

## We are offering the following biomarkers/ cytokine panel:

- Interleukin-1  $\alpha$  (IL-1 $\alpha$ )
- Interleukin-1  $\beta$  (IL-1 $\beta$ )
- Interleukin-2 (IL-2)
- Interleukin-4 (IL-4)
- Interleukin-6 (IL-6)
- Interleukin-8 (IL-8)
- Interleukin-10 (IL-10)
- Vascular Endothelial Growth Factor (VEGF)
- Epidermal Growth Factor (EGF)
- Interferon- $\gamma$  (IFN- $\gamma$ )
- Monocyte Chemotactic Protein-1
- Tumor Necrosis Factor- $\alpha$  (TNF- $\alpha$ )

## IMPORTANT:

The laboratory services are for informational purposes only. It is not the intention of Canada Metabolic Inflammation Diagnostics Inc. to provide specific medical advice but rather to provide users with information to better understand their health. Specific medical advice including diagnosis and treatment will not be provided. Always seek the advice of a trained health professional for medical advice, diagnosis or treatment.

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## CONFIRMED

*The cost involved is Tax deductible as it is considered as a medical expenses through the referral of patient's medical professional/practitioner. Also, some private insurance companies are covering the cost involved.*

## Helpful Hints:

**(Please call to make an appointment)**

When you are ready to order, we will ask you to provide the followings:

1. Fill out the authorization forms (complete contact information, Name, address, phone and e-mail).
2. Credit Card number and expiry date.
3. We also accept money order or certified cheque payable to : (Canada Metabolic Inflammation Diagnostics Inc.).



## Contact

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# Canada Metabolic Inflammation Diagnostics Inc. (CMID)



CMID INC. laboratory believes that chronic inflammation is the common denominator of all age-related specifically associated with stress and pain related diseases as well as chronic diseases such as lipid disorders, cardiovascular diseases, diabetes and immunological disorders including cancer. CMID INC. laboratory is offering Esoteric and Genetic testing, as a repertoire of tests that concerns disease progression (Health Canada Approved). This novel service supports the public health and wellness of Canadians by provision of an innovative tool, and an excellent diagnostic research methodology to aid in the early diagnosis, research, and disease prevention.

## What is New in the field of Personalized Medicine?

Specialized tests can uncover disturbances in our body's normal function causing a state of imbalance. Physiological imbalance can cause and lead to the development of different disease states that are tightly related to the level of inflammation in our body. Metabolic and physiological disturbances can be monitored and detected by asking your doctor for conducting an additional diagnostic testing for measuring the inflammatory mediators. The inflammatory mediators are a group of proteins known as cytokines. Those inflammatory mediators work together in a harmony to balance our normal physiological function to stay balanced in a state of equilibrium known by the term Homeostasis. The cytokine test can act as a very early predictor for disease development, a maker to track and monitor any disease progression and drug efficacy in case of chronic disease management.

## Early Intervention and Personalized Medicine are two strong highlights for our New Diagnostic research services:

Proinflammatory cytokines are produced predominantly by activated macrophages and are involved in the up-regulation of inflammatory reactions. There is abundant evidence that certain pro-inflammatory cytokines such as IL-1 $\beta$ , IL-6, and TNF- $\alpha$ , are involved in the process of pathological pain.

## Stress related Symptoms, Pain as a disease and inflammation:

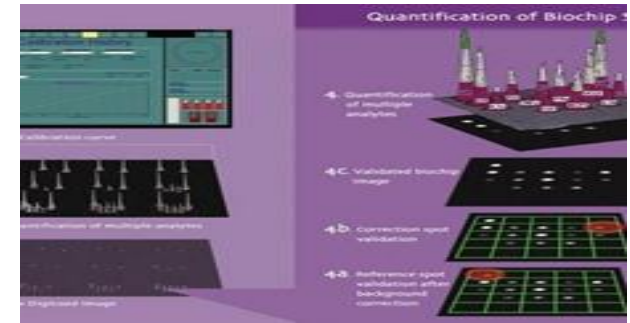
Evidence exists to suggest that stress-related hormones known as cytokines (inflammatory mediators) interact with immune cells, and result in changes in intracellular signalling pathways and phenotypical expression consistent with inflammatory activity. For example, intracellular levels of nuclear factor Kappa-B (NF $\kappa$ B), a signal transcription factor critical to multiple inflammatory pathways, are elevated following stressful experiences and exposure to catecholamines. Cellular adhesion molecules (CAMs), critical for cell migration to sites of inflammatory activity, are present in higher concentrations in the plasma following various psychological and physiological stressors. Furthermore, recently it has been reported a relationship between psychological responses to pain and CAM expression on leukocytes. There is strong body of literatures to discuss the link between painful nociceptive stresses, as an antecedent conditions, on markers of inflammatory activity in our body.

## Chronic Disease Prevention and Management:

The magnitude and composition of inflammatory mediators may provide important insights into the robustness for measuring and screening for type 2 diabetes. Diabetes is considered as a good example of chronic disease among other diseases. So the inflammatory panel/profile is an excellent diagnostic tool to predict the disease and manage its treatment.

## Overview:

The cytokine panel as a group of inflammatory mediators, 12 cytokines and chemokines are measured from one blood sample. There are a strong body of literature as scientific evidences to suggest that the inflammation process and its early link for the prediction and intervention of diabetes as a good example for chronic disease managements. The good thing is we have a group of proteins that are working and linked together that can be measured through a simple methodology to reveal the whole picture for different diseases.



## What to expect when referred to our services:

The levels of inflammatory cytokines in blood are considered as a novel diagnostic tool. This will also help to monitor the general status for our patient. In addition, monitoring the efficacy of medications is so important by studying the potential implications of these cytokines in the diagnosis and treatment plan.