

FORM 51-102F3
MATERIAL CHANGE REPORT

Item 1 Name and Address of Company

BetterLife Pharma Inc. (the “Company”)
1275 West 6th Avenue
Suite 300
Vancouver, British Columbia
V6H 1A6

Item 2 Date of Material Change

August, September and October 2022

Item 3 News Releases

News releases dated August 24, September 7 and September 27, 2022

Item 4 Summary of Material Change

A study, published in [Experimental Neurology](#), has provided some new evidence that lysergic acid diethylamide (“LSD”) has nootropic effects which are believed to be driven by neuroplasticity promotion. Researchers found that LSD increased neuroplasticity in ‘human brain organoids, increased novelty preference in rats, and improved memory performance in humans.’ Increased structural plasticity in the brain neurons (mainly prefrontal cortex) has also been linked to the sustained antidepressant effects. The Company’s [neuroplasticity study](#) similarly demonstrated that, in the treatment of rat embryonic cortical neurons the Company’s lead drug, BETR-001 (2-bromo-LSD) increases the structural complexity of neurons (dendrite growth and complexity) indicating the neural plasticity activity of BETR-001. In certain measurements of structural plasticity in neurons, BETR-001 performs better than ketamine in this model.

The Company submitted a key research publication on BETR-001 for review to a prestigious peer-reviewed journal. This publication will present data from a comprehensive preclinical in-vitro and in-vivo characterization of BETR-001 conducted in collaboration with three leading investigators in this field: Dr. Adam L. Halberstadt (University of California San Diego, USA), Dr. Argel Aguilar-Valles (Carleton University, Canada), and Dr. John D. McCorvy (Medical College of Wisconsin, USA). The publication will include a pharmacological profiling of BETR-001 against over 30 key neuroreceptors in parallel with its parent compound LSD, as well as in-vivo studies in mouse models, showing the non-hallucinogenic profile of BETR-001 as well its effective structural neuroplasticity and anti-depressant profile. Furthermore, the research will provide insight into the mechanism for the non-hallucinogenic activity of BETR-001, as well as other key pharmacological differences between BETR-001 and LSD which could potentially translate into significant therapeutic benefits of BETR-001.

The Company filed a PCT patent application along with a U.S. application for LSD derivatives, including 2-bromo-LSD. The applications cover compositions of these derivatives for their use in the treatment of a range of neuropsychiatric and neurological conditions, including depression, anxiety, cluster headaches and pain. The Company is already in advanced stages of GMP manufacturing of BETR-001 and completing the

necessary preclinical IND-enabling studies for BETR-001. The Company expects to file the BETR-001 IND and start Phase 1, in healthy subjects, in H1 of 2023.

During October 2022, the Company closed on a tranche of a private placement. 1,666,667 common shares were issued for gross proceeds of US\$250,000. US\$201,500 of subscription proceeds were also received for common shares to be issued. During the month, the Company also issued the following common shares to third parties:

- 1,540,135 common shares pursuant to the conversion of convertible debenture consisting of a principal balance of \$250,000 and accrued interest of \$58,027. Original terms of the convertible debenture were as follows: Interest rate of 8%, maturity date of May 3, 2022 and conversion price of \$1.15. In October 2022, the conversion price was amended to \$0.20.
- 2,500 common shares pursuant to vesting of restricted stock units.

Item 5 Full Description of Material Change

Refer to Item 4.

Item 6 Reliance on subsection 7.1(2) or (3) of National Instrument 51-102

This Report is not being filed on a confidential basis in reliance on subsection 7.1(2) of National Instrument 51-102.

Item 7 Omitted Information

No information has been omitted on the basis that it is confidential information.

Item 8 Executive Officer

Further information can be obtained from Ahmad Doroudian, Chief Executive Officer of the Company, at (604) 221-0595.

Item 9 Date of Report

November 7, 2022

SCHEDULE "A"



BetterLife Lead Drug (BETR-001) Promotes Structural Neural Plasticity with Possible Nootropic Effects Similar to That of LSD Without Hallucinogenic Side Effects

VANCOUVER, British Columbia, August 24, 2022 - BetterLife Pharma Inc. (“BetterLife” or the “Company”) (CSE: [BETR](#) / OTCQB: [BETRF](#) / FRA: [NPAU](#)), is an emerging biotech company focused on the development and commercialization of cutting-edge treatments for mental disorders.

