

## Representative Publications Using **AimPlex®** Bead-Based Multiplex Immunoassays

1. Martínez-López S. et al. Cirrhosis-downregulated LSEctin can be retrieved by cytokines, shifts the TLR-induced LSECs secretome and correlates with the hepatic Th response. *Liver International*. 2024;00:1–15.

DOI: <https://doi.org/10.1111/liv.15836>

Analytes: Mouse Inflammation 16-Plex kit, C282216 (CCL4, TNF- $\alpha$ , IL-1 $\beta$ , IL-12p70, IL-9, CXCL10, IL-1 $\alpha$ , CCL3, IL-10, CXCL1, IL-13, CCL5, IL-6, IFN- $\gamma$ , IL-15, and CCL2).

Sample type: cell culture supernatant.

2. Nyarady B. et al. Growth and differentiation factor-15: A link between inflammaging and cardiovascular disease. *Biomedicine & Pharmacotherapy* 174 (2024) 116475.

DOI: <https://doi.org/10.1016/j.biopha.2024.116475>

Analytes: Human GDF-15.

Sample type: Human serum.

3. Milivojac T. et al. Ursodeoxycholic and chenodeoxycholic bile acids attenuate systemic and liver inflammation induced by lipopolysaccharide in rats. *February 9th, 2024 available at Research Square*.

DOI: <https://doi.org/10.21203/rs.3.rs-3936668/v1>

Analytes: Rat TNF-alpha, GM-CSF, IL-2, IFN-gamma, IL-6, and IL-1beta.

Sample type: Rat plasma.

4. Zeng X. et al. Helios characterized circulating follicular helper T cells with enhanced functional phenotypes and was increased in patients with systemic lupus erythematosus. *Clinical and Experimental Medicine*. 2024, 24:5.

DOI: <https://doi.org/10.1007/s10238-023-01289-6>

Analytes: Human IL-2, IL-4, IL-6, IL-10, TNF-alpha, IFN-gamma.

Sample type: cell culture supernatant.

5. Bitsianis S. et al. Effect of Intraperitoneal Chemotherapy with Regorafenib on IL-6 and TNF- $\alpha$  Levels and Peritoneal Cytology: Experimental Study in Rats with Colorectal Peritoneal Carcinomatosis. *J. Clin. Med.* 2023, 12, 7267.

DOI: <https://doi.org/10.3390/jcm12237267>

Analytes: Rat IL-6, and TNFalpha.

Sample type: Rat serum.

6. Guo L. et al. Alterations of Cytokine Profiles in Patients With Recurrent Implantation Failure. *Front. Endocrinol.* 13:949123.

DOI: <https://doi.org/10.3389/fendo.2022.949123>

Analytes: Human IL-2, IL-4, IL-6, IL-10, IL-17A, IFN-gamma, TNF-alpha, TNF-beta, G-CSF, and GM-CSF.

Sample type: Human serum.

7. Li D. et al. Polydatin combined with hawthorn flavonoids alleviate high fat diet induced atherosclerosis by remodeling the gut microbiota and glycolipid metabolism. *October 2023, PREPRINT (Version 1) available at Research Square.*

DOI: <https://doi.org/10.21203/rs.3.rs-3318517/v1>

Analytes: Mouse IL-1beta, IL-2, IL-6, IL-17A, TNFalpha, and CRP.

Sample type: Mouse serum.

8. Mami W. et al. Inflammatory Bowel Disease Increases the Severity of Myocardial Infarction after Acute Ischemia–Reperfusion Injury in Mice. *Biomedicines* 2023, 11, 2945.

DOI: <https://doi.org/10.3390/biomedicines11112945>

Analytes: Mouse Th1/Th2/Th17 7-plex Kit, C281107 (IFNgamma, IL-2, IL-4, IL-6, IL-10, IL-17A, TNFalpha).

Sample type: Mouse serum.

9. Chrienova Z. et al. Frentizole derivatives with mTOR inhibiting and senomorphic properties. *Biomedicine & Pharmacotherapy* 167 (2023) 115600.

DOI: <https://doi.org/10.1016/j.biopha.2023.115600>

Analytes: Human Inflammation 11-Plex, C192211 (IFNgamma, IL-1alpha, IL-1beta, IL-6, IL-8, IL-10, IL-12p70, IL-27, IP-10, MCP-1, TNFalpha).

Sample type: cell culture supernatant.

10. Zheng R. et al. Inhibition of HAdV-14 induced apoptosis by selenocystine through ROS-mediated PARP and p53 signaling pathways. *Journal of Trace Elements in Medicine and Biology* 79 (2023) 127213.

DOI: <https://doi.org/10.1016/j.jtemb.2023.127213>

Analytes: Human IL-6, IL-8.

Sample type: cell culture supernatant.

11. Domvri K. et al. Prognostic Value of Serum Biomarkers in Patients with Idiopathic Pulmonary Fibrosis in Relation to Disease Progression. *Pers. Med.* 2023, 13, 1307.

DOI: <https://doi.org/10.3390/jpm13091307>

Analytes: Human CCL18, CXCL13, VEGF-A, IL-8, IGFBP-1, IGFBP-2, IGFBP-7, MMP-1, MMP-9, MPO, and ICAM-1.

Sample type: Human serum.

12. Kiss L. Z. et al. Association of growth and differentiation factor-15 with coronary artery calcium score and ankle-brachial index in a middle-aged and elderly Caucasian population sample free of manifest cardiovascular disease. *GeroScience* (2023).

DOI: <https://doi.org/10.1007/s11357-023-00899-y>

Analytes: Human GDF-15.

Sample type: Human plasma.

13. Takahashi A et al. Adipose-Derived Mesenchymal Stromal Cell Transplantation for Severe Spinal Cord Injury: Functional Improvement Supported by Angiogenesis and Neuroprotection. *Cells*. 2023, 12, 1470.

DOI: <https://doi.org/10.3390/cells12111470>

Analytes: Rat IL-1beta, IL-6, IL-10, TNFalpha, IFNgamma, VEGF-A, BDNF, beta-NGF/NGFB, PDGF-AB, PDGF-BB, FGF basic, CCL2, CCL5, CCL7, CXCL1, CXCL10, and CXCL12.

Sample type: Rat cell culture supernatants.

14. Papadopoulou A et al. SARS-CoV-2-specific T cell therapy for severe COVID-19: a randomized phase 1/2 trial. *Nature Medicine*.

DOI: <https://doi.org/10.1038/s41591-023-02480-8>

Analytes: Human Th1/Th2 5-Plex Panel 1, C191051 (IFNgamma, IL-4, IL-6, IL-10, TNFalpha).

Sample type: Human serum.

15. Guo M et al. 5-Nitrobenzo[c][1, 2, 5]selenadiazole as therapeutic agents in the regulation of oxidative stress and inflammation induced by influenza A(H1N1)pdm09 in vitro and in vivo. *J Med Virol*. 2023;95:e28920.

DOI: <https://doi.org/10.1002/jmv.28920>

Analytes: Human IL-12p70, IL-17F, TNFalpha, TNFbeta, IFNgamma.

Sample type: Human cell culture supernatants.

16. Hu R et al. Cytokine levels in patients with non-M3 myeloid leukemia are key indicators of how well the disease responds to chemotherapy.

DOI: <https://doi.org/10.21203/rs.3.rs-2541753/v1>

Analytes: Human Th1/Th2/Th17 14-plex, C191114 (IFNgamma, IL-1beta, IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, IL-17A, IL-17F, IL-22, TNFalpha, and TNFbeta).

Sample type: Human serum.

17. Zhao S et al. Influence of cytokines on early death and coagulopathy in newly diagnosed patients with acute promyelocytic leukemia. *Front. Immunol*. 14:1100151.

DOI: <https://doi.org/10.3389/fimmu.2023.1100151>

Analytes: Human Th1/Th2/Th17 14-plex, C191114 (IFN $\gamma$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, IL-17A, IL-17F, IL-22, TNF $\alpha$ , and TNF $\beta$ ).

Sample type: Human serum.

18. Hu Y et al. Hypermethylation of Smad7 in CD4+ T cells is associated with the disease activity of rheumatoid arthritis. *Front. Immunol.* 14:1104881.

DOI: <https://doi.org/10.3389/fimmu.2023.1104881>

Analytes: Human Th1/Th2/Th17 14-plex, C191114 (IFN $\gamma$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, IL-17A, IL-17F, IL-22, TNF $\alpha$ , and TNF $\beta$ ).

Sample type: Human serum.

19. John S et al. Bioactive compounds in Layacha brown rice (*Oryza sativa* L.) improve immune responses in mice via activation of transcription factor Nrf2. *Food Bioscience* 2023

DOI: <https://doi.org/10.1016/j.fbio.2023.102785>

Analytes: Mouse Th1/Th2/Th17 17-plex, C281117 (GM-CSF, IFN $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-10, IL-12p70, IL-13, IL-17A, IL-21, IL-22, KC, TNF $\alpha$  and TSLP).

