

Hybrigenics presents new *in vitro* results on inecalcitol in breast cancer at the ASCO meeting in Chicago, USA

- **Inecalcitol inhibits cell proliferation and increases cell death of breast cancer cell lines in correlation with the levels of vitamin D receptors**
- **Results are presented at the Annual Meeting of the American Society of Clinical Oncology by a team led by Prof. Michael J. Duffy, St. Vincent University Hospital and University College of Dublin, Ireland**

Paris, 29 May 2015 – Hybrigenics (ALHYG), a bio-pharmaceutical company listed on the Alternext market of Euronext Paris, with a focus on research and development of new treatments against proliferative diseases, today announces the presentation tomorrow by an Irish group of researchers from the School of Medicine and Medical Science, University College Dublin, the St. Vincent University Hospital, and the National Institute for Cellular Biotechnology, led by Prof. Michael J. Duffy, of the *in vitro* effects of inecalcitol on the growth of human breast cancer cell lines in culture at the Annual Meeting of the American Society of Clinical Oncology in Chicago, Illinois, USA.

Inecalcitol, a synthetic vitamin D receptor agonist, has been compared to calcitriol, the active natural metabolite of vitamin D, on the growth *in vitro* of several human breast cancer cell lines in culture. In parallel, the levels of vitamin D receptors, and also of the receptors for estrogens (the female hormones), have been measured in each cell line. Both inecalcitol and calcitriol effectively inhibited the proliferation and induced the death of breast cancer cells. A significant positive correlation has been found between the effects of inecalcitol and calcitriol and the levels of vitamin D receptors present in the cell lines: the more vitamin D receptors, the more cellular sensitivity. Interestingly, inecalcitol and calcitriol were also significantly more active on breast cancer cell lines with estrogens receptors (so called ER-positive) than without (ER-negative).

Inecalcitol and calcitriol clearly exerted similar effects through the same mechanism of action logically involving vitamin D receptors, but inecalcitol was shown to be significantly at least 14 times more potent than calcitriol *in vitro*. The written conclusion of the abstract states: "*Since inecalcitol is considerably more potent than calcitriol and has low calcemic potential, it should be further investigated as a treatment for breast cancers expressing vitamin D receptors.*" (http://abstracts.asco.org/156/AbstView_156_145606.html).

"*The vitamin D receptor levels and possibly also the estrogen-receptor status of the tumors, could be criteria to elect breast cancer patients for potential oral treatment by inecalcitol, in addition to the well-established reference protocols to try to improve their outcomes,*" said Jean-François Dufour-Lamartinie, Hybrigenics' Head of Clinical R&D.

About Hybrigenics

Hybrigenics (www.hybrigenics.com) is a bio-pharmaceutical group listed (ALHYG) on the Alternext market of Euronext Paris, focusing its internal R&D programs on innovative targets and therapies for the treatment of proliferative diseases and providing cutting-edge proteomic and genomic scientific services. Hybrigenics' current development program is based on inecalcitol, a vitamin D receptor agonist active by oral administration. Oral inecalcitol has shown excellent tolerance and strong presumption of efficacy for the first-line treatment of metastatic castrate-resistant prostate cancer in combination with Taxotere®, which is the current gold-standard chemotherapeutic treatment for this indication. Inecalcitol has also been tested in chronic lymphocytic leukemia patients, an indication for which inecalcitol has received orphan drug status in Europe and the United States. A clinical Phase II study of inecalcitol is currently ongoing in chronic myeloid leukemia patients.

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Press Release

Hybrigenics has a research collaboration with Servier on deubiquitinating enzymes (DUBs) and their inhibitors in oncology, neurology, psychiatry, rheumatology, ophthalmology, diabetes and cardiovascular diseases. A first milestone has been achieved in a drug discovery program targeting one DUB in oncology.

Hybrigenics Services (www.hybrigenics-services.com) is the market leader in Yeast Two-Hybrid (Y2H) and related services to identify, validate and inhibit protein interactions for researchers in all areas of life sciences, using its ISO 9001-certified high-throughput Y2H screening platform.

Helixio (www.helixio.com), Hybrigenics' genomic branch, provides state-of-the-art services specialized in DNA chips, DNA or RNA target enrichment and next generation sequencing with an Illumina NextSeq500. Hybrigenics Corp., based in Cambridge, Mass., is the American subsidiary of Hybrigenics.

HYBRIGENICS is listed on the Alternext market of Euronext Paris

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Hybrigenics
Rémi Delansorne
CEO
Tel.: +33 (0)1 58 10 38 00
investors@hybrigenics.com

NewCap
Financial communication
Julien Perez / Pierre Laurent
Tel.: +33 (0)1 44 71 94 94
hybrigenics@newcap.fr