

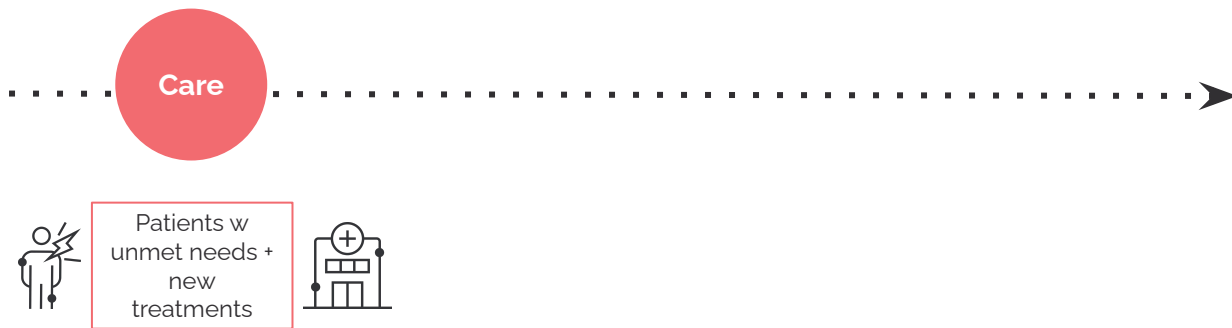
Emyria (ASX:EMD)

Broker Briefing Webinar | Michael Winlo, CEO

***Emyria** develops **biopharmaceuticals** guided by **Real-World Data** collected **with patients** receiving care at our clinics*



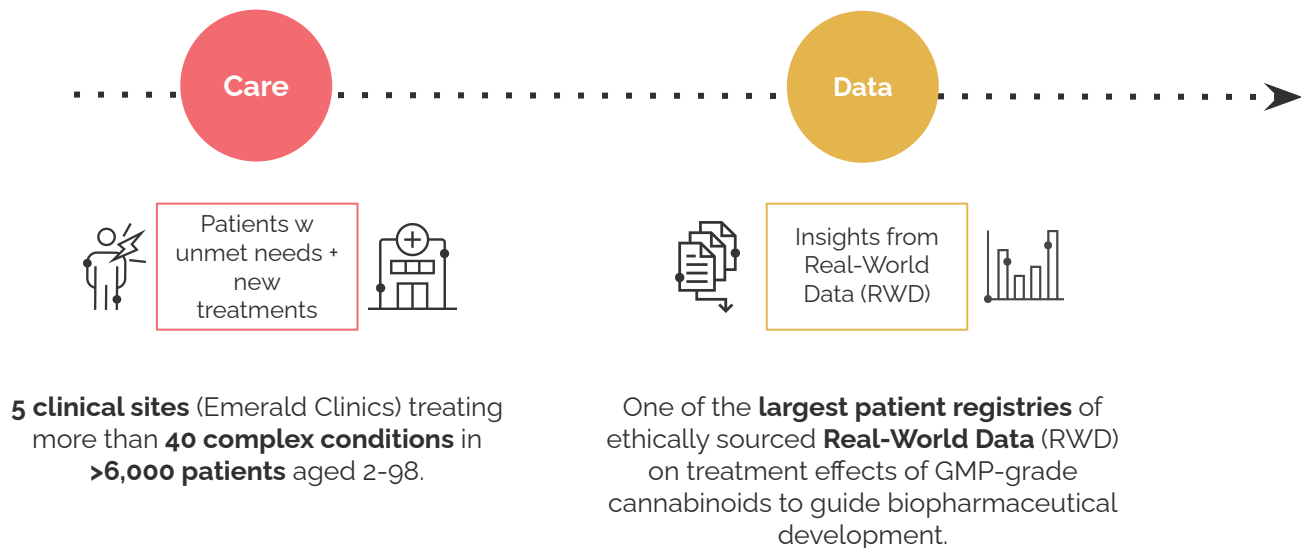
Emyria is a biotech that, *uniquely*:
provides care, **generates data** & **develops treatments**



5 clinical sites (Emerald Clinics) treating
more than **40 complex conditions** in
>6,000 patients aged 2-98.