Sample type: Mouse cell culture supernatants.

20. Guan X et al. Expression of Th1/2/17 Cytokines in CML with or without Pulmonary Bacterial and Fungal Coinfection. *Journal of Oncology* Volume 2023, Article ID 6318548

DOI: <https://doi.org/10.1155/2023/6318548>

Analytes: Human Th1/Th2/Th17 14-plex, C191114 (IFN $\gamma$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, IL-17A, IL-17F, IL-22, TNF $\alpha$ , and TNF $\beta$ ).

Sample type: Human serum.

21. Wang WX et al. Serum cytokine change profile associated with HBsAg loss during combination therapy with PEG-IFN- $\alpha$  in NAs-suppressed chronic hepatitis B patients. *Front. Immunol.* 14:1121778. 2023

DOI: <https://doi.org/10.3389/fimmu.2023.1121778>

Analytes: Human IFN $\gamma$ , IL-1 beta, IL-1RN, IL-2, IL-4, IL-6, IL-10, IL-12p70, IL-17A, CCL2, CCL3, CCL5, CXCL8, CXCL10, TNF $\alpha$ , and CSF2.

Sample type: Human serum.

22. Lambrechtset Y et al. Circulating biomarkers at diagnosis correlate with distant metastases of early luminal-like breast cancer. *Genes & Immunity* 2023

DOI: <https://doi.org/10.21203/rs.3.rs-2924520/v1>

Analytes: Human fractalkine/CX3CL1, GRO $\alpha$ /CXCL1, IP-10/CXCL10, TECK/CCL25, TARC/CCL17, IL-8/CXCL8, MCP-1/CCL2, ITAC/CXCL11, BCA-1/CXCL13, RANTES/CCL5, MIP-3b/CCL19, CTACK/CCL27, MIP-3 $\alpha$ /CCL20, 6-Ckine/CCL21, and CXCL12/SDF-1.

Sample type: Human plasma.

23. Ma D et al. Immunomodulatory effects of umbilical mesenchymal stem cell-derived exosomes on CD4+ T cells in patients with primary Sjögren's syndrome. *Inflammopharmacology* Mar. 2023

DOI: <https://doi.org/10.1007/s10787-023-01189-x>

Analytes: Human IFN $\gamma$ , TNF $\alpha$ , IL-2, IL-4, IL-22, IL-6, IL-17A, IL-17F, IL-10, and TGF $\beta$ .

Sample type: Human cell culture supernatants.

24. Khadiilkar P et al. A comparative study of modulatory interaction between cytokines and apoptotic proteins among Scleroderma patients with and without pulmonary involvement. *Cytokine* 166 (2023) 156183

DOI: <https://doi.org/10.1016/j.cyto.2023.156183>

Analytes: Human IL-1beta, IL-4, IL-6, IL-22, TNF $\alpha$ , IFN $\gamma$ .

Sample type: Human serum.

25. Tong R et al. Characterizing the cellular and molecular variabilities of peripheral immune cells in healthy recipients of BBIBP-CorV inactivated SARS-CoV-2 vaccine by single-cell RNA sequencing. *Emerging Microbes & Infections*. 2023

DOI: <https://doi.org/10.1080/22221751.2023.2187245>

Analytes: Human IFN $\gamma$ , IFN $\alpha$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-10, IL-17A, TNF $\alpha$ .

Sample type: Human serum.

26. Shen C et al. Changes in expression levels of immune cells and inflammatory cytokines in pre-eclampsia patients before and after delivery. *Journal of Reproductive Immunology* 156 (2023) 103812.

DOI: <https://doi.org/10.1016/j.jri.2023.103812>

Analytes: Human Th1/Th2/Th17 14-plex, C191114 (IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-8, IL-6, IL-12p70, IL-10, IL-22, TNF- $\beta$ , IFN $\gamma$ , IL-17A, TNF $\alpha$ , IL-17F).

Sample type: Human serum.

27. Liang Y et al. Maternal intermittent fasting in mice disrupts the intestinal barrier leading to metabolic disorder in adult offspring. *COMMUNICATIONS BIOLOGY* (2023) 6:30.

DOI: <https://doi.org/10.1038/s42003-022-04380-y>

Analytes: Mouse GM-CSF, IFN $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-10, IL-12p70, IL-13, IL-17A, IL-21, IL-22, IL-23, KC, TNF $\alpha$  and TSLP.

Sample type: Mouse intestinal tissue extract.

28. Villatoro A et al. Endogenous IL-1 receptor antagonist restricts healthy and malignant myeloproliferation. *Nature Communications* (2023)1 4:12.

DOI: <https://doi.org/10.1038/s41467-022-35700-9>

Analytes: Mouse IL-1RN.

Sample type: BM extracellular fluid (BMEF).

29. Chrienova Z et al. Discovery of small molecule mechanistic target of rapamycin inhibitors as anti-aging and anti-cancer therapeutics. *Front. Aging Neurosci.* 14:1048260.

DOI: <https://doi.org/10.3389/fnagi.2022.1048260>

Analytes: Human Inflammation 11-Plex (IFN- $\gamma$ , IL-1 $\alpha$ , IL-1  $\beta$ , IL-6, IL-8, IL-10, IL-12p70, IL-27, IP-10, MCP-1, and TNF $\alpha$ ), C192211.

Sample type: Human cell culture supernatants.

30. Nie ZQ et al. TH1/Treg ratio may be a marker of autism in children with immune dysfunction. *Research in Autism Spectrum Disorders* 101 (2023) 102085.

DOI: <https://doi.org/10.1016/j.rasd.2022.102085>

Analytes: IL-2, IL-4, IL-5, IL-6, IL-10, IL-17A, TNF- $\alpha$ , and IFN-  $\gamma$ ; TGFbeta1.

Sample type: Human plasma.

31. Bathini P et al. Systemic inflammation is associated with microglial dysfunction and vascular gene expression changes in the hippocampus. *Brain, Behavior, & Immunity - Health* (2023).

DOI: <https://doi.org/10.1016/j.bbih.2022.100568>

Analytes: Mouse Inflammation 5-Plex Panel 1 (C282251): IL-1 $\beta$ , IL-6, IL-10, MCP-1, TNF $\alpha$ .

Sample type: Mouse plasma.

32. Batsos G et al. Vitreous inflammatory and angiogenic factors on patients with proliferative diabetic retinopathy or diabetic macular edema: the role of Lipocalin2. *BMC Ophthalmology* (2022) 22:496.

DOI: <https://doi.org/10.1186/s12886-022-02733-z>

Analytes: IL-1 $\beta$ , IL-6, IL-8, IL-27, TNF $\alpha$ , ICAM-1, VCAM, MCP-1, VEGFA, and LCN2 (NGAL).

Sample type: Human vitreous samples.

33. Du E et al. Efficient Synthesis and Evaluation of Novel Sulfonated Dihydropyrimidinthione Derivatives for the Treatment of UV-B Induced Corneal Damage. *Photochem Photobiol.* 2022 Nov 27.

DOI: <https://doi.org/10.1111/php.13748>

Analytes: IL-6, IL-8, IL-10, and VEGF-A.



Sample type: Human cell culture supernatants.

34. Desai N et al. Perturbations of immune landscape in COVID-19 associated mucormycosis. *Mycoses*. 2022 Nov 15.

DOI: <https://doi.org/10.1111/myc.13546>

Analytes: IL-1 $\beta$ , IFN- $\gamma$ , IL-4, IL-6, IL-22, IL-17A, IL-10, IL-2, IL-12p70, IL-8, IL-7, IL-21, MCP-1, TNF- $\alpha$ , and GM-CSF.

Sample type: Human serum.

35. Souissi C et al. PpSP32, Phlebotomus papatasi immunodominant salivary protein, exerts immunomodulatory effects on human monocytes, macrophages and lymphocytes. *Research Square*, 03 Nov 2022

DOI: <https://doi.org/10.21203/rs.3.rs-2222010/v1>

Analytes: Human Inflammation 11-Plex (C192211): TNF- $\alpha$ , IP-10, IL-1 $\beta$ , IL-27, IFN- $\gamma$ , IL-8, IL-12p70, MCP-1, IL-1 $\alpha$ , IL-6, IL-10.

Sample type: Human cell culture supernatants.

36. Zhang J et al. Cytokines help suggest aplastic anemia with pulmonary bacterial or co-fungal infection. *Sci Rep*. 2022 Nov 1;12(1):18373.

DOI: <https://doi.org/10.1038/s41598-022-22503-7>

Analytes: Human Th1/Th2/Th17 14-plex (C191114): IFN- $\gamma$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, IL-17A, IL-17F, IL-22, TNF- $\alpha$  and TNF- $\beta$ .

