

オープンアクセス	タイトル	著者	年度	生体分子	詳細①	詳細②
Preprint	Systemic Multi-Omics Analysis Reveals Interferon Response Heterogeneity and Links Lipid Metabolism to Immune Alterations in Severe COVID-19	Ronaldo Lira-Junior, et al.	2026	Antigen	Recombinant antigens including: Type I, II, III interferons/cytokines, SARS-CoV-2 spike, receptor binding domain, nucleocapsid and Epstein Barr virus	
Yes	Immune-coagulation dynamics in severe COVID-19 revealed by autoantibody profiling and multi-omics integration	Anoop T. Ambikan, et al.	2025	Antigen	ADAMTS13, Factor V, Protein S, SERPINC1 (antithrombin III), Apo-H (β 2-glycoprotein I), PROC1 (Protein C), prothrombin, and platelet factor 4 (PF4)	
Yes	A novel method for recombinant mammalian-expressed S-HBsAg virus-like particle production for assembly status analysis and improved anti-HBs serology	Michael Lehky, et al.	2024	Antigen	Hepatitis B surface antigen (HEK, Yeast, Serum)	
Yes	Development and validation of a respiratory syncytial virus multiplex immunoassay	Patrick Marsall, et al.	2024	Antigen	RSV subtypes (A & B)	EDC NHS comparison - AnteoBind 1.5x up to 45.6x improvement in signal
Yes	Humoral immune response to SARS-CoV-2 and endemic coronaviruses in urban and indigenous children in Colombia	Nathalie Verónica Fernández Villalobos, et al.	2023	Antigen	SARS-CoV-2, Spike protein, Receptor-Binding Domain, Nucleocapsid, Alpha (B.1.1.7) RBD, Beta (B.1.351), Gamma (P.1), hCoV-229E, hCoV-NL63, hCoV-OC43, hCoV-HKU1 Spike protein	
Yes	Multiplexed bead-based assay for the simultaneous quantification of human serum IgG antibodies to tetanus, diphtheria, pertussis toxin, filamentous hemagglutinin, and pertactin	Vishal Rathod, et al.	2023	Antigen	PT, FHA, PRN, diphtheria toxoid (DT), and tetanus toxoid (TT)	
Yes	Assessment of Immunogenicity and Efficacy of CV0501 mRNA-Based Omicron COVID-19 Vaccination in Small Animal Models	Nicole Roth, et al.	2023	Antigen	SARS-CoV-2 Omicron BA.1 Spike Receptor-Binding Domain	
Yes	Diminishing Immune Responses against Variants of Concern in Dialysis Patients 4 Months after SARS-CoV-2 mRNA Vaccination	Alex Dulovic1 Cossmann, et al.	2022	Antigen	Receptor-binding domains from Alpha (B.1.1.7), Beta (B.1.351), Gamma (P.3) and Delta (B.1.617.2) VOCs.	
Yes	COVID-19 patient serum less potently inhibits ACE2-RBD binding for various SARS-CoV-2 RBD mutants	Daniel Junker, et al.	2022	Antigen	SARS-CoV-2 Wild Type, receptor binding domains (Alpha, Beta, Gamma, Delta, Epsilon, Eta, Theta, Kappa, Lambda, Cluster 5, A.23.1)	
Yes	Longitudinal cellular and humoral immune responses after triple BNT162b2 and fourth full-dose mRNA-1273 vaccination in haemodialysis patients	Matthias Becker, et al.	2022	Antigen	trimeric Spike B.1, its subdomains (S1, S2, RBD), nucleocapsid B.1 and RBDs of Delta and Omicron BA.1	

