

HDXperts AB

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EXECUTIVE SUMMARY

HDXperts AB's vision is to become the leading provider of label-free drug screening and crystal-free protein-structural services to pharmaceutical and biotech industries. The company will provide innovative and cost-effective analytical services to corporate clients by delivering comprehensive drug binding studies, such as Binding Site Identification/Optimization and Label-free Ligand Screening by High Throughput Hydrogen Deuterium Exchange Mass Spectrometry.



The Golden Opportunity

The Big Pharma that has previously performed all stages of drug development in-house, in a closed and secretive environment, is currently retreating from many disease areas.

A large and rapidly growing number of small and medium-size companies have arisen in order to occupy the area vacated by Big Pharma. These smaller actors, often centered on a single target, do not have the resources to perform all steps of drug development in-house. Thus there is a rapidly growing market for outsourced service analysis, and we aim to become the leaders within this range of development.

Recently, governments have increased funding of research leading to drug development and encouraged university professors to initiate creation of new companies, thereby allowing the seeds of growth of new pharma companies to be within academia. Thus association with and proximity to KI is an important element of success in our business strategy.

Recent trends in High Throughput Screening stipulate the use of a smaller number of different orthogonal HTS-platforms, delivering "richer" early-phase data.

Last but not least, FDA is currently pushing the manufacturers of biosimilars to provide structural data confirming their similarity with the original protein. Hydrogen Deuterium Exchange Mass Spectrometry (HDX MS) is the preferred FDA method of such confirmation. To ensure metrology support and provide reference methods and standards, NIST has recently set up an HDX MS laboratory. However, not a single commercial company is left globally to deliver this type of analysis!

The Challenge

Ligand screening and structural characterization of drug targets are the cornerstone in drug development. These critical steps represent a significant bottleneck for small and medium sized biopharmaceutical companies, since in many cases, these analytical tools are not economically or technically accessible. The current state of biophysical methods requires the use of a multitude of different techniques and expertise for ligand screening and binding site characterization (e.g. Biacore (Biosensors), fluorescence, x-ray crystallography, NMR).

In this context, HDXperts will provide the use of a single analytical platform to perform both analysis using label-free techniques that will provide a fast and cost-efficient service to our clients.

HDXperts Solution

- Patented platform for Membrane-Assisted Hydrogen Deuterium Exchange Mass Spectrometry (HDX MS) to provide label-free drug screening and crystal-free protein-structural services using a single and innovative analytical platform.

- A novel unique (patent pending) and highly Multiplexed state-of-the-art **High-Throughput Site-specific Binding Screening Platform**. HDXperts will provide a unique cost-efficient analytical service that it will considerably facilitate the generation of valuable data for IP protection and improved target validation/optimization.

- For structural characterization of biosimilars, HDXperts will provide GLP-based, NIST-certified, competitively priced analysis.

Competitive Advantage

- HDXperts's Analytical Platform is information-rich and more specific than any other HTS-platform.

- Orthogonal screening is mandatory in pharmaceutical discovery and development.

- HT-HDX-MS is complementary to all widely used high-throughput screening methods.

Global High Throughput Screening (HTS) Market to Reach \$19.9 Billion by 2017, According to a New Report by Global Industry Analysts, Inc.

"With our unique new offering, we are convinced that we can seize a considerable market share of this highly lucrative market"

Thorleif Lavold - Entrepreneur and founder

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