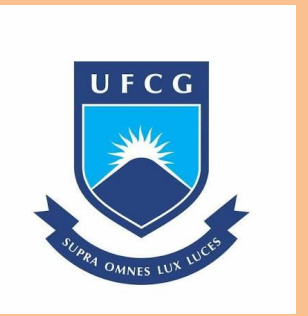


Temporal dynamics of *Aedes aegypti* in a semi-arid urban environment in Northeastern Brazil

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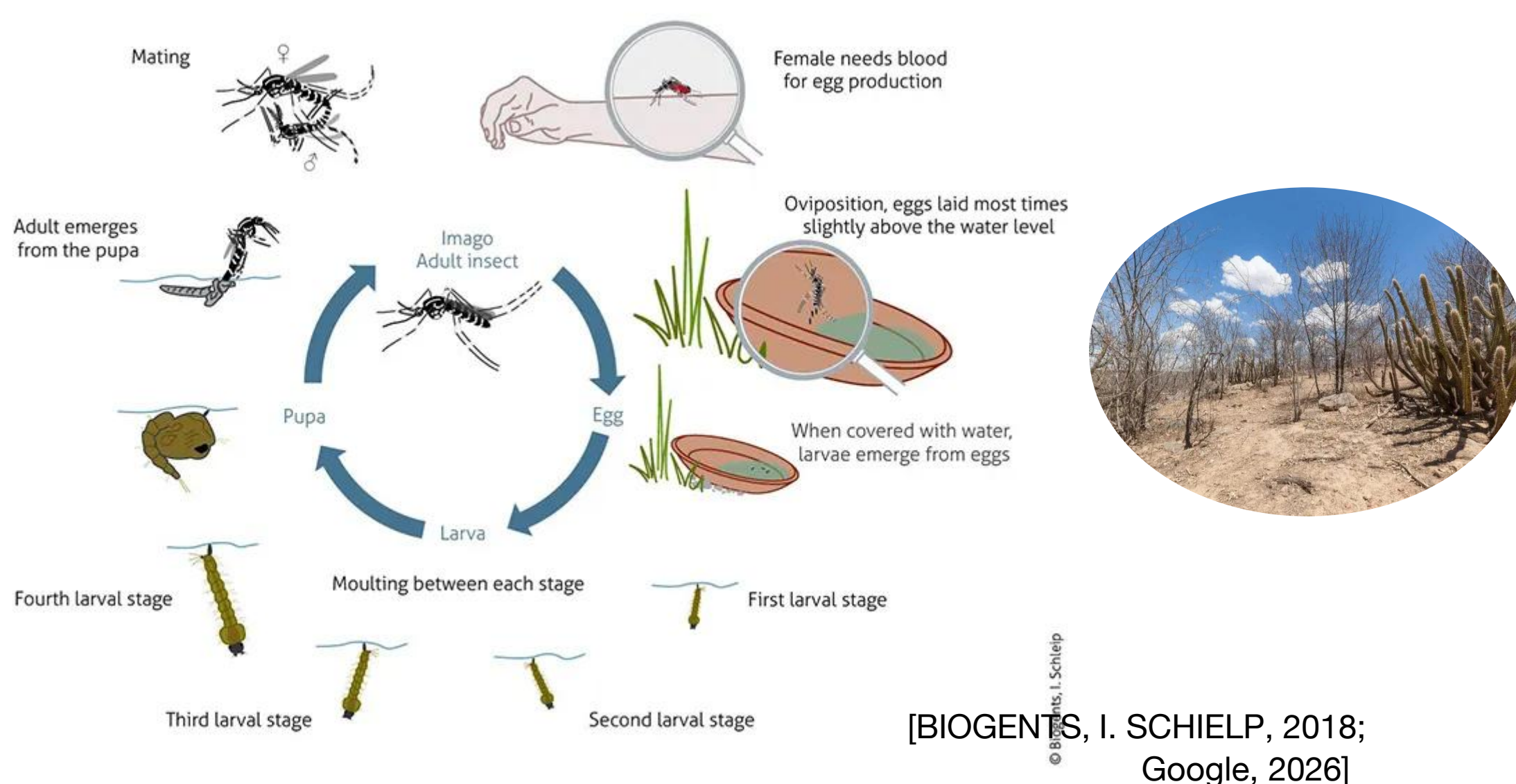


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INTRODUCTION & AIM



Aedes aegypti is the main urban mosquito vector of several arboviruses responsible for outbreaks and epidemics. Its adaptability to diverse environmental conditions promotes dispersal and challenges vector control. Understanding oviposition dynamics in relation to climatic factors is essential for improving entomological surveillance.

