

**FORM 51-102F3  
MATERIAL CHANGE REPORT**

**Item 1 Name and Address of Company**

BetterLife Pharma Inc. (the "Company")  
1275 West 6<sup>th</sup> Avenue  
Suite 300  
Vancouver, British Columbia  
V6H 1A6

**Item 2 Date of Material Change**

July 2021

**Item 3 News Releases**

News releases dated July 27 and July 22, 2021.

**Item 4 Summary of Material Change**

On July 22, 2021, the Company announced funding of its joint application with Dr. Argel Aguilar-Valles at Carleton University ("Carleton") Department of Neuroscience by the Accelerate program at Mitacs for research into the anxiolytic potential of TD-010 in preclinical models of chronic anxiety and depression. As part of the research agreement, Dr. Argel Aguilar-Valles's team will work with the Company to test TD-010 in both in vitro and in vivo models that are established in their lab. The team's expertise is understanding the molecular mechanisms that underlie psychiatric and neurodevelopmental disorders and is performed through the use of a combination of biochemistry, molecular biology, neuronal culture and animal models.

During July 2021, the Company's wholly-owned subsidiary, Altum Pharmaceuticals Inc., and Pontificia Universidad Católica de Chile obtained approval from the Instituto de Salud Publica de Chile to conduct their planned randomized placebo-controlled trial ("IN2COVID") in COVID-19 patients. The trial, set to start in early August, tests the Company's proprietary inhaled interferon alpha-2b ("IFN-a2b") product, AP-003. The IN2COVID trial will have a randomized placebo Phase 1 portion in healthy subjects followed by a randomized placebo-controlled Phase 2 portion in early stage COVID-19 patients (<5 days of diagnosis of COVID-19). The IFN-a2b treatment arms will receive the Company's proprietary inhaled IFN-a2b product, AP-003, administered via nebulizer, twice daily for 10 days.

**Item 5 Full Description of Material Change**

Refer to Item 4 and the news release in Schedule "A".

**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**

August 3, 2021

**SCHEDULE "A"**



## BetterLife-Carleton University Research Team Secure Mitacs Accelerate Funding to Study the Therapeutic Effect of TD-010 in Chronic Anxiety

VANCOUVER, July 22, 2021 - BetterLife Pharma Inc. (“BetterLife” or the “Company”) (CSE: [BETR](#) / OTCQB: [BETRF](#) / FRA: [NPAU](#)), an emerging biotech company focused on developing compounds to treat neurological conditions, is pleased to announce funding of its joint application with [Dr. Argel Aguilar-Valles at Carleton University \(“Carleton”\) Department of Neuroscience](#) by the Accelerate program at Mitacs for research into the anxiolytic potential of TD-010 in preclinical models of chronic anxiety and depression.

TD-010 or dihydrohonokiol-B (“DHH-B”) is a compound that BetterLife is developing primarily for benzodiazepine dependency in addition to anxiety. It is a derivative of the anxiolytic compounds honokiol, which has demonstrated more potent anxiolytic-like effects in animal studies than the parent compound.

Dr. Ahmad Doroudian, Chief Executive Officer of BetterLife, stated: “TD-010 is a potential novel therapy to treat debilitating anxiety disorders that show resistance to benzodiazepine and other therapies or require a long-term use and therefore put patients at risk for dependency. BetterLife’s goal is to bring this treatment to the Investigational New Drug (“IND”) application and the clinic as soon as possible because it is non-addictive yet potentially highly effective. We thank Mitacs for the funding and Carleton University’s team, headed by Dr. Argel Aguilar-Valles at the Department of Neuroscience, for being an ideal partner to help us realize this vision.”

As part of the research agreement, Dr. Argel Aguilar-Valles’s team will work with BetterLife to test TD-010 in both in vitro and in vivo models that are established in their lab. The team’s expertise is understanding the molecular mechanisms that underlie psychiatric and neurodevelopmental disorders. To do this they use a combination of biochemistry, molecular biology, neuronal culture, and animal models.

Dr. Argel Aguilar-Valles commented: “We are delighted to have the opportunity to examine TD-010 in our established animal anxiety models. The high rate of resistance to benzodiazepine and SSRIs for chronic anxiety disorder indicates an urgent unmet need for alternative anxiolytic treatments. TD-010 has shown to have more potent anxiolytic effects than its parent compound honokiol and it can be a promising alternative in the treatment of chronic anxiety.”

## **Benzodiazepine Dependency**

Each year, up to 20% of adults are affected by anxiety disorders (such as generalized anxiety disorder, panic disorder, and various phobia-related disorders). Anxiety disorders are highly comorbid with depression and are associated with various physical health problems (such as asthma, gastrointestinal issues, decreased immune system functioning and insomnia) leading to overall poor quality of life. Among the most used anxiolytic therapeutics are benzodiazepines, which from mid-February to mid-March of 2020 saw a 34% increase in prescriptions.

