

Plague came from China: scientists

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The first outbreak of plague occurred in China more than 2,600 years ago before reaching Europe via Central Asia's "Silk Road" trade route, according to a study of the disease's DNA signature.

The findings flesh out long-held suspicions about the Chinese origins of the [plague](#), which killed an estimated third of Europe's population in the Middle Ages.

An international team of scientists sequenced 17 strains of *Y. pestis*, building a genetic "family tree" of pathogens that mutated from a [common ancestor](#).

"The results indicate that plague appeared in China more than 2,600 years ago," France's Museum of Natural History, which took part in the research, said.

It then spread towards Western Europe along the Silk Road, starting more than 600 years ago, and then to Africa, probably by an expedition led by Chinese seafarer Zhang He in the 15th century, it said.

Plague came to the United States from China via Hawaii in the late 19th century, according to the molecular evidence.

It arrived in California through the ports of San Francisco and Los Angeles before heading inland.

"The work highlights specific mutations in the [bacterium](#) showing how

the germ evolved within given geographical regions," the museum said in a press release.

"But it demonstrates in particular that successive epidemic waves originated as a whole in Central Asia and China."

The investigation could be useful for tracing the origins of other feared bacteria, including anthrax and tuberculosis, it added.

The study, published online on Sunday by the journal *Nature Genetics*, was led by Mark Achtman of University College Cork in Ireland. Scientists from Britain, [China](#), France, Germany, Madagascar and the United States also took part.

The natural reservoir for *Y. pestis* is species of rodents, including rats. The bacterium is transmitted via [fleas](#) who take a blood meal from an infected animal and pass it on when they bite a human.

The resulting infection of the lymph glands is called bubonic plague.

A more virulent but less common form of the disease is pneumonic plague. It occurs from humans to humans, when someone initially infected with bubonic plague transmits the bacteria through airborne droplets in coughs.

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