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Sequence of a plant pathogen

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In the 13 July *Nature* a Brazilian sequencing consortium reports the first public sequence of a free-living plant pathogen (*Nature* 2000, **406**:151-159). The bacterium, *Xyella fastidiosa*, grows in the water-conducting xylem of citrus plants and causes chlorosis (yellowing) and premature production of small, tough fruit. The sequence reveals a metabolism focussed on carbohydrate consumption and extensive biosynthetic capability to compensate for the scarcity of biological small molecules in the xylem. The 67 genes devoted to iron metabolism suggest that bacterial uptake of iron may contribute to plant symptoms. The bacteria adhere to the plant using a matrix of extracellular polysaccharides related to xanthan gum, and to their insect vector using fimbriae. The sequence includes afimbrial adhesin and haemagglutinin genes, which have previously been associated only with human and animal pathogens.

References

1. *Nature*, [<http://www.nature.com/nature/>]
2. A triply cloned strain of *xylella fastidiosa* multiplies and induces symptoms of citrus variegated chlorosis in sweet orange.