

## Emyria receives further positive MDMA analogue screening results

### Highlights:

- Emyria and the University of Western Australia (UWA) have received positive screening results from the second batch of MDMA analogues sent to Eurofins (EPA:ERF)
- 16 of 17 novel compounds synthesised and screened demonstrated no interactions with selected “anti-targets” (receptors and enzymes known to be involved in unwanted side effects); These results bring total count of successfully screened analogues in the proprietary library to 83 of 85, and growing
- New compound synthesis is ongoing; Third batch of MDMA analogues now being prepared for initial screening with Eurofins
- Emyria and UWA have also entered into an agreement with a leading contract research organisation (CRO) to evaluate “drug-likeness” for the partnership’s highest priority MDMA analogue candidates; Further studies will compliment preclinical screening work currently being planned with University of Sydney
- Novel MDMA analogue development progressing well alongside Emyria’s cannabinoid programs, with preliminary EMD-RX5 Phase 1 results to be received end of this week

**Emyria Limited (ASX: EMD)** (Emyria or the Company), a clinical stage biotech developing multiple treatments for unmet needs powered by real-world patient data, is pleased to announce positive progress on its MDMA (aka ‘ecstasy’) analogue development program being run in partnership with the University of Western Australia (UWA).

### Positive screening results grows MDMA analogue library

16 of 17 compounds sent from the second batch of analogues successfully passed screening with Eurofins at the test concentrations, meaning these compounds showed no evidence of interactions with one or more of the enzymes or cell receptors (“anti-targets”) that can be associated with unwanted clinical side effects.

These positive results bring the total count of successfully screened MDMA analogues to date to 83 out of 85. (See ASX release 08 Dec 2021)

**Additional preclinical screening** is now being planned with a leading CRO who will perform a number of assays to evaluate the solubility, partition coefficients and metabolic stability of each compound. These assays can help to predict absorption and brain uptake rates and help identify compounds that are similar to MDMA in potency but with faster onset and shorter half-lives, which may be more suitable for clinical applications.

Leading MDMA analogues will undergo more sophisticated pharmacokinetic studies, which is important in helping select compounds for further in vivo efficacy studies.

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## The MDMA analogue library

Emyria recently secured exclusive rights to a library of more than 100 novel MDMA analogues (and growing) from the University of Western Australia creating a unique drug-discovery pipeline. (See ASX announcement 05 Aug 2021)

The analogues are unique chemical entities that are structurally similar to 3,4-Methylenedioxyamphetamine ('MDMA', 'ecstasy') but designed to engage different neurological targets based on feedback from earlier screening work.

MDMA-analogues have shown promise as next-generation psychedelic-assisted therapies and treatments for neurological disorders, such as Parkinson's Disease. For some indications, it may be desirable to moderate (increase, decrease or remove) the euphoric and stimulant effects of MDMA. The development program has been designed to create MDMA-like compounds that are more selective for specific neurological receptors and with the potential to become treatments for large patient populations.

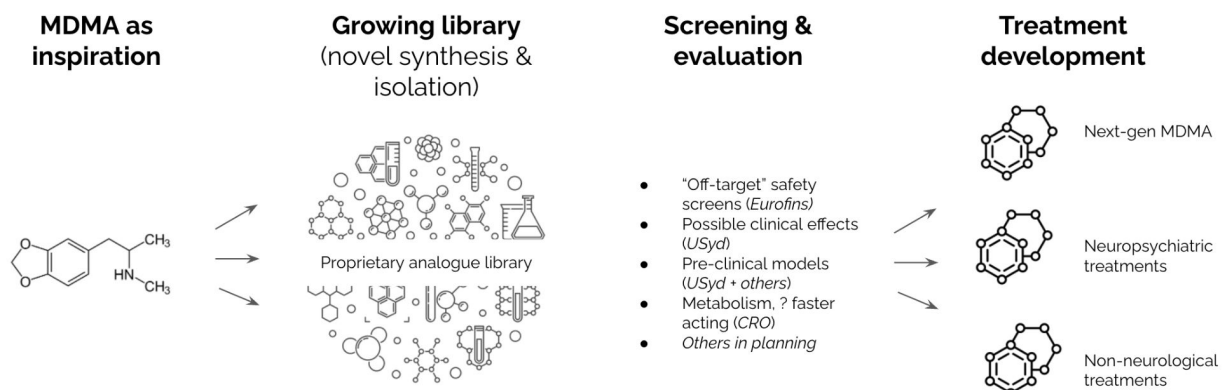
Each new compound created is guided by prior screening results. Follow-on preclinical development programs are being planned with key partners to identify which compounds have the strongest IP and the greatest potential to become either next generation psychedelic-assisted therapies or treatments for other neurological disorders.

