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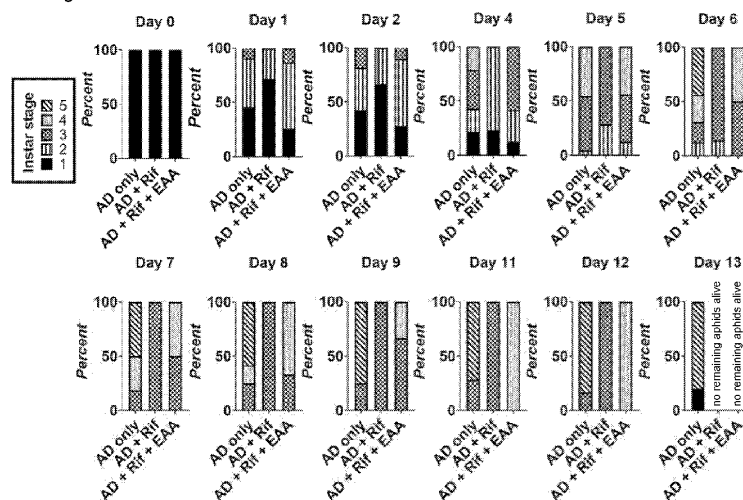
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(54) Title: COMPOSITIONS AND RELATED METHODS FOR CONTROLLING VECTOR-BORNE DISEASES

Fig. 2A



(57) **Abstract:** Provided herein are methods and compositions useful for human health, e.g., for targeting one or more microorganisms resident in a host insect (e.g., arthropod, e.g., insect, e.g., pathogen vector), the modulation resulting in a decrease in the fitness of the host. The invention features a composition that includes a modulating agent (e.g., phage, peptide, small molecule, antibiotic, or combinations thereof) that can alter the host's microbiota in a manner that is detrimental to the host. By disrupting microbial levels, microbial activity, microbial metabolism, or microbial diversity, the modulating agent described herein may be used to decrease the fitness of a variety of insects that carry vector-borne pathogens that cause disease in humans.

[Continued on next page]

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