Transforming Mental Health Care

Investor Presentation
April 2024

Compass

Disclaimer

Cautionary Note Regarding Forward-Looking Statements

This presentation includes “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. In some cases, you can identify forward-looking statements by terms such as “believe,” “continue,” “could,” “estimate,” “expect,” “may,” “might,” “plan,” “potential,” “project,” “should,” “target,” “will,” “would,” or the negative of these terms, and similar expressions intended to identify forward-looking statements. However, not all forward-looking statements contain these identifying words. These forward-looking statements include express or implied statements relating to our strategic plans or objectives; our expectations and projections about our future cash needs and financial results, the anticipated proceeds to be received from the pending exercise of warrants issued in the private placement and future exercises, if any, of remaining warrants issued in the private placement; our expectations for our phase 3 program in treatment resistant depression, including the expected timing for any data readouts, and the potential for that or other trials to support regulatory filings and approvals; our expectations regarding timing for our phase 2 trial in post traumatic stress disorder, including the expected timing for any data readouts; our expectations regarding the future reimbursement and accessibility of COMP360 psilocybin therapy, if FDA approval is obtained, including the potential impact of the CPT III codes on such reimbursement and accessibility; our ability to launch and successfully commercialize COMP360 psilocybin therapy; and our ability to advance COMP360 psilocybin therapy in other areas of high unmet mental health need and to discover and advance new drug compounds. By their nature, these statements are subject to numerous risk and uncertainties, including the our need for substantial additional funding to achieve our business goals, including to repay the term loan facility, and if we are unable to obtain this funding when needed and on acceptable terms, we could be forced to delay, limit or terminate our clinical development efforts; the risk that the pending warrant exercises for approximately $9.0 million in proceeds will not settle; clinical development is lengthy and outcomes are uncertain, and therefore our phase 3 clinical trials in TRD and our other clinical trials may be delayed or terminated; impact of global macroeconomic trends on our business, our expectations about the outcomes of our clinical programs, actions of regulatory agencies, our dependence on third parties in connection with our clinical trials and other factors beyond our control, that could cause our actual results, performance or achievements to differ materially and adversely from those anticipated or implied in our statements. For additional disclosure regarding these and other risks we may face, see the disclosure contained under the heading "Risk Factors" and elsewhere in the Company’s most recent Annual Report on Form 10-K, Quarterly Report on Form 10-Q and subsequent public filings with the US Securities and Exchange Commission (the “SEC”). You should not rely upon forward-looking statements as predictions of future events. Although our management believes that the expectations reflected in our statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances described in the forward-looking statements will be achieved or occur. Moreover, neither we, nor any other person, assumes responsibility for the accuracy and completeness of these statements. Accordingly, you are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date such statements are made and should not be construed as statements of fact. Except as required by applicable law, we undertake no obligation to update these forward-looking statements to reflect any new information, events or circumstances after the date hereof, or to reflect the occurrence of unanticipated events. No representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements.

Market & Industry Data Projections, estimates, industry data and information contained in this presentation, including our general expectations about our market position and market opportunity, are based on information from third-party sources, publicly available information, our knowledge of our industry and assumptions based on such information and knowledge. Although we believe that our third party-sources are reliable, we cannot guarantee the accuracy or completeness of our sources. All of the projections, estimates, market data and industry information used in this presentation involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such information. In addition, projections, estimates and assumptions relating to our and our industry’s future performance are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including, but not limited to, those described above, that could cause future performance to differ materially from our expressed projections, estimates and assumptions or those provided by third parties.

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Compass Pathways

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

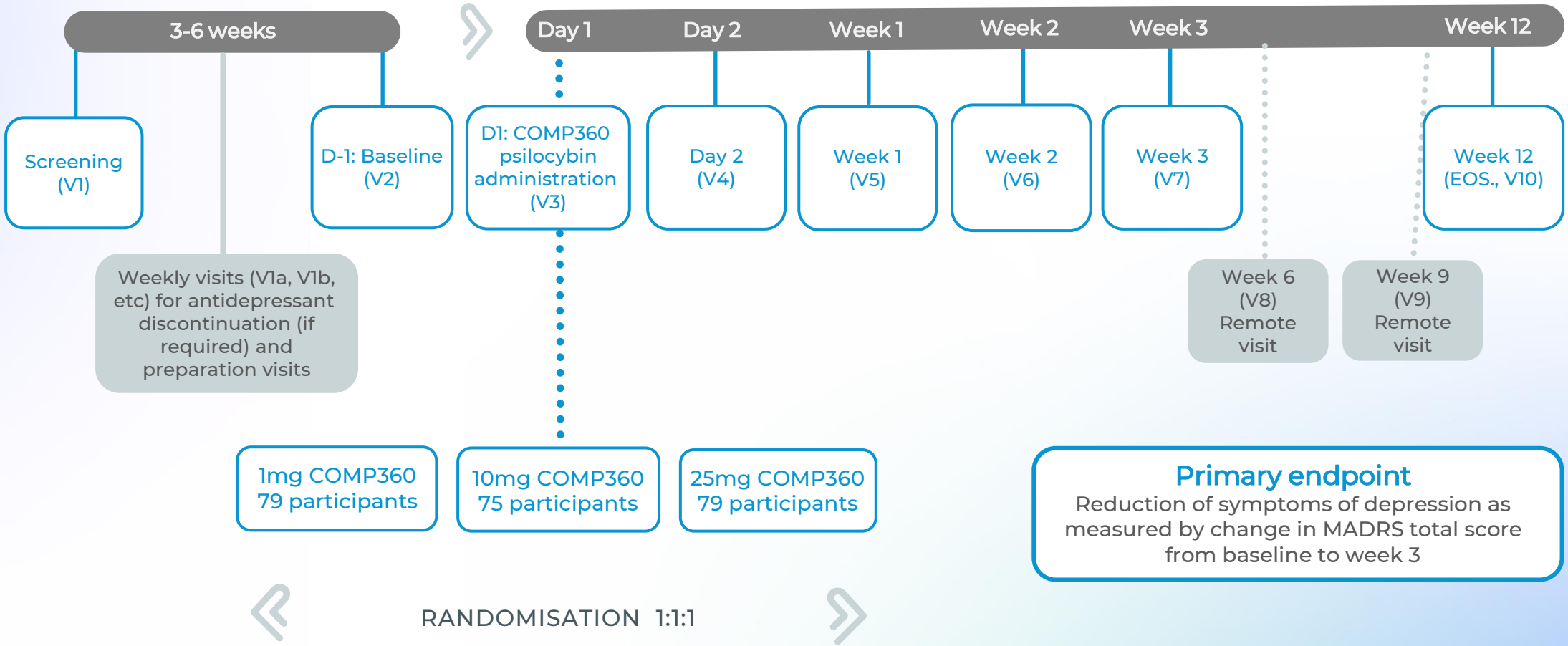
- Lead product candidate: COMP360 psilocybin treatment
- Phase 2 TRD program published in *The New England Journal of Medicine*
- Phase 3 TRD program recruiting
  - Pivotal trial 1: top-line data expected Q4 2024
  - Pivotal trial 2: top-line data expected mid-2025
- Phase 2 PTSD study top-line data expected Spring 2024
- IIS programs expected to generate additional data