Sample type: Human serum.

37. ELBini-Dhouib I et al. Dual Mechanism of Action of Curcumin in Experimental Models of Multiple Sclerosis. *Int J Mol Sci*. 2022 Aug; 23(15): 8658.

DOI: <https://doi.org/10.3390/ijms23158658>

Analytes: Mouse Th1/Th2/Th17 7-plex Kit (C281107): IFN $\gamma$ , IL-2, IL-4, IL-6, IL-10, IL-17A, TNF $\alpha$ .

Sample type: Mouse cell culture supernatants.

38. Cros C et al. Nicotinamide Mononucleotide Administration Triggers Macrophages Reprogramming and Alleviates Inflammation During Sepsis Induced by Experimental Peritonitis. *Front. Mol. Biosci.* 2022, 9:895028.

DOI: <https://doi.org/10.3389/fmolb.2022.895028>

Analytes: Mouse IL-6, IL-10, IL-12p70, and TNF $\alpha$ .

Sample type: Mouse cell culture supernatants.

39. Chen MC et al. pcMSC Modulates Immune Dysregulation in Patients With COVID-19-Induced Refractory Acute Lung Injury. *Front. Immunol.* 2022, 13:871828.

DOI: <https://doi.org/10.3389/fimmu.2022.871828>

Analytes: Human IL-1 $\beta$ , IFN $\gamma$ , TNF $\alpha$ , IL-2, IL-6, IL-10, IL-13, IL-5, IL-4, IL-17A, IL-18, and IL-22.

Sample type: Human serum.

40. Boziki M et al. Ocrelizumab in Patients with Active Primary Progressive Multiple Sclerosis: Clinical Outcomes and Immune Markers of Treatment Response. *Cells* 2022; 11, 1959.

DOI: <https://doi.org/10.3390/cells11121959>

Analytes: Human IL-6; IFN $\gamma$ ; TNF $\alpha$ ; IL-1 $\beta$ ; IL-12; IL-2; IL-4; IL-5; IL-10; and IL-17A.

Sample type: Human serum.

41. Zhang L et al. Increased Cytokine Levels Assist in the Diagnosis of Respiratory Bacterial Infections or Concurrent Bacteremia in Patients With Non-Hodgkin's Lymphoma. *Front. Cell. Infect. Microbiol.*, 08 April 2022.

DOI: <https://doi.org/10.3389/fcimb.2022.860526>

Analytes: Human Th1/Th2/Th17 14-plex (C191114): IFN $\gamma$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, IL-17A, IL-17F, IL-22, TNF $\alpha$ , TNF $\beta$ .

Sample type: Human serum.

42. Bai X et al. Analysis of transcriptome characteristics of UTI therapy for cerebral injury after CA/ROSC based on RNA-seq technique. *Iran J Basic Med Sci* 2022; 25:715-722.

DOI: <https://dx.doi.org/10.22038/IJBMS.2022.61990.13722>

Analytes: Rat IL-6, and TNF $\alpha$ .

Sample type: Rat serum.

43. Hu B et al. Effects of 'Healthy' Fecal Microbiota Transplantation against the Deterioration of Depression in Fawn-Hooded Rats. *mSystems*. 2022 Jun 28;7(3).

DOI: [10.1128/msystems.00218-22](https://doi.org/10.1128/msystems.00218-22)

Analytes: Rat IL-4, IL-10, TNF $\alpha$ , IL-1 $\beta$ , IL-2, IL-6, IL-17A, and IFN $\gamma$ .

Sample type: Rat hippocampus and serum.

44. Tamura K et al. Effects of postnatal hydrocortisone on cytokine profile in extremely preterm infants. *Pediatrics International* (Mar. 29<sup>th</sup>, 2022).

DOI: <https://doi.org/10.1111/ped.15205>

Analytes: Human Th1/Th2/Th17 12-plex (C191112): IFN $\gamma$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, IL-17A, TNF $\alpha$ , TNF $\beta$ .

Sample type: Human serum.

45. Fleury S et al. Clinical Correlates Identify ProBDNF and Thrombo-Inflammatory Markers as Key Predictors of Circulating p75NTR Extracellular Domain Levels in Older Adults. *Front. Aging Neurosci.*, 21 February 2022.

DOI: <https://doi.org/10.3389/fnagi.2022.821865>

Analytes: Human BDNF, sCD40L, and P-selectin.

Sample type: Human plasma.

46. Wang YS et al. Rasmussen's encephalitis is characterized by relatively lower production of IFN- $\beta$  and activated cytotoxic T cell upon herpes viruses infection. *Journal of Neuroinflammation* (2022) 19:70.

DOI: <https://doi.org/10.1186/s12974-022-02379-0>

Analytes: Human IFN- $\gamma$ , TNF- $\alpha$ , sCD137, GM-CSF, IL-1 $\alpha$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, IL-13, IL-15, IL-17A, IL-27, IL-31, IL-33, CXCL10, CCL2, CCL3, CCL4, CCL5; GZMB

Sample type: brain tissue and cerebrospinal fluid (CSF).

47. Li S et al. Optimizing the Method for Differentiation of Macrophages from Human Induced Pluripotent Stem Cells. *Stem Cells International* Volume 2022, Article ID 6593403.

DOI: <https://doi.org/10.1155/2022/6593403>

Analytes: Human IL-6, IL-10, TNF $\alpha$ .

Sample type: cell culture supernatants.

48. Schroyen G et al. Neuroinflammation and Its Association with Cognition, Neuronal Markers and Peripheral Inflammation after Chemotherapy for Breast Cancer. *Cancers* 2021, 13, 4198.

DOI: <https://doi.org/10.3390/cancers13164198>

Analytes: Human beta-NGF, Eotaxin, IL-4, MIP-1beta, VCAM-1, VEGF-A, BDNF, IFN $\gamma$ , IL-1alpha, IL-1beta, IL-6, IL-8, IL-10, IL-12p70, IL-18, MCP-1, TNF $\alpha$

Sample type: Human plasma.

49. Liu K et al. Expression and correlation of IL-2, IL-10 and TNF- $\alpha$  in patients with multiple myeloma-infected herpes zoster treated by bortezomib-containing regimen. *Am J Transl Res* 2021;13(12):13732-13740.

PMID: 35035711

Analytes: Human IL-2, IL-10, TNF $\alpha$ .

Sample type: Human blood.

50. Chen M et al. Impact of Placenta-Derived Mesenchymal Stem Cells Treatment on Patients with Severe Lung Injury Caused by COVID-19 Pneumonia: Clinical and Immunological Aspect.

*DOI:10.21203/rs.3.rs-1013382/v1*

Analytes: Human IFN $\gamma$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-13, IL-6, IL-18, IL-10, IL-22, IL-17A, TNF $\alpha$ .

Sample type: Human serum.

51. Prtina A et al. The Effect of Three-Month Vitamin D Supplementation on the Levels of Homocysteine Metabolism Markers and Inflammatory Cytokines in Sera of Psoriatic Patients. *Biomolecules* 2021, 11, 1865.

*DOI: 10.3390/biom11121865*

Analytes: Human Th1/Th2 10-plex Panel (C190010): IFN $\gamma$ , IL-1beta, IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, TNF $\alpha$ .

Sample type: Human serum.

52. Chen XH et al. Chimeric antigen receptor T cells targeting CD147 for non-small cell lung cancer therapy. *Translational Oncology* 16 (2022) 101309.

*DOI: 10.1016/j.tranon.2021.101309*

Analytes: Human Th1/Th2/Th17 7-plex Panel (C191107): IFN $\gamma$ , IL-2, IL-4, IL-6, IL-10, IL-17A, TNF $\alpha$ .

Sample type: Cell culture supernatant.

53. Salovska B et al. Peroxiredoxin 6 protects irradiated cells from oxidative stress and shapes their senescence-associated cytokine landscape. *Redox Biology* 49 (2022) 102212.

*DOI: 10.1016/j.redox.2021.102212*

Analytes: Human Inflammation 11-Plex Panel (C192211): IFN $\gamma$ , IL-1alpha, IL-1beta, IL-6, IL-8, IL-10, IL-12p70, IL-27, IP-10, MCP-1, TNF $\alpha$

Sample type: Cell culture supernatant.

54. Zheng R et al. Changes of Host Immunity Mediated by IFN- $\gamma$ <sup>+</sup> CD8<sup>+</sup> T Cells in Children with Adenovirus Pneumonia in Different Severity of Illness. *Viruses* 2021, 13, 2384.

DOI: [10.3390/v13122384](https://doi.org/10.3390/v13122384)

Analytes: IFN- $\gamma$ , IL-1 $\beta$ , IL-6, IL-8, IL-10, IL-12p70, IL-17F, IL-22, TNF- $\alpha$ , and TNF- $\beta$ .

Sample type: Human serum.