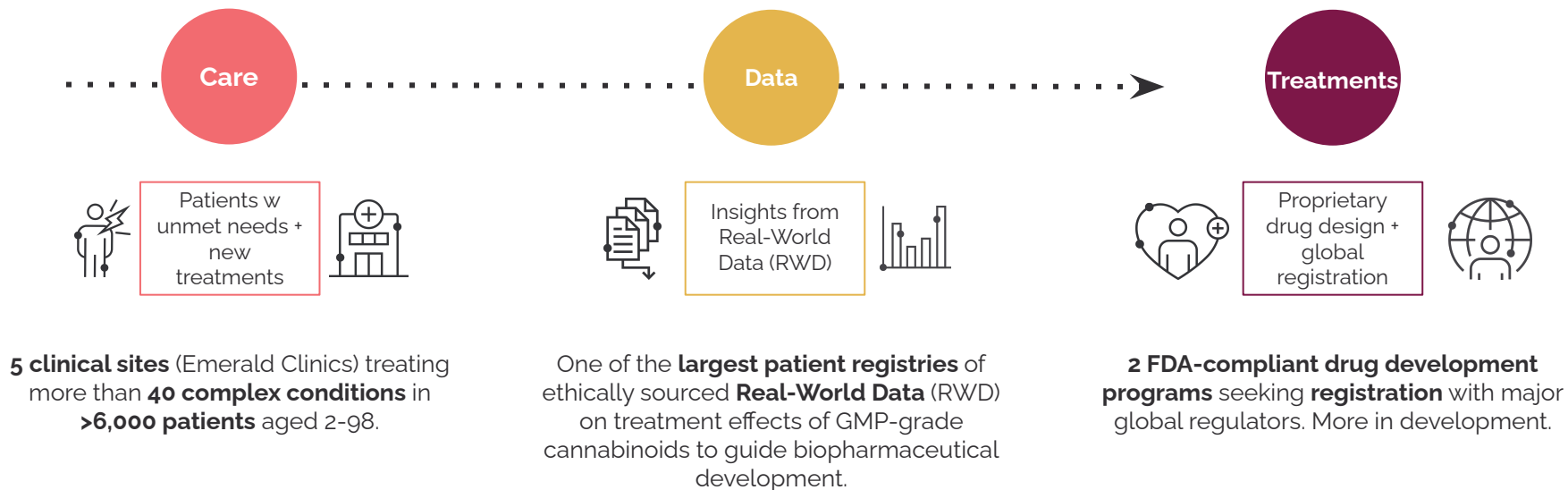


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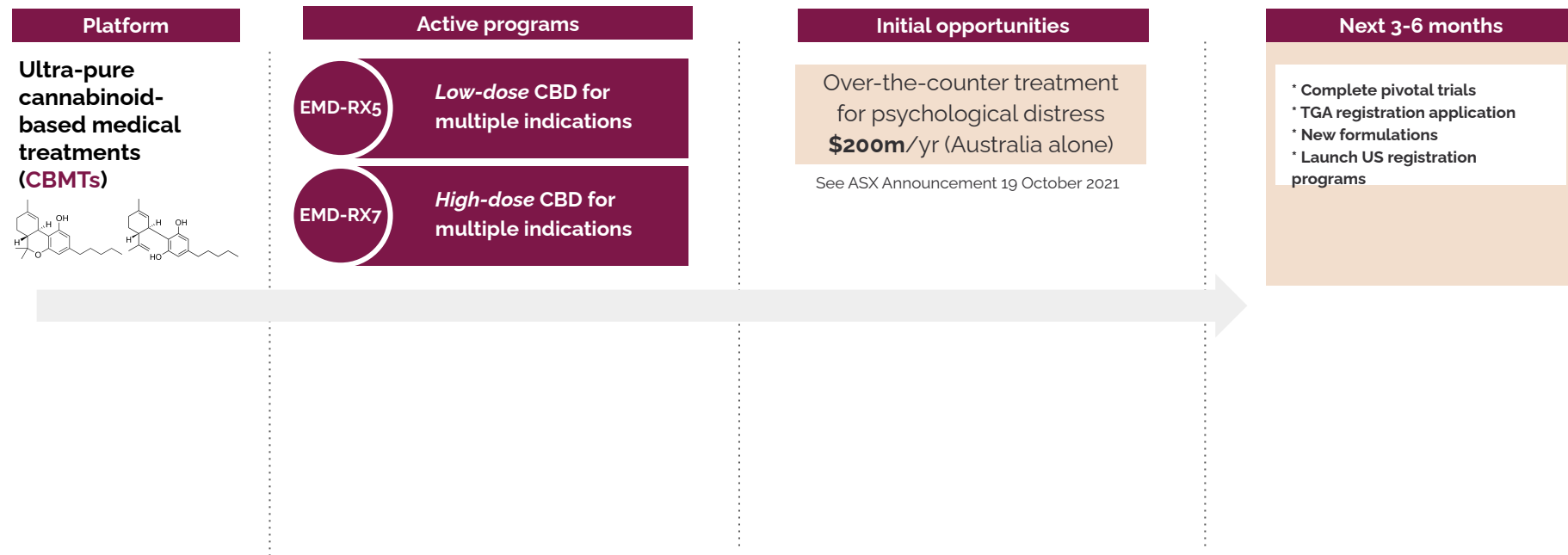




Emyria is a biotech that, *uniquely*: provides care, generates data & develops treatments



Emyria's active clinical development programs



Emyria's active clinical development programs



Biopharmaceutical cannabinoid development

1

Learn from real-world patients

2

Create high-performing dose form

3

Pursue global registration



Emyria has Real-World Data with 6,000 patients (+ growing)

What dose?



0-1,200 mg

Range of daily **CBD** prescribed

0-197 mg

Range of daily **THC** prescribed

7.12

Average **concomitant medications**
per patient at initial visit

What problem?



44

Unique **primary indications**

53%

Patients presenting with symptoms
of **depression**

54%

Patients presenting with symptoms of
moderate to severe **anxiety**

Which patients?



