

# Scientists map genome that causes Dutch Elm Disease

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Credit: Martin Hubbes

Researchers from the University of Toronto and SickKids Research

Institute announced today that they have successfully mapped the genes in the fungus that causes Dutch Elm Disease.

The researchers believe this is the first time the 30 million [DNA letters](#) for the fungus *Ophiostoma ulmi* have been mapped. The findings, published in this week's online journal *BMC Genomics*, could help scientists figure out how to prevent the fungus from destroying elm trees in the future.

"Essentially, [Dutch Elm Disease](#) is caused by a fungus that prevents the normal distribution of [nutrients](#) in the tree by blocking the flow of sap," said Alan Moses, an Assistant Professor with the University of Toronto's department of Cell & Systems Biology, one of the authors of the study. "The tree wilts and eventually dies.

"Relatively little is known about the fungus that causes Dutch Elm Disease, and it's a very distant relative of the fungi that are more often studied by researchers, like bread mould or beer yeast. We hope that the availability of the genome will encourage and speed-up research on this fungus – it's only a matter of time before most the [elm trees](#) are gone."

Dutch Elm disease is believed to have originated in the Himalayas, travelling to Europe from the Dutch East Indies in the late 1800s. It emerged in Holland shortly after the First World War, earning the name Dutch Elm Disease.

It is the most destructive elm tree disease in North America, and typically kills most trees within two years of infection. Dutch Elm Disease is a problem in many parts of the world, particularly Scotland, Spain, Italy, Western Canada and New Zealand.

**More information:**

[www.biomedcentral.com/1471-2164/14/162/abstract](http://www.biomedcentral.com/1471-2164/14/162/abstract)

Provided by University of Toronto

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