55. Setia P et al. FADD Deficiency Mimicking ALPS-FAS: An Expanding Phenotype. *J of Clinical Immunology*.

DOI: [10.21203/rs.3.rs-995974/v1](https://doi.org/10.21203/rs.3.rs-995974/v1)

Analytes: sFASL, IL-10, IL-18 and sCD25.

Sample type: Human serum.

56. Tamura K et al. Effects of Postnatal Hydrocortisone Treatment on Cytokine Profile in Preterm Infants at Risk of Bronchopulmonary Dysplasia.

DOI: [doi.org/10.21203/rs.3.rs-674256/v1](https://doi.org/10.21203/rs.3.rs-674256/v1)

Analytes: Human Th1/Th2/Th17 12-plex (C191112): IFN $\gamma$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, IL-17A, TNF $\alpha$ , TNF $\beta$ .

Sample type: Human serum.

57. Torii K et al. Determining the immune environment of cutaneous T-cell lymphoma lesions through the assessment of lesional blood drops. *Sci Rep*. 2021 Oct 4;11(1):19629.

DOI: [10.1038/s41598-021-98804-0](https://doi.org/10.1038/s41598-021-98804-0)

Analytes: CCL21 and CCL22.

Sample type: Human serum.

58. Boukhatem I et al. The brain-derived neurotrophic factor prompts platelet aggregation and secretion. *Blood Adv.* 2021 Sep 28;5(18):3568-3580.

DOI: [10.1182/bloodadvances.2020004098](https://doi.org/10.1182/bloodadvances.2020004098)

Analytes: Human IL-8, ENA-78, PF4, TARC, VEGF-A, VEGF-C, RANTES, PDGF-AB, SDF-1, and ANGPT-1.

Sample type: Human platelets.

59. Bélanger JC et al. Brain-Derived Neurotrophic Factor Mitigates the Association Between Platelet Dysfunction and Cognitive Impairment. *Front. Cardiovasc. Med.*, 2021 Sep 7;8:739045.

DOI: [10.3389/fcvm.2021.739045](https://doi.org/10.3389/fcvm.2021.739045)

Analytes: Human BDNF, and sP-selectin.

Sample type: Human plasma.

60. Cheng Q et al. Prognostic nomogram incorporating cytokines for overall survival in patients with newly diagnosed multiple myeloma. *International Immunopharmacology* 99 (2021) 108016.

DOI: [10.1016/j.intimp.2021.108016](https://doi.org/10.1016/j.intimp.2021.108016)

Analytes: Human MIP-1 $\alpha$ , MIF, TNF- $\alpha$ , VEGF- $\alpha$ , MCP-1, IL-17A, IL-6, IL-21 and IL-10.

Sample type: Human serum.

61. Ma C et al. In vitro Immunomodulatory Effects of Human Umbilical Cord-Derived Mesenchymal Stem Cells on Peripheral Blood Cells from Warm Autoimmune Hemolytic Anemia Patients. *Acta Haematol.* 2021.

DOI: [10.1159/000506759](https://doi.org/10.1159/000506759)

Analytes: Human IL-2, IL-4, IL-10, IFN- $\gamma$ , TNF- $\alpha$ , and IL-17A.

Sample type: Cell culture supernatant.

62. Sun C et al. Whole-genome sequencing suggests a role of MIF in the pathophysiology of TEMPI syndrome. *Blood Advances*. 22 JUNE 2021, VOLUME 5, NUMBER 12

DOI: [10.1182/bloodadvances.2020003783](https://doi.org/10.1182/bloodadvances.2020003783)

Analytes: Human MIF.

Sample type: Human serum and BM aspirates.

63. Lang J et al. Pre- and Postictal Changes in the Innate Immune System: Cause or Effect? *Eur Neurol*. June 17, 2021

DOI: [10.1159/000516556](https://doi.org/10.1159/000516556)

Analytes: Human IFN- $\gamma$ , IL-1 $\beta$ , IL-1RA, IL-4, IL-6, IL-10, IL-12, IL-17, MCP-1, MIP-1 $\alpha$ , and TNF $\alpha$ .

Sample type: Human serum.

64. Berben L et al. Blood Immunosenescence Signatures Reflecting Age, Frailty and Tumor Immune Infiltrate in Patients with Early Luminal Breast Cancer. *Cancers* 2021, 13, 2185

DOI: <https://doi.org/10.3390/cancers13092185>

Analytes: Human Inflammation 11-plex, PN, C192211, IFN $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-6, IL-8, IL-10, IL-12p70, IL-27, IP-10, MCP-1, TNF $\alpha$

Sample type: Human plasma.

65. Kanayama Y et al. Bath Psoralen Plus UVA Therapy Suppresses Keratinocyte-Derived Chemokines in Pathogenetically Relevant Cells. *JID Innovations* (2021); 1:100027

DOI: [10.1016/j.xjidi.2021.100027](https://doi.org/10.1016/j.xjidi.2021.100027)

Analytes: Human CCL21, CCL18 (PARC), CCL19 (MIP-3 $\beta$ ), CCL22 (MDC), CCL27 (CTACK), CXCL2 (GRO $\beta$ ), CXCL12 (SDF-1), CXCL16, and CX3CL1 (fractalkine).



Sample type: Human serum.

66. Torii K et al. Skin liquid biopsy method for assessing the immune environment of cutaneous T-cell lymphoma lesions. Apr. 2021;

DOI: <https://doi.org/10.21203/rs.3.rs-410301/v1>

Analytes: Human CCL21 and CCL22.

Sample type: Human serum.

67. Xu K et al. Human umbilical cord mesenchymal stem cell-derived small extracellular vesicles ameliorate collagen-induced arthritis via immunomodulatory T lymphocytes. *Molecular Immunology* 135 (2021) 36–44;

<https://doi.org/10.1016/j.molimm.2021.04.001>

Analytes: Rat IL-17, IL-10, and TGF- $\beta$ .

Sample type: Rat serum.

68. Cao X et al. Dysbiotic Gut Microbiota and Dysregulation of Cytokine Profile in Children and Teens With Autism Spectrum Disorder. *Front. Neurosci.* 2021 15:635925

doi: 10.3389/fnins.2021.635925

Analytes: Human IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-17A, IL-17F, TNF- $\alpha$ , TNF- $\beta$ , IFN- $\gamma$ , IL-22, and IL-12 p70 (Cat# C191114)

Sample type: Human plasma.

69. Fan X et al. Changes of Damage Associated Molecular Patterns in COVID-19 Patients. *Infectious Diseases & Immunity* (2021) 1:1

DOI: <http://dx.doi.org/10.1097/01.ID9.0000733572.40970.6c>

Analytes: Human IL-1RA, MCP-1, MIP-1 $\alpha$ , IP-10, IL-1 $\beta$ , IL-2, IL-6, IL-12P70, TNF- $\alpha$ , IFN- $\gamma$ .

Sample type: Human plasma.

70. Schmidt J et al. Detection of Inflammatory and Homeostasis Biomarkers after Selective Removal of Carious Dentin—An In Vivo Feasibility Study. *Journal of Clinical Medicine* 2021; 10 (5), 1003

<https://doi.org/10.3390/jcm10051003>

Analytes: Human MMP-7, MMP-8, and MMP-9

Sample type: rinsing liquid from dental cavities.

71. Ishikawa-Nishimura M et al. A Case of Pruritic Urticarial Papules and Plaques of Pregnancy: Pathophysiology and Serum Cytokine Profile. *Case Rep Dermatol* 2021;13:18–22

DOI: 10.1159/000511494

Analytes: Human Th1/Th2/Th17 18-plex (C191118, GM-CSF, IFN $\gamma$ , IL-1beta, IL-2, IL-4, IL-5, IL-6, IL-8, IL-9, IL-10, IL-12p70, IL-17A, IL-17F, IL-22, IL-33, TNF $\alpha$ , TNF $\beta$ , TSLP)

Sample type: Human serum.

72. Kondo M et al. Transition of Serum Cytokine Concentration in *Rickettsia japonica* Infection. *Infect. Dis. Rep.* 2020, 12, 127–131

DOI: 10.3390/idr12030023

Analytes: Human IFN- $\gamma$ , IL-12p70, TNF- $\alpha$ , IL-2, IL-8, IL-4, IL-5, IL-9, IL-33, IL-6, IL-17A, IL-17F, and IL-22.

Sample type: Human serum.

73. Wang D et al. Detecting 24 Kinds of Cytokines Via Flow Cytometry Aimplex Kit Is an Effective Way to Monitor CRS after CAR-T Cells Infusion. *Blood* (2020) 136 (Supplement 1): 50–51.

DOI: 10.1182/blood-2020-138404

Analytes: Panel 1: Human IFN- $\gamma$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, IL-17A, IL-17F, IL-22, TNF- $\alpha$ , and TNF- $\beta$ . Panel 2: sCD25, GM-CSF, IL-15, MCP-1, Granzyme B, Reg3A, ST2, TNFRSF1A, Elafin, and MIP-1 alpha.

