



## FOR IMMEDIATE RELEASE

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### **Gene Alliance and Altana affiliate announce the complete decoding of the *Chlamydia pneumoniae* genome**

In October 1998, the pharmaceutical branch of Altana AG, Byk Gulden (Konstanz) entered into a pioneering research project with Gene Alliance, one of the leading companies for genome sequencing and analysis in Europe. The aim of this collaboration was to fully sequence the genome of the bacterium *Chlamydia pneumoniae*. Only nine months after the start of the project, Gene Alliance announced the complete decoding of this genome.

Dr. Andreas Düsterhoeft, QIAGEN GmbH (Hilden), said during a presentation at a DECHEMA-Meeting in April this year: "We are very pleased with the high quality of the data. The accuracy of 99.999% obtained is well above the average accuracy achieved in comparable genome sequencing projects worldwide". Thomas Pohl, GATC GmbH (Konstanz), added: "All raw data for the project were generated in only 11 weeks. All partners within the Gene Alliance have shown that they can work successfully as one team in a high-throughput setting."

The genome sequence was assembled at GATC using the DNA analysis software DNASTAR Lasergene. After assembly, full annotation and sophisticated visualization of results was performed using the custom tailored bioinformatics system GeneReliance of Biomax Informatics GmbH (Martinsried). GeneReliance is based on the proven Pedant-Pro software system developed by Biomax Informatics and enables the complete identification of all genetic elements within a given DNA sequence as well as their full functional classification.

Dr. Thomas Gauly, corporate speaker of the Altana holding (Bad Homburg), is very pleased with the collaboration with Gene Alliance: "This project was carried out extremely efficiently and all data are of exceptional quality. The tight timeframe for the whole project was successfully met." Gene Alliance carried out generation of the genomic library, high-throughput sequencing, and annotation and visualization of data for decoding of the *C. pneumoniae* genome up to ring closure of the sequence.

The bacterium is a common cause of lung infections and is also regarded by leading scientists to be causatively linked to arteriosclerosis and Alzheimer's disease. Decoding the *Chlamydia* genome establishes the basis for elucidation of the molecular processes that occur during infection. In addition to the targeted identification of genes, decoding of the sequence will also enable the analysis of molecular interactions between the bacterium and its target cells, which is the starting point for the spread of infectious disease.

Gene Alliance is one of the leading European genomics companies which perform large-scale genome analysis. The founding members of this alliance, AGOWA (Berlin), Biomax Informatics (Munich), GATC (Konstanz), MediGenomix (Munich) and QIAGEN (Hilden), have combined their expertise and core competencies to form a successful, long-term cooperation. Gene Alliance provides industrial customers with high-end solutions for their large-scale genome analysis projects and offers a complete portfolio of integrated genomic services, such as library construction, mapping, megabase sequencing, and annotation and visualization using its bioinformatic system GeneReliance. Gene Alliance guarantees customers exclusive proprietary rights on all results from their genome projects.

Byk Gulden (Konstanz) is an international pharmaceutical enterprise. Byk Gulden represents a group of firms constituting 27 subsidiaries and affiliates worldwide with sales of approximately DM 2.0 billion (1998). As a research-based drug company Byk Gulden has specialized in selected business areas covering the three strategic business units Therapeutics, Diagnostics and OTC (nonprescription drugs). For several years, Byk Gulden has taken an active part in genetic engineering research in collaboration with biotechnology enterprises.

*Certain of the statements contained in this news release may be considered forward-looking statements within the meaning of Section 27A of the U.S. Securities Act of 1933, as amended, and Section 21E of the U.S. Securities Exchange Act of 1934, as amended. To the extent that any of the statements contained herein relating to the services, products and markets and operating results of the Gene Alliance or any of its members are forward-looking, such statements are based on current expectations that involve a number of uncertainties and risks. Such uncertainties and risks include, but are not limited to, those associated with the continued ability of the respective members of the Gene Alliance to work together to successfully operate and manage the alliance and market its and their respective products and services and the continued commercial development of the DNA sequencing and genomics markets. For further information concerning these uncertainties and risks, refer to the discussion in reports that the Gene Alliance and its members have published including reports that QIAGEN N.V has filed with the U.S. Securities and Exchange Commission (SEC).*