**Emyria's Managing Director, Dr. Michael Winlo said:** "Emyria and development partner, the University of Western Australia, now have a set of over 80 MDMA-like compounds with strong IP and therapeutic potential.

*We are now planning pivotal preclinical studies to help identify which of these compounds may have the potency of common MDMA but with enhanced safety and shorter acting times and half-lives. We anticipate this screening program will help identify compounds with the potential to become registered treatments for other neuropsychiatric conditions .*

*Emyria's MDMA-analogue development continues to advance in parallel to the proprietary, ultra-pure cannabinoid drug registration programs, with the EMD-RX5 Phase 1 trial now complete and results expected later this week.*

## Emyria's MDMA analogue library - a drug discovery pipeline



## ADVANCING EMYRIA'S DRUG REGISTRATION PROGRAMS

### ULTRA-PURE CANNABINOID MEDICINES

EMYRIA'S ULTRA-PURE CANNABINOID TREATMENTS have been uniquely formulated to:

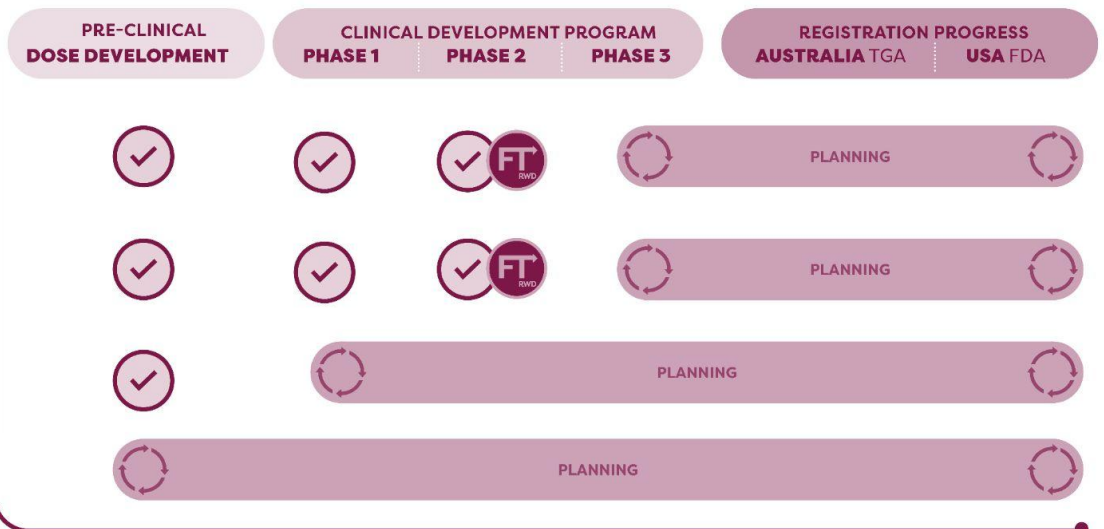
- Meet FDA requirements for registered medicines
- Have improved bioavailability
- Meet patient preferences for a solid, oral dose form

EMYRIA'S ACCELERATED REGISTRATION PROGRAMS are supported by Emyria's proprietary **REAL WORLD DATA**, carefully gathered with over 6,000 patients (and growing) receiving personalised cannabinoid treatment across Emyria's clinical service subsidiary.



