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Propanc Biopharma's CSO Predicts PRP Could Enhance Therapeutic Effects of Immune Checkpoint Therapy for Pancreatic Cancer

PRP Exerts Effects Against Tumor Microenvironment Lowering Potential for Drug Resistance

MELBOURNE, Australia--(BUSINESS WIRE)-- **Propanc Biopharma, Inc.** (OTC Pink: PPCB) ("Propanc" or the "Company"), a biopharmaceutical company developing novel cancer treatments for patients suffering from recurring and metastatic cancer, today announced that the Company's lead product candidate, PRP, could enhance the effects of novel therapies like immune checkpoint inhibitors that can have a role in pancreatic cancer treatment. Chief Scientific Officer and Co-Founder, Dr. Julian Kenyon MD, MB, ChB, predicts therapies can enhance the patient's immune response to fight solid tumors by enabling detection of specific tumor cells within the body that were previously undetected. For example, once considered a "non-immunogenic" cancer, pancreatic ductal adenocarcinoma (PDA) has been identified with upregulated immune networks and immune checkpoint molecule expression in its tumor microenvironment and is now redefined as an immunogenic cancer, according to the *World Journal of Gastroenterology*, November 21, 2016.

PDA is a highly aggressive malignancy, characterized by delayed diagnosis and treatment resistance. At the time of clinical detection, most PDA cancers are either advanced locally, or metastatic, *i.e.*, ineligible for surgical resection and with a typical five-year survival in the single digits. One of the reasons for the poor effect of treatment is the ability of PDA to evade host immune surveillance. The tumor microenvironment of PDA is composed of a dense fibrotic stroma of extracellular (outside cell) matrix components and a variety of inflammatory cells. "This is where PRP comes in, and, as we understand, it can potentially expose the tumors and lower drug resistance, whereas before they were largely impenetrable," said Dr. Kenyon.

PRP was recently reported as having a significant impact on the tumor microenvironment by impact inhibiting, slowing, or reversing tumor development through acting as an anti-tumor agent, decreasing tumor cell proliferation, developing a non-malignant phenotype (observable characteristics) and promoting cell adhesion (sticking close to one another) and differentiation (cell specialization rather than stem cell-like). To accomplish this, PRP targets specific pathways like TGFβ, critical for tumor development and prevention of immunorecognition by the body's own immune system. Furthermore, numerous pathways affected downstream are also impacted by altering the tumor surface, which is often resistant to immune regulators due to the impenetrability of the tumor walls.

“Immune checkpoint inhibitors have only recently been investigated for solid tumors like PDA and we are now only realizing the importance of the immune checkpoint inhibition in these cancers. PRP, which is a combination of two proenzymes, trypsinogen and chymotrysinogen, has been shown to impact the tumor microenvironment dramatically, which could have significant implications for other treatment modalities, such as chemotherapy, but also immune checkpoint inhibitors, which could result in improved effects,” said Dr. Kenyon. “As we progress along the clinical development pathway, we will continue to explore combinatorial treatments that, if proven clinically beneficial, could have a marked impact on the response rates of approaches like immune checkpoint therapy and lead to improved benefits for sufferers.”

PRP is a mixture of two proenzymes, trypsinogen and chymotrypsinogen from bovine pancreas, administered by intravenous injection. A synergistic ratio of 1:6 inhibits growth of most tumor cells. Examples include kidney, ovarian, breast, brain, prostate, colorectal, lung, liver, uterine and skin cancers.

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.

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, that 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, as of the date of this press release, it would have substantial difficulty repaying in cash; the Company’s ability successfully to 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 on an as-needed basis; the Company’s ability successfully to initiate and complete clinical trials and to 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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Investor Relations and Media Contacts:
Mr. James Nathanielsz
Propanc Biopharma, Inc.
irteam@propanc.com
+61-3-9882-0780

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