Sample type: Human serum.

74. Ozsurekci Y et al. Predictive value of cytokine/chemokine responses for the disease severity and management in children and adult cases with COVID-19. *J Med Virol.* 2020;1–10.

DOI: 10.1002/jmv.26683

Analytes: Human Inflammation 18-Plex (C192218, IFN  $\gamma$ , IL- $\alpha$ , IL- $\beta$ , IL-4, IL-6, IL-8, IL-10, IL-12p70, IL-13, IL-17A, IL-27, IL-31, IL-33, IP-10, MCP-1, MIP-1 $\alpha$ , MIP-1 $\beta$ , and TNF $\alpha$ ) and Human Inflammatory Chemokine 7-Plex Panel 2 (C193372, IP-10, I-TAC, MIP-1 $\alpha$ , MIP-1 $\beta$ , 6Ckine, MDC, MIP-3 $\beta$ ).

Sample type: Human serum.

75. Chen X et al. Correlation study between blood cytokines and lymphocytes in early postoperative critical patients with compromised immune function. *Medicine* (2020) 99:42

PMID: 33080681

DOI: 10.1097/MD.00000000000022459

Analytes: Human IL-2, IL-4, IL-6, IL-10, IL-17A, IFN- $\gamma$ , TNF- $\alpha$ , TNF- $\beta$ , G-CSF, and GM-CSF.

Sample type: Human plasma.

76. Berben L et al. Age-related remodeling of the blood immunological portrait and the local tumor immune response in patients with luminal breast cancer. *Clinical & Translational Immunology* 2020; 9: e1184

DOI: 10.1002/cti2.1184

Analytes: Human Inflammation 11-Plex (C192211, IFN $\gamma$ , IL-1alpha, IL-1beta, IL-6, IL-8, IL-10, IL-12p70, IL-27, IP-10, MCP-1, TNF $\alpha$ ).

Sample type: Human plasma.

77. Aloufi N [The role of sCD127 in IL-7-Mediated T cell homeostasis \*in vivo\*](#). Thesis submitted to the University of Ottawa in partial fulfillment of the requirements for the master's degree in Microbiology and Immunology

Analytes: Mouse IL-7 and Mouse IL-7R $\alpha$ /sCD127 single-Plex kits.

Sample type: Mouse serum.

78. Meng F et al. Human umbilical cord-derived mesenchymal stem cell therapy in patients with COVID-19: a phase 1 clinical trial. *Signal Transduct Target Ther.* 2020 Aug 27;5(1):172

PMID: 32855385

DOI: 10.1038/s41392-020-00286-5

Analytes: Human IL-6, IFN- $\gamma$ , TNF- $\alpha$ , MCP-1, IP-10, IL-22, IL-1RA, IL-18, IL-8, and MIP-1 $\alpha$ .  
Sample type: Human plasma.

79. Umaoka A et al. Skin Inflammation and Testicular Function: Dermatitis Causes Male Infertility via Skin-Derived Cytokines. *Biomedicines*, 2020 Aug 20;8(9):E293

PMID: 32825298

DOI: 10.3390/biomedicines8090293

Analytes: Mouse TNF- $\alpha$ , IL-1 $\beta$ , IL-12p70, MCP-1, IFN- $\gamma$ , IL-6, KC, IL-10, IL-1 $\alpha$ , IP-10, and IL-23.  
Sample type: Mouse epididymal suspension.

80. Zhang J et al. Single-cell landscape of immunological responses in patients with COVID-19. *Nature Immunology* 21, 1107–1118 (2020)

DOI: <https://doi.org/10.1038/s41590-020-0762-x>

Analytes: Human IFN- $\gamma$ , IL-6, IL-18, MCP-1, MIP-1 $\alpha$ , and IP-10.  
Sample type: Human plasma.

81. Bathini P et al. Systemic inflammation causes microglial dysfunction with a mixed AD-like pathology. <https://www.biorxiv.org/content/10.1101/2020.07.27.223198v1>

DOI: <https://doi.org/10.1101/2020.07.27.223198>

Analytes: Mouse IL-6, IL-10, MCP-1, and TNF-alpha.  
Sample type: Mouse plasma.

82. Tan L et al. Elevated Interleukin-6 Levels within 72 Hours Post Admission Are Associated with Disease Progression in Nonseptic Critically Ill Children. *BioMed Research International* Volume 2020, Article ID 4596851

DOI: <https://doi.org/10.1155/2020/4596851>

Analytes: Human IL-2, IL-4, IL-6, IL-10, IL-17A, G-CSF, GM-CSF, TNF-alpha, TNFbeta, and IFNgamma.  
Sample type: Human plasma.

83. Hsiao T et al. Serum Neurofilament Light Polypeptide is a Biomarker for Inflammation in Cerebrospinal Fluid Caused by Fine Particulate Matter. *Aerosol and Air Quality Research*, 20: 1665–1674, 2020

DOI: <https://doi.org/10.4209/aaqr.2019.08.0376>

Analytes: Rat IL-4, IL-6, IL-10, and TNF-alpha.

Sample type: Rat serum.

84. Delli FS et al. Total IgE, eosinophils, and interleukins 16, 17A, and 23 correlations in severe bullous pemphigoid and treatment implications. *Dermatol Ther* 2020 Jul 4; e13958

PMID: 32621642

DOI: <https://doi.org/10.1111/dth.13958>

Analytes: Human IL-16, IL-17A, and IL-23p19.

Sample type: Human serum and Bullous pemphigoid (BP) skin blisters fluid.

85. Song J et al. Immunological and inflammatory profiles in mild and severe cases of COVID-19. *Nat Commun* 11, 3410 (2020)

DOI: <https://doi.org/10.1038/s41467-020-17240-2>

Analytes: Human IL-1beta, IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, IL-17A, IL-17F, IL-22, TNF-alpha, TNFbeta, IFNgamma, IL-1RA, IL-18, G-CSF, RANTES, MCP-1, IP-10, and MIP-1alpha.

Sample type: Human plasma.

86. Wang Z et al. Axl deficiency promotes the neuroinvasion of Japanese encephalitis virus by enhancing IL-1 $\alpha$  production from pyroptotic macrophages. *J. Virol.* Posted Online 1 July 2020.

PMID: 32611752

DOI: [10.1128/JVI.00602-20](https://doi.org/10.1128/JVI.00602-20)

Analytes: Mouse IL-1alpha, IL-1beta, IL-2, IL-4, IL-6, IL-10, TNF-alpha, IFNgamma, CCL2, and CCL5.

Sample type: Mouse serum.

87. Shabrish S et al. Impaired NK cell activation during acute dengue virus infection: A contributing factor to disease severity. *Heliyon* 6 (2020) e04320.

DOI: <https://doi.org/10.1016/j.heliyon.2020.e04320>

Analytes: Human IL-10, IL-15, and IFNgamma.

Sample type: Human plasma.

88. Wang Y et al. Pilot study of cytokine changes evaluation after fecal microbiota transplantation in patients with ulcerative colitis. *International Immunopharmacology* 85 (2020) 106661.

PMID: 32563025

DOI: [10.1016/j.intimp.2020.106661](https://doi.org/10.1016/j.intimp.2020.106661)

Analytes: a total of 41 Human cytokines including IL-1alpha, IL-1Ra, IL-12/IL-23p40, IL-12p70, IL-17C, IL-17F, TNFalpha, IL-1beta, IFNgamma, IL-23, IL-2, IL-6, IL-7, IL-15, IL-17A, IL-13, IL-4, IL-10, IFN-alpha, IP-10, MCP-1, MEC, MIP-1alpha, ENA-78, IL-8, RANTES, IL-5, G-CSF, FGF2, sIL-2R, IL-16, IL-22, EGF, CD40, 6CKine, BCA-1, TECK, E-selectin, P-selectin, ICAM-1, and VCAM-1.  
Sample type: Human serum.

89. Zhao N et al. Changes in Treg numbers and activity in papillary thyroid carcinoma with and without Hashimoto's thyroiditis. *Journal of International Medical Research*. 2020 48(4) 1-8.

DOI: 10.1177/0300060520919222

Analytes: Human IL-10, and IL-35.  
Sample type: Human serum.

90. Jin JH et al. Virtual memory CD8+ T cells restrain the viral reservoir in HIV-1-infected patients with antiretroviral therapy through derepressing KIR-mediated inhibition. *Cell Mol Immunol*. 2020 Mar 24.

PMID: 32210395

DOI: 10.1038/s41423-020-0408-9

Analytes: Human IL-1beta, IP-10, I-TAC, MIG, IL-15, MCP-1, sCD14, IL-6, IFN-alpha2, MIP-1beta, G-CSF, and sCD163.  
Sample type: Human serum.

