Safeguarding New Mexico from the Spread of Mosquito-Borne Viruses

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CBS NEWS / August 2, 2016, 6:43 AM

CDC struggling to wipe out mosquitoes carrying Zika virus

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ESTIMATED range of *Aedes albopictus* and *Aedes aegypti* in the United States, 2016





http://www.cdc.gov/zika/vector/range.html

The Team



Kathryn Hanley Professor of Biology NMSU

"Mosquito-Virus hunting"



Michaela Buenemann Assistant Professor of Geography NMSU

"Mosquito habitat prediction"



Sang-Yeon Cho Associate Professor of Electrical and Computer Engeneering NMSU

"Mosquito Traps"



Immo Hansen Associate Professor of Biology NMSU

"Mosquito control"



Aim 1: Map the distribution of Ae. aegypti and Ae. albopictus in NM.



- Optimize mosquito trap design
- Set-up traps all over the state
- Collect data on species abundance
- Record seasonal changes



Aim 2: Quantify levels of insecticide resistance in *Ae. aegypti* and *Ae. albopictus*



- Catch NM Aedes mosquitoes
- Raise colonies in the lab
- CDC bottle test for insecticide resistance



Aim 3: Develop Sterile Insect Technique (SIT) for Vector Control in NM





Deliverables & Timeline

Deliverables:

- NM map for Aedes aegypti
- NM map for Aedes albopictus
- Map of insecticide resistance levels in NM
- Recommendations for NM vector control personnel
- Proof of concept study: 'Eradication of Aedes aegypti from NMSU main campus using SIT'