2 - 98 years

age range of patients

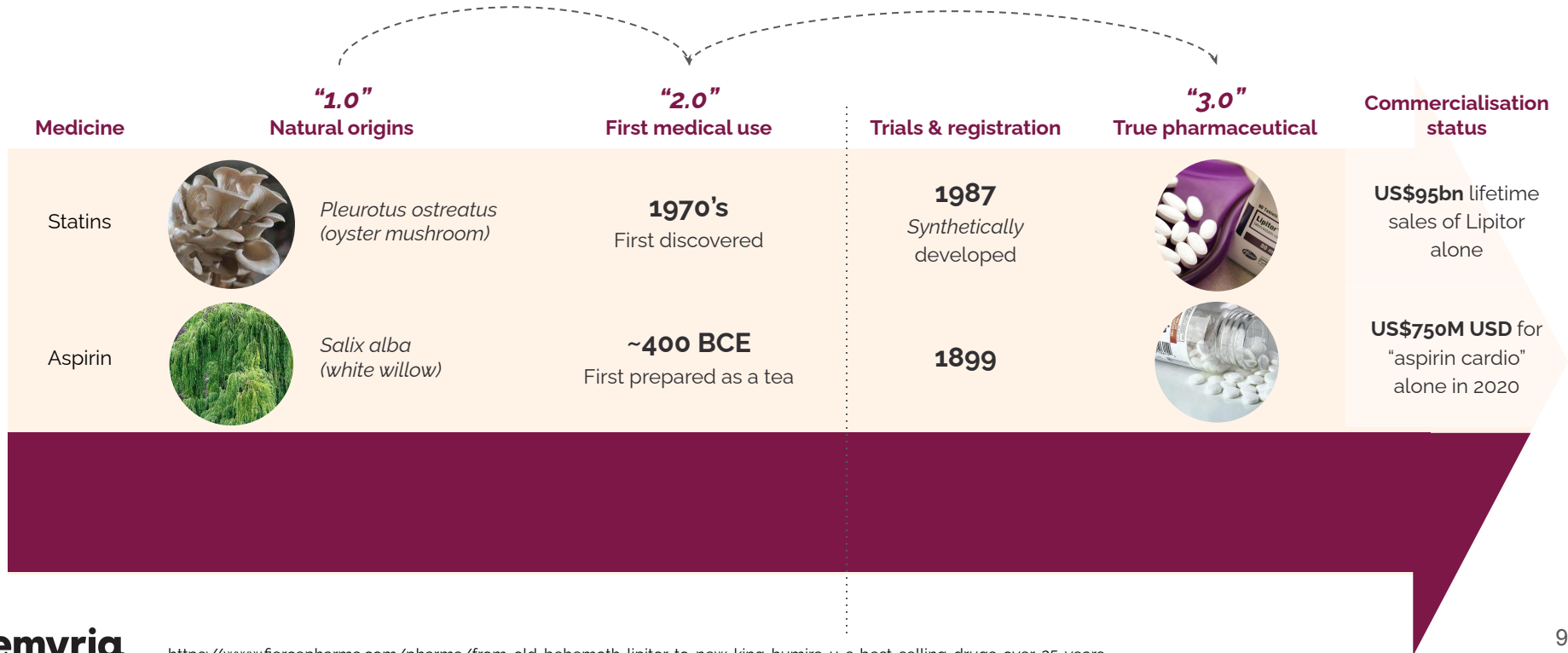
56%

female patients







35%

Patients experiencing an **adverse event**

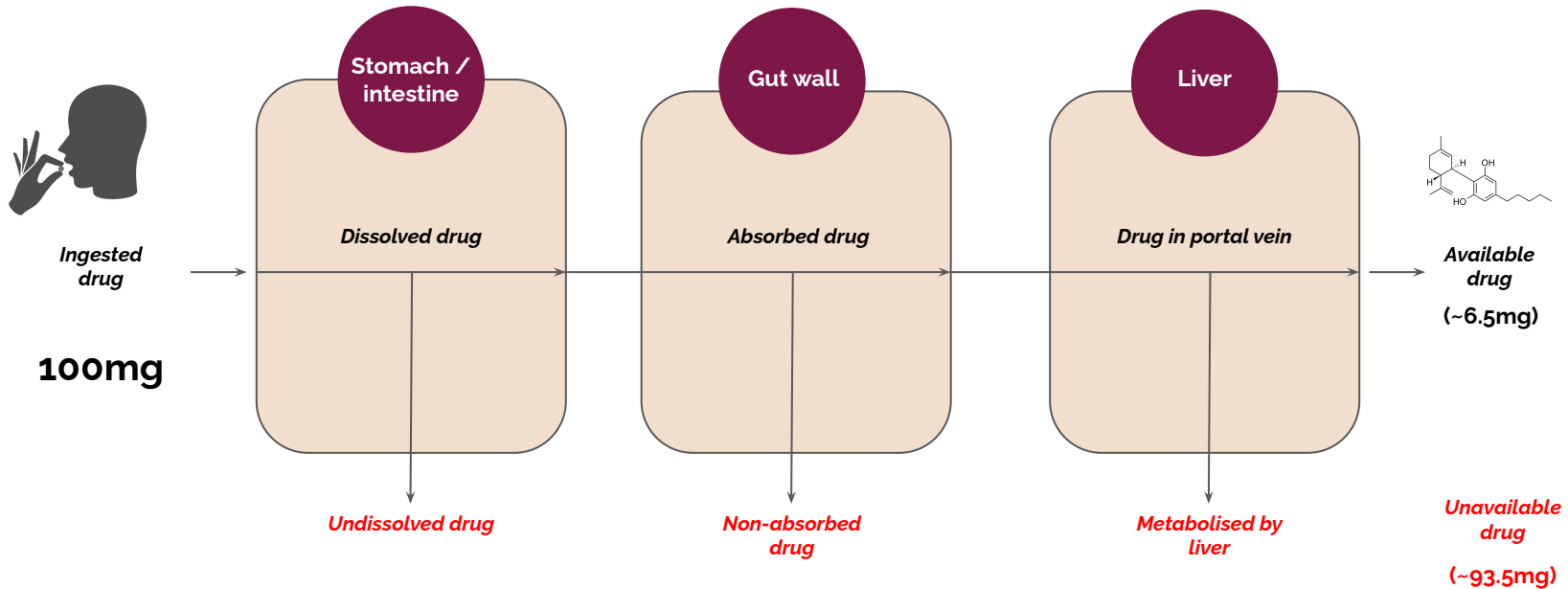
Plants have inspired 40% of registered medicines



Medicinal cannabis stuck at “2.0” - *registered biopharmaceuticals reach more patients*

