A DNA portrait of European history

Art will blend with genetics in a forthcoming exhibition, reports Roger Highfield

A remarkable slice of history is captured in this painting, which contains DNA that is representative of the seven women who are thought to be the ancestors of almost all Europeans.

The Danish painter Ulla Plougmand-Turner has embedded representative snippets of reconstructed ancient DNA from the women within a series of paintings, entitled the Seven Daughters of Eve, which will go on public show for the first time in a few weeks.

The daughters are a reference to the research of Prof Bryan Sykes of Oxford University, a researcher who has been involved in high-profile cases dealing with ancient DNA, such as those of Otzi the Iceman and Cheddar Man.

To identify the daughters, Prof Sykes studied mitochondrial DNA, the kind found in the mitochondria (chemical batteries) of cells which passes from generation to generation through the maternal line, that is from mother to children.

By comparing mitochondrial DNA, Prof Sykes has found that almost all Europeans can trace their ancestry back to one of seven women - the seven daughters of Eve. "It is like the branches of a tree," said Prof Sykes. "The seven daughters sit at the intersections of the main branches of the tree."

To create images of the genetic "clan mothers", who lived up to 45,000 years ago, the artist mixed lab-produced genetic sequences consisting of 400 "letters" of ancient DNA code that helped to identify the seven women into her paint.

"I felt as if I were injecting life into the individual woman, and that in the process she took on her very own personality" said Plougmand-Turner. The first public viewing is to be held on June 3 at Wolfson College, Oxford, where Prof Sykes is a fellow.

A trained artist and former model, Plougmand-Turner has been painting professionally for more than 15 years, with exhibitions in London, Los Angeles and Rome, abstract interpretations of the female form.

She won the inaugural Venus Award of the Society for the Appreciation of the Female Nude. The event in Mayfair was hosted by the Marquess of Bath, who brought her together with Prof Sykes, who at the time was helping to use DNA methods to trace the ancestry of the bohemian lord, well known for his polyamorous lifestyle with "wifelets".

Prof Sykes and Plougmand-Turner subsequently discovered they both belonged to the same maternal clan, "and then she got very interested in this sort of thing," said Prof Sykes.

This is by no means the first attempt to blend genetics and art. While some companies now offer a way to turn a person’s DNA into art, the artist Marc Quinn created an abstract 'genomic portrait' of Sir John Sulston, one of the scientists who read the entire human genetic code.

The picture, brown blobs floating on clear gel inside a stainless steel frame the size of an A4 sheet of paper, marked the Gallery’s first entirely conceptual portrait, and was based on Sir John’s semen. Quinn said at the time "It is the most realistic portrait in the Portrait Gallery since it carries the actual instructions that led to the creation of John."

- The Seven Daughters of Eve Exhibition, Wolfson College, Oxford, 10am to 4pm daily from 4th - 22nd June 2007.
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