Objective: To relate the density of eggs from female *A. aegypti* with climatic variables (temperature, relative humidity, and rainfall) at the Teacher Training Center of the Federal University of Campina Grande, located in Cajazeiras, Paraíba, a region characterized by a hot and dry semi-arid climate in Brazil.

METHOD

Study Area:

- Teacher Training Center (CFP/UFPA)
- Cajazeiras, Paraíba, Brazil
- Semi-arid climate
- High temperatures and seasonal rainfall

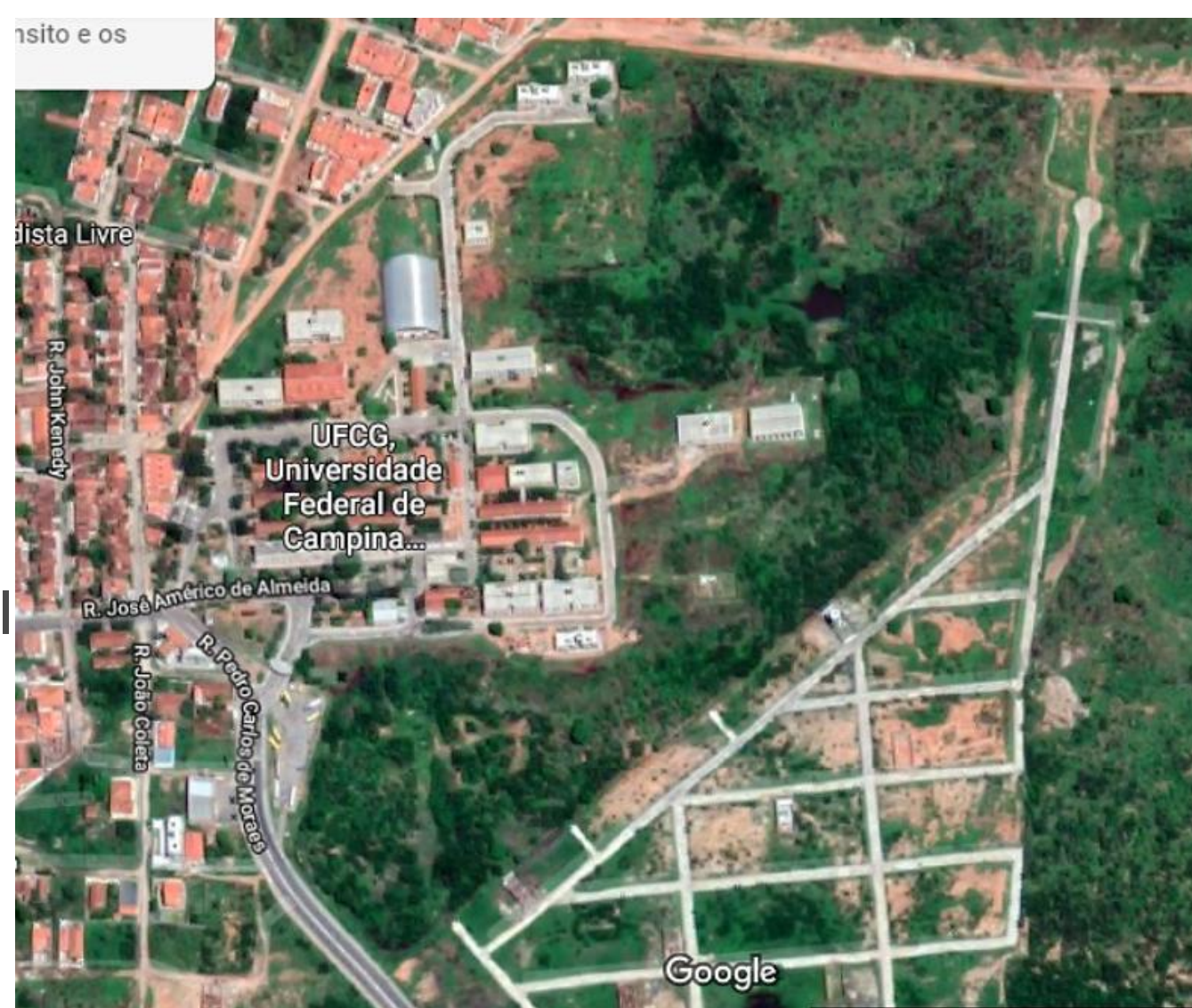
Sampling Design

- 51 ovitraps installed across the campus
- Distribution based on mosquito environmental preferences
- Monitoring period:
- June 2019 – March 2020
- 39 weekly inspections



