

Antibodies as probes for infectious diseases diagnostics

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Antibodies are proteins produced by animals to aid in immunity to diseases. One of the characteristics that make antibodies great immune system tools is that they can be very specific; this exquisite specificity also makes antibodies great probes for diagnostic tests. They have been used to diagnose infectious diseases for more than a century, and the global diagnostic antibody market was estimated at 22 billion US dollars in 2022. Antibodies are thus key reagents for diagnostic applications of new biosensing technologies. In this talk, I will briefly discuss the history and uses of antibodies in diagnostic tests, present some of the results from projects in this area my research group obtained and explore ideas on innovations combining biosensing and antibodies to diagnose human infectious diseases.