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 number of patients (worldwide)	320 million	200 million	100 million (~1 in 3 of total) US health care cost approx. $17-25k per patient/year
Available treatments	– Antidepressants – Psychological interventions, e.g., CBT*	– Antidepressants – Antidepressant combinations – Psychological interventions	– Antidepressants – Augmentation therapy (antidepressants, mood stabilizers, 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
SOURCE Table adapted from Rush, A. J., Trivedi, M. H., Wisniewski, S. R., Nierenberg, A. A., Stewart, J. W., Warden, D., ... & Fava, M. (2006). Acute and longer-term outcomes in depressed outpatients requiring one or several treatment steps: a STAR* D report. American Journal of Psychiatry, 163(11), 1905-1917; Zhdanava M, Pilon D, Ghelerter I, et al. The prevalence and national burden of treatment-resistant depression and major depressive disorder in the United States. J Clin Psychiatry. 2021;82(2):20m13699.

COMP001 phase 2b study design and primary endpoint (n=233)



Note: MADRS = Montgomery-Åsberg Depression Rating Scale; EOS = end of study; TRD = treatment-resistant depression; D = day; V = visit

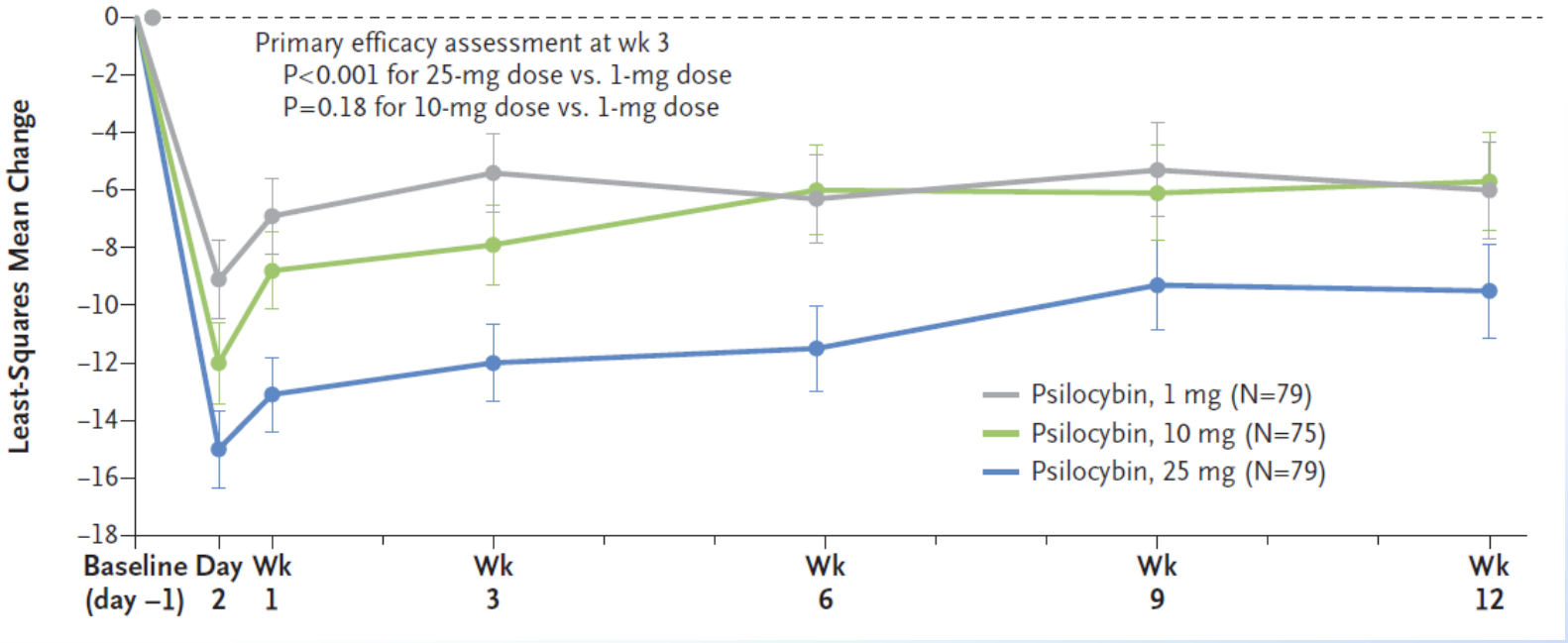
Phase 2b trial: Results demonstrate the potential for a rapid, sustained response in TRD

Published in The NEW ENGLAND JOURNAL of MEDICINE

In a randomized, controlled, double-blind trial, three groups of participants were given a single dose (either 1mg, 10mg or 25 mg) of COMP360 psilocybin alongside psychological support.