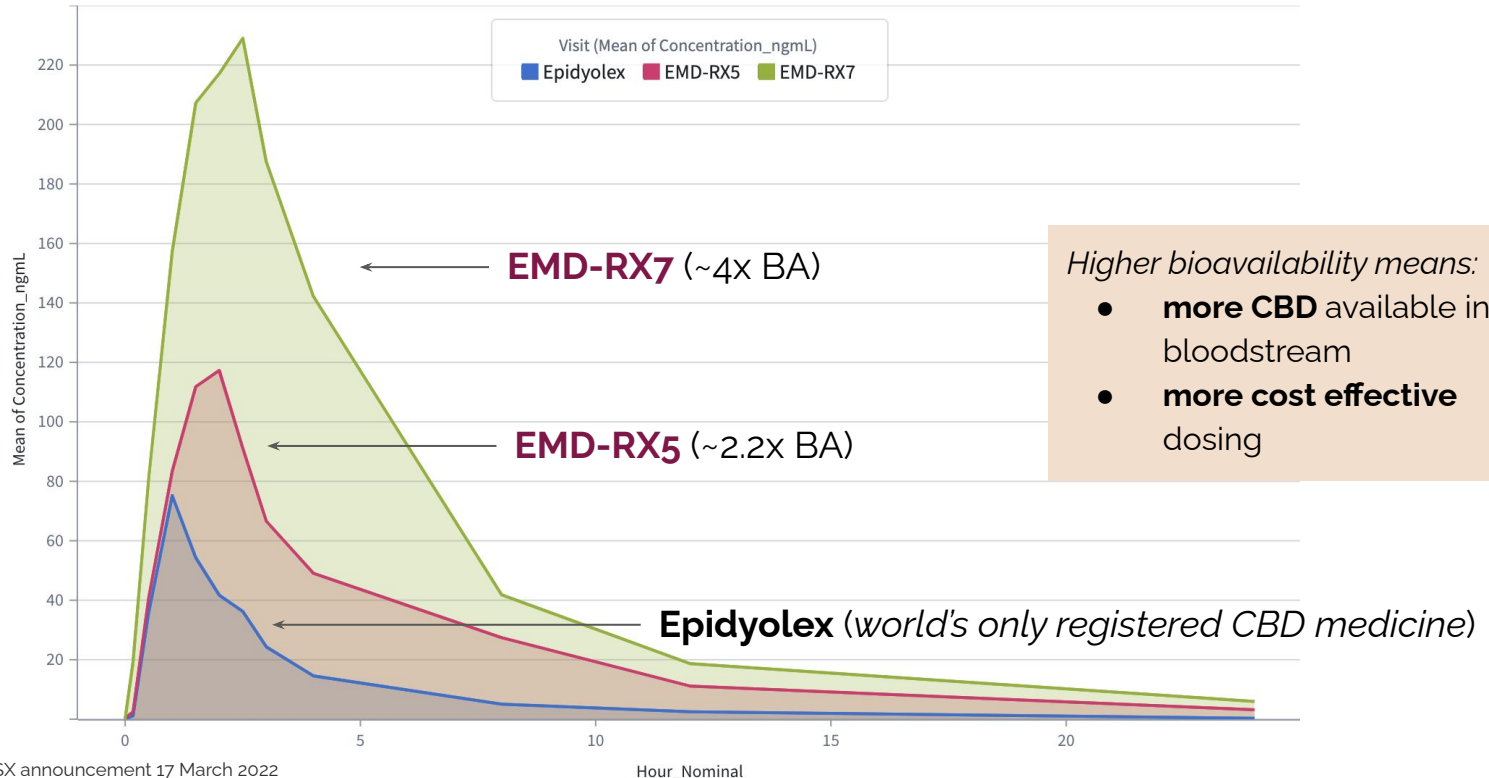
Medicine	“1.0” Natural origins	“2.0” First medical use	Trials & registration	“3.0” True pharmaceutical	Commercialisation status
Statins	 <i>Pleurotus ostreatus</i> (oyster mushroom)	1970's First discovered	1987 Synthetically developed		US\$95bn lifetime sales of Lipitor alone
Aspirin	 <i>Salix alba</i> (white willow)	~400 BCE First prepared as a tea	1899		US\$750M USD for “aspirin cardio” alone in 2020
Cannabis	 <i>Cannabis sativa</i> (cannabis)	~8000 BCE First medicinal use documented		Emyria's novel synthetic delivery and drug development programs target multiple indications	Initial targets: mental health, insomnia and pain

Oral CBD has poor bioavailability - *as low as 6.5%*



Emyria's proprietary CBD formulations enhance bioavailability

Diagram on right shows concentrations of CBD in the blood for 3 different formulations as measured over a 24 hour period in an animal model. Each formulation contained the same amount of CBD - 50mg - but clear differences in bioavailability are apparent. [1]



[1] See ASX announcement 17 March 2022

Emyria's ultra-pure CBD vs comparators



Emyria is developing a novel cannabinoid delivery platform with leading North American contract drug manufacturer Altasciences (See ASX Announcement 13 August 2021)

Feature	Emyria's proprietary formulation	Botanical alternatives
Biological action	Synthetic CBD has equivalent physiological effects to botanical CBD [1]	
Regulatory considerations	FDA Drug Master File for API. Acceptance from major regulators	Most CBD oils do not meet FDA requirements for CBD purity (with exception of Epidyolex)
Chromatographic purity (low level, ppm) <ul style="list-style-type: none"> • Delta-9-THC • Delta-8-THC • Sum (D8,D9) 	<u>No detectable THC</u> Synthetic API <ul style="list-style-type: none"> • < 4 (*ND) • < 4 (*ND) • < 4 (*ND) 	<u>THC present</u> Epidyolex <ul style="list-style-type: none"> • 224 • 84 • 328
Enantiomeric purity by HPLC <ul style="list-style-type: none"> • (-)-CBD • (+)-CBD 	<u>Ultra-pure</u> Synthetic API <ul style="list-style-type: none"> • 100% • 0.00% 	Epidyolex <ul style="list-style-type: none"> • 99.9% • 0.08%
Enhancing bioavailability	Emyria technology achieves ~1.5-2x greater (c/w Epidyolex)	Generally poor BA. Sesame oils > MCT oils
Intellectual property	100% Emyria-owned	Generic oils - limited IP
Costs	Cost effective over long-term	Plant extraction expensive

The image features seven white, oblong capsules with a central score line, arranged in a loose cluster on the right side of a solid maroon background. The capsules are oriented diagonally, with some showing more detail than others due to lighting. The left side of the image is mostly empty maroon space, except for a text box at the bottom.

