

Evolve gains exclusive license to develop and commercialise nootkatone globally for pest control

Evolve also signs broader nootkatone collaboration agreement with CDC

5 April 2016 – Evolve (SIX: EVE) announces that it has just signed a license agreement with the US Centers for Disease Control and Prevention (CDC) that grants Evolve the exclusive worldwide patent rights to develop and commercialise nootkatone for the control of a wide range of disease and virus vectors such as ticks, mosquitoes, fleas, flies, lice, bed bugs, and other biting insects.

Evolve announced just recently that it is expanding its nootkatone research focus to include the mosquitoes that transmit Zika and other viruses. This expanded focus is included in the comprehensive Cooperative Research and Development Agreement (CRADA) now in place between Evolve and the CDC. The World Health Organisation (WHO) recently declared Zika virus a global public health emergency. Nootkatone could play an important role in the global response to the spread of Zika.

CDC research has shown nootkatone both repels and kills the yellow fever mosquito, *Aedes aegypti*, and the black-legged tick, *Ixodes scapularis* which transmits Lyme disease. Nootkatone appears to have a mode of action distinct from that of currently used pesticides and therefore could potentially be valuable for mitigating pesticide resistance in mosquito vectors. Nootkatone already occurs in the natural environment and has an established track record as a flavor and fragrance ingredient, providing attractive characteristics in a number of respects.

Nootkatone can be extracted in minute quantities from the skin of grapefruit or the bark of the Alaska yellow cedar (also known as the *Nootka cypress*), or produced on an industrial scale from brewing via yeast fermentation. Evolve is currently performing all necessary safety and efficacy studies to get nootkatone approved by the US Environmental Protection Agency, initially as a repellent against the blacklegged tick.

“We now have the tools in place to accelerate the research and commercial development of nootkatone as a next-generation pest control compound against a broad range of biting insects, including the mosquitoes that transmit Zika, chikungunya, dengue, and West Nile viruses,” said Evolve CEO **Neil Goldsmith**.

About Evolva

Evolva is a pioneer and global leader in sustainable, fermentation-based approaches to ingredients for health, wellness and nutrition. Evolva's products include stevia, resveratrol, vanillin, nootkatone and saffron. As well as developing its own proprietary ingredients, Evolva also deploys its technology for partners, providing them with a competitive edge and sharing in the returns they make. For more information see www.evolva.com. Questions about our fermentation approach? Have a look at our [video](#).

About nootkatone

Nootkatone is a citrus ingredient that is characteristically associated with grapefruit. It can be extracted in minute quantities from the skin of grapefruit or the bark of the Alaska yellow cedar (also known as the *Nootka cypress*), or produced on an industrial scale from brewing via yeast fermentation. Nootkatone is being tested against a variety of biting and nuisance pests, notably the ticks that are responsible for spreading Lyme disease, but also the mosquitoes contributing to the spread of Zika, chikungunya, dengue and West Nile viruses, as well as head lice, bed bugs, and other biting insects.

About Lyme disease and Zika virus

[Lyme disease](#) is caused by the bacterium *Borrelia burgdorferi* and is transmitted to humans through the bite of infected blacklegged ticks. Typical symptoms include fever, headache, fatigue, and a characteristic skin rash called erythema migrans. If left untreated, infection can spread to joints, the heart, and the nervous system.

[Zika virus disease \(Zika\)](#) is a disease caused by Zika virus that is spread to people primarily through the bite of an infected *Aedes aegypti* or *Aedes albopictus* mosquito. The most common symptoms of Zika are fever, rash, joint pain, and conjunctivitis (red eyes). Because the symptoms of Zika are similar to those of many other diseases, many cases may not have been recognized.

In May 2015, the Pan American Health Organization (PAHO) issued an alert regarding the first confirmed Zika virus infection in Brazil and on Feb 1, 2016, the World Health Organization (WHO) declared Zika virus a public health emergency of international concern (PHEIC). Local transmission has been reported in many other countries and territories. Zika virus likely will continue to spread to new areas.

Contact Details

Neil Goldsmith, CEO
neilg@evolva.com
+ 41 61 485 2005

Stephan Herrera, Media
stephanh@evolva.com
+ 1 415 794 4005

Paul Verbraeken, IR
paulv@evolva.com
+ 41 61 485 2035

This press release contains specific forward-looking statements, e.g. statements including terms like believe, assume, expect or similar expressions. Such forward-looking statements are subject to known and unknown risks, uncertainties and other factors which may result in a substantial divergence between the actual results, financial situation, development or performance of the company and those explicitly or implicitly presumed in these statements. Against the background of these uncertainties readers should not place undue reliance on forward-looking statements. The company assumes no responsibility to update forward-looking statements or to adapt them to future events or developments.