Results were measured as a change on the MADRS* depression scale from baseline (a day prior to administration) over a 12-week period.

The primary endpoint of this study was the change from baseline in MADRS total score at week 3.



Efficacy: We saw a statistically significant and clinically meaningful reduction in depression symptoms.

Rapid onset of action: The effect occurred the day after the administration.

Durability: We saw a sustained response at week 12 – a positive indication for high potential as a monotherapy.

NOTE: *Least square mean change from baseline in MADRS total score; MADRS = Montgomery-Åsberg Depression Rating Scale

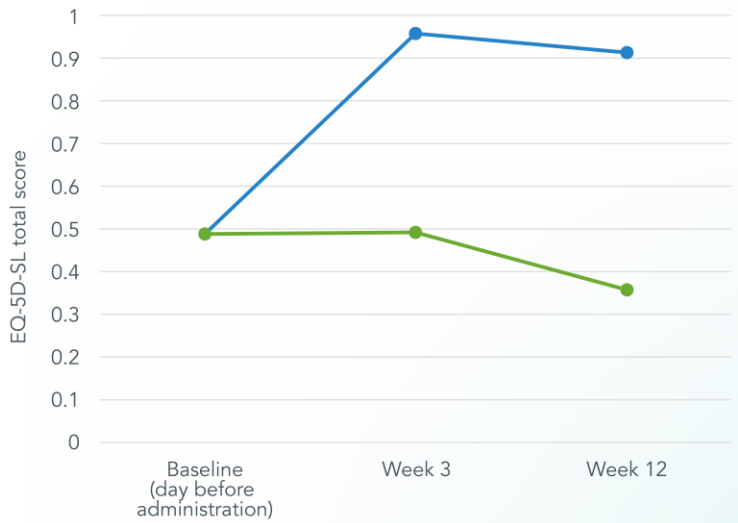
Phase 2b trial: Those participants who showed a sustained response also showed signs of improvement beyond the reduction of depression symptoms

Sustained responders are participants who responded (≥50% change in MADRS total score from baseline) at weeks 3 and 12, and at least one visit out of week 6 and 9, and who did not start new treatments for depression.

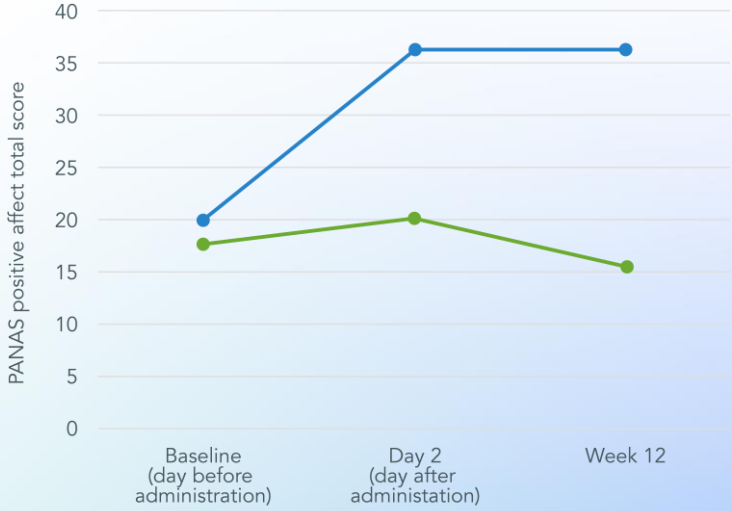
Sustained non-responders are participants who did not respond (<25% change in MADRS total score from baseline) at weeks 3 and 12, and at least one visit out of week 6 or 9.

- Sustained responders (n=19)
- Sustained non-responders (n=21)

Quality of life: Sustained responders were found to have a clinically meaningful increase in quality of life from baseline at week 3 and week 12 with scores in the normal range after treatment



Positive affect: Sustained responders were found to have a clinically meaningful increase in positive affect from baseline on the day after the psilocybin session and at week 3



NOTE: EQ-5D-3L= EuroQoL 5-Dimensions 3-Levels; PANAS= Positive and Negative Affect Schedule; SD= standard deviation

Phase 2b trial: COMP360 psilocybin treatment was generally well-tolerated

Treatment-emergent adverse events (TEAEs)

>90% of TEAEs were of mild or moderate severity.

5 most frequent TEAEs across the 10mg and 25mg doses were headaches, nausea, fatigue, insomnia and anxiety.

>77% of TEAEs occurring on the day of administration resolved on the same or next day; most were mild or moderate.

