

A GRAND CHALLENGE | Agenda for Entomology



Challenges with Implementing an Effective Control Strategy for *Aedes aegypti*

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Overview of Challenges

- Mosquito factors
- Human behavior factors
- Environmental factors
- Communication and Collaboration



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Mosquito-specific factors

- Insecticide resistance
- Behavioral characteristics of *Ae. aegypti*
- Vector behavior: Flight, breeding, and resting patterns
- Adaptation and exploitation of new environments
- Multitude of diseases carried by this mosquito



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Human behavior factors

- Increased urbanization
- Global travel spreads disease transmission
- Ineffective and dangerous control techniques
- Reluctance to apply novel control and prevention strategies
- “Fickle nature” of addressing important issues
- Public reaction/over-reaction to news releases
- Pesticide aversion



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Environmental factors

- Climate change expands mosquito range
- Drought expands use of cisterns and other containers which are advantageous for mosquito container breeders
- Warmer temperatures may increase “mosquito appetite”
- Possible mutation of disease strains



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Other factors that impact control efforts

- Funding
- Sustainable efforts
- Oversight
- Monitoring
- Communicating personal responsibility to the impacted populations
- Education!
- Geopolitical relationships in the Americas




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THANK YOU!



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