EMD-RX# programs:

Ultra-pure CBD targeting multiple indications



BRIEFING ROOM

FACT SHEET: President Biden to Announce Strategy to Address Our National Mental Health Crisis, As Part of Unity Agenda in his First State of the Union

MARCH 01, 2022 • STATEMENTS AND RELEASES

In his first State of the Union, the President will outline a unity agenda consisting of policy where there has historically been support from both Republicans and Democrats, and call on Congress to send bills to his desk to deliver progress for the American people. As part of this unity agenda, he will announce a strategy to address our national mental health crisis.

Our country faces an unprecedented mental health crisis among people of all ages. Two out of five adults [report](#) symptoms of anxiety or depression. And, Black and Brown communities are [disproportionately](#) [↗](#) [↘](#) undertreated – even as their burden of mental illness has continued to rise. Even before the pandemic, rates of depression and anxiety were inching [higher](#) [↗](#). But the grief, trauma, and physical isolation of the last two years have driven Americans to a [breaking point](#) [↗](#).



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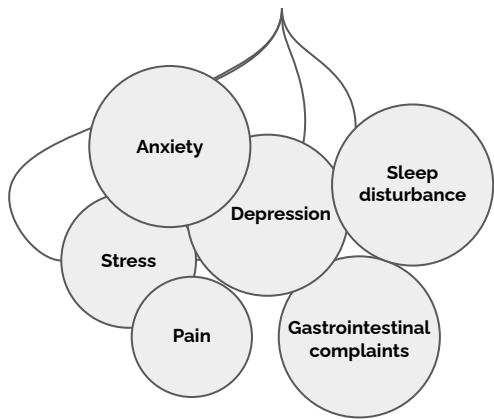
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...considering of policy where there has historically been support from both Republicans and Democrats, and call on Congress to send bills to his desk to deliver progress for the American people. As part of this unity agenda, he will announce a strategy to address our national mental health crisis.

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First indication: *Psychological distress* - a growing challenge

Symptoms of **psychological distress**



More prevalent in patients with **chronic disease**

~15% of Australian adults experience high or very high levels of psychological distress [1].

Prevalence is increasing. [2]



Current treatments may include monitoring, psychotherapy, prescription medications or referral to support services. [3]



There is no over-the-counter treatment for psychological distress.

EMD-RX5: Over-the-counter CBD for psychological distress

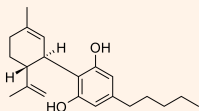
Registered, "over-the-counter" (OTC) treatments can improve patient access:

- **do not require a doctor's prescription**
- can be **purchased directly** from qualified **pharmacists**

There are **5,900 pharmacies in Australia** [1] and **OTC market** is estimated at over **\$20B/year** [2].



The TGA permits **low-dose cannabidiol (CBD)** to be registered as Schedule 3 (S3) OTC medicine. [3]
S3 cannabinoid medicines could generate an estimated **\$200m** in Australia, much more globally. [4]



Emyria plans to register one of the first, affordable, cannabinoid S3 medicines (EMD-RX5)

EMD-RX5 will initially target psychological distress but poised to expand to adjacent indications

EMD-RX5: Real World Data (RWD) guides indication selection

Care

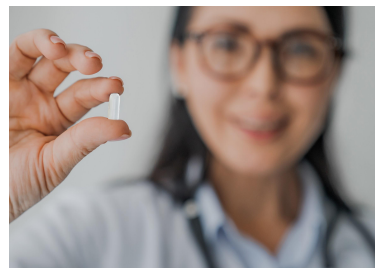
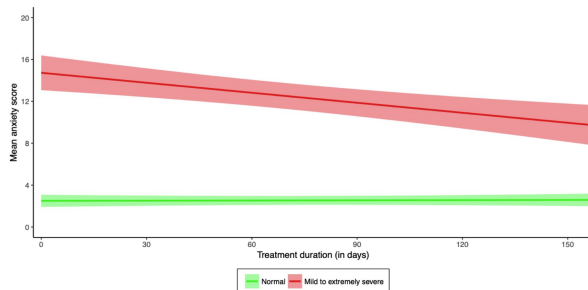
Data

