Introductions – Panelists With You Today

Andrea Leal
Executive Director
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FKMCD and Oxitec are hosting a series of public educational webinars to share information with residents of the Florida Keys and provide forums to answer questions.

- All webinars are open to everyone
- All webinars are recorded and made available for everyone after the event
- All questions will be answered (some in batches if questions are similar)
- If time runs out, we will accept questions in writing via florida@oxitec.com
- Questions and answers will be published in writing after the event with external or related online resources/references

Upcoming Events:

Webinar 4: Oxitec’s Vector Control Performance  Tuesday, August 11th, 5:00 – 6:00 p.m. ET
Webinar 5: Assessment, Oversight, and Validation  Monday, August 17th, 5:00 – 6:00 p.m. ET
Welcome to Webinar #3 in this 5-part series!

Today’s Agenda:
- Building partnerships with communities
  - Strong project partnership
  - Defining stakeholders
  - Listening and learning
  - Sharing and informing
  - Empowering and partnering
  - Continued feedback and dialogue
  - Evaluating and improving
- Building blocks for success
- FKMCD-Oxitec intentions for proposed Florida Keys project
- FAQs
- Your Questions

Documentation, resources, references, and other information are available at oxitec.com/florida
Florida Keys Pilot Project Timeline

<table>
<thead>
<tr>
<th>PRE-SEASON</th>
<th>MOSQUITO SEASON</th>
<th>POST-SEASON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology transfer and staff training</td>
<td>Set up trap network and initiate pre-release monitoring</td>
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<tr>
<td>Community engagement</td>
<td>Release of Oxitec mosquitoes</td>
<td>Extensive monitoring of the releases</td>
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<tr>
<td></td>
<td></td>
<td>Post-release monitoring</td>
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Building Partnerships with Communities
Our Goal:
Develop a genuine, trust-based partnership with the Keys community
Working together, FKMCD and Oxitec will continue engaging, listening and sharing with communities in the Florida Keys.

Community Approach:

• Full coordination between FKMCD and Oxitec
• Transparency and robust information sharing
• Listening and learning from communities and stakeholders
• Inclusive engagement programs specific to community members and groups
• Broad view of stakeholders – citizens, communities, businesses, experts
• Multiple avenues for anyone to contact and engage
"Are you in favor of the Florida Keys Mosquito Control District conducting an effectiveness trial in Monroe County, Florida, using genetically modified mosquitoes to suppress an invasive mosquito that carries mosquito-borne diseases?"

Oxitec GM Mosquito Referendum Results Nov 2016

40,544 votes cast: **23,422 in favor.**

CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=5140544
Context: Decade of Pioneering Experience, Lessons & Proof-Points

- Published peak suppression performance of wild-type *Aedes aegypti* ranging from 92% to 96% as compared to control sites (see below)
- 1Bn+ Oxitec mosquitoes produced for release
- Deployments ranged from small-scale to coverage of 65K people
- Successful suppression of target *Aedes aegypti* populations in range of deployments
- Demonstrated safe with no lasting impact on the environment, humans or animals
- Multiple pilot approvals from biosafety regulators

**SELECTED DEPLOYMENT PROGRAMS, 2010 – 2021**

*Aedes aegypti* peak suppression measured in each program compared to control sites

<table>
<thead>
<tr>
<th>Year</th>
<th>Location</th>
<th>1st Generation Aedes aegypti Deployment Programs</th>
<th>2nd Generation Aedes aegypti Deployment Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-12</td>
<td>Juazeiro, Bahia, Brazil</td>
<td>92%</td>
<td>96%</td>
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<tr>
<td>2012-13</td>
<td>Jacobina, Bahia, Brazil</td>
<td>96%</td>
<td>93%</td>
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<tr>
<td>2014</td>
<td>Nuevo Chorrillo, Panama</td>
<td>96%</td>
<td>96%</td>
</tr>
<tr>
<td>2015-19</td>
<td>Piracicaba, São Paulo, Brazil</td>
<td>92%</td>
<td>93%</td>
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<tr>
<td>2016-18</td>
<td>1st Generation 4-Year Pilot</td>
<td></td>
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<tr>
<td>2018-19</td>
<td>2nd Generation 65,000-Person Program</td>
<td></td>
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<tr>
<td>2020-21</td>
<td>Indaiatuba, Brazil</td>
<td>96%</td>
<td>96%</td>
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<tr>
<td>2021</td>
<td>Florida EUP, United States</td>
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Context: Successful Track Record of Building Partnerships w/ Communities

Brazil Survey on Oxitec Mosquitoes (2019)

94% would like the Friendly project to continue

Yes 94.3%
No 5.7%

93% would like to see the project expanded

Yes 93.2%
No 6.9%

A public survey of 1,000 people carried out in September 2019 in the city of Indaiatuba.
Our Approach to Public Engagement in the Keys

Our Process

- Evaluating and Improving
- Strong FKMCD-Oxitec Partnership
- Defining Stakeholders Broadly and Inclusively
- Listening & Learning
- Sharing & Informing
- Empowering & Partnering
- Continued Feedback & Dialogue

Our Building Blocks

- Scientific Excellence
- Transparency
- Independent Validation
Define Stakeholders Broadly & Inclusively