Yes	Robust and durable serological response following pediatric SARS-CoV-2 infection	Hanna Renk, et al.	2022	Antigen	SARS-CoV-2 and variants of concern, HCoV	
Yes	Multianalyte serology in home-sampled blood enables an unbiased assessment of the immune response against SARS-CoV-2	Niclas Roxhed, et al.	2021	Antigen	SARS-CoV-2 spike glycoprotein (S), receptor binding domain, nucleocapsid protein (N), SARS-CoV-1, MERS-CoV, hCoV-NL63, Epstein-Barr virus	
Yes	Cellular and humoral immunogenicity of a SARS-CoV-2 mRNA vaccine in patients on haemodialysis	Monika Strengert, et al.	2021	Antigen	SARS-CoV-2 Spike, Spike receptor-binding domains, nucleocapsid proteins	
Yes	Immune response to SARS-CoV-2 variants of concern in vaccinated individuals	Matthias Becker, et al.	2021	Antigen	SARS-CoV-2 RBD	
Yes	Development of a Bead-Based Multiplex Assay for the Analysis of the Serological Response against the Six Pathogens HAV, HBV, HCV, CMV, T. gondii, and H. pylori	Angela Filomena, et al.	2020	Antigen	HAV, HBV, HCV, CMV, T. gondii, and H. pylori	
Yes	Validation of HAV biomarker 2A for differential diagnostic of hepatitis A infected and vaccinated individuals using multiplex serology	Katrin Bohm, et al.	2017	Antigen	Anti-HAV IgG/IgM antigens, HAV biomarker 2A, VP1-2A, VP0	
Yes	Somatic deficiency of the human E3 ubiquitin ligase CBL in leukocytes impairs B cell but not T cell development and function	Taja Vatrovec, et al.	2026	Cytokine/Antibodies/Antigen	Two panels: Panel 1 (68 analytes) including: anti-human IgG, EBNA1, GM-CSF, IFNA1, IFNA7, IFNB1, IFNG, IFNL4, IFNW1, IL-12, IL-17A, IL-17F, IL-22, IL-23, IL-28a, IL-28b, IL-29, IL-6, IL1RN, SARS-CoV-2 spike, TNF, Trove2 and TXLNB Panel 2 (28 analytes) including: ACAN, angiotensin II, ANKS4B, anti-human IgA, anti-human IgG, ARNT, EBNA1, ENTPD1, FOXP3, GAD2, HNF4A, IFNA1, IFNA10, IFNA14, IFNA16, IFNA17, IFNA2, IFNA21, IFNA4, IFNA5, IFNA6, IFNA7, IFNA8, IFNB1, IFNG, IFNL4, IFNW1, IL-12, IL-17A, IL-17F, IL-1F6, IL1RN, IL-22, IL-23, IL-28a, IL-28b, IL-29, IL-6, PF4, PPARG, PROS, RBD, RORC, RXRA, SARS-CoV-2 nucleocapsid, SARS-CoV-2 S protein RBD, SARS-CoV-2 S protein spike, TNF, TNNC2, TROVE2/Ro60, TXLNB, USH1C and VIL1	
Yes	Inherited IFNAR1 Deficiency in a Child with Both Critical COVID-19 Pneumonia and Multisystem Inflammatory Syndrome	Hassan Abolhassani, et al.	2022	Cytokines	recombinant human type I interferons (IFNs)	

Yes	X-Linked TLR7 Deficiency Underlies Critical COVID-19 Pneumonia in a Male Patient with Ataxia-Telangiectasia	Hassan Abolhassani, et al.	2022	Cytokines	IFNA1, IFNA2, IFN-A2a, IFNA4, IFNA5, IFNA6, IFNA8, IFNA10, IFNA17, IFNA21, IFNB1, IFNW1, IFNG, IL6	
Yes	No link between type I interferon autoantibody positivity and adverse reactions to COVID-19 vaccines	Ahmet Yalcinkaya, et al.	2024	Cytokines/Antigen	IFN- α (IFNA1, 2, 4, 5, 6, 7, 8, 10, 14, 16, 17 and 21), IFN- β (IFNB), IFN- ϵ (IFNE), IFN- κ (IFNK), and IFN- ω (IFNW), Epstein-Barr virus, Spike (S protein), receptor binding domain (RBD), and nucleocapsid (N	
Preprint	Mucosal IgA to pre-fusion F protein predicts protection from RSV infection in a high burden setting	David Hodgson, et al.	2026	Protein	Protein G	
Yes	Serological Analysis of Herpes B Virus at Individual Epitope Resolution: From Two-Dimensional Peptide Arrays to Multiplex Bead Flow Assays	Sven-Kevin Hotop, et al.	2019	Protein	NeutrAvidin	
Yes	Autoantibodies to protein S may explain rare cases of coagulopathy following COVID-19 vaccination	Ahmet Yalcinkaya, et al.	2024	Protein/Antigen	Factor V, Protein S, Protein C, Prothrombin, PF4, ApoH (B2-Gp1), Antithrombin III, Epstein-Barr virus nuclear antigen 1 (EBNA1), SARS-CoV-2 spike, receptor binding domain & nucleocapsid protein	
Yes	Autoantibodies against type I IFNs in humans with alternative NF- κ B pathway deficiency	Tom Le Voyer, et al.	2023	Protein/Antigen	IFN- α 2, IFN- α 1, IFN- α 7, IFN- α 14, IFN- β 1, IFN- ϵ , IFN ω -1, IFN- α 5, IL-22, IFN- α 6, IFN- α 10, IFN- α 8, IFN- α 16, IFN- α 17, IFN- κ , anti-IgG, IFN- α 21, IL-17A, TROVE2, RBM38, IFN- α 4, IL-17F, and	
Yes	Identification of multiple arbovirus infections/exposure in Northeastern Brazil using a multiplex microsphere immunoassay	Wang W, et al.	2026	Virus-like particles	Chikungunya VLP, Dengue Virus (wild type and fusion loop)	
Yes	Development of a Multiplex Panel of Biomarkers to Assess Energy Metabolism in Cancer	Meenakshi P. Balakrishnan, et al.	2013	Antibody	HK2, PKM2 and LDHA antibodies	