A recent study, published in [Experimental Neurology](#), has provided some new evidence that LSD has nootropic effects which are believed to be driven by neuroplasticity promotion. Researchers found that LSD increased neuroplasticity in ‘human brain organoids, increased novelty preference in rats, and improved memory performance in humans.’ Increased structural plasticity in the brain neurons (mainly prefrontal cortex) has also been linked to the sustained antidepressant effects.

BetterLife’s [neuroplasticity study](#) similarly demonstrated that, in the treatment of rat embryonic cortical neurons the Company’s lead drug, BETR-001 (2-bromo-LSD) increases the structural complexity of neurons (dendrite growth and complexity) indicating the neural plasticity activity of BETR-001. In certain measurements of structural plasticity in neurons, BETR-001 performs better than ketamine in this model.

“These results confirm that our proprietary BETR-001, an LSD analog, retains the anti-depressant and neural plasticity activity of LSD *without causing hallucination*. The fact that BETR-001 can promote structural plasticity in the prefrontal cortex neurons indicates its therapeutic effects in depression and related disorders, providing a potential patient friendly treatment addressing a very large unmet medical need affecting large number of patients globally,” said Ahmad Doroudian, CEO of BetterLife.

About BetterLife Pharma

BetterLife Pharma Inc. is an emerging biotechnology company primarily focused on developing and commercializing two compounds, BETR-001 and BETR-002, to treat neuro-psychiatric and neurological disorders.

BETR-001, which is in preclinical and IND-enabling studies, is a non-hallucinogenic and non-controlled LSD derivative in development and it is unique in that it is unregulated and, therefore, can be self-administered. BetterLife’s synthesis patent for BETR-001 eliminates regulatory hurdles

and its pending patent for composition and method of use covers treatment of depression, cluster headaches, post-traumatic stress disorder and other neuro-psychiatric and neurological disorders.

BETR-002, which is in preclinical and IND-enabling studies, is based on honokiol, the active anxiolytic ingredient of magnolia bark. BetterLife's pending method of use and formulations patent covers treatment of anxiety related disorders including benzodiazepine dependency.

BetterLife also owns a drug candidate for the treatment of viral infections such as COVID-19 and is in the process of seeking strategic alternatives for further development.

For further information, please visit [BetterLife Pharma](#).

Contact Information

David Melles, Investor Relations Manager

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Cautionary Note Regarding Forward-Looking Statements

No securities exchange has reviewed nor accepts responsibility for the adequacy or accuracy of the content of this news release. This news release contains forward-looking statements relating to product development, licensing, commercialization and regulatory compliance issues and other statements that are not historical facts. Forward-looking statements are often identified by terms such as "will", "may", "should", "anticipate", "expects" and similar expressions. All statements other than statements of historical fact, included in this release are forward-looking statements that involve risks and uncertainties. There can be no assurance that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. Important factors that could cause actual results to differ materially from the Company's expectations include the failure to satisfy the conditions of the relevant securities exchange(s) and other risks detailed from time to time in the filings made by the Company with securities regulations. The reader is cautioned that assumptions used in the preparation of any forward-looking information may prove to be incorrect. Events or circumstances may cause actual results to differ materially from those predicted, as a result of numerous known and unknown risks, uncertainties, and other factors, many of which are beyond the control of the Company. The reader is cautioned not to place undue reliance on any forward-looking information. Such information, although considered reasonable by management at the time of preparation, may prove to be incorrect and actual results may differ materially from those anticipated. Forward-looking statements contained in this news release are expressly qualified by this cautionary statement. The forward-looking statements contained in this news release are made as of the date of this news release and the Company will update or revise publicly any of the included forward-looking statements as expressly required by applicable law.