91. Du X et al. Hypoxia-Inducible Factor 1 $\alpha$  and 2 $\alpha$  Have Beneficial Effects in Remote Ischemic Preconditioning Against Stroke by Modulating Inflammatory Responses in Aged Rats. *Front. Aging Neurosci*. 12:54. (2020).

doi: 10.3389/fnagi.2020.00054

Analytes: Rat IL-1beta, IL-6, TNF-alpha, IFN-gamma, IL-4 and IL-10.  
Sample type: Rat peripheral blood, penumbra, and brain tissue lysate samples.

92. Bai C et al. Effect of High Calorie Diet on Intestinal Flora in LPS-Induced Pneumonia Rats. *Sci Rep* 10, 1701 (2020).

DOI: 10.1038/s41598-020-58632-0

Analytes: Rat IL-6, IL-12p40, KC, and TNFalpha (Figure 5E).  
Sample type: Rat tissue lysate samples.

93. Batsos G et al. Vitreous levels of Lipocalin-2 on patients with primary rhegmatogenous retinal detachment. *PLoS One*. 2019; 14(12): e0227266.

PMID: 31891637

DOI: 10.1371/journal.pone.0227266

Analytes: Human Lipocalin2 (LCN2/NGAL).  
Sample type: undiluted vitreous core sample.

94. Liu C et al. Increased proportion of functional subpopulations in circulating regulatory T cells in patients with chronic hepatitis B. *Hepatol Res.* 2019 Dec 15

DOI: 10.1111/hepr.13472

Analytes: Human IL-2, IL-4, IL-6, IL-10, TNFalpha, and IFNgamma.  
Sample type: Cell culture supernatant.

95. Bathini P et al. Classifying dementia progression using microbial profiling of saliva. *medRxiv preprint first posted online Aug. 29, 2019.*

DOI: <https://doi.org/10.1101/19004820>

Analytes: Human Inflammation 16-Plex (IFNgamma, IL-1alpha, IL-1beta, IL-6, IL-8, IL-10, IL-12p70, IL-13, IL-17A, IL-27, IL-31, IL-33, IP-10, MCP-1, MIP-1alpha, and TNFalpha).  
Sample type: Human saliva supernatant.

96. Higuchi Y et al. Rice Endosperm Protein Administration to Juvenile Mice Regulates Gut Microbiota and Suppresses the Development of High-Fat Diet-Induced Obesity and Related Disorders in Adulthood. *Nutrients* 2019, 11, 2919.

DOI: 10.3390/nu11122919

Analytes: Mouse TNF- $\alpha$ , IL-1 $\beta$ , IL-6, and MCP-1.  
Sample type: Mouse serum and tissue (kidney and liver) lysate

97. Ma T et al. Targeted Migration of Human Adipose-Derived Stem Cells to Secondary Lymphoid Organs Enhances Their Immunomodulatory Effect and Prolongs the Survival of Allografted Vascularized Composites. *STEM CELLS* 2019;37:1581–1594.

PMID: 31414513

DOI: 10.1002/stem.3078

Analytes: Rat IL-2, IL-4, IL-6, IL-10, IL-17, and INF- $\gamma$ .  
Sample type: Rat plasma

98. Diao W et al. Disruption of histidine and energy homeostasis in chronic obstructive pulmonary disease. *International Journal of Chronic Obstructive Pulmonary Disease* 2019;14 2015–2025.

DOI <https://doi.org/10.2147/COPD.S210598>

Analytes: Human TNF- $\alpha$ , and IL-6.  
Sample type: Human serum

99. Wang H et al. CD137 ligand feedback upregulates PD-L1 expression on lung cancer via T cell production of IFN- $\gamma$ . *Thoracic Cancer*. 2019 Oct 17

PMID: 31625289

DOI: 10.1111/1759-7714.13207

Analytes: Human IFN- $\gamma$   
Sample type: Cell culture supernatant

100. Feng JC et al. Intra-Arterial Injection of Human Adipose-Derived Stem Cells Improves Viability of the Random Component of Axial Skin Flaps in Nude Mice. *Journal of Plastic, Reconstructive & Aesthetic Surgery*. 2019

DOI: <https://doi.org/10.1016/j.bjps.2019.10.001>

Analytes: Mouse TNF- $\alpha$ , IFN- $\gamma$ , IL-6, and VEGF.  
Sample type: Mouse tissue lysate samples

101. Bélanger J et al. Association of Platelet Activity with Circulating Levels of Brain-Derived Neurotrophic Factor (BDNF) and Cognitive Function: A Cross-Sectional Study. *Canadian Journal of Cardiology*. 2019; 35: S122

DOI: <https://doi.org/10.1016/j.cjca.2019.07.527>

Analytes: Human SDF-1, PDGF, VEGF-A, MIP-1 $\alpha$ , RANTES, TARC, ENA-78, VEGF-C, IL-1 $\alpha$ , IL-1 $\beta$ , IL-8, IL-33, MCP-1, ANGPT-1, Endostatine, PF4, IL-27, and TNF $\alpha$ .  
Sample type: Human blood platelets.

102. Fleury S et al. Large-Scale Assessment of Platelet Differential Secretion. *Canadian Journal of Cardiology*. 2019; 35: S127

DOI: <https://doi.org/10.1016/j.cjca.2019.07.536>

Analytes: Human BDNF, and P-selectin.  
Sample type: Human plasma

103. Khadilkar PV et al. Fibrotic Cytokine Interplay in Evaluation of Disease Activity in Treatment Naïve Systemic Sclerosis Patients from Western India. *Journal of The Association of Physicians of India*. 2019; 67: 26-30

[http://www.japi.org/august\\_2019/04\\_oa\\_fibrotic\\_cytokine\\_interplay.pdf](http://www.japi.org/august_2019/04_oa_fibrotic_cytokine_interplay.pdf)



Analytes: Human IL-1 $\beta$ , and IL-4.  
Sample type: Human serum

104. Zhu SR et al. Level of Regulatory B Cells in Patients with Immune Thrombocytopenia and Its Clinical Significance. *Zhongguo Shi Yan Xue Ye Xue Za Zhi*. 2019;27(1):175-179. (Article in Chinese)

PMID: 30738466

DOI: 10.7534/j.issn.1009-2137.2019.01.028

Analytes: Human IL-10, TGF- $\beta$ 1, CD40, and CD40L.  
Sample type: Human serum

105. Bai C et al. *Yinlai* decoction alleviates lipopolysaccharide-induced pneumonia by changing the immune status of juvenile rates: A study based on network pharmacology. *J Traditional Chinese Medical Sciences*, 2019; 6(1): 44-58.

DOI:10.1016/j.jtcms.2019.01.006

Analytes: Rat IL-6, TNF- $\alpha$ , IL-12p40, IL-8.  
Sample type: Rat Serum

106. Dring KJ et al. Multi-Stage Fitness Test Performance, VO<sub>2</sub> Peak and Adiposity: Effect on Risk Factors for Cardio-Metabolic Disease in Adolescents. *Front. Physiol*, 2019; 10:629.

PMID: 31231231

PMCID: PMC6558424

DOI: 10.3389/fphys.2019.00629

Analytes: Human IL-1 $\beta$ , IL-6, TNF- $\alpha$ , IL-10, CRP.  
Sample type: Human plasma

107. Xu H et al. Extreme Levels of Air Pollution Associated with Changes in Biomarkers of Atherosclerotic Plaque Vulnerability and Thrombogenicity in Healthy Adults. *Circ Research*, 2019; 124 (5): e30-343.

PMID: 30661461

DOI: 10.1161/circresaha.118.313948

Analytes: Human MMP-1, MMP-2, MMP-3, MMP-7, MMP-8, MMP-9, TIMP-1, TIMP-2, sCD40L, sCD62P, sRAGE, IL-1 $\beta$ , CRP, MIP-1 $\alpha$ , MIP-1 $\beta$ , IGF-1, IGFBP-1 and IGFBP-3.  
Sample type: Human serum.

108. Shabrish S et al. Natural Killer Cell Degranulation Defect: A Cause for Impaired NK-Cell Cytotoxicity and Hyperinflammation in Fanconi Anemia Patients. *Front. Immunol*. 2019; 10:490

PMID: 30949167

DOI: 10.3389/fimmu.2019.00490

Analytes: Human IL-2, IL-4, IL-6, IL-7, IL-10, IL-15, IL12p40, IFN- $\gamma$ , TNF- $\alpha$ , GM-CSF, MIP-1 $\alpha$ , MIP-1 $\beta$ , MCP-1, and IP-10/CXCL10  
Sample type: Human serum

109. Domvri K et al. Th2/Th17 cytokine profile in phenotyped Greek asthmatics and relationship to biomarkers of inflammation. *Respiratory Medicine*. 2019; 151: 102-110.

