

New scientific evidence in Libya HIV death penalty case

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Five Bulgarian nurses and a Palestinian doctor stand accused of infecting children with HIV and face death by firing squad. Credit: L Larbi/Reuters

New molecular evidence from Oxford's Zoology Department sheds significant doubt on charges against six medical workers who are facing execution in Libya.

The medical workers are charged with deliberately contaminating more than 400 children with HIV in 1998. However, new evidence published online in *Nature* from the Evolutionary Biology Group at Oxford, in collaboration with several European universities, shows that the subtype of HIV involved began infecting patients well before the medical workers arrived in Libya.

Researchers used the genetic sequences of HIV and Hepatitis C viruses

that were isolated from the patients to reconstruct the transmission history of the strains involved and work out when the outbreaks began. By analysing mutations that accumulate over time, they were able to work out the timescale of the outbreaks and when they started. A body of scientific evidence already indicates that the outbreak was caused by poor hospital hygiene and not by deliberate transmission. These results provide the first direct molecular evidence.

For ten years the Evolutionary Biology Group has been developing and honing state-of-the-art methods for reconstructing the epidemic and evolutionary history of viruses from genetic data, and have researched both HIV and the Hepatitis C Virus. Authors Dr Tulio de Oliveira, Dr Oliver Pybus and Dr Andrew Rambaut are world experts on this type of analysis. Together they worked around the clock to analyse the genomes of the viruses isolated from blood samples collected by a network of European clinical research centres that are involved in treating the infected children.

Dr Oliver Pybus said: 'We've demonstrated that the HIV and Hepatitis C Virus strains involved in the Al Fateh Hospital outbreaks were present and being transmitted locally for some time before the arrival of the Bulgarian medical staff.'

The trial of the six workers, which has been taking place in Tripoli, ended on 4 November and a verdict is expected on 19 December.

Last month 114 Nobel Laureates wrote an open letter to Colonel Gaddafi urging the appropriate authorities to hear independent science-based evidence, and reaffirming the need for a fair trial. The new research represents a thorough and peer-reviewed scientific investigation of the new genetic and molecular data available from the outbreaks.

Lead author Dr Tulio de Oliveira said: 'All the lines of scientific

evidence point in the same direction: towards a longstanding infection control problem at the hospital, dating back to the mid 1990s or earlier.'

Source: University of Oxford

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