Treatments

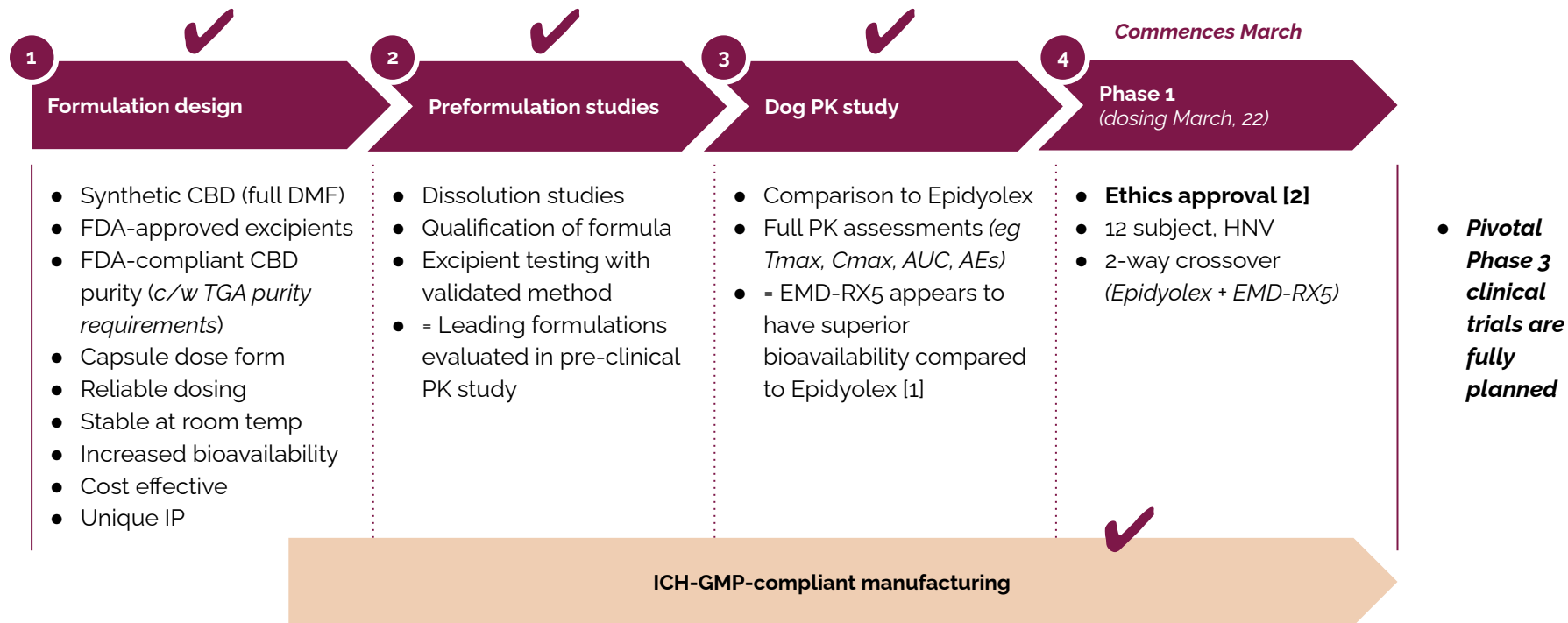
Emyria clinicians have **already prescribed low-dose CBD** for **psychological distress** for 600+ patients over 6+ months

RWD analysis reveals specific **dose-responses**, for a specific set of symptoms, in a specific patient population

Emyria's RWD supports an end-to-end **EMD-RX5 registration program** and **patients** (slide 27)



EMD-RX5: Rapid clinical development progress



[1] See ASX announcement 15 December 2021

[2] See ASX announcement 03 March 2022

EMD-RX#: *What's next?* New indications. More formulations.



1

Ongoing RWD collection & analysis

- Dose-response insights on >6,000 patients and growing
- Long-term AE monitoring

Helps inform:

- Additional indication selection
- Pivotal study designs (*eg. endpoint selection*)
- Dose form preferences



2

Proprietary dose-form development

Develop a range of unique dose forms:

- **CBD-only**
- **CBD/THC combinations**

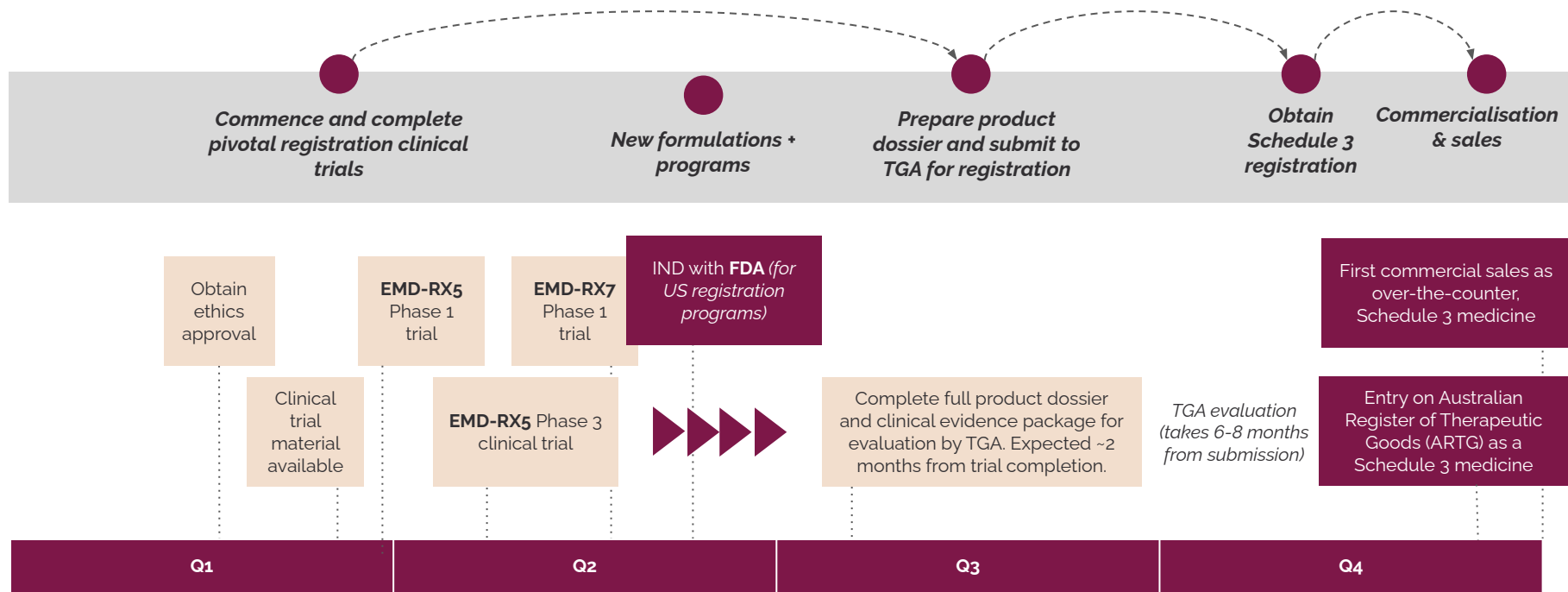


3

Launch drug registration programs

- **EMD-RX5** (multiple indications)
 - Distress
 - IBS
 - *Others*
- **EMD-RX7** (multiple indications)
- ***Others in development***

