

Complete sequence of water buffalo announced

January 24 2014

Chinese researchers announced today that they have completed the genome sequencing of water buffalo and the bioinformatics analysis. The outstanding work lays an important foundation for molecular breeding of water buffalo, and sheds new light on the understanding of its origin and domestication process.

Buffalo is known as "Black Gold" due to its contribution to economy, which is being reared as milk, [meat](#), hide and bone sources all over the world. In particular, it could provide more than 5% of the world's [milk](#) supply and 20% to 30% of the farm power in Southeast Asia. Considering the importance of buffalo and realizing the need of genomic research for its improvement, Lal Teer Livestock took a great effort for "The Whole Genome Sequencing of Water Buffalo" in collaboration with BGI since March 2012.

The joint efforts yielded a high-quality water buffalo genome with the size of about 2.77Gb, slightly smaller than human genome. There are 21,550 protein coding genes found in total. Researchers compared buffalo [genome](#) with other mammals', such as cattle, horse, panda, pig, and dog for discovering more genetic characteristics of water buffalo and providing guidance for its breeding and industrial transformation.

"We are pleased to form partnership with Lal Teer Livestock to decode this important animal, " said, Professor Jian Wang, President of BGI, "BGI is dedicated to using genomics technology to benefit human beings, and we have contributed to the sequencing of many critical crops

and livestock including rice, maize, soybean, potato, pigeonpea, pig and sheep. BGI is continuing to make more progress for facing the challenges on food shortage and safety, as well contribute to the development and wellbeing of local society."

"With the joined forces with BGI, we are excited to successfully complete the task of sequencing water buffalo." stated Mr. Tafsir Mohammed Awal, Director of Lal Teer, "This will now lay the foundation of ensuring nutrition and food security in Bangladesh and other developing countries."

Provided by BGI Shenzhen

Citation: Complete sequence of water buffalo announced (2014, January 24) retrieved 25 April 2024 from <https://phys.org/news/2014-01-sequence-buffalo.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.