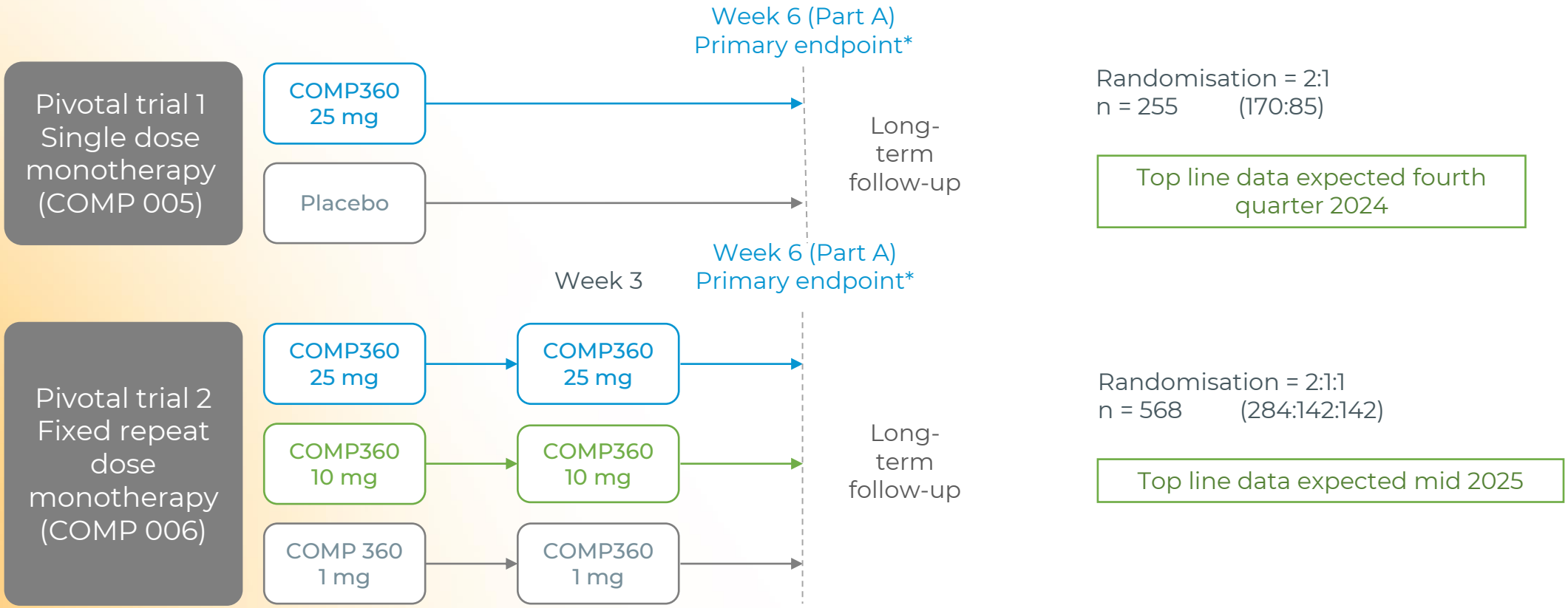
There were no concerns with vital signs, ECG or clinical laboratory data in any of the treatment groups

TEAEs involving hallucinations (which only occurred in the 25mg and 10mg groups) and illusions (all groups) started and resolved on the day of administration.

TESAEs of suicidal ideation, suicidal behaviour and intentional self-injury were uncommon but occurred unevenly across groups in non-responders

- All patients who experienced these events during the trial had said during screening that they had had suicidal thoughts prior to the trial.
- 3 TESAEs of suicidal behavior in non-responders, 30 days post administration in the 25 mg arm emphasizing the need for a vigilant approach to the TRD condition.

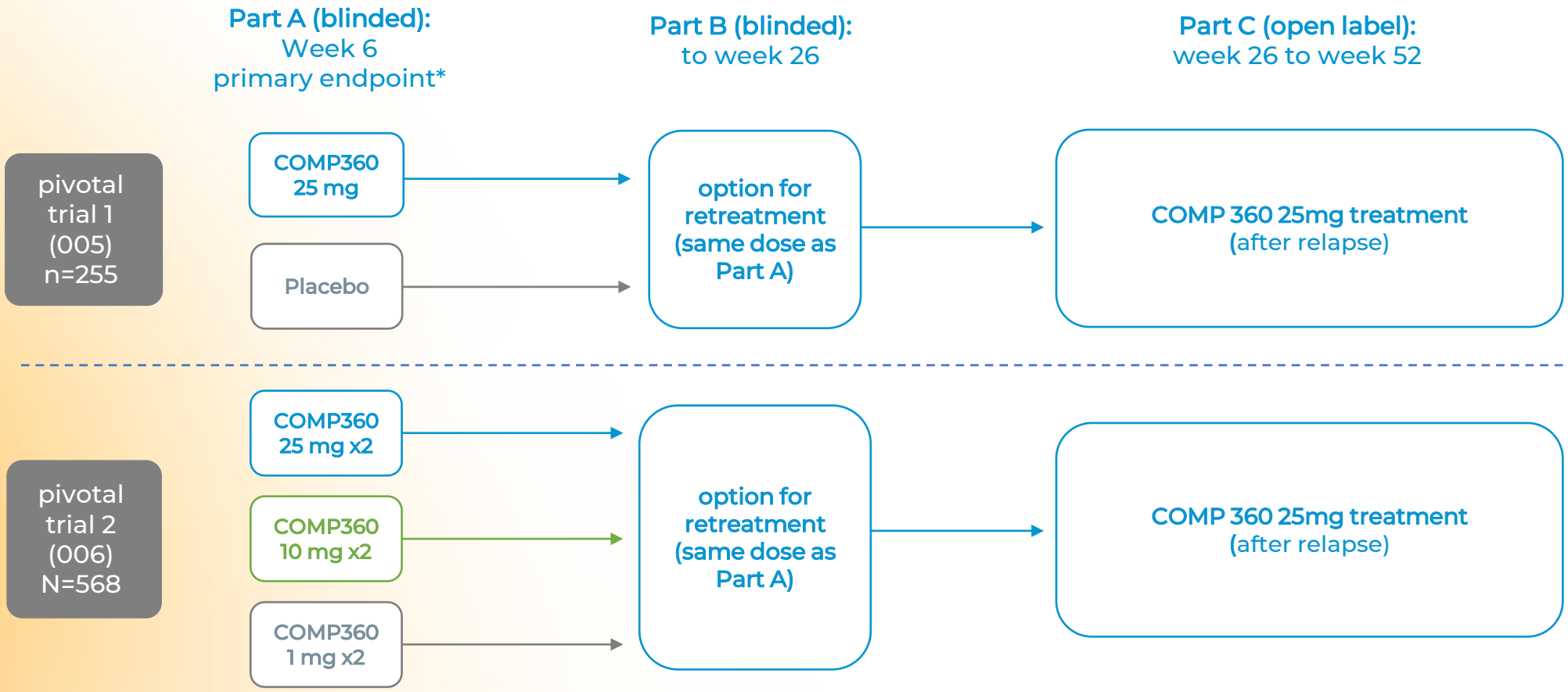
Phase 3 program: Overview of ongoing pivotal trial designs