DOI: <https://doi.org/10.1016/j.rmed.2019.03.017>

Analytes: Human IL-4, IL-5, IL-13, IL-6, IL-17A, IL-23, and TGF $\beta$ 1  
Sample type: Human serum

110. Shabrish S et al. IFN-g:IL-10 Ratio: a Putative Predictive Biomarker to Discriminate HLH From Severe Viral Infections. *J Clin Immunol*. 2019; 39(2):135-137.

PMID: 30783923

DOI: 10.1007/s10875-019-00601-y

Analytes: Human IFN- $\gamma$ , TNF- $\alpha$ , IL-12p40, IL-4, IL-6, IL-10), GM-CSF, IL-2, IL-7, IL-15, IP-10, MIP-1 $\alpha$ , MIP-1 $\beta$ , MCP-1  
Sample type: Human serum

111. Leclaire MD et al. Lipofuscin-dependent stimulation of microglial cells. *Graefes Arch Clin Exp Ophthalmol*. 2019; 257: 931–952. <https://doi.org/10.1007/s00417-019-04253-x>

PMID: 30693383

DOI: 10.1007/s00417-019-04253-x

Analytes: Mouse Inflammation 17-Plex pre-mixed panel: IFN $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-6, IL-9, IL-10, IL-12p70, IL-13, IL-15, IL-23p19, IP-10, KC, MCP-1, MIP-1 $\alpha$ , MIP-1 $\beta$ , RANTES and TNF $\alpha$ .  
Sample type: Mouse cell culture supernatants.

112. Dring KJ et al. Cytokine, glycemic, and insulinemic responses to an acute bout of games-based activity in adolescents. *Scandinavian Journal of Medicine & Science In Sports* 2019; 1-9  
<https://doi.org/10.1111/sms.13378>

PMID 30580469

DOI: 10.1111/sms.13378

Analytes: Human IL-1 $\beta$ , IL-6, TNF- $\alpha$ , IL-10, and CRP  
Sample type: Human plasma

113. Gamallat Y, et al. Probiotic *Lactobacillus rhamnosus* modulates the gut microbiome composition attenuates preneoplastic colorectal Aberrant crypt foci. *Journal of Functional Foods* 2019; 53: 146–156 <https://doi.org/10.1016/j.jff.2018.12.018>

Analytes: Rat IL-2, IL-4, IL-6, IL-10, IL-17A, IFN- $\gamma$ , and TNF- $\alpha$   
Sample type: Rat serum

114. Kimura M, et al. Neutrophilia and hyperamylasemia in patients with immediate food allergy. *Pediatrics International*, 2019; 61, 23–30, <https://doi.org/10.1111/ped.13728>;

PMID: 30402929      DOI: 10.1111/ped.13728

Analytes: Human IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, IFN- $\gamma$ , and TNF- $\alpha$   
Sample type: Human serum

115. C. Dentone et al. Inflammatory effects of atazanavir/ritonavir versus darunavir/ritonavir in treatment naïve, HIV-1-infected patients. *HIV Clinical Trials* 2018; 19 (4), 158-162, <https://doi.org/10.1080/15284336.2018.1488453>

DOI: 10.1080/15284336.2018.1488453

Analytes: Human IL-6, MCP-1, sCD163, VCAM-1, and adiponectin  
Sample type: Human plasma

116. Hou Y, et al. Protective effects of Jiayan Kangtai granules on autoimmune thyroiditis in a rat model by modulating Th17/Treg cell balance. *Journal of Traditional Chinese Medicine* 2018; 38 (3), 380-390, [https://doi.org/10.1016/S0254-6272\(18\)30628-9](https://doi.org/10.1016/S0254-6272(18)30628-9)

Analytes: Rat IL-2, IL-6, IL-10, IL-17A, and TGF- $\beta$ 1  
Sample type: Rat plasma

117. Shih C, et al. Chronic pulmonary exposure to traffic related fine particulate matter causes brain impairment in adult rats. *Particle and Fibre Toxicology*, 2018, 15: 44; <https://doi.org/10.1186/s12989-018-0281-1>

PMID: 30413208      PMCID: PMC6234801      DOI: 10.1186/s12989-018-0281-1

Analytes: Rat CCL5, CCL11, IL-4, and IL-6  
Sample type: Rat plasma

118. Tlili A, et al. *Phlebotomus papatasi* Yellow-Related and Apyrase Salivary Proteins Are Candidates for Vaccination against Human Cutaneous Leishmaniasis. *Journal of Investigative Dermatology*. 2018, 138: 598-606

PMID: 29054598      DOI: 10.1016/j.jid.2017.09.043

Analytes: Human TH1/TH2/TH17 7-Plex Panel (IFN $\gamma$ , IL-2, IL-4, IL-6, IL-10, IL-17A and TNF $\alpha$ )  
Sample type: Cell Culture Supernatant

119. Dobri KD et al. Study of polymorphisms and expression of IL-17 in Greek patients with bronchial asthma. *European Respiratory Journal*, 2018; 52:PA4994.  
[https://erj.ersjournals.com/content/52/suppl\\_62/PA4994](https://erj.ersjournals.com/content/52/suppl_62/PA4994)

DOI: 10.1183/13993003.congress-2018.PA4994

Analytes: Human IL-6, IL-17A, IL-23, TGF $\beta$ 1  
Sample type: Human serum

120. Wang MJ et al. Secretory Imbalance between Pro-inflammatory and Anti-inflammatory Cytokines in the Patients with Immune Thrombocytopenia. *Zhongguo Shi Yan Xue Ye Xue Za Zhi*. 2018;26(2):522-527. (Article in Chinese)

PMID: 29665926

DOI: 10.7534/j.issn.1009-2137.2018.02.036

Analytes: Human IL-8, IL-17A, IL-22, TNF- $\alpha$ , IFN- $\gamma$ , IL-4, CD40, CD40L, TGF- $\beta$  and IL-10.  
Sample type: Human serum

121. He Y, et.al. Increased Soluble CD137 Levels and CD4+ T-Cell-Associated Expression of CD137 in Acute Atherothrombotic Stroke. *Clin Transl Sci*, 2018, 11: 428-434

PMID: 29697202

PMCID: PMC6039206

DOI: 10.1111/cts.12553

Analyte: sCD137  
Sample type: Human plasma

122. Boutsikou E, et.al. Tumour necrosis factor, interferon-gamma and interleukins as predictive markers of antiprogrammed cell-death protein-1 treatment in advanced non-small cell lung cancer: a pragmatic approach in clinical practice. *Therapeutic Advances in Medical Oncology*, 2018, 10: 1-8.

PMID: 29662549

PMCID: PMC5894896

DOI: 10.1177/1758835918768238

Analytes: IFN- $\gamma$ , TNF- $\alpha$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12

Sample type: Human serum

123. Yin Y, et.al. Human umbilical cord-derived mesenchymal stem cells direct macrophage polarization to alleviate pancreatic islets dysfunction in type 2 diabetic mice. *Cell Death & Disease*. 2018, 9:760

PMID: 29988034

PMCID: PMC6037817

DOI: 10.1038/s41419-018-0801-9

Analytes: MCP-1, IL-1 $\beta$ , IL-4, IL-6, IL-10, and TNF $\alpha$   
Sample type: Mouse serum and cell culture supernatant

124. Liang H, et.al. Elevated peripheral blood B lymphocytes and CD3+CD4-CD8- T lymphocytes in patients with non-small cell lung cancer: A preliminary study on peripheral immune profile. *Oncology Letters*. 2018, 15: 8387-8395.

PMID: 29805573      PMCID: PMC5950528      DOI: 10.3892/ol.2018.8424

Analytes: IFN $\gamma$ , IL-2, IL-4, IL-10, IL-17A, TNF $\alpha$ , TGF- $\beta$ 1  
Sample type: Human serum

125. Yang J, et.al. Hypoxia Inducible Factor 1 $\alpha$  Plays a Key Role in Remote Ischemic Preconditioning Against Stroke by Modulating Inflammatory Responses in Rats. *J Am Heart Assoc*, 2018, 7: e007589.

PMID: 29478025      PMCID: PMC5866324      DOI: 10.1161/JAHA.117.007589

Analytes: IFN $\gamma$ , IL-1 $\beta$ , IL-4, IL-6, IL-10  
Sample Type: Rat plasma

126. Shimomura M, et. al. Increased serum cortisol on oral food challenge in infants with food protein-induced enterocolitis syndrome. *Pediatrics International*, 2018, 60: 13–18.