Cannabinoid program development milestones



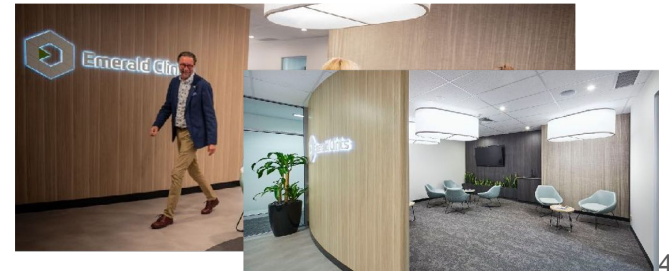
Leading next-generation psychedelic development



Psychedelic-assisted therapy addresses major unmet needs and is attracting large investment



Emyria to leverage clinical network, data infrastructure and drug development expertise to lead innovation

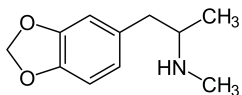




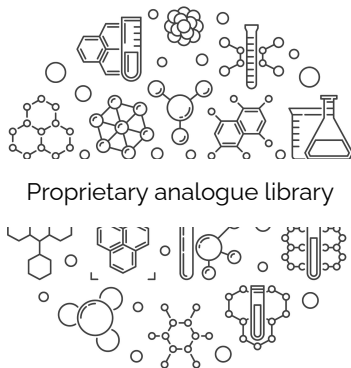
MDMA analogue development

Emyria's MDMA analogue library - a drug discovery pipeline

MDMA as inspiration



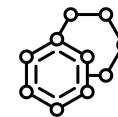
Growing library (100+ proprietary analogues)



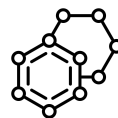
Screening

- ? safety
- ? prosocial potency
- ? faster acting
- ? peripheral effects
- etc

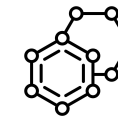
Treatment development



Next-gen MDMA



Neuropsychiatric
treatments



Non-neurological
treatments

Emyria's MDMA analogue library - a drug discovery pipeline

Emyria's MDMA analogue library

Key features

- **>100** unique MDMA analogues, *and growing* [1]
- **>10 years of development** at UWA
- Entire library exclusively optioned to Emyria
- Verified **excellent purity and stability**
- Potential as treatments for:
 - Next-gen psychedelics, neurological disorders + *other conditions*

Progress to date

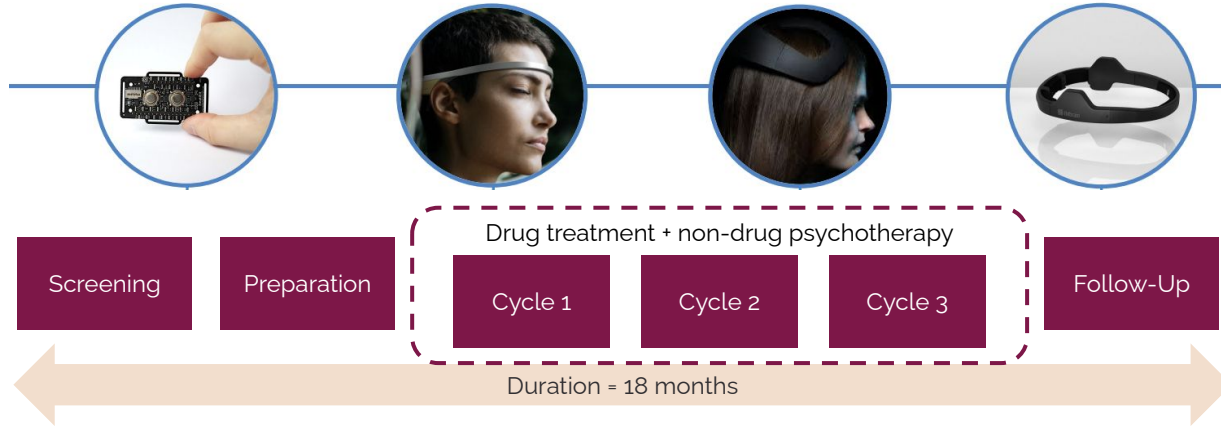
1. No "off-target" effects in first screen (~66 compounds) [2]
2. First patent family filed
3. Library expansion underway
4. University of Sydney approached to develop animal models [2]
5. **NEXT: Further expansion, screening and evaluation**



Emyria's clinical research



EMDMA-001: a Phase IIa trial for PTSD with advanced monitoring



EMDMA-001 to evaluate potential of MDMA-assisted therapy for additional patients.

Will involve advanced remote monitoring technology with partner **Cydelic** [1].

Protocol completed and clinical psychologists have completed *well as* Certificate of Psychedelic-Assisted Therapies (CPAT) partner, Mind Medicine Australia (MMA).



training as
with



The study will be led by consultant psychiatrist **Dr Eli Kotler** (left), and will be run out of the Victorian Counselling and Psychology Services in **Melbourne** (below)



Emyria's growing patent portfolio

	Title	Official No.	Status
Emyria's cannabinoid patents cover unique formulations, delivery approaches and "method of use"	Use of Cannabidiol for the Treatment of Psychological Distress	2020g04152	Provisional filed
	Use Of Cannabidiol for the Treatment of Psychological Distress	2021g01086	Provisional filed
	Use Of Cannabidiol for the Treatment of Irritable Bowel Syndrome-Related Psychological Distress	2021g01672	Provisional filed
	Use Of Cannabinoid Combination for the Treatment of Irritable Bowel Syndrome-Related Psychological Distress	2021g01674	Provisional filed
	Cannabidiol Dosing Regime	2021g02001	Provisional filed
	Cannabinoid Dosage Form	2022g00479	Provisional filed
	Analogues	2021g03836	Provisional filed
	<i>Others in development covering unique delivery platforms, dose responses and clinical indications</i>	<i>Multiple provisionals expected 2021</i>	

