

Oral presentation

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A staged strategy for pathogen surveillance and discovery

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Recent advances in molecular diagnostics have revolutionized microbiology by facilitating rapid, sensitive pathogen surveillance and differential diagnosis of infectious diseases. Implementation of these technologies can enable intervention when the prognosis is optimal for limiting replication, dissemination, transmission, morbidity and mortality. It may also reveal unappreciated links between infection and chronic diseases. Although new pathogens continue to emerge, we have likely collected much of the "low hanging fruit" (microbes readily associated with diseases). An important task now is to understand those disorders that reflect the interaction of microbes with other environmental factors (toxins, other stressors) and susceptibility genes in a developmental context. Here I will review the strengths and limitations of various assay platforms, describe the challenges associated with proving causation, and delineate a staged strategy for pathogen discovery focused in emerging infectious disease "hot spots," "hot hosts," and prospective birth cohorts.

References

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