The phase 3 program will be conducted across approx. 150 sites in 12 countries. Key secondary endpoints include change in MADRS at week 9, 6 weeks following second dose. The participant population (TRD definition and core inclusion/exclusion criteria) remains unchanged compared to Phase 2b

*Primary endpoint - change from baseline in MADRS total score at Week 6

Phase 3 program long-term follow up component



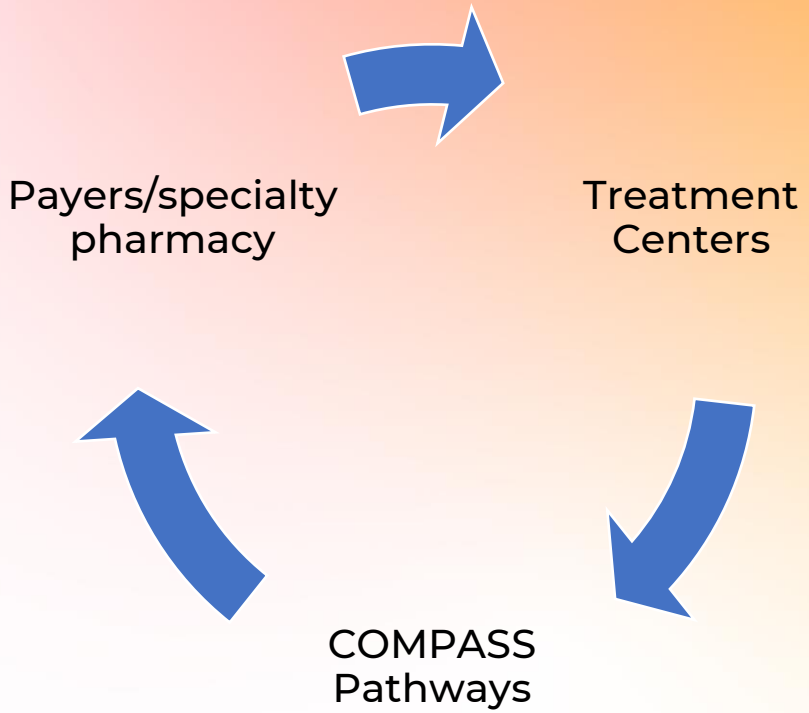
*Primary endpoint - change from baseline in MADRS total score at Week 6

Preparing for scale at launch, if approved

Compass Pathways intends to deliver COMP360 (medicine) to **Treatment Centers** through specialty pharmacy channels, reimbursed by **Payers**

Our strategy for reimbursement is for **Treatment Centers** to be reimbursed by **Payers** with new reimbursement codes specific to psychedelic therapies*

Regulatory approval and payer coverage/reimbursement is the path to broad and equitable patient access



*New CPT III codes accepted, and language released by AMA for Psychedelic Drug Monitoring Services, expected to be published in the CPT Manual and become effective on January 1, 2024

The infrastructure to deliver COMP360 psilocybin treatment already exists and is growing

Specialty TRD centers, health systems, and integrated delivery networks (IDNs), some of which are clinical trial sites during our phase 3 clinical program, are already experienced in delivering interventional psychiatry treatments like ketamine, esketamine, transcranial magnetic stimulation (TMS) and electroconvulsive therapy (ECT) to tens of thousands of TRD patients

These are delivered relatively frequently, requiring a cumulatively high number of hours of patient and provider time

TMS:
30-36 treatments[2][5]

esketamine:
20-28 treatments[1]

ketamine:
12-15 treatments[6]

ECT:
6-12+ treatments
[3][4]

*treatment #s represent a typical course over 6 months

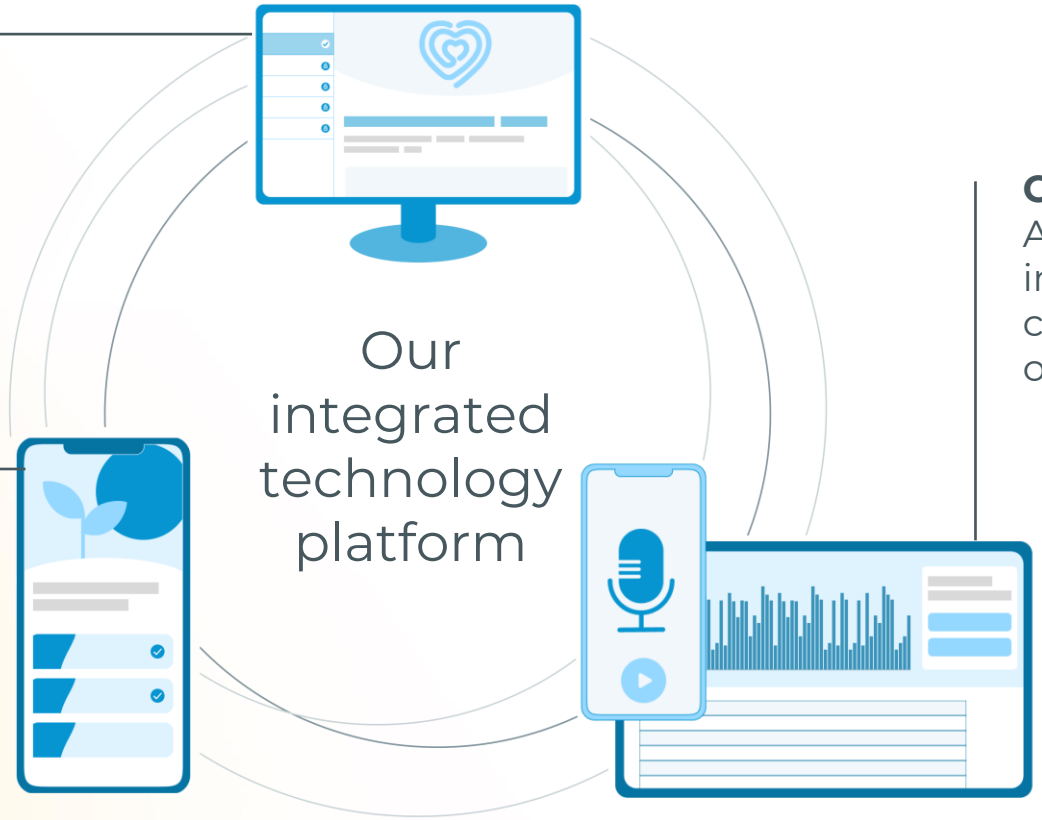
References: [1] ICER, 2019; [2] Ross, 2018; [3] Petrides, 2011; [4] Thirthalli, 2020; [5] Voigt, 2017; [6] Wilkinson, 2018.

