

New genetics project could help save the ash tree

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A Queen Mary scientist will embark on a new project to decode the ash tree's entire genetic sequence in the hope of stopping Britain's trees from being completely devastated by the Chalara ash dieback fungal disease.

A small percentage of [ash trees](#) in Denmark are showing some resistance to the fungus. By decoding the tree's genetic sequence, scientists will take a crucial first step towards identifying the genes that confer this resistance.

Together with field trials and breeding programmes, this knowledge will help produce a more resilient strain of the tree.

Project leader, Dr Richard Buggs from Queen Mary's School of Biological and [Chemical Sciences](#), said: 'Sequencing the ash genome is a foundational step towards discovering the [genetic basis](#) of resistance to ash dieback: the future of ash trees in Britain may depend on this. At Queen Mary, University of London we will build on our experience of [sequencing the birch genome to optimise this ash genome project](#).'

The researchers expect to have a first draft of the tree's entire [genetic sequence](#) by August 2013. Once sequencing is complete, they plan to make it publicly available for use by other researchers.

The project is supported by the Natural Environment Research Council (NERC) through an urgency grant.

NERC's chief executive, Professor Duncan Wingham said: 'The Natural Environment Research Council is making an important contribution to tackling the country's ash dieback crisis. I'm confident this project will be a huge step forward towards solving this problem. '

To date, ash dieback has been found at almost 300 places across the country. But with ash the third most abundant broadleaf species in Britain's woodlands, 80 million trees are at risk. The loss of Britain's ash population would pose a serious threat to the [plants and animals](#) that depend on the trees for survival.

Ash trees across the rest of Europe have already been ravaged by ash dieback, and it's recently become clear that the disease is already too widespread to be eliminated from Britain.

The most visible signs that a tree is infected with the *Chalarafraxinea* fungus are bleeding sores and cankers on the bark and discolouration of the underlying sapwood.

Provided by Queen Mary, University of London

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