Oxitec to Apply New Generation of Self-Limiting Mosquito Technology to Malaria-Spreading Mosquitoes

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– Oxitec's first step into global malaria vector control efforts in partnership with the Bill & Melinda Gates Foundation – Agreement covers the first strain of Oxitec's genetically-engineered mosquitoes specifically designed to combat malaria vector –

Oxford, June 19, 2018 – Oxitec, Ltd. ("Oxitec"), a wholly owned subsidiary of Intrexon Corporation (NYSE: XON), today announced it is entering into a cooperative agreement with the Bill & Melinda Gates Foundation ("BMGF") to develop a new strain of Oxitec's self-limiting Friendly™ Mosquitoes to combat a mosquito species that spreads malaria in the Western Hemisphere. The parties will build on Oxitec's successful deployment of Friendly™ Aedes mosquitoes to reduce the vector that spreads dengue, Zika and other diseases and apply the self-limiting and male-selecting technology to anopheline vectors that can spread malaria in endemic regions in the Americas, eastern Africa and South Asia.

This collaboration will fund the development of a new self-limiting Friendly™ Anopheles mosquito strain designed to suppress wild malaria vector populations. This first Friendly™ Anopheles strain will build on the strengths of Oxitec's self-limiting insect technology developed and tested over the last decade, and transfer the skills and know-how into an anopheles strain for use in vector control efforts to combat malaria.

"With the support and partnership of the Bill & Melinda Gates Foundation, Oxitec is entering the fight against malaria with a powerful, innovative vector control technology," said Grey Frandsen, CEO of Oxitec. "We've built a strong, proven biological engineering platform capable of developing self-limiting mosquito strains that can be used to combat specific disease-spreading species. We're now leveraging that platform to contribute to the fight against mosquitoes that transmit malaria."

Oxitec will be using its new 2nd generation Friendly™ Mosquito technology to develop an *Anopheles albimanus* strain to address one of the most important vectors of malaria in the Americas. All of Oxitec's Friendly™ Mosquito strains are designed to significantly reduce the population of a targeted mosquito species in the wild without impact on human or environmental health. Upon release into the wild, Oxitec's 2 nd generation male-selecting strains mate with wild females, and only male offspring with a self-limiting gene survive to adulthood. The female offspring from these matings - only female mosquitoes bite - will die before reaching adulthood. The surviving non-biting males subsequently seek out and mate with more wild females and pass along the self-limiting trait for up to ten generations before no longer persisting in the environment. When deployed as part of an integrated vector control program, this strain is anticipated to dramatically reduce wild populations of this malaria-transmitting mosquito species, while still ensuring Oxitec self-limiting mosquitoes do not persist in the environment.

Philip Welkhoff, director of the malaria program at the Bill & Melinda Gates Foundation, said, "Vector control has played a critical role in reducing cases and deaths due to malaria over the past 15 years. With further progress stalled at present, continued innovation of new and transformational interventions is critical to realizing the goal of a world free of malaria. Successful burden reduction and elimination will require a range of technologies for different geographies and challenges. Genetically-modified mosquitoes are showing promise in controlling other vector-borne diseases, so we look forward to exploring their use alongside complementary interventions for malaria. Oxitec's work will complement the foundation's investments in self-sustaining genetically-modified mosquitoes for potential use in Africa."

"This is a fantastic example of how British innovation has the ability to have a positive impact on thousands of lives around the world," said Minister of State for the Department for International Trade, Baroness Fairhead. "The Department for International Trade will continue to support the ever-growing British life sciences sector, and businesses such as Oxitec."

"Our first self-limiting mosquito has been studied for more than ten years by independent researchers and governments around the world. It has proven to be efficacious in the fight against *Aedes aegypti* mosquitoes responsible for the spread of Zika and dengue. Our team is thrilled to be using our knowledge and experience toward developing a strain that can expand the role of environmentally safe, species-specific biological solutions in management of additional disease vectors, including this deal in malaria control," said U.S. Army Lieutenant General (Retired) Thomas Bostick, PhD, PE, Intrexon's Chief Operating Officer.

Oxitec has developed a proven track record with its first self-limiting Friendly™ Mosquito, OX513A, which was designed to control *Aedes aegypti* mosquitoes. OX513A has been released and evaluated for effectiveness in multiple countries worldwide, where it has been successful in achieving significant vector suppression levels that outperform traditional methods. OX513A has been granted approvals and endorsements from a range of national and international bodies, including: regulatory approvals in Brazil; an interim recommendation from the World Health Organization Vector Control Advisory Group for use in pilot projects to combat Zika; the U.S. Food and Drug Administration's "Finding of No Significant Impact" for the use of OX513A in the U.S.; and a positive technical report for use of OX513A from the National Institute of Public Health and the Environment (RIVM) in the Netherlands.

Releases of Oxitec's first self-limiting, male-selecting mosquito, the OX5034O Friendly™ Aedes mosquito, were launched in Indaiatuba, Brazil in May 2018, after receiving approval for a Planned Release into the Environment Permit (LPMA) by CTNBio (Brazil's National Technical Biosafety Commission) in August 2017.

More on how male-selecting Friendly™ Mosquitoes work
Oxitec has been working in mosquito control for over a decade and pioneered the use of a biological method to suppress wild populations of dangerous mosquito species through the release of male Friendly™ Mosquitoes, which do not bite and do not transmit diseases. When released,

these males search for wild females to mate and their offspring inherit a self-limiting gene that causes either all progeny or specifically the female progeny to die before reaching adulthood, based on the strain of mosquito. Friendly™ Mosquitoes offspring also inherit a fluorescent marker that allows tracking and monitoring at a level never before achieved, making the assessment of effectiveness more accurate throughout the whole Friendly™ Mosquitoes deployment program. Unlike other approaches, Friendly™ Mosquitoes do not persist in the environment or leave any ecological footprint.

About Oxitec
Oxitec is a pioneer in using genetic engineering to control insect pests that spread disease and damage crops, and was founded in 2002 as a spinout from Oxford University (UK). Oxitec is a subsidiary of Intrexon Corporation (NYSE: XON), which engineers biology to help solve some of the world's biggest problems. Follow us on Twitter at @Oxitec, on Facebook, and LinkedIn.

About Intrexon Corporation
Intrexon Corporation (NYSE: XON) is Powering the Bioindustrial Revolution with Better DNA™ to create biologically-based products that improve the quality of life and the health of the planet. The company's integrated technology suite provides its partners across diverse markets with industrial-scale design and development of complex biological systems delivering unprecedented control, quality, function, and performance of living cells. We call our synthetic biology approach Better DNA®, and we invite you to discover more at www.dna.com or follow us on Twitter at @Intrexon, on Facebook, and LinkedIn.

Safe Harbor Statement
Some of the statements made in this press release are forward-looking statements. These forward-looking statements are based upon our current expectations and projections about future events and generally relate to our plans, objectives and expectations for the development of our business. Although management believes that the plans and objectives reflected in or suggested by these forward-looking statements are reasonable, all forward-looking statements involve risks and uncertainties and actual future results may be materially different from the plans, objectives and expectations expressed in this press release.

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