SynDevRx Announces Research Collaboration with Queensland University of Technology (QUT) to Study the Effects of SDX-7320 In Advanced Prostate Cancer Models

- *Part of an ongoing investigation focused on how obesity and dysregulated metabolic hormones promote prostate cancer progression and metastasis*
- *Studies aim to quantify the ability of SynDevRx MetAP2 inhibitor evexomostat (SDX-7320) to control tumor growth of castration resistant prostate cancers*

December 7, 2021 - 07:00 AM Eastern Daylight Time

CAMBRIDGE--(BUSINESS WIRE)—SynDevRx, Inc., a clinical-stage biotechnology company leading the development in treatments for obesity-accelerated cancers, today announced a research collaboration with Australia's Queensland University of Technology. The collaboration with Professor Colleen Nelson, PhD, and her team will study the role of methionine aminopeptidase 2 (MetAP2) inhibition in tumor growth in castration resistant and other treatment resistant forms of prostate cancer.

Obesity and systemic metabolic dysfunction like pre-diabetes and type 2 diabetes are known to make many solid tumors more aggressive, including prostate cancer. MetAP2 inhibitors, such as evexomostat (SDX-7320), have been clinically shown to improve systemic metabolic hormone dysregulation[1] and to possess direct anti-tumor, anti-metastatic and anti-angiogenic properties[2]. This combination of attributes may be well suited to sever the link between metabolic dysfunction and cancer, and may prove to be effective in treating advanced prostate cancer in combination with standard-of-care therapies.

Professor Nelson is the founder and executive director of the Australian Prostate Cancer Research Centre - Queensland (APCRC-Q) and Chair of Prostate Cancer Research at Queensland University of Technology (QUT). APCRC-Q, is one of the leading global research facilities investigating the connection between prostate cancer and dysregulated metabolic hormones and pathways, and how these affect prostate cancer progression and metastasis. "The downstream effects of obesity change the tumor microenvironment in ways highly favorable to prostate cancer recurrence, progression and metastasis. Hyperleptinemia and hyperinsulinemia are well-established, negative side effects of androgen deprivation therapy (ADT) and other treatments that block the androgen axis in prostate cancer. The APCRC-Q has been investigating this relationship using targeted drugs in preclinical models that inhibit metabolic pathways induced by ADT, through tumor promoting pathways activated systemically, and through direct tumor cell adaptation." said Colleen Nelson, PhD, lead investigator. "We're very excited to study SynDevRx's SDX-7320 inhibition of MetAP2 in our well-vetted models of treatment resistant advanced prostate cancer models."

The APCRC-Q team's research focuses on pathways activated by ADT, including alterations in metabolism that are druggable with novel targeted agents. They recently showed that

pharmacological blockade of leptin receptor or the activation of adiponectin signaling was efficacious in significantly reducing tumor burden and in delaying progression to castration resistance in animal models. The APCRC-Q team has also been targeting metabolic pathways directly through mitochondrial activity or lipid synthesis in models of CRCP and ENZ resistance.

“Professor Nelson team’s work has clearly demonstrated the central role that leptin and adiponectin play in the feedback loop of androgen deprivation and results in the emergence of treatment resistance,” said Peter Cornelius, PhD, senior director of translational research at SynDevRx. “Her lab has some of the best models for studying the deleterious effects of inhibition of the androgen receptor axis in prostate cancer, identifying mechanisms of resistance and then targeting those proteins driving the resistance in pre-clinical prostate cancer models. Given our clinical results showing evexomostat (SDX-7320) significantly lowers leptin and increases adiponectin in late-stage cancer patients, we’re thrilled to work with Professor Nelson and her expert team on testing the potential beneficial effects that SDX-7320/MetAP2 inhibition could play in these validated models.”

“SynDevRx is establishing global collaborations with leading research institutions focused on the downstream effects that obesity and dysregulated metabolic hormones have on cancer progression and metastasis. We invite other researchers to work with us as we untangle these complex and critical interactions between cancer and dysregulated metabolic hormons,” said SynDevRx’s co-founder and Chief Business Officer James Shanahan.

1. (Proietto et al., Diabetologia 2018 Sep;61(9):1918-1922)
2. (Mann-Steinberg et al., “TNP-470: The Resurrection of the First Synthetic Angiogenesis Inhibitor.” (2008).)

About SDX-7320

SynDevRx believes that evexomostat (SDX-7320) is the first drug being developed specifically for cancer patients with metabolic complications, such as obesity, diabetes, high blood glucose or HbA1c, pre-diabetes or insulin/leptin resistance. For certain tumor types, metabolic hormones stimulate oncogenic pathways, making the cancer more aggressive and deadlier. Evexomostat acts by binding irreversibly to its target enzyme MetAP2, triggering downstream improvements in the metabolic hormones insulin, leptin and adiponectin, improvements in key lipids, and inhibition of the important angiogenic proteins bFGF and VEGF-C, as was demonstrated in a Phase 1 clinical study in late-stage cancer patients. In preclinical studies, evexomostat also directly inhibited multiple cell cycle signaling pathways, provided synergistic anti-tumor effects in combination with a PI3K inhibitor, reduced angiogenesis, controlled aberrant metabolic hormone signaling, and reversed obesity-induced immune suppression within the tumor micro-environment of tumor-bearing obese mice. Evexomostat (SDX-7320) is being developed for use in combination with clinically indicated standard-of-care cancer therapies for breast and prostate cancers.

About SynDevRx, Inc.

SynDevRx is a privately held clinical-stage biopharmaceutical company based in Cambridge, Mass. that is leading the research and development of treatments that address the interactions between cancer and dysregulated metabolic hormones. – i.e., metabo-oncology. Obesity, pre-diabetes and type 2 diabetes are known to worsen certain cancer patients' prognoses, but oncologists have no specific tools to treat systemic or treatment-induced metabolic complications, except for diet and exercise. SynDevRx is initiating a series of proof-of-concept clinical studies of its drug candidate evexomostat (SDX-7320) to show that improving these hormones together with effects on angiogenesis and the tumor micro-environment will result in better patient outcomes, thereby establishing a new and complementary treatment paradigm for tens of thousands of cancer patients. For more information visit www.syndevrx.com.

About Queensland University of Technology, Australia

Queensland University of Technology (QUT) is a major Australian university with a global outlook. Home to nearly 50,000 students, QUT provides real-world infrastructure, learning and teaching, and graduate skills to the next generation of change-makers. QUT's vision is to be the university for the real world. For more information visit https://www.qut.edu.au/ .