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Propanc Biopharma Targets Pancreatic & Ovarian Cancers for PRP Clinical Studies with Combined Markets to Reach Over $14.3 Billion by 2027

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 Chief Scientific Officer and Co-Founder, Dr Julian Kenyon, MD, MB, ChB, explains why pancreatic and ovarian cancers are selected as the primary target therapeutic indications for planned PRP human studies. According to Dr Kenyon, target indications were selected based on *in vitro* and *in vivo* data, as well as clinical observations from a compassionate use study investigating the effects of two proenzymes, trypsinogen and chymotrypsinogen against a range of malignant tumors. Overall, proenzymes appeared to exert significant effects against more aggressive, less differentiated tumor types, like pancreatic and ovarian tumors. Patients from the compassionate use study suffering from cancers of the GI tract, or endocrine tumors, such as pancreatic and ovarian cancers, benefited most from treatment. The world market for pancreatic and ovarian cancer drugs is projected to grow to $4.2 Billion in 2025 according to Grandview Research and $10.1 Billion by 2027 according to iHealthcareAnalyst, respectively, resulting in a combined global market of $14.3 Billion over the next 5-year period.

Extensive laboratory analysis confirmed that PRP reduced the main characteristics of cancer spread, namely angiogenesis (blood vessel formation), which is a critical step in tumor development, as well as the spreading of tumor metastases. In addition, assays revealed that the migration capacity of ovarian, pancreatic, melanoma and colon cancer cells was suppressed after incubation with PRP. Furthermore, evidence suggests the epithelial to mesenchymal transition (EMT), a biological process associated with wound healing and cell migration, which causes cancer stem cells (CSCs) to become motile and invasive, is associated with metastasis and inducing drug resistance in many cancers, such as pancreatic and ovarian cancers. Studies in pancreatic and cancer cell lines after PRP treatment demonstrated a significant reduction in EMT markers and genes and in fact, a reversal of the EMT process so that CSCs become benign and less resistant to standard treatments.

The *in vivo* effects of PRP at different doses on tumor weight in implanted pancreatic and ovary tumors was evaluated. In the pancreatic tumor model, there was significant reduction in mean tumor weight in animals treated for 26 days with PRP with more than 85% tumor growth inhibition compared with the control. Furthermore, ovary tumor-bearing mice showed a significant reduction in mean tumor weight in animals treated for 21 days with two different doses of PRP, resulting in a 46 – 52% tumor growth inhibition compared with the control.

The clinical efficacy of a suppository formulation containing bovine pancreatic proenzymes trypsinogen and chymotrypsinogen was evaluated in the context of a UK Pharmaceuticals Special Scheme and the results were published in *Scientific Reports*. Clinical effects were studied in 46 patients with advanced metastatic cancers of different origin (prostate, breast, ovarian, pancreatic, colorectal, stomach, non-small cell lung, bowel cancer and melanoma) after treatment with a rectal formulation of both pancreatic proenzymes. No severe or serious adverse events related to the rectal administration were observed. Patients did not experience any hematological side effects as typically seen with classical chemotherapy regimens.

In order to assess the therapeutic activity, overall survival of patients under treatment was compared to the life expectancy assigned to a patient prior to treatment start. Nineteen from 46 patients (41.3%) with advanced malignant diseases, most of them suffering from metastases, had a survival time significantly longer than their expected, in fact, for the whole set of cancer types, mean survival (9.0 months) was significantly higher than mean life expectancy (5.6 months). In the case of pancreatic and ovarian cancers, 2 from 4 pancreatic cancer patients and 4 from 7 ovarian cancer patients significantly exceeded life expectancy.

As a result of the extensive studies undertaken, particularly in pancreatic cancer, the Company applied for and received Orphan Drug Designation (ODD) from the US Food and Drug Administration (USFDA) for the use of its lead product, PRP, for the treatment of pancreatic cancer. The approved indication is one of the most lethal malignancies with a median survival of 6 months and a 5-year survival rate of less than 5%. The lethal nature of this disease stems from its propensity to rapidly disseminate to the lymphatic system and distant organs, and is a major unmet medical issue. Under the Orphan Drug Act (ODA), drugs, vaccines, and diagnostic agents qualify for orphan status if they are intended to treat a disease affecting less than 200,000 American citizens. Under the ODA, orphan drug sponsors qualify for seven-year FDA-administered market Orphan Drug Exclusivity (ODE), tax credits of up to 50% of R&D costs, R&D grants, waived FDA fees, protocol assistance and may get clinical trial tax incentives.

“Over the past 15 years, our extensive research has uncovered a truly unique and exciting technology that selectively targets and eradicates cancer stem cells, whilst leaving healthy cells alone, making it less toxic compared with standard treatment approaches,” said Dr Kenyon. “Furthermore, our technology appears to be effective against more aggressive, less differentiated tumor types where few treatment options exist, and prognosis is poor, especially in the case of pancreatic and ovarian cancers. I look forward to advancing PRP to human studies where we can fully assess the clinical efficacy of PRP in a controlled setting.”

Propanc plans to undertake a First-In-Human study in 30 to 40 advanced cancer patients suffering from solid tumors to determine a maximum tolerated dose for PRP treatment, followed by two proof of concept studies in pancreatic and ovarian cancers, 60 patients in each study, to confirm the clinical efficacy of PRP in the selected target therapeutic indications.

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, 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 successful 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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