

Communication and Marketing Department Isebe IoThungelwano neNtengiso Kommunikasie en Bemarkingsdepartement

Private Bag X3, Rondebosch 7701, South Africa Welgelegen House, Chapel Road Extension, Rosebank, Cape Town Tel: +27 (0) 21 650 5427/5428/5674/4846 Fax: +27 (0) 21 650 3780

www.uct.ac.za

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## 2,330-year-old skeleton sheds light on human origin

## Southern African archaeology significant in defining early modern human origins – UCT study

A team of international researchers, including University of Cape Town (UCT) Emeritus Professor Andrew Smith and Professor Alan Morris, has unearthed remains of a skeleton from which they have extracted mitochondrial DNA (mtDNA) that can provide clues to early modern human prehistory in Southern Africa.

The 2,330-year-old male skeleton was discovered in 2010 by Professor Smith at St Helena Bay, South Africa. The researchers generated a complete ancient mitochondrial genome from the skeleton which, according to Professor Smith "is the first genomic evidence that pre-pastoral Southern African marine foragers carried the earliest diverged maternal modern human lineages".

The DNA was extracted from the inner canal region of a single tooth and ribs. Until now, genetic data has never been recovered from the indigenous peoples that once sustained life along the southern coastal waters of Africa pre-pastoral arrival. This was possible thanks to input from world-renowned expert in African genomics, Professor Vanessa Hayes. Based at the Garvan Institute of Medical Research in Sydney, Australia, Professor Hayes heads the Laboratory for Human Comparative and Prostate Cancer Genomics.

Professor Morris, a biological anthropologist, confirms that the man was a "marine forager" who was in his fifties when he died. Professor Morris said: "A bony growth in his ear canal, known as 'surfer's ear', suggests that he spent some time diving for food in the cold coastal waters, while shells carbon-dated to the same period and found near his grave, confirmed his seafood diet."

The closest surviving lineage to this skeleton is represented by click-speaking forager peoples largely found in semi-desert regions of Namibia and Botswana.

Archaeological, historical and genetic evidence indicates that there once was a broader southerly dispersal of click-speaking peoples, including southward migrating pastoralists and indigenous marine-foragers.

"This study highlights the significance of Southern African archaeological remains in defining early modern human origins," Professor Smith added.

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Mologadi Makwela Media Liaison Officer Communication and Marketing Department University of Cape Town, South Africa Tel: (021) 650 5427 Cell: (078) 258 3965 E-mail: loga.makwela@uct.ac.za Website: www.uct.ac.za