Residents | Communities | Businesses | Non-profits | Educators | Local Governments | Media

Inclusive of age, gender, ethnicity, economic background
Listening & Learning
Public Meetings | House-to-house | Questionnaires | Q&As | Social Media
Sharing and Informing
Door-to-Door | Full Transparency | Virtual & In-person Engagement | Open House Days | Meet the Mosquitoes | Science Demonstrations | Seminars | Publications | Webinars
Sharing & Informing

Let's Keep India Ahead

- Precautions and care
- Mosquito is a blood-sucking insect, the leading cause of disease
- The disease is spread by mosquitoes

Effects include:

- Drowsiness
- Headache
- Body aches
- Fever
- Rash

- Deformities and death in babies

How it works

- Oxitec has modified the Mosquito’s DNA
- This makes it unable to reproduce
- The females spread the modified DNA to other females
- When the females mate, they cannot produce offspring

Effective and proven

- Non-toxic
- Safe and environmentally friendly

What is the Oxitec Florida Keys project?

- Oxitec Florida Keys project includes two phases:
  - Phase 1: Release of genetically modified mosquitoes
  - Phase 2: Evaluation of the effectiveness

- The modified mosquitoes are monitored for 2 years, and the impact on the mosquito population is studied

More information can be found at [www.Oxitec.com](http://www.Oxitec.com)
Empowering & Partnering
Community Integration | Consultations on Operations | Timing Considerations
Continued Feedback & Dialogue

"Always Available" | Routine Dialogue | Public Meetings | House-to-house Engagements | Radio | Social Media | Surveys | etc.
Evaluating & Improving
Feedback Sessions | Meetings | Independent Analysis
Oxitec’s OX5034 Mosquito Receives High Levels of Support

A public survey carried out in September 2019 in the Brazilian city of Indaiatuba, where Oxitec’s 2nd generation ‘Aedes do Bem’ had been released for 1 year, showed exceptionally high levels of support for the technology.

**METHOD:** Interviews

**WHO:** >16 years old citizens of Indaiatuba, SP

**HOW MANY:** 1000 interviews

**DISTRICTS:** 17

**WHEN:** September 2019

87% fully support the Aedes do Bem!™ project

94% would like the Aedes do Bem!™ project to continue

93% would like to see the project extended to other neighbourhoods
Building Blocks for Supporting Strong Partnerships with Communities
Scientific Excellence  |  Transparency  |  Independent Validation
Building Blocks: Scientific Excellence
Extensive academic review | 100+ scientific publications
Building Blocks: Scientific Excellence

100+ scientific publications peer-reviewed by independent experts:

- Effective performance
- No impact on non-target organisms
- Full safety
- No long-term persistence
- No evidence for species niche replacement
- Potential to dilute insecticide resistance
Building Blocks: Transparency
Unprecedented information sharing | Accessible Publications | Available to community 24/7
Building Blocks: External Validation
Regulatory oversight | Independent Advisory Board | Independent scientific validation
We Continue to Invite Comprehensive Independent Reviews: Local Stakeholders

Independent Advisory Board Members

Bob Eadie
Administrator and Health Officer
Monroe County Department of Health
Member, Project Independent Advisory Board

Dr Douglas Mader
Veterinary Specialist
Marathon Veterinary Hospital
Fellow, Royal Society of Medicine
Member, Project Independent Advisory Board

Dr Jorge Rey
Director and Professor
University of Florida – IFAS
Florida Medical Entomology Laboratory
Member, Project Independent Advisory Board
External Validation and Independent Oversight of this Project

EUP also approved by:

- Bureau of Inspection and Incident Response (BIIR)
- Bureau of Agricultural Environmental Laboratories (BAEL)
- Bureau of Chemical Residue Laboratories (BCRL)
- Bureau of Scientific Evaluation and Technical Assistance, Scientific Evaluation Section (SES)
We Continue to Invite Comprehensive Independent Reviews

CDC confirms participation:

“...I am writing this letter to communicate our intention to collaborate with you and the jurisdiction on the evaluation of this important project.

...entomologists and senior leaders from CDC’s Division of Vector-Borne Diseases (DVBD) will provide their technical assistance to develop a strong project evaluation.”

Lyle Petersen, MD, MPH
Director of Division of Vector-Borne Diseases
Centers for Disease Control and Prevention
# Florida Keys Community Engagement Timeline

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<tbody>
<tr>
<td>Defining Stakeholders</td>
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<tr>
<td>Listening to communities (house-to-house, local meetings, virtual as needed)</td>
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<tr>
<td>Sharing and Information (radio, social, events)</td>
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<tr>
<td>Project updates (start, middle, end)</td>
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<tr>
<td>Reporting</td>
<td></td>
<td></td>
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<tr>
<td>Empowering and Partnering (operations, support and advice)</td>
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<tr>
<td>Continued Feedback and Dialogue (communities and stakeholders)</td>
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<td></td>
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<tr>
<td>Evaluating and Improving (surveys)</td>
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Any and all questions on this evening’s topics are welcome!

(If we run out of time tonight, email florida@oxitec.com and we will attempt to answer your question if it isn’t included in the growing FAQ or post-event summary we publish online)
THANK YOU!

A summary of this event, as well as more Q&As, resources, facts, and background materials are available at oxitec.com/florida.