

Hybrigenics' technology platform successfully applied to the study of rare genetic muscular disorders

A Genethon research team publishes results on limb-girdle muscular dystrophies based on a protein interactions network mapped by Hybrigenics

Paris, 14 March 2013 – Hybrigenics (ALHYG), a bio-pharmaceutical company listed on Alternext (NYSE-Euronext) in Paris, today comments on a scientific article recently published by a team of researchers led by Dr. Isabelle Richard from Genethon, the French organization specialized in genetic diseases. This article (Blandin et al., *Skeletal Muscle*, 2013; doi:10.1186/2044-5040-3-3) is about proteins involved in limb-girdle muscular dystrophies (LGMDs) and includes results generated by Hybrigenics Services, Hybrigenics' subsidiary specialized in protein interactions.

LGMDs are a group of at least 24 different progressive neuromuscular disorders principally affecting the muscles of the hips and/or the shoulders; 21 are known to be caused by a defect in a specific gene and 3 to be hereditary genetic diseases but with no causative gene yet identified (so-called "orphan" LGMDs). LGMDs are estimated to affect 1 patient out of 150,000 persons.

The results of the article include a protein interaction map (Figure 1) deciphered and modelled by Hybrigenics Services using its proprietary PIM-Rider® bioinformatic visualization tool. To build this network, Hybrigenics Services has performed a total of 87 yeast two-hybrid (Y2H) screens, identified 1492 interactions linking 1018 proteins, and received €0.68m over 5 years.

The main findings are two new proteins as strong candidates to be each the cause of a distinct orphan LGMD. They have been identified by crossing the LGMD protein network information with the three groups of 13 to 45 genes previously suspected by genetic studies to be associated with the orphan LGMDs.

"Building a protein interaction map is a long-haul endeavour, but a rewarding one when matched with genetic or genomic information. It is fascinating to see that elucidation of a genetic disease may stem from studies on proteins back upstream to their corresponding gene, when the usual paradigm has generally been to first identify the gene and then to see downstream which function its corresponding protein was playing. Proteomic and genomic studies will be more and more intertwined in the future, and Hybrigenics is well positioned to play a role in this converging landscape," said Remi Delansorne, Hybrigenics Services' President.

About Hybrigenics

Hybrigenics (www.hybrigenics.com) is a bio-pharmaceutical company listed (ALHYG) on Alternext (NYSE-Euronext) in Paris, focusing its internal R&D programs on innovative targets and therapies for the treatment of proliferative cancerous or non-cancerous diseases.

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. Oral inecalcitol has recently been studied in a clinical trial for the treatment of moderate-to-severe psoriasis, and is currently being tested in chronic lymphocytic leukemia patients.

Hybrigenics has a research collaboration with Servier on deubiquitinating enzymes and their inhibitors in oncology, neurology, psychiatry, rheumatology, ophthalmology, diabetes and cardiovascular diseases. Hybrigenics continues to build on its pioneer research position in the field of ubiquitin-specific proteases by exploring their role in other areas of particular relevance, such as inflammation and virology.

HYBRIGENICS

Press Release

Hybrigenics Services (www.hybrigenics-services.com), a fully-owned subsidiary, 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, its sophisticated bioinformatics tools and extensive database, along with its chemical library and chemical screening platform.

HYBRIGENICS is listed on the Alternext by NYSE Euronext Paris

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