#### CLINICAL PROGRAMS

- EMD-RX5**  
Psychological Distress  
Over-the-counter treatment for symptoms of psychological distress (eg. mild anxiety, stress, sleep disturbance)
- EMD-RX5**  
Irritable Bowel Syndrome (IBS)  
Over-the-counter treatment for symptoms of IBS (eg. gastrointestinal upset, stress, discomfort)
- EMD-RX7 Targeting**  
Multiple Medical Conditions\*  
ULTRA-PURE, prescription CBD treatment for conditions requiring higher CBD dose exposures
- Other novel CANNABINOID FORMULATIONS in development**  
ULTRA-PURE, high bioavailability cannabinoid treatments targeting unmet needs



\* Expected start date      \* To be determined

### NEXT-GENERATION MDMA LIKE MEDICINE

Emyria is developing a one-of-a-kind, proprietary library of OVER 100 UNIQUE COMPOUNDS (AND GROWING). Inspired by -3, 4 -Methylenedioxymethamphetamine (also known as "MDMA" or "ecstasy") and developed over 10 years by Dr. Matt Piggott and his team at the University of Western Australia.

AN ADVANCED CLINICAL AND IP DEVELOPMENT STRATEGY is focussed on identifying novel small molecules with potential to become registered treatments as:

- Next-generation psychedelic-assisted therapies
- Novel neurological therapies
- Novel non-neurological therapies

#### THERAPEUTIC FOCUS AREA

- NEXT-GENERATION MDMA Targeting** PTSD  
psychedelic-assisted therapies  
neurological disorders (Parkinson's)  
non-neurological disorders



**Fig 1. Emyria's drug development pipeline**

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This announcement has been approved and authorised for release by the Board of Emyria Limited.

For further information:

**Dr. Michael Winlo**  
Managing Director  
+61 (0) 8 6559 2800  
[mwinlo@emyria.com](mailto:mwinlo@emyria.com)

**Lexi O'Halloran**  
Investor Relations  
+61 (0) 404 577 076  
[investors@emyria.com](mailto:investors@emyria.com)

**Andrew Williams**  
Media Relations  
+61 (0) 412 614 125  
[awilliams@emyria.com](mailto:awilliams@emyria.com)

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## About Emyria ([www.emyria.com](http://www.emyria.com))

Emyria Limited develops biopharmaceuticals guided by proprietary Real-World Data collected with patients across its wholly-owned clinical service subsidiary, Emerald Clinics.

**Emyria's current clinical development programs** are focussed on the registration of proprietary formulations of cannabinoid-based medical treatments (CBMTs) and novel MDMA ('ecstasy') analogues with major global regulators. Emyria's programs target major unmet needs such as mental health disorders and chronic pain.

**Emyria's Real World Data (RWD)** guides each of Emyria's clinical development programs and care models. Emyria RWD is deep, ethically-sourced clinical evidence gathered with thousands of patients who also receive personalised care at Emerald Clinics.

**Emyria** is therefore uniquely providing care to patients, generating clinical evidence and advancing multiple proprietary treatment programs towards registration.

## Cautionary Note on Forward-Looking Statements

Any statements in this press release about future expectations, plans and prospects for the Company, the company's strategy, future operations, and other statements containing the words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions, constitute forward-looking statements. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: the Company's ability to successfully develop its product candidates and timely complete its planned clinical programs and the Company's ability to obtain marketing approvals for its product candidates. In addition, the forward-looking statements included in this press release represents the Company's views as of the date hereof. The Company anticipates that subsequent events and developments will cause the Company's views to change. However, while the Company may elect to update these forward-looking statements at some point in the future, the Company specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date hereof.