

# Propanc Biopharma Demonstrates Significant Effects of Proenzyme Therapy on the Tumor Microenvironment

*Chief Scientific Officer Concludes Observations Applicable to All Solid Tumors*

MELBOURNE, Australia--(BUSINESS WIRE)-- [Propanc Biopharma, Inc.](#) (OTCQB: PPCB) ("Propanc" or the "Company"), a biopharmaceutical company developing novel cancer treatments for patients suffering from recurring and metastatic cancer, today announced that Ms. Belen Toledo MSc., from the laboratory of Professor Macarena Perán Ph.D., at the University of Jaén, Spain, recently completed an important experimental thesis on the effects of proenzyme therapy and the impact on the tumor microenvironment, which is key to the development, invasion, metastatic spread, and recurrence of solid tumors. Ms. Toledo also reconfirmed proenzymes kill cancer stem cells (CSCs). This research is part of the "Proenzymes Optimization Project 1" (POP1) Joint Research and Drug Discovery Program at the Universities of Jaén and Granada, Spain, designed to produce synthetic recombinant, commercial scale quantities of the two proenzymes, trypsinogen and chymotrypsinogen.

The encouraging results demonstrates that proenzymes have a specific effect on tumor cells and CSCs, but also effects other tumor elements in the tumor microenvironment. However, the most significant conclusion from Ms. Toledo is that the proenzymes also caused a reversal of the malignant tumor phenotype, which was, "most unexpected, very exciting and powerfully conclusive." The process that causes a reversal of the tumor phenotype is called differentiation, which is fundamentally how proenzymes exert anti-tumor, anti-cancer and anti-metastatic effects. Therefore, proenzyme treatment, also known as differentiation therapy, exerts these effects on malignant cells, but leaves healthy cells alone.

"The tumor microenvironment displays certain characteristics common to all solid tumors. Proenzymes normalize this tumor microenvironment," said Dr. Julian Kenyon Mb., ChB., M.D., Propanc's Chief Scientific Officer. "Therefore, the process of cell differentiation induced by the proenzymes will be applicable to all cancers from solid tumors, as well as sarcomas. This is truly a remarkable finding and may be the key to unlocking the uncontrolled spread of malignant tumors, the main cause of patient death for cancer sufferers. As a result of these findings, I believe there is an urgency in advancing our lead product candidate, PRP, into clinical trials."

The POP1 program is designed to produce a backup clinical compound to the Company's lead product candidate, PRP. The objective is to produce large quantities of trypsinogen and chymotrypsinogen for commercial use that exhibits minimal variation between lots and without sourcing the proenzymes from animals. Propanc is undertaking the challenging research project in collaboration with the Universities of Jaén and Granada, led by research scientists Mr. Aitor González MSc. and Ms. Toledo, supported by Profs. Perán and Juan Antonio Marchal, M.D., representing the Universities respectively, and Dr. Kenyon.

## **About Propanc Biopharma, Inc.**

Propanc Biopharma, Inc. (the "Company") is developing a novel approach to prevent recurrence and metastasis of solid tumors by using pancreatic proenzymes that target and eradicate cancer stem cells in patients suffering from pancreatic, ovarian and colorectal cancers. For more information, please visit [www.propanc.com](http://www.propanc.com).

The Company's novel proenzyme therapy is based on the science that enzymes stimulate biological reactions in the body, especially enzymes secreted by the pancreas. These pancreatic enzymes could represent the body's primary defense against cancer.

To view the Company's "Mechanism of Action" video on its anti-cancer lead product candidate, PRP, please click on the following link: <http://www.propanc.com/news-media/video>

## **Forward-Looking Statements**

All statements other than statements of historical facts contained in this press release are "forward-looking statements," which may often, but not always, be identified by the use of such words as "may," "might," "will," "will likely result," "would," "should," "estimate," "plan," "project," "forecast," "intend," "expect," "anticipate," "believe," "seek," "continue," "target" or the negative of such terms or other similar expressions. These statements involve known and unknown risks, uncertainties and other factors, which may cause actual results, performance or achievements to differ materially from those expressed or implied by such statements. These factors include uncertainties as to the Company's ability to continue as a going concern absent new debt or equity financings; the Company's current reliance on substantial debt financing that it is unable to repay in cash; the Company's ability to successfully remediate material weaknesses in its internal controls; the Company's ability to reach research and development milestones as planned and within proposed budgets; the Company's ability to control costs; the Company's ability to obtain adequate new financing on reasonable terms; the Company's ability to successfully initiate and complete clinical trials and its ability to successfully develop PRP, its lead product candidate; the Company's ability to obtain and maintain patent protection; the Company's ability to recruit employees and directors with accounting and finance expertise; the Company's dependence on third parties for services; the Company's dependence on key executives; the impact of government regulations, including FDA regulations; the impact of any future litigation; the availability of capital; changes in economic conditions, competition; and other risks, including, but not limited to, those described in the Company's periodic reports that are filed with the Securities and Exchange Commission and available on its website at <http://www.sec.gov>. These forward-looking statements speak only as of the date hereof and the Company disclaims any obligations to update these statements except as may be required by law.

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