

## **Synthesizing evidence to inform emerging infectious disease surveillance and risk mitigation**

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### **Abstract:**

EcoHealth Alliance is a global non-profit organization working at the interface of ecology, conservation, and public health. Over the last decade, we have led a series of research programs, including large-scale synthetic reviews and meta-analyses, aimed at synthesizing evidence to understand the underlying drivers of infectious disease emergence and to better inform zoonotic disease surveillance. I will present methodologies and key findings from these research programs, including: 1) a revised analysis to identify global 'hotspots' of emerging zoonotic diseases; 2) a comprehensive assessment of mammalian host-virus relationships and factors that predict zoonotic potential; and 3) an ongoing synthetic review to identify the first human emergence event for all anti-microbial resistant pathogens over the last 20 years. I will discuss how these research findings are being used to refine on-the-ground zoonotic disease surveillance activities, and how data from our field investigations are subsequently being used to develop models to inform intervention policies to mitigate emerging infectious diseases.