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Material patented by UM reduces bacteria in food

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NEWS RELEASE

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MATERIAL PATENTED BY UM REDUCES BACTERIA IN FOOD

MISSOULA —

The University of Montana has patented a larch-tree extract that protects food from disease-causing bacteria. Use of the wood extract has been licensed to Larex, Inc., a Minnesota-based company, and the new material may soon be protecting food supplies across American and around the world.

Jon A. Rudbach, UM assistant vice president for research and economic development, said the extract comes from "juice" produced from the compressed wood of western larch trees, which are prevalent across the Northwest – especially the Libby area. The extract contains a chemical called arabinogalactan, which was found by a UM lab to suppress the growth of salmonella and E. coli bacteria on chicken and beef.

"This extract has only a little flavor or color," Rudbach said. "It reduces pathogenic bacteria and helps preserve food. Moreover, the material already has gone through a series of tests and is classified as Generally Regarded as Safe – GRAS – by the Food and Drug Administration."

The U.S. patent "Reduction of Pathogenic Bacteria in Food Products" was issued April 3. The patent's inventor is retired Professor Emeritus Geoffrey Richards, who directed UM's Shafizadeh Wood Chemistry Lab from 1985 to 1995. An Australian citizen who was born in England, Richards has 15 patents from his time working in UM labs.

"We have demonstrated that, when you take chicken and rinse it with a solution of this

larch extract and then expose the chicken meat to salmonella, the subsequent growth of the salmonella is very much slowed," Richards said. "The larch extract solution can protect chicken from contamination by the dirty surfaces that can occur in kitchens and in other food-processing areas. We also did a second experiment with fresh beef and E. coli contamination. Again, the growth of the E. coli on the infected beef was suppressed."

Sandy Bigelow, Larex vice president for research and development, said his company started manufacturing the larch extract in 1996 for use as an emulsifier and stabilizer in the food, feed and cosmetic industries. He said arabinogalactan, or AG, has not been used to protect food in the past.

Larex is headquartered in St. Paul, Minn., with a manufacturing plant in Cohasset, Minn. The company uses western larch trees taken from the Libby area. The company generally processes "larch butts" - the bottom 10 to 15 feet of larch trees that aren't used by the timber industry.

Besides the Northwest's western larches, the only other trees with lots of AG are Russian Siberian larch trees. Bigelow said Larex might need a second processing facility based in western Montana if demand for AG products increase.

Rudbach said the University now has 18 patents - with another seven pending - for products or processes produced in UM labs. He said commercialization of UM's intellectual properties has accelerated since 1995, when the University had only two patents.

"As part of the licensing agreement for our patents, money changes hands because the University and inventor want to get something out of their work," Rudbach said. "Since 1995, when we started actively commercializing UM technologies, what we call 'technology transfer' - our revenues from our intellectual properties - has increased tenfold."

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