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Italians Sequence Corvina - Amarone Genome

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Wine

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Report Highlights:
Researchers at the Center for Functional Genomics, University of Verona, have mapped the genome and transcriptome of the first native Italian vine - the Corvina. The Corvina is a basic grape variety used to produce Amarone and Valpolicela wine.

General Information:

Researchers at the Center for Functional Genomics, University of Verona, have mapped the genome and transcriptome of the first native Italian vine - the Corvina. The Corvina is a basic grape variety used to produce Amarone and Valpolicela wine. This genome sequencing comes just three years after the University of Verona decoded the genome of the 40024th Pn, an experimental clone of the Pinot Noir. The research, conducted by Massimo Delledonne and Mario Pezzotti, from the University of Verona, was made possible with the support of five leading Italian wine companies: Bolla Italian Wine Group, Masi, Easter, and Sartori.

Thanks to the use of nanotechnology and with the help of a next generation sequencer purchased jointly with the Institute of Applied Genomics in Udine, the use of DNA maps may change the way wine frauds are detected. The Italian Farmers Union Coldiretti has already asked that Italy's 355 native vines be safeguarded by having their DNA mapped. Coldiretti cautioned that China plans to map and collect genomes from around the world, which would give it a major technological advantage.

The Beijing Genomic Institute, the leading Chinese research center, has announced that it plans to sequence a thousand genomes (500 animals and 500 plants) within the next two years thanks to a $100 million grant. The Beijing Institute reportedly has more than 130 sequencers and is contacting international researchers from around the world to assist in this project. The Institute reportedly mapped the genome of rice in 2002, the melon in late 2009, the panda bear a few weeks ago, and is working to map the genome of the polar bear and the penguin.

According to the University of Verona, the fear is that China will use DNA information to manufacture Italian foods that appear to be authentic. Italy frequently complains that worldwide sales of fake Italian food cost its economy between €50 and €100 billion annually, depending on how one defines 'fake,' 'Italian,' and 'costs' since the total value of all food and beverage produced in Italy is estimated at €119 billion annually.

For previous Post reporting on Genome sequencing, refer to FAS Rome IT8034 - Italian Ministry of Agriculture Contemplating Creation of an Anthocyanin database hoping to resolve, among other things, certification issues that still loom over the production and export of Brunello di Montalcino wines.