Our digital tools

provide educational support and guidance for patients and therapists, enabling the scalability and continuous optimization of our care model

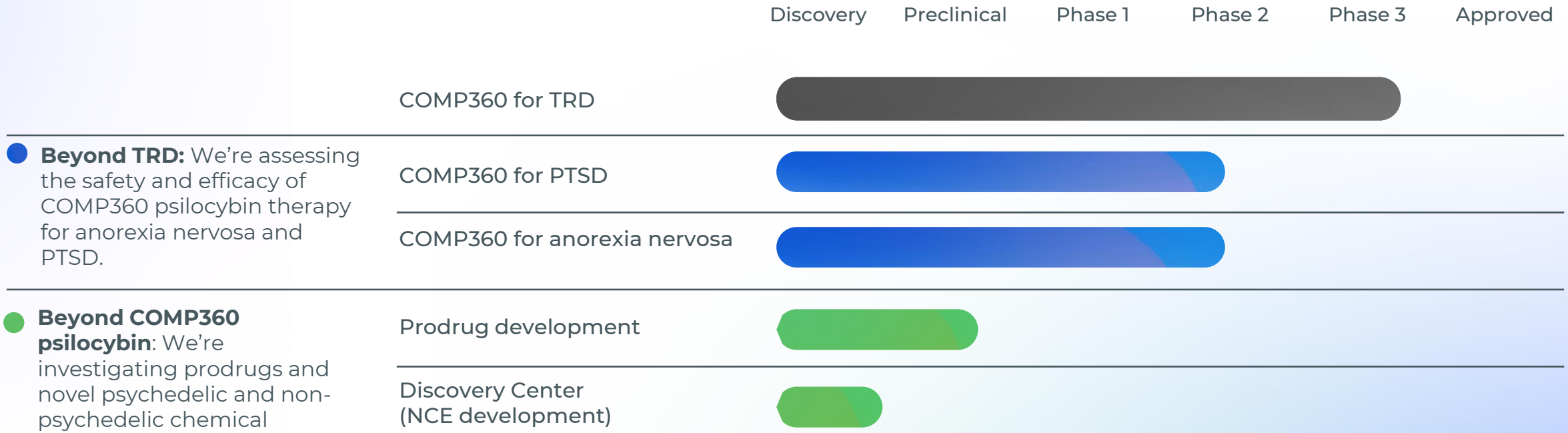
Therapist COMPanion
Web-based portal supporting therapists through all phases of patient care

myPathfinder
Patient-facing app providing guidance throughout COMP360 psilocybin treatment



Chanterelle
AI & analytics infrastructure for continuous optimization

We’re continuing to develop a balanced and differentiated pipeline



- **Beyond TRD:** We’re assessing the safety and efficacy of COMP360 psilocybin therapy for anorexia nervosa and PTSD.
- **Beyond COMP360 psilocybin**: We’re investigating prodrugs and novel psychedelic and non-psychedelic chemical entities.

NOTE: NCE = new chemical entity; PTSD = post-traumatic stress disorder; TRD = treatment-resistant depression

We have a team of experts and leaders with a record of delivering visionary innovation in pharma and beyond

1. **Kabir Nath**
   Chief Executive Officer
2. **Guy Goodwin, MD, PhD**
   Chief Medical Officer
3. **Trevor Mill**
   Chief Development Officer
4. **Anne Benedict**
   Chief People Officer
5. **Teri Loxam**
   Chief Financial Officer
6. **Matt Owens**
   General Counsel and Chief Legal Officer
7. **Greg Ryslik** Chief Technical Officer
8. **Chris Williams**
   Chief Communications Officer

COMPASS runway expected into late 2025

Cash and cash equivalents through Dec 31, 2023

$220.2 million

Cash raised in Q1 through Feb 29, 2024

$31.4 million

Financial guidance for cash used in operating activities (As issued on Q4 2023 earnings call in February 2024)

First quarter 2024:	$17 - $23 million
Full-year 2024:	$110 - $130 million

Appendix

Most frequent TEAEs ordered by the 25mg arm
(at least 5% in any treatment group)

