

The Vaccines business at Sanofi is interested in partnering opportunities in the field of active and passive human immunization, as well as technologies supporting product development and industrial performance, including:

- **Vaccines and monoclonal antibodies against infectious diseases**
 - Prophylactic vaccines candidates (respiratory viruses, multi-pathogen nosocomial, latent infections, bacterial targets, gastrointestinal pathogens)
 - Therapeutic vaccine candidates (multi-pathogen nosocomial, latent infections, bacterial targets)
 - Monoclonal antibodies against infectious disease targets
- **Enabling technologies (including mRNA) for prevention and treatment of infectious diseases**
 - mRNA vaccine technologies – mRNA design, delivery, stabilization, production and formulation
 - mRNA vaccine raw materials and production - pDNA, improved enzymes, lipids
 - Novel antigens and methods for antigen discovery, optimization and characterization
 - New ways to administer vaccines, including mucosal routes (oral, sublingual, intranasal)
 - Nanoparticles, carrier proteins, and methods of conjugations of proteins and polysaccharides
 - Novel vectors for delivering antigens
 - Adjuvants and immunomodulators
- **Characterization and assays of immune responses, disease markers and disease targets**
 - Animal models, including of human diseases
 - Biological markers and tools for evaluating the efficacy of prophylactic or therapeutic interventions
 - *In vitro*, *ex vivo*, and 3D models of human tissues, including the immune system
 - B-cell immunology, and immunosenescence
 - Imaging/bioimaging
 - Systems biology methodologies (omics) related to biomarkers, safety, and disease target identification
 - Bioinformatics techniques for modeling, data handling and analysis
 - AI, machine learning and machine vision
- **Vaccine manufacturing**
 - Prokaryotic or eukaryotic cell lines for antigen production
 - Upstream and downstream processes optimization technologies
 - Process automation and digital innovation
 - Preservatives and stabilizers
 - Nonionic detergents
 - Anti-counterfeiting technology
- **Microbiome Associated Technologies**
 - Biologics (antibodies, phages, etc) to modify the GI, skin, and/or oral microbiome