PMID: 29095536      DOI: 10.1111/ped.13449

Analytes: IL-8  
Sample type: Human serum

127. Schroff A, et. al. Knockout of autophagy gene, ATG5 in mice vaginal cells abrogates cytokine response and pathogen clearance during vaginal infection of *Candida albicans*. *Cellular Immunology*, 2018, 324: 59-73

PMID: 29306553      DOI: 10.1016/j.cellimm.2017.12.012

Analytes: G-CSF, IL-1 $\alpha$ , IL-1 $\beta$ , IL-6, IL-10, IL17A, IL-22, IL-23p19 and TNF- $\alpha$   
Sample type: Mouse vaginal lavages

128. Miyagawa I, et. al. Induction of Regulatory T Cells and Its Regulation with Insulin-like Growth Factor/Insulin-like Growth Factor Binding Protein 4 Human Mesenchymal Stem Cells. *J Immunol*, 2017; 199:1616-1625.

PMID: 28724578      DOI: 10.4049/jimmunol.1600230

Analytes: IGF-1 and IGF-2  
Sample type: Bone marrow-derived hMSCs Cell cultures

129. Dong w, et.al. Dampness-Heat Accelerates DMBA-Induced Mammary Tumors in Rats. *Chin J Integr Med*, 2017. <https://doi.org/10.1007/s11655-017-2821-1>

PMID: 28914439      DOI: 10.1007/s11655-017-2821-1

Analytes: TNF- $\alpha$  and IL-1 $\beta$   
Sample Type: Rat serum and tumor tissues

130. Ji W et al. Study on the Inhibitory Effects of Ephedra Aconite Asarum Decoction on LPS-Induced Dendritic Cells. *Evidence-Based Complementary and Alternative Medicine*, 2017; 10:1-9.

PMID: 29333181      PMCID: PMC5733235      DOI:10.1155/2017/3272649

Analytes: Mouse IL-12, IFN- $\gamma$ , IL-6, IL-1 $\beta$ , IL-4, IL-13  
Sample Type: Mouse bone marrow-derived dendritic cell culture supernatant

131. Schlieffsteiner C, et. al. Human Placental Hofbauer Cells Maintain an Anti-inflammatory M2 Phenotype despite the Presence of Gestational Diabetes Mellitus. *Front Immunol*, 2017, 8: 888.

PMID: 28824621      PMCID: PMC5534476      DOI: 10.3389/fimmu.2017.00888

Analytes: A human custom 23-Plex Panel  
Sample type: Human Hofbauer cells (HBCs), macrophages of the fetoplacental unit

132. Deng P, et al. The herbal decoction modified Danggui Buxue Tang attenuates immune-mediated bone marrow failure by regulating the differentiation of T lymphocytes in an immune-induced aplastic anemia mouse model. *PLOS One* 2017, <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0180417>.

PMID: 28683082      PMCID: PMC5500321      DOI: 10.1371/journal.pone.0180417

Analytes: IFN $\gamma$ , IL-2, IL-4, IL-6, IL-10 and IL-17A  
Sample type: Mouse peripheral blood

133. Song X, et al. Effect of perioperative intravenous lidocaine infusion on postoperative recovery following laparoscopic cholecystectomy-A randomized controlled trial. *International Journal of Surgery*, 2017, 45: 8-13

PMID: 28705592      DOI: 10.1016/j.ijssu.2017.07.042

Analytes: IL-1ra, IL-6 and IL-8  
Sample type: Human Plasma cells in culture media

134. Li F, et al. Cytokine profiles in papillary thyroid carcinoma, with or without Hashimoto's thyroiditis. *European J Inflammation*, 2017, 15: 257-261.

DOI: 10.1177/1721727X17739515

Analytes: IL-10, IL-17, IL-35, IFN- $\gamma$   
Sample type: Human serum  
<http://journals.sagepub.com/doi/pdf/10.1177/1721727X17739515>

135. Tang H, et. al. Effect of inhibitors of endocytosis and NF- $\kappa$ B signal pathway on folate-conjugated nanoparticle endocytosis by rat Kupffer cells. *International J Nanomedicine*, 2017, 12: 6937-6947.

PMID: 29075112      PMCID: PMC5609780      DOI: 10.2147/IJN.S141407

Analytes: TNF- $\alpha$ , IL-1 $\beta$  and IL-6  
Sample type: Rat Kupffer cells (cell culture)

136. Suda J, et al. Knockdown of RIPK1 Markedly Exacerbates Murine Immune-Mediated Liver Injury Through Massive Apoptosis of Hepatocytes, Independent of Necroptosis and Inhibition of NF- $\kappa$ B. *J Immunol*, 2016, 197: 3120-3129.

PMID: 27605011      PMCID: PMC5101131      DOI: 10.4049/jimmunol.1600690

Analytes: CXCL1, CXCL2, IFN- $\gamma$ , IL-6, IL-17A and TNF- $\alpha$ .  
Sample type: Mouse serum

137. Loegl J, et al. Hofbauer cells of M2a, M2b and M2c polarisation may regulate fetoplacental angiogenesis. *Reproduction*, 2016, 152: 447-455.

PMID: 27534571      DOI: 10.1530/REP-16-0159

Analytes: FGF-2 and VEGF.  
Sample type: Cell culture conditioned medium

138. Timperi E, et al. Regulatory T cells with multiple suppressive and potentially pro-tumor activities accumulate in human colorectal cancer. *Onc Immunology*, 2016, 5: e1175800.

PMID: 27622025      PMCID: PMC5006916      DOI: 10.1080/2162402X.2016.1175800

Analytes: IL-1 $\beta$ , IL-6 and IL-23p19.  
Sample type: Human tissue-conditioned medium

139. Xing Y et al. Human cytomegalovirus infection contributes to glioma disease progression via up-regulating endocan expression. *Translational Research*, 2016,;177:113-126

PMID: 27474433      DOI: 10.1016/j.trsl.2016.06.008

Analytes: IFN- $\gamma$ , IL-6, and TNF- $\alpha$ .  
Sample type: Cell culture supernatant

140. Yang M et al. Macrophages participate in local and systemic inflammation induced by amorphous silica nanoparticles through intratracheal instillation. *Int J Nanomedicine*, 2016. 11: 6217-6228.

PMID: 27920528      PMCID: PMC5125762      DOI: 10.2147/IJN.S116492

Analytes: Mouse IL-1 $\beta$ , IL-18, TNF- $\alpha$ , IL-6.  
Sample type: Mouse serum

141. Ren W, et al. Pharmacokinetic-Pharmacodynamic Analysis on Inflammation Rat Model after Oral Administration of Huang Lian Jie Du Decoction. *PLoS ONE* 2016, Jun 9;11(6) <http://dx.doi.org/10.1371/journal.pone.0156256>.

PMID: 27280291      PMCID: PMC4900566      DOI: 10.1371/journal.pone.0156256

Analytes: IFN- $\gamma$ , IL-6, IL-1 $\beta$ , MIP-2, TNF- $\alpha$ , IL-13 and IL-10.  
Sample type: Rat plasma

142. Gu Q, et al. Genomic characterization of a large panel of patient-derived hepatocellular carcinoma xenograft tumor models for preclinical development. *Oncotarget*, 2015, 6: 20160-20176.

PMID: 26062443      PMCID: PMC4652995      DOI: 10.18632/oncotarget.3969

Analyte: Human AFP  
Sample type: Mouse serum

143. Fan X, et al. Berberine alleviates ox-LDL induced inflammatory factors by up-regulation of autophagy via AMPK/mTOR signaling pathway. *Journal of Translational Medicine*, 2015, 13: 92.

PMID: 25884210      PMCID: PMC4365560      DOI: 10.1186/s12967-015-0450-z



Analytes: Mouse Inflammation 17-Plex Panel (IFN $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-6, IL-9, IL-10, IL-12p70, IL-13, IL-15, IL-23, IP-10, KC, MCP-1, MIP-1 $\alpha$ , MIP-1 $\beta$ , RANTES and TNF $\alpha$ )  
Sample type: Cell culture supernatant

144. Xu S, et al. Salvianolic acid B inhibits platelets-mediated inflammatory response in vascular endothelial cells. *Thromb Research*, 2015, 135: 137-145.

PMID: 25466843      DOI: 10.1016/j.thromres.2014.10.034

Analytes: ICAM-1, IL-1 $\beta$ , IL-6, IL-8 and MCP-1  
Sample type: Cell culture supernatant

145. Breyne K, et al. Non-Classical ProIL-1beta Activation during Mammary Gland Infection Is Pathogen-Dependent but Caspase-1 Independent. *PLoS ONE* 2014, 9(8): e105680.  
doi:10.1371/journal.pone.0105680.

PMID: 25162221      PMCID: PMC4146512      DOI: 10.1371/journal.pone.0105680

Analytes: KC and MIP-2  
Sample Type: Mouse mammary gland lysate and serum

146. Zhang Y, et al. Research on the analgesic effect and mechanism of gabapentin on rat model with tibia metastatic cancer pain. *Chinese J Biochemical Pharmaceutics*, 2014, 3: 8-15.

Analytes: IL-12p70, IFN $\gamma$  and  $\beta$ -NGF  
Sample type: Rat tibia metastatic tissue lysate