Benzodiazepines have drawbacks, including a high rate of treatment resistance, dependence and serious side effects, including sedation, overdose, accidental death and congenital malformation. Therefore, there is an unmet need for safer alternative therapeutics with strong anxiolytic effects such as TD-010.

## **About BetterLife Pharma**

BetterLife Pharma Inc. is an emerging biotechnology company primarily focused on developing and commercializing two compounds, TD-0148A and TD-010, to treat neurological disorders such as depression, cluster headaches and anxiety. TD-0148A is a non-hallucinogenic and non-controlled psychedelic candidate and is unique in that it is not regulated and therefore can be self-administered. TD-010 is a treatment of anxiety without the addictive potential of benzodiazepines. 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 [www.abetterlifepharma.com](http://www.abetterlifepharma.com).

## **About Carleton University, Department of Neuroscience**

Carleton Neuroscience has an international reputation for research on stress and its effects on brain functioning and mental health. The department has an interdisciplinary approach to understanding the emergence, prevention and treatment of mental and physical disorders.

For more information, please visit [www.carleton.ca/neuroscience](http://www.carleton.ca/neuroscience).

## **About Mitacs**

Mitacs is a not-for-profit organization that fosters growth and innovation in Canada by solving business challenges with research solutions from academic institutions. Mitacs is funded by the Government of Canada along with the Government of Alberta, the Government of British Columbia, Research Manitoba, the Government of New Brunswick, the Government of Newfoundland and Labrador, the Government of Nova Scotia, the Government of Ontario, Innovation PEI, the Government of Quebec, the Government of Saskatchewan and the Government of Yukon.

For more information, please visit [www.mitacs.ca](http://www.mitacs.ca).

## Contact Information

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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 Receives Approval to Conduct COVID-19 Randomized Placebo-Controlled Trial with Pontificia Universidad Católica de Chile

VANCOUVER, British Columbia, July 27, 2021 –BetterLife Pharma Inc. (“BetterLife” or the “Company”) (CSE: [BETR](#) / OTCQB: [BETRE](#) / FRA: [NPAU](#)) today announced that its wholly owned subsidiary, Altum Pharmaceuticals Inc. (“Altum”), and Pontificia Universidad Católica de Chile have obtained approval from the Instituto de Salud Publica de Chile to conduct their planned randomized placebo-controlled trial (“IN2COVID”) in COVID-19 patients. The trial, set to start in early August, tests BetterLife’s proprietary inhaled interferon alpha-2b (“IFN-a2b”) product, AP-003.

BetterLife’s Chief Executive Officer, Dr. Ahmad Doroudian, commented, “We are excited to initiate this trial of AP-003 in COVID-19 patients in collaboration with the Escuela de Medicina (school of medicine) at Pontificia Universidad Católica de Chile. The team as well as the trial center are the leaders in Chile in conducting COVID-19 trials.

Dr. Arturo Borzutzky, principal investigator of the IN2COVID trial, said, “We are pleased to be partnering with Altum to bring AP-003 to COVID-19 patients”. He added, “There are several reasons why there is a need for an effective, easy to administer, non-invasive treatment, such as AP-003, for COVID-19. These reasons include: the time it will take to vaccinate the whole population; not knowing the duration of protection afforded by the current vaccines; emergence of SARS-CoV-2 variants; and emergence of possible totally new coronavirus pandemics in the future. AP-003, being a Type I interferon, is a broad acting anti-viral agent, and therefore potentially could be effective in all these scenarios.”

The IN2COVID trial will have a randomized placebo Phase 1 portion in healthy subjects followed by a randomized placebo-controlled Phase 2 portion in early stage COVID-19 patients (<5 days of diagnosis of COVID-19). The IFN-a2b treatment arms will receive BetterLife’s proprietary inhaled IFN-a2b product, AP-003, administered via nebulizer, twice daily for 10 days.

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**About Pontificia Universidad Católica de Chile:**

Founded in 1888, Pontificia Universidad Católica de Chile is currently one of the leading higher education institutions in Latin America, ranked first in the continent for two years in a row by the Times Higher Education Ranking. Universidad Católica aspires to achieve excellence in the creation and transfer of knowledge and in providing a Catholic-based educational experience that motivates both personal growth and the development of an inquisitive and critical mind. One of its objectives is to educate persons who are committed to the construction of a more just and prosperous society. The University is an important national center for research in social sciences, natural sciences, health, economics, agriculture, philosophy, theology, arts and literature. Located in a young and geographically distant country, the University believes that maintaining an active exchange program with foreign universities is crucial for academic development.

For more information, visit: <https://www.uc.cl/en>

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### **Cautionary Note Regarding Forward-Looking Statements**

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