EPIGENE
THERAPEUTICS INC.

EPIGENE THERAPEUTICS INC. announces presentation on NEO2734, an oral dual inhibitor of both BET and CBP-P300, at the 2019 Genitourinary Cancers Symposium

Data demonstrate significant activity of NEO2734, with superior effects to those of either standard BET inhibitors or CBP-P300 inhibitors, in multiple models of both SPOP mutated and SPOP wildtype prostate cancer.

Montreal, Quebec, February 11, 2019 - Epigene Therapeutics Inc. announces that data on NEO2734, its investigational, first-in-class, dual inhibitor of the Bromodomain and Extra-Terminal domain (BET) family of proteins, as well as, the Cyclic AMP response element binding protein (CREB)-binding protein (CBP) and E1A interacting protein of 300 kDa (EP300 or P300) will be presented at the 2019 Genitourinary Cancers Symposium (ASCO GU) taking place in San Francisco, USA from February 14th to February 16th. The data being presented will include a poster presentation on NEO2734's activity in an array of molecularly defined pre-clinical models of prostate cancer.

"Our increasing understanding of molecular aberrations in prostate cancer is helping us to develop a profile of potential key disease drivers in patient subsets. Some of these emerging novel molecular targets offer developmental therapeutics opportunities, including in the area of epigenetic modifiers" said Prof. Silke Gillessen Sommer, Professor in Division of Cancer Sciences and Senior Consultant in Medical Oncology at The Christie NHS Trust, University of Manchester, UK and member of the Epigene Therapeutics Scientific Advisory Board. "SPOP mutations in prostate cancer are associated with multiple adverse disease features, sensitivity to PARP inhibitors, and resistance to BET inhibitors. SPOP normally marks BET proteins for ubiquitination-mediated degradation. Prostate cancer-associated SPOP mutants do not interact with BET proteins, leading to their elevation in SPOP-deficient prostate cancer and thus resistance to BET inhibitor-induced cell growth arrest or apoptosis. NEO2734 is unique in its ability to inhibit both the BET family and the CBP-P300 paralogs. The data being presented at ASCO GU on its ability to significantly inhibit prostate cancer growth in cell lines, organoids, and xenograft models is very interesting. NEO2734's striking activity in SPOP mutated prostate cancer, which markedly contrasts with the lack of activity of either standard BET inhibitors or CBP-P300 inhibitors alone, is potentially particularly important. These data extend on the prior information presented on NEO2734 activity in prostate cancer at the ESMO 2018 meeting. They also provide a clear rationale for the inclusion of patients with advanced SPOP mutated or wild-type disease in forthcoming clinical studies of NEO2734. It

will also be particularly interesting to seek possible synergy between NEO2734 and the PARP inhibitors which would give us an opportunity to optimize treatment by combining substances with different mechanism of action against prostate cancer"

"Our group has a specific focus on epigenetic pathways in prostate cancer, especially on key transcription factors and their downstream targets. We find the consistent superiority of NEO2734 over both BET inhibitors and CBP-P300 inhibitors particularly exciting" said Prof. Jindan Yu, Departments of Medicine, Biochemistry and Molecular Genetics, Feinberg School of Medicine and Robert H. Lurie Comprehensive Cancer Center of Northwestern University, Chicago, IL, USA. "It is intriguing that the effect of single agent NEO2734 in these models can be mimicked by the simultaneous administration of both BET inhibitors and CBP-P300 inhibitors, while either alone only has moderate effect. The BET inhibitors have shown modest clinical activity in prostate cancer but at a level that has not merited regulatory approval. CBP-P300 has been established as a potentially important target in prostate cancer but we have no relevant clinical data yet. It is consistent with the data generated in multiple cancer types that NEO2734 has unique activity as a single agent in prostate cancer – independent of SPOP status. We are working to extend these data into the context of androgen-blockade resistant prostate cancer in order to help further define which subsets of patients should be afforded a high priority in clinical studies of NEO2734."

"PARP inhibition is emerging as a promising approach for some patients with advanced prostate cancer" said Dr. Yves Collette, Group Leader, Integrative Structural and Chemical Biology, Cancer Research Center of Marseille, Marseille, France. "NEO2734's robust activity in both SPOP mutated and wildtype in vivo models of prostate cancer is remarkable. SPOP mutations are associated with relative sensitivity to PARP inhibitors – this is consistent with SPOP's established role in maintaining normal cellular DNA repair processes. NEO2734 has the ability to simultaneously modulate multiple established targets in prostate cancer. We are particularly interested in how NEO2734 may interact with PARP inhibitors in prostate cancer, especially in SPOP mutated disease where we may have a multi-faceted cell-killing approach in a poor prognosis subset of patients. The ability to impact multiple pathways is potentially very exciting and we hope to strengthen the rationale for combining NEO2734 with PARP inhibitors in clinical studies."

Poster details:

Activity of NEO2734, a novel dual inhibitor of both BET and CBP-P300, in SPOP-mutated prostate cancer.
(Abstract #62, Poster session A: Prostate Cancer. Moscone West Building)
Thursday, 14 February 2019 from 11:30 (PST) to 13:00 and 17:30 to 18:30

Full session details and data presentation listings for the 2019 Genitourinary Cancers Symposium can be found at: https://gucasym.org/

About Epigene Therapeutics Inc.

Epigene Therapeutics Inc. is a Montreal, Quebec-based biopharmaceutical company focused on the discovery, development and commercialization of epigenetic modifying agents for the treatment of patients with cancer.

For additional information, please visit the Company's website at www.epigenetherapeutics.com or e-mail *fgiles@epigenetherapeutics.com*