BetterLife and Collaborators to Submit Key Joint Research Publication

VANCOUVER, British Columbia, September 7, 2022 - BetterLife Pharma Inc. (“BetterLife” or the “Company”) (CSE: [BETR](#) / OTCQB: [BETRF](#) / FRA: [NPAU](#)), an emerging biotech company focused on the development and commercialization of cutting-edge treatments for mental disorders, is pleased to announce that BetterLife is working with its collaborators on a key research publication on BETR-001, its proprietary 2-bromo-LSD, and plans to submit it for review to a prestigious peer-reviewed journal by end of September 2022.

This publication will present data from a comprehensive preclinical in-vitro and in-vivo characterization of BETR-001 conducted in collaboration with three leading investigators in this field: Dr. Adam L. Halberstadt (University of California San Diego, USA), Dr. Argel Aguilar-Valles (Carleton University, Canada), and Dr. John D. McCorvy (Medical College of Wisconsin, USA). The publication will include a pharmacological profiling of BETR-001 against over 30 key neuroreceptors in parallel with its parent compound LSD, as well as in-vivo studies in mouse models, showing the non-hallucinogenic profile of BETR-001 as well its effective structural neuroplasticity and anti-depressant profile. Furthermore, the research will provide insight into the mechanism for the non-hallucinogenic activity of BETR-001, as well as other key pharmacological differences between BETR-001 and LSD which could potentially translate into significant therapeutic benefits of BETR-001. Subject to the journal’s regulations, a pre-publication preprint will be posted as soon as possible for the public.

Ahmad Doroudian, CEO of BetterLife said, “This is the first comprehensive preclinical characterization of 2-bromo-LSD, the non-hallucinogenic congener of LSD.” He added, “The studies were conducted using BetterLife’s proprietary 2-bromo-LSD (patent pending). The mechanistic data showing the differences between LSD and BETR-001 highlight the significant potential therapeutic benefits of BETR-001. We are excited to be able to study these in our BETR-001 human clinical trials projected to start in 2023.”

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BETR-001, which is in preclinical and IND-enabling studies, is a non-hallucinogenic and non-controlled LSD derivative in development and it is unique in that it is unregulated and therefore

can be self-administered. BetterLife's synthesis patent for BETR-001 eliminates regulatory hurdles and its pending patent for composition and method of use covers treatment of depression, cluster headaches, post-traumatic stress disorder and other neuro-psychiatric and neurological disorders.

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BetterLife Files Comprehensive Patent for BETR-001 and Other LSD Derivatives

VANCOUVER, British Columbia, September 27, 2022 - BetterLife Pharma Inc. (“BetterLife” or the “Company”) (CSE: [BETR](#) / OTCQB: [BETRF](#) / FRA: [NPAU](#)), an emerging biotech company focused on the development and commercialization of cutting-edge treatments for mental disorders, is pleased to announce filing of a PCT patent application along with a U.S. application for lysergic acid diethylamide (“LSD”) derivatives, including 2-bromo-LSD. The applications cover compositions of these derivatives for their use in the treatment of a range of neuropsychiatric and neurological conditions, including depression, anxiety, cluster headaches and pain.

BetterLife is currently developing a new composition of 2-bromo-LSD (“BETR-001”) covered by these patent filings. BETR-001 is a second-generation LSD derivative molecule that does not cause hallucinations, and therefore is not subject to global controlled substance regulations. In addition, the synthesis of BETR-001 is via non-controlled substance synthetic routes, and therefore not subject to controlled substance regulatory restrictions.

BetterLife is already in advanced stages of GMP manufacturing of BETR-001 and completing the necessary preclinical IND-enabling studies for BETR-001. BetterLife expects to file the BETR-001 IND and start Phase 1, in healthy subjects, in H1 of 2023.

Ahmad Doroudian, CEO of BetterLife, commented, “The inventions covered by the patent filings are comprehensive and involve significant body of data including composition of matter, preclinical in-vitro and in-vivo characterization of BETR-001 that will be submitted for publication in a prestigious peer-reviewed journal, in the near future. Based on the data generated to date, we believe BETR-001 holds great promise in becoming a major treatment for a range of mental health and neurological conditions, including depression, anxiety, pain and related disorders.”

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