Corporate structure



Board has multiple drug registrations, deep biotech experience



Dr Stewart Washer
Chairman & Founder



Prof Sir John Tooke
Non-Executive Director



Dr Karen Smith
Executive Director
> 100 clinical trials & 20 FDA approvals



Matt Callahan
Non-Executive Director
4 FDA approvals



Dr Alistair Vickery Smith
Medical Director, Specialist GP



Dr Michael Winlo
Managing Director



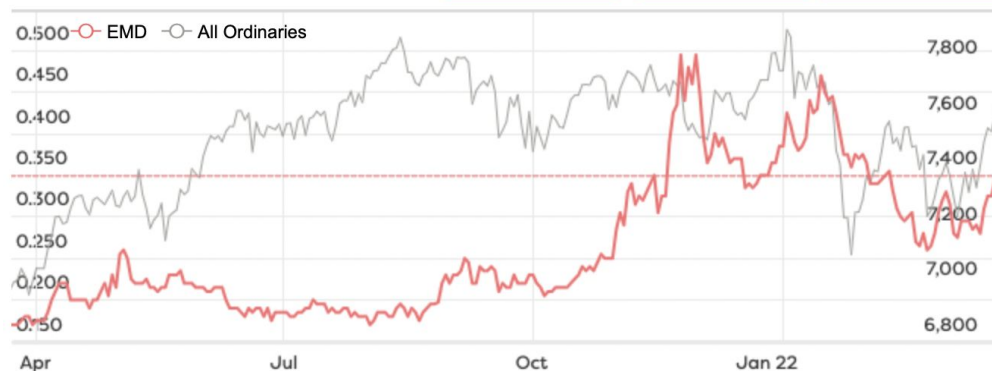
Capital structure

Top 20 = **60.48%** | **Tattarang** holds ~5% [1]
Director ownership = **27.17%**

Key Metrics	Value
Shares on issue	254m
Last close (26 Oct 2021)	A\$0.33
Market Capitalisation (26 Oct 2021)	A\$90.75M
Cash (31 Dec 2021)	A\$8.7m
Debt (31 Dec 2021)	-
Enterprise value	A~\$82.05m
Total options (exercise price \$0.114-0.45) expiring. 2022-24	62m

Share price over 12 months

EMD \$0.350 ▲



Source: <https://emyria.com/for-investors/#Stock-Information>



Emyria positioned for growth

1

**World-class
Board/Management with
FDA registration successes**

In-house expertise in drug development, clinical trials and drug registration

2

**Proprietary data, access to
clinics and patients**

One of the **largest Real World Data** assets on cannabinoid treatments guiding clinical development programs

3

**Targeting major markets
and unmet needs**

Multiple clinical programs targeting major, unmet needs

4

**Unique biopharmaceutical
cannabinoid platform**

Ultra-pure CBD dose form, FDA-compliant and with **bioavailability advantages**

5

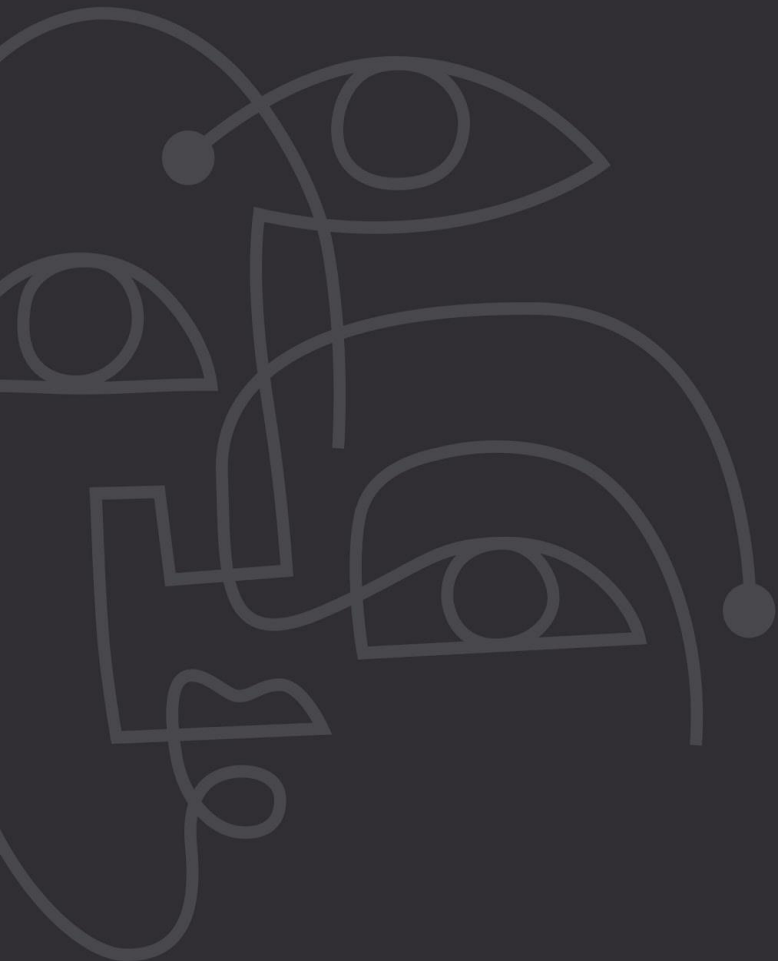
**Leader in development of
novel MDMA-analogues**

Exclusive access to large and **novel MDMA analogue compound library**

6

Attractive valuation

Compared to industry vertical peers



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