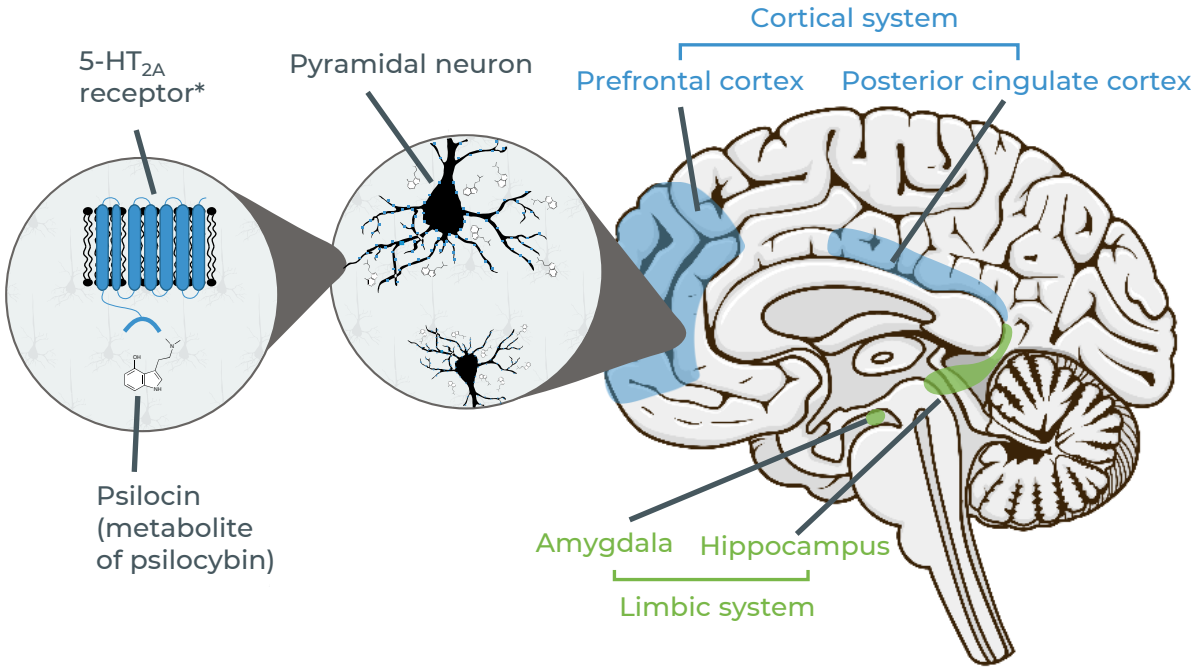
MedDRA TEAE preferred term	COMP360 25mg	COMP360 10mg	COMP360 1mg	Overall
	N=79	N=75	N=79	N=233
	n (%)			
Headache	27 (34.2)	16 (21.3)	20 (25.3)	63 (27.0)
Nausea	18 (22.8)	7 (9.3)	4 (5.1)	29 (12.4)
Fatigue	12 (15.2)	5 (6.7)	7 (8.9)	24 (10.3)
Insomnia	8 (10.1)	11 (14.7)	14 (17.7)	33 (14.2)
Anxiety	7 (8.9)	13 (17.3)	3 (3.8)	23 (9.9)
Mood altered	7 (8.9)	3 (4.0)	1 (1.3)	11 (4.7)
Back pain	6 (7.6)	0	3 (3.8)	9 (3.9)
Dizziness	6 (7.6)	1 (1.3)	1 (1.3)	8 (3.4)
Suicidal ideation	5 (6.3)	5 (6.7)	4 (5.1)	14 (6.0)
Myalgia	5 (6.3)	2 (2.7)	1 (1.3)	8 (3.4)
Euphoric mood	4 (5.1)	5 (6.7)	4 (5.1)	13 (5.6)
Depression	4 (5.1)	6 (8.0)	5 (6.3)	15 (6.4)
Abdominal pain upper	4 (5.1)	2 (2.7)	1 (1.3)	7 (3.0)
Irritability	4 (5.1)	2 (2.7)	1 (1.3)	7 (3.0)
Panic reaction	4 (5.1)	1 (1.3)	1 (1.3)	6 (2.6)
Depressed mood	3 (3.8)	5 (6.7)	4 (5.1)	12 (5.2)
Paraesthesia	3 (3.8)	4 (5.3)	1 (1.3)	8 (3.4)
Thinking abnormal	0	4 (5.3)	0	4 (1.7)

TEAE incidence is higher in the 25mg group overall

Key mood-related TEAEs (euphoric mood, depression, depressed mood, suicidal ideation) do not have a higher incidence in the 25mg arm

Note: MedDRA = Medical Dictionary for Regulatory Activities; TEAE = treatment emergent adverse event; N = number of participants in the population; n = number observed

Psilocybin mechanism of action



1. Stimulation of 5-HT_{2A} receptors[1] results in downstream cascades via G-protein signalling[2].

2. Altered extracellular release of dopamine[3,4] and leading to enhanced positive mood.

3. Downregulation of the DMN[5], and de-synchronisation of cortical activity as well as the emergence of new patterns of functional connectivity across the brain[6].

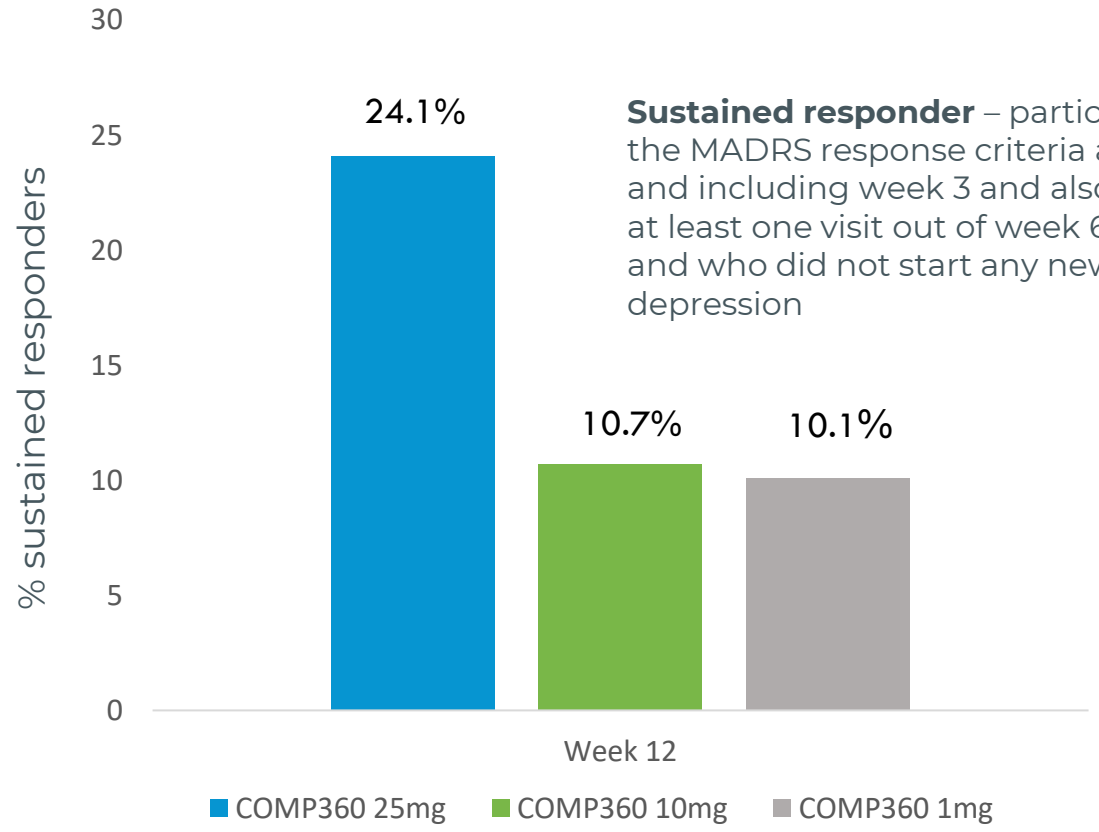
4. Sustained cellular changes leading to neuroplasticity[7] and "window of opportunity" for therapy.