Data Collection

- Number of eggs
- Number of larvae
- Ovitrap Positivity Index (OPI)
- Egg Density Index (EDI)



[Google Maps, 2020]

RESULTS & DISCUSSION

- A total of 6,296 eggs and 759 larvae of *A. aegypti* were collected.
- Among the climatic variables evaluated, rainfall had the greatest influence on the increase in egg density in the traps, suggesting a strong influence of water availability on the vector's reproductive activity. The maintenance of oviposition during periods of drought may be related to the eggs' resistance to desiccation, the presence of cryptic breeding sites, and the skip oviposition behavior of females—strategies that allow reproductive continuity even in environmental conditions with low water availability.

Figure 1: Number of eggs collected in ovitraps at 51 locations on the Federal University of Campina Grande campus.

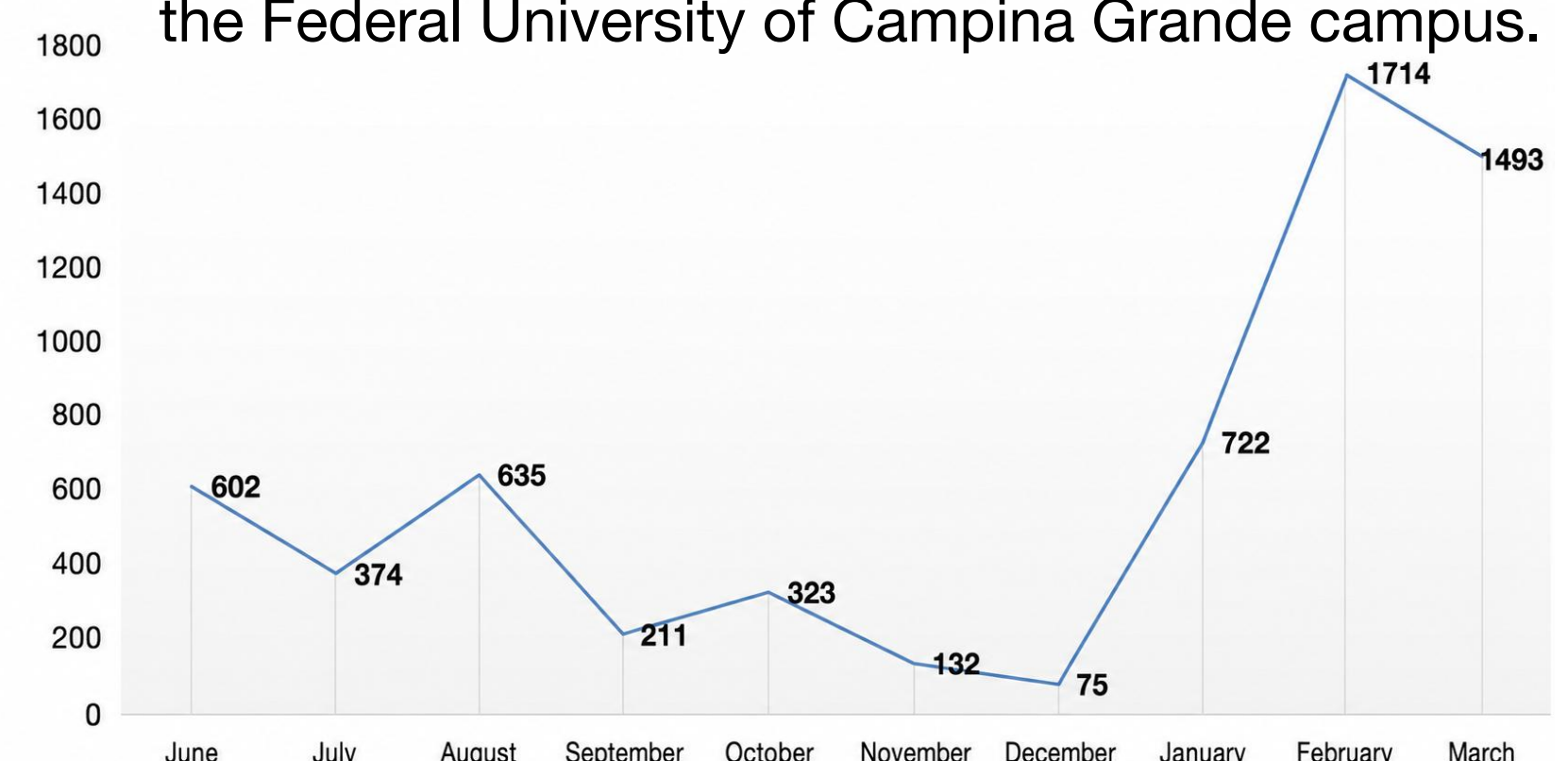
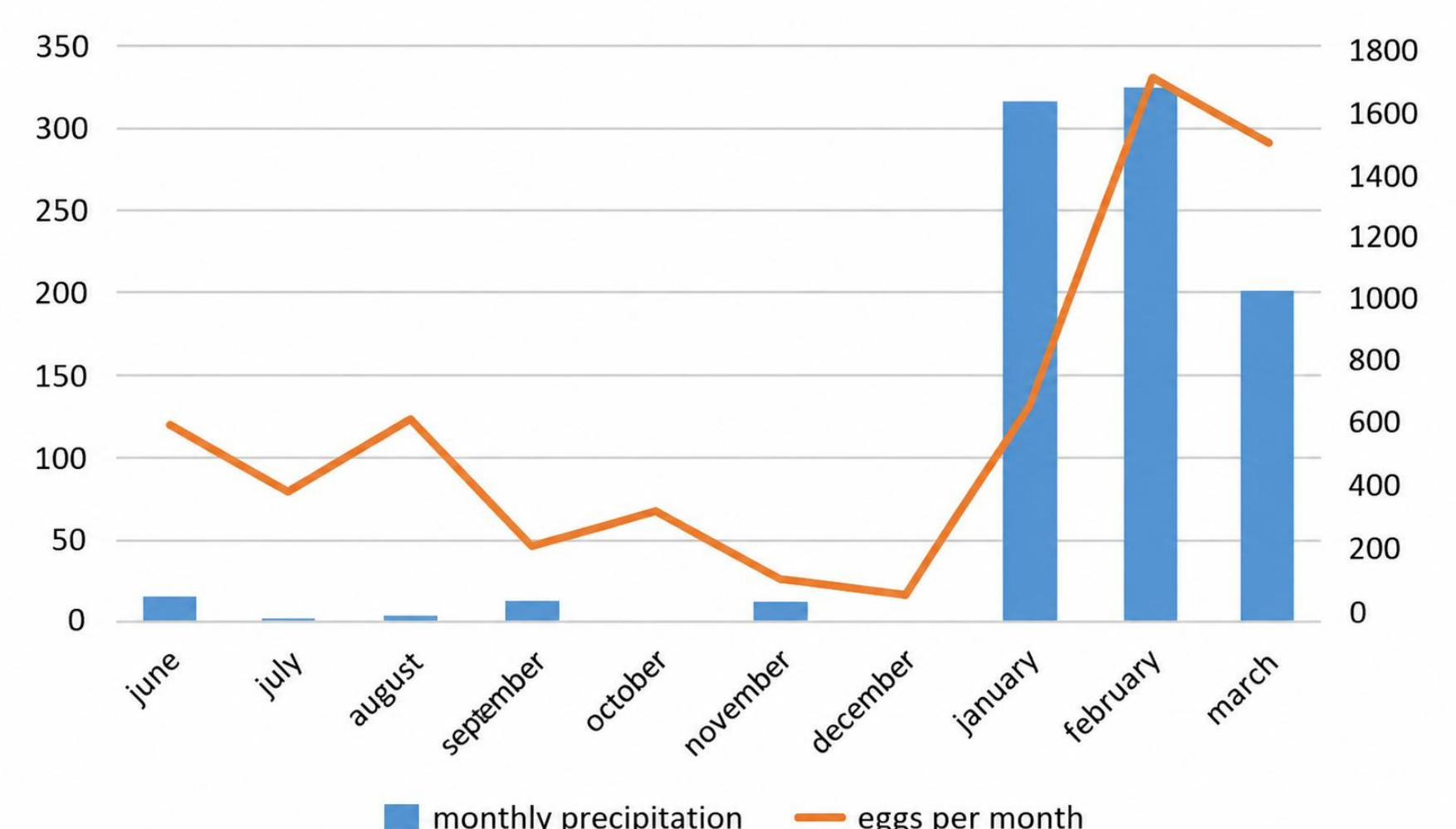


Figure 2: Correlation between the number of eggs collected and average precipitation



CONCLUSION

These findings reinforce the importance of continuous entomological monitoring in semi-arid regions to guide more effective vector control strategies.

FUTURE WORK / REFERENCES

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