



FOR IMMEDIATE RELEASE

First of 100 Arab Human Genomes Sequenced by Saudi Biosciences, Beijing Genomics Institute Shenzhen, and CLC bio

Riyadh, Kingdom of Saudi Arabia -- September 9, 2008 -- An international consortium consisting of Saudi Biosciences, Beijing Genomics Institute Shenzhen, and CLC bio have in a joint effort performed an initial sequencing and analysis of the first Arab human genome, as part of a large project to sequence 100 Arab human genomes to map the unique genetic variations of the Arab population.

His Royal Highness Prince Ahmad bin Sultan bin Abdulaziz, Head of the Board of Directors at Saudi Biosciences, said *"This marks the first milestone in our goal to pioneer the personalized medicine era in the Arab world, and the next step is to lead a large project to sequence 100 Arab genomes at high resolution no later than the end of 2010. Our ambitions are to make this project go beyond similar international efforts, both in terms of quality and quantity!"*

Dr. Saeed Hussain from Saudi Bio Sciences, states, *"We are extremely proud to present the first Arab human genome! This project launches the Kingdom of Saudi Arabia in to the small circle of nations who are currently in the process of building sophisticated databases of human genetic variation. This database is fundamental in the process of analyzing and understanding the specific genetic makeup of Arabs, which in turn will provide key knowledge to improve medical care for this large group of people."*

How was the project realized?

After Saudi Biosciences launched this project early 2008, an international joint collaboration with Beijing Genomics Institute and CLC bio was organized. A high quality sequencing of this genome was generated using Illumina's *Genome Analyzer* platform. Afterwards the data was assembled and analyzed using CLC bio's *CLC Genomics Workbench*.

"The fact that Saudi Biosciences have selected CLC bio among all the potential software providers, emphasizes that we are the world's leading provider of genomics software solutions. We could think of no better opportunity to refine our software solutions, than a project like this, which is truly at the forefront of genomics research. This is indeed a unique and visionary project that we are excited and proud to be a part of." said the Director of Scientific Solutions at CLC bio, Dr. Roald Forsberg.

The results, including analysis and identification of the unique variants of the Arab genome compared to African, European and Asian genomes, have been accumulated. The data are currently confidential but will be released following publication.



What is the impact of this project?

One of the most important goals of modern medicine and genetic research is the goal of tailoring medical care to an individual's needs, based on information from the individual's genotype or gene expression profile, so-called *personalized medicine*. Personalized medicine can offer huge advances in medical care but can only succeed if the genetic variation of humans can be accurately mapped.

The advent of a new generation of experimental techniques, has now given biomedical researchers the opportunity to map the complete genetic variation of large numbers of humans via full genome sequencing. The data produced from such efforts will provide an unparalleled amount of information that can be used to distinguish the unique groups within the human race, and help tailor medical care that targets the specific needs of different populations and individuals. Personalized medicine is thus on the brink of a major breakthrough.

However, the projects scheduled so far have aimed at characterizing mainly three populations - Africans, Europeans and Asians. This means that an accurate characterization and discovery of genetic variation in the Arab people can not be immediately expected and that the Arab populations may receive less of the benefits that will follow the advancement of personalized medicine.

This is why the Kingdom of Saudi Arabia wanted to start building an Arab human genomics database now, in order to scientifically explore the unique genetic composition in the Arab world. The database is fundamental in the process of analyzing and recognizing the distinct genetic makeup of Arabs, which in turn can provide knowledge to help stratify disease status, select between different medications and tailor their dosage, provide a specific therapy for an individual's disease, or initiate a preventative measure that is particularly suited to that patient at the time of administration.

His Royal Highness Prince Ahmad bin Sultan bin Abdulaziz, Head of the Board of Directors at Saudi Biosciences, said *"The Arab world was never an active participant in the large international projects in the field of genomics, and we believe that this should change. Working with an international collaborator such as Beijing Genomics Institute, an advanced institute in genomics studies, and CLC bio, the leaders in bioinformatics solutions with their recently released CLC Genomics workbench, we plan to participate actively in international efforts towards understanding the genomics basis of human diseases."*



About Saudi Biosciences

Saudi Biosciences (SB) is a leading biotechnology company in the Middle East. SB main goal is to implement personalized medicine concept through studying the variations in Arabic populations. To achieve this goal, SB is sequencing 100 Arab genomes, exploring copy-number variations (CNV) and performing genome-wide association studies (GWAS) in collaboration with major institutes in Middle East.



About the Beijing Genomics Institute Shenzhen

The Beijing Genomics Institute Shenzhen (BGI) was founded in 1999. Since June of 2007, BGI has been headquartered in Shenzhen. It achieved international prominence as a center for sequencing the human genome. BGI completed one percent of the human genome for the Human Genome Project and ten percent of HapMap. Today the BGI staff of 500, led by Director Yang Huanming and Director Wang Jian, are in the forefront of genome research. Among other achievements, BGI has sequenced and mapped the rice and silk worm genomes. Current research includes sequencing of the panda genome as well as participation in the International HapMap project and the 1000 Genomes project.



About CLC bio

CLC bio is a world leading bioinformatics solution provider, solely focusing on the development of bioinformatics: software, hardware, data analysis, and custom-designed bioinformatics algorithms.

CLC bio's mission is to be among the most innovative bioinformatics companies in the 21st century.

This is realized through:

- Focusing on Next Generation Sequencing downstream data analysis
- Development of bioinformatics software and hardware based on the latest scientific findings
- User-friendly, integrated and intuitive cross-platform software solutions
- Continuous focus on customer needs and superior customer service
- Frequent product updates including the latest IT technologies and bioinformatics algorithms
- A flexible IT architecture, enabling customers to buy or develop individualized solutions at a reasonable price



Contact

For further information, please contact:

Thomas Knudsen,
CEO at CLC bio

CLC bio
Finlandsgade 10-12
Katrinebjerg
8200 Aarhus N
Denmark
Phone: +45 7022 5509
E-mail: info@clcbio.com
Website: www.clcbio.com