## U.S. Leadership for a Pandemic-Free Future

Technologies to End Biological Threats













Comprehensive laboratory biosafety



Technologies to deter & prevent bad actors (biological attribution, microbial forensics)



Ubiquitous (metagenomic) sequencing



Digital pathogen surveillance



National pathogen surveillance & forecasting center



Point of person diagnostics



Non-invasive detection



Pan-pathogen detection



Next gen PPE



Pathogen-proof structures and transport



Vaccine candidates for prototype pathogens



Multi-pathogen therapeutic drugs



Flexible and scalable manufacturing of pharmaceuticals



Needle free methods for drug and vaccine administration

