The CoE will be used to:

- Conduct clinical trials in psilocybin therapy for a range of mental health illnesses
- Train and certify therapists
- Prototype digital solutions to improve patient experience

A recognised team led by Scott Aaronson MD, Director of Clinical Research at Sheppard Pratt, distinguished fellow of the American Psychiatric Association and fellow of the

American College of Psychiatrists



The Sheppard Pratt campus

Exploring the potential of COMP360 therapy for major depressive disorder in cancer with Maryland Oncology Hematology at the Aquilino Cancer Center

Signal-generating study (IIS)

A 30-patient, open-label study to test the safety and feasibility of psilocybin therapy to treat depression in cancer patients

FDA-approved protocol includes key features of a scalable delivery model, with simultaneous administration and 1:1 patient support under lead therapist supervision

Study began in Q4 2020 with data expected in Q4 2021

Purpose-built facility

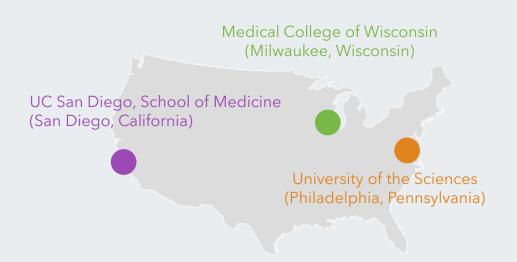
New treatment space at the Aquilino Cancer Center (near Washington DC) co-designed with COMPASS for simultaneous delivery of psilocybin therapy



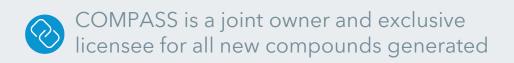
Major depressive disorder in cancer - an unmet medical need

- Recognised unmet need and patient population
- Signal-generating study will inform later stage development path
- Development path to be designed in collaboration with regulators and stakeholders

COMPASS Pathways Discovery Center A collaboration among world-leading scientists and institutions









Jason Wallach, leading chemist and pharmacologist in psychedelic and dissociative drugs

 Assistant Professor of Pharmaceutical Sciences, University of the Sciences



John D McCorvy, leading 5-HT receptor pharmacologist and expert on GPCR signalling

 Assistant Professor, Department of Cell Biology, Neurobiology and Anatomy, Medical College of Wisconsin



Adam Halberstadt, expert in behavioural psychopharmacology

 Associate Professor, Department of Psychiatry, UC San Diego, School of Medicine

Comprehensive preclinical program - COMP360 psilocybin in a broad range of indications with pending patent applications

Preclinical research has been conducted in the following indication areas:

Autistic spectrum Alzheimer's disease Chronic pain **Epilepsy** Inflammation Parkinson's disease disorder Attention deficit Generalised anxiety Obsessive-compulsive Binge eating disorder Cluster headache Sleep wake disorders hyperactivity disorder disorder disorder

Ongoing confidence in these biological substrates builds preclinical extrapolations to the following indications

Inflammatory bowel Post-traumatic stress Panic disorder Anorexia nervosa Bulimia nervosa Stroke disorder disease Body dysmorphic Post-partum Fibromyalgia Social anxiety disorder Migraine Traumatic brain injury disorder depression

COMP360 commercial exclusivity strategy

Regulatory strategy

COMP360 can be registered as NCE*/NAS*

- · Possibility of full patent and regulatory exclusivity
- Data protection, up to
 - 8-11 years (EU)
 - 5-7.5 years (US)

Reschedule COMP360 psilocybin

 Upon approval by FDA, COMP360 psilocybin could be rescheduled by DEA

Patent strategy

First US patent granted in December 2019

- Claims directed to methods of treating drug-resistant depression with high-purity polymorphic crystalline psilocybin
- Petition for Post Grant Review was dismissed on merits in August 2020

European patents granted/registered

- German utility model (March 2020): covering forms of crystalline psilocybin, its use in medicine and methods of synthesis
- First UK patent (May 2020): includes two independent method of manufacture claims, and product-by-process and formulation claims
- Second UK patent (July 2020): includes claims covering crystalline psilocybin, pharmaceutical formulations, medical uses, and a method of manufacturing

Multiple related applications pending

- To expand claim scope
- To extend coverage in over 20 additional countries/regions

Three PCT applications and Taiwanese application pending

- Additional formulations, administration, therapeutic and digital supports, combination treatments, methods of treating variety additional indications
- Additional indications include: anxiety disorders, headache disorders, eating disorders, neurocognitive disorders, autism, epilepsy, inflammation, ADHD*, substance use disorders, inflammatory bowel disease, stroke, ALS*, multiple sclerosis, anti-social personality disorder, pain, sleep-wake disorders, and bipolar type II depression

Achieving broad patient access



Comprehensive and payer-relevant evidence generation plan

- Early scientific advice with key payer-experts and HTAb*
- US reimbursement and coding strategy
- Real-world evidence data access agreements



Differentiated and modular commercial offering

- Therapist training services and partnerships
- Treatment centre activation services
- Digital solutions companion apps for prediction and prevention



Strategic partnerships with payers, health systems and clinic networks

- Centres of Excellence
- Prospective payer-focused trials
- Potential franchise model

Prototype design Centre of Excellence treatment room



Prototype design Centre of Excellence post-treatment space



Financial overview

Cash and cash equivalents at 30 September 2020

• \$196.5 million

IPO raise

• \$146.6 million¹

Issued shares

• 35,930,331

Covering analysts

- Ritu Baral, Cowen
- Josh Schimmer, Evercore
- Esther Hong, Berenberg
- Sumant Kulkarni, Canaccord Genuity
- Patrick Trucchio, HC Wainwright & Co

A strong and growing team



Backed by high calibre boards

Board of directors tapestry Lotus. George Goldsmith McKinsey & Company Ekaterina Malievskaia, MD Icahn School of Medicine at Mount Sinai ATAI LIFE SCIENCES Florian Brand THIEL Jason Camm MERCK Annalisa Jenkins, MBBS Thomas Lönngren EUROPEAN MEDICINES AGENCY Linda McGoldrick Robert McQuade, PhD Otsuka **David Norton** Johnson Johnson

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Thomas Insel, MD



Prof Diego Pizzagalli, PhD



Prof Augustus John Rush, MD



Prof Alan Schatzberg, MD



Paul Summergrad, MD



Kirk Rutter (Patient Advisor)

Pioneering the development of a new model of psilocybin therapy

Key achievements

- ✓ \$146.6m raised in September IPO; \$80m raised in Series B
- ✓ Breakthrough Therapy designation for COMP360 in TRD
- ✓ Phase I healthy volunteers trial completed
- ✓ Phase IIb clinical trial making steady progress
- ✓ Patent awards in US, UK, Germany
- Experienced leadership team, board of directors, scientific advisory board; leadership team and board strengthened with recent hires
- Preclinical studies in new indications; Discovery Center launched
- ✓ Additional trials underway in TRD programme
- ✓ COMP360 used in multiple IISs exploring range of indications
- ✓ FDA approved request for 1:1 therapist patient ratio and online therapist training
- ✓ Aquilino Cancer Center launches psilocybin therapy study with simultaneous administration and 1:1 therapist support

2021 Anticipated milestones

- ✓ Establish first Centre of Excellence
- Phase IIb trial: data expected late 2021
- Further senior appointments
- Further partnerships and collaborations
- Data published from IISs using COMP360
- Expand current IP portfolio with additional patent grants
- Evolve data and technology strategy

Note: TRD = treatment-resistant depression



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