Modulation of cortical and limbic systems via 5-HT2A receptors

Note: understood mechanism of action based on studies of psilocybin (not COMP360); *5-HT2A = 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)

MADRS sustained responders at week 12



Sustained responder – participant meeting the MADRS response criteria at any visit up to and including week 3 and also at week 12 and at least one visit out of week 6 and week 9, and who did not start any new treatments for depression

Higher proportion of sustained responders found in the 25mg vs 1mg arm.

Note: MADRS = Montgomery-Åsberg Depression Rating Scale; Statistical significance cannot be claimed on secondary endpoints due to hierarchical testing being broken for the 10mg vs 1mg dose on the primary endpoint

Participants who started new treatment for depression were assumed to be a non-responder hence decreasing numbers reflecting antidepressant use over time

We provide support to research institutions conducting investigator-initiated studies with COMP360 psilocybin

Listed here are signal-generating studies looking at indications in areas of serious unmet need with COMP360 psilocybin.

These studies may provide signals for new potential indications for COMP360 psilocybin that we can explore further and bring into our development pipeline.

COMPASS owns or has a license to new IP generated around COMP360 psilocybin.

● Complete ● Ongoing

Indication	Institution	Status
MDD in cancer patients	Aquilino Cancer Center	●
MDD	University of Zurich	●
Chronic cluster headache	University of Copenhagen	●
Severe TRD	Sheppard Pratt	●
Anorexia nervosa	UC San Diego	●
Bipolar disorder II	Sheppard Pratt	●
Body dysmorphic disorder	Columbia University	●
Anorexia nervosa	Imperial College London	●
Suicidal ideation	Sheppard Pratt	●
Autism	King's College London*	●
Severe TRD	Stanford	●
Obsessive compulsive disorder	Imperial College London	●
Rumination	Massachusetts General Hospital	●

NOTE: MDD = major depressive disorder ; *A research scientist employed by COMPASS Pathways who is a PhD student at King's College London is conducting the study

COMP360 IP protection and regulatory exclusivity

Regulatory exclusivity

Upon approval

- US: Benefit of 5 years New Chemical Entity (NCE) protection.
- EU: Benefit of 8+2 years New Active Substance (NAS) protection.

IP protection

COMPASS has US patents covering COMP360 (including composition of matter, formulation, methods of treatment, and methods of manufacture) that expire in 2038 (20-year term) as well as pending patent applications covering COMP360 in major markets such as US, UK, and EU.

COMPASS to seek Patent Term extension and Supplementary Protection Certificates, where available, that may extend the term of patents that cover the approved product potentially up to five years depending on the date of regulatory approval and patent grant date.

A third party challenged the validity of three US patents (US 10,519,175; US 10,647,257; and US 10,954,259) at the USPTO. The USPTO has denied institution of all three challenges, upholding the validity of these patents.

Post-traumatic stress disorder (PTSD)

PTSD can occur in people who have experienced or witnessed a traumatic event (eg, natural disaster, serious accident, war, rape). Some people with PTSD experience symptoms from immediately after the event while for others symptoms may appear years later.

311M

People will experience PTSD at some point in their lives.

20-30%

of patients treated with currently approved pharmacological interventions for PTSD will reach full remission.

$17K

Direct medical costs per patient per year in a large veteran population in the US.

SOURCE; Kautz et al., 2017; Kessler et al., 2005; Van Ameringen et al., 2008; Koenen et al., 2017; Berger et al., 2009; Wang et al., 2016
NOTE: SSRI = selective serotonin reuptake inhibitor; FDA = Food and Drug Administration

Latest trial

P2 (ongoing), 20 participants

Initial safety reported, treatment was well-tolerated

Multi-national, multicenter, open label study

Single dose of 25mg COMP360 psilocybin administered with psychological support

Primary endpoint

Safety and tolerability

Secondary endpoints

Symptoms reduction, functionality, quality of life, response and remission

Anorexia nervosa (AN)

AN is an eating disorder characterized by weight loss or difficulties maintaining a healthy body weight, usually associated with distorted body image. People with AN generally restrict their caloric intake, types of food they eat, and might engage in purging behaviors (eg, strenuous exercise, vomiting, laxatives/diuretics misuse).

3.9M

people suffer with AN; it has a lifetime prevalence up to 4% in females.

20%

of deaths in AN are due to suicide; it's the deadliest of psychiatric disorders.

0

no pharmacological treatments approved; psychological treatments have relapse rates as high as 52%.

SOURCE: Our World In Data; NICE, 2019; Khalsa et al., 2017

Latest trial (ongoing)

P2a to determine proof of concept in AN

60 participants

Multi-national, multi-center, randomized, double-blind study

Single dose of 25mg COMP360 psilocybin vs 1mg administered with psychological support

Primary endpoint

AN symptoms reduction

Secondary endpoints

Change in obsessive-compulsive symptoms and change in weight at week 12

We're a biotechnology company...

...dedicated to accelerating patient access to evidence-based innovation in mental health.

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