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## **Qlucore receives European funding as part of consortium project that will benefit Personalized medicine**

### ***Hepatitis C patients to benefit from European funding awarded to Qlucore***

[Qlucore](#) has been awarded funding of €0.6 million over a three year period by the European Commission's 7th Framework Programme as part of a €6.0 million consortium project (Grant n° 601851) for the development of mathematical and statistical algorithms focusing on integrating data from multiple analytical platforms focusing on integrating genetic and proteomic data with clinical variables. On receiving the award, Carl-Johan Ivarsson, CEO, Qlucore said, **“Personalized medicine, and in particular Hepatitis C patients, will benefit from the project outcome. One of the primary objectives of the consortium is to provide predictive tests that will lead to improvements in the health of these patients, which will simultaneously reduce the costs of medical treatment.”**

The consortium, known as the PoC-HCV consortium\*, aims to develop integrated genetic and protein biomarker tests for use in treating and monitoring HCV patients, as well as in clinical research. Data and algorithms will be tailored for analysis and treatment in a Point of Care environment for Hepatitis C. One of the outputs from the consortium will be a mobile application prototype where the algorithms are implemented. Establishing a path for validation and implementation of point-of-care medical devices is a challenge, and the driving vision of the Consortium. The consortium additionally consists of the coordinator Inserm (Institut Pasteur) (France), Inserm Transfert (France), Epistem (UK) and Biosurfit (Portugal).

With the primary objective to provide Point of Care diagnostic and predictive tests and reduce costs, the approach will capitalise on the consortium's combined expertise spanning leading edge miniaturised molecular testing, lab-on-a-chip systems and algorithm design. These enabling technologies will permit the development and delivery of the first integrated genetic and protein biomarker tests, applied here to Hepatitis C disease for: (i) making the decision to treat; (ii) selection of therapy; (iii) response-guided monitoring; and (iv) clinical research practices.

Hepatitis-C is a global public health problem with over 150 million people infected worldwide, representing a 15 billion Euro/year market. It is particularly prevalent in under-developed countries and treatments can be very costly. One vision is to allow the physicians to make better treatment decisions (selecting the correct drug) and hence lower the total cost of treatment. In countries with many infected patients and limited healthcare budget this will provide an enormous improvement in quality of life for this patient group.

The algorithms developed by Qlucore will be based on classification techniques. They will also be available in future versions of Qlucore Omics Explorer and hence enable researchers and physicians in other areas to benefit from the results.

Qlucore has recruited and increased its engineering capacity in order to fulfil its role in the PoC HCV consortium. This, combined with the recently announced grant to Qlucore from VINNOVA (Swedish Governmental Agency for Innovation Systems) is additional validation of the high value being placed on developments currently being undertaken by Qlucore.

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*\*The PoC-HCV consortium, includes Inserm (Institut Pasteur), Inserm Transfert, Qlucore, Epistem and Biosurfit, and aims to provide PoC diagnostic and predictive tests that enable tangible improvements in the health and quality of life of chronic hepatitis C patients*

### **About Qlucore**

Qlucore started as a collaborative research project at Lund University, Sweden, supported by researchers at the Departments of Mathematics and Clinical Genetics, in order to address the vast amount of high-dimensional data generated with microarray gene expression analysis. As a result, it was recognised that an interactive scientific software tool was needed to conceptualise the ideas evolving from the research collaboration.

The basic concept behind the software is to provide a tool that can take full advantage of the most powerful pattern recogniser that exists - the human brain. The result is a core software engine that visualises the data in 3D and will aid the user in identifying hidden structures and patterns. Over the last two years the major efforts have been to optimise the early ideas and to develop a core software engine that is extremely fast, allowing the user to interactively and in real time instantly explore and analyse high-dimensional data sets with the use of a normal PC.

Qlucore was founded in early 2007 and the first product released was the "Qlucore Gene Expression Explorer 1.0". The latest version of this software, Version 1.1, represents a major step forward with the advanced statistics support. All user action is at most two mouse clicks away. The Company's early customers are mainly from the Life-science and Biotech industries, but solutions for other industries are currently under development.

One of the key methods used by Qlucore Gene Expression Explorer to visualise data is dynamic principal component analysis (PCA), an innovative way of combining PCA analysis with immediate user interaction. Dynamic PCA is PCA analysis combined with instant user response, a combination which provides an optimal way for users to visualise and analyse a large dataset. By presenting a comprehensive view of the data set at the same time, the user is given full freedom to explore all possible versions of the presented view.

PCA analysis works by projecting high dimensional data down to lower dimensions. The specific projections of the high-dimensional data are chosen in order to maintain as much variance as possible in the projected data set. With Qlucore Gene Expression Explorer, data is projected and plotted on the two dimensional computer screen and then rotated manually or automatically and examined by the naked eye.

Additional information is available at [www.qlucore.com](http://www.qlucore.com)

**Press Contact:**

Chaz Brooks, CBC

Tel: +44 (0)1483 537 890

Email: [chazb@chazb.com](mailto:chazb@chazb.com)

**Company Contact:**

Carl-Johan Ivarsson

Phone +46 46 286 3110

Email: [carl-johan.ivarsson@qlucore.com](mailto:carl-johan.ivarsson@qlucore.com)

Web: <http://www.qlucore.com>