ASX Announcement

18 Jul 2022

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Emyria expands drug candidate library inspired by MDMA

Highlights:

- Emyria and partner the University of Western Australia have made drug discovery and development progress by expanding their proprietary MDMA analogue library
- **19 new compounds** have been created in this third batch generated since the inception of the partnership
- **This brings the library size to >125 novel MDMA-like compounds**; additional design and synthesis is ongoing and guided by screening results
- **Three drug discovery priority areas have been identified** for the ongoing synthesis program and associated intellectual property (IP) strategy:
  - Drug-assisted psychotherapy for major mental health disorders (next-generation MDMA analogues) where shorter-acting MDMA may be desirable
  - Novel, small molecule treatments for neurological disorders such as Parkinson's disease
  - Treatments for non-neurological disorders where selective activity at peripheral serotonin receptors is of interest
- Further testing is in planning to identify lead compounds in each focus area
- The partnership's preclinical MDMA analogue pipeline compliments Emyria's clinical programs; drug development milestones outlined below

Emyria Limited (ASX: EMD) (Emyria or the Company), a clinical stage biotechnology company leveraging real-world patient data to develop treatments for unmet needs, is pleased to announce positive progress of its preclinical MDMA analogue medicine program with partner, the University of Western Australia.

Emyria's next-generation MDMA drug discovery is being led by Professor Matt Piggott, of the University of Western Australia (UWA). Prof. Piggott is an international leader in medicinal chemistry and expert in adapting the unique structures of MDMA.

Emyria previously secured exclusive rights to all MDMA-like compounds created under the partnership with Prof. Piggott and UWA, starting with an initial library of more than 100 novel MDMA analogues created over more than 10 years. Emyria and UWA have been actively growing and screening this unique drug-discovery pipeline to identify new chemical entities and drug candidates with the potential to address major unmet needs in mental health and neurological disorders. *(See ASX announcement 05 Aug 2021)*

***UWA's Associate Prof. Matt Piggott said**: "It's exciting to see the results of the first rounds of screening informing subsequent analogue design. This is the critical feedback loop that drives drug discovery."*

A third batch comprising 19 novel MDMA analogues has now been created, characterised and sent for screening. The design of this third batch was led by Professor Matt Piggott and his expert team at UWA and guided by the successful results received from the screening of the first two batches. *(See ASX announcements 08 December 2021 and 09 May 2021).*

A total of 45 new MDMA-like analogues have now been created under the partnership. Further synthesis and discovery is ongoing.

Most compounds already screened show no evidence of significant interactions with one or more "anti-targets" that is, enzyme or receptors associated with serious side effects - at the test concentrations. *(See ASX announcements 08 December 2021 and 09 May 2022)*

Emyria's Managing Director, Dr. Michael Winlo said: *"Emyria's preclinical drug discovery program, inspired by MDMA, is making great progress. We are strengthening Emyria's IP portfolio and potential slate of proprietary drug candidates targeting major unmet needs.*

Guided by our initial screening results, we have identified three therapeutic areas to target. (1) next-generation psychedelic-assisted therapeutics to help treat major mental health disorders and where more potent and shorter-acting treatments may offer advantages over MDMA-based therapy, (2) novel small molecule treatments for neurological disorders where selective receptor effects are desired and (3) treatments for non-neurological disorders where selective activity at peripheral, (non-brain) targets are of interest.

Our preclinical program complements our advanced clinical programs and demonstrates the depth of our unique drug discovery and development opportunities and capabilities. I look forward to updating the market with further progress and results as we advance towards our development milestones in the coming months."

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

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UPCOMING DRUG DEVELOPMENT MILESTONES

CLINICAL PROGRAMS
Repurposing "ultra-pure" cannabinoids

PRE-CLINICAL PROGRAM

EMD-RX5 *"direct-to-consumer"* program	**EMD-RX7** *"prescription medicine"* program	**MDMA**-like medicine creation
Formulation optimisation ✓	**Formulation optimisation** ✓	**Screening results** for first 85 compounds ✓
Phase 1 ✓	**Phase 1**	**First patent family** filed ✓
Ethics submitted for Phase 3 ✓	Pre-IND **(FDA)**	Batch **3** sent ✓
Phase 3 commencement	**Pivotal** trials	Batch 3 **screening results**
Regulatory submission		**Create and screen** additional batches
Commercial strategy **Australia**		**Metabolic** studies
Commercial strategy **Europe**		**Preclinical assays** *(multiple animal models)*
Commercial strategy **USA**		**Human cell** line assays
		Lead selection
		Phase 1 trials

About Emyria (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 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.