

## **INFEPERIUM™ Methods of Action**

In simple terms INFEPERIUM™ is a Biological Response Modifier (BRM) / Immunomodulator that helps reset the immune system so your body can heal itself. It addresses in an endogenous (from inside the body) way the majority causes of Chronic Disease and their effects on the body.

The active ingredient in INFEPERIUM™ modulates both the adaptive and innate immune systems (without negative side effects) and allows the body to eliminate chronic inflammation, a major cause in all diseases. INFEPERIUM™ restores proper cell signaling, pathogen recognition and proper cell energy, Adenosine Triphosphate production (ATP) endogenously.

INFEPERIUM™ is a major breakthrough in ImmunoTherapy. The action of INFEPERIUM™ is to modulate both the innate and adaptive immune systems that have been degraded and compromised due to disease, environmental, bacterial, viral etc. to normalization and homeostasis allowing the bodies own healing and defense mechanisms to restore proper cell signaling, proper cellular respiration versus fermentation, regulation of cellular transport, and healing. INFEPERIUM™ embodies the latest and most medically accepted theories and practices of immunotherapy, which is now at the forefront and becoming the standard of care for chronic diseases which include cancer, a wide range of autoimmune conditions, and most importantly addressing the growing concern of bacterial resistance.

What INFEPERIUM™'s breakthrough Immunotherapy can do, and why it is different.

INFEPERIUM™'s immunomodulator is one of the few molecules, if not the only one known today, that affects and modulates both the innate and adaptive immune systems without negative side effects.

The major causes of Chronic Disease are primarily:

1. The establishment of a state of Chronic Inflammation (CI), which is now considered the main cause of the vast majority of disease.
2. Due to the prolonged state of CI, improper and aberrant cellular signaling begins which is the harbinger of most AutoImmune(AI) conditions.
3. This state of cellular "Misinformation" creates over and under reaction of the immune response and inhibits the bodies defense mechanisms from properly functioning. This includes but is not limited to depressed CD4 and CD8 counts.

Suppressed MHC I and MHC II, which Marshall the forces of T cells, B cells, NK cells and various Macrophages, that prevent pathogens from invading the bodies systems or once they have attacked them to consume and destroy them. Most importantly interfering with the Jak-Stat signaling pathway which controls immune deficiency syndromes and most Cancers.

These three states determine the vast majority of disease. The traditional Rx approach is to address the symptom of any of the 12,500 named conditions with a Cytotoxic (the generic name for Rx drugs) chemical agent. However, if you can address these above states of disease from an Endogenous state, you are going to able to reverse a vast number of diverse conditions that are created by these altered states of health. As well as bringing the patient to Homeostasis.

Besides the Cytokines mentioned above the following Cytokine, Chemokine and Growth factor cascades, what they modulate with their corresponding disease they address:

1. The up regulation of IL-10 addresses the issue of Chronic Inflammation. This alone can reverse the diseased state but at a minimum stop the progressing damage in All Chronic Disease Conditions.

To name a few: MS, RSD, Most Rheumatoid conditions. Chronic Pain.

Asthma. Any Inflammatory condition (too many to name here).

2. The up regulation of INF $\gamma$  and TNF $\alpha$  (Tumor Necrotic Factor) addresses most Cancers, Chronic respiratory conditions (Pneumonia, viral or bacterial) most viral and bacterial infections including the big problem in "post surgical infection" in hospitals. Most importantly this up regulation is the only thing that can stop Antibiotic Resistant Bacterias (ARB's) which is a major growing concern, worldwide!
3. The up regulation of TNF $\alpha$ , GM-CSF (Granulocyte Macrophage Colony Stimulating Growth Factor), IL-1 $\alpha$ , EGF (Epidermal Growth factor), and bFGF(basic Fibroblast growth Factor), treats and closes pre amputation chronic wounds, major burns and accompanying infections, most of the Neuropathy's, diabetic and inflammatory. bFGF is crucial to proper stem cell growth and repair.
4. The up regulation of MCP-1 (Monocyte Chemoattractant Protein #1) recruits immune cells through the Blood Brain Barrier (BBB) which does two important processes.
  - a) Opens up the Glymphatic System (GS) closed due to CI. The GS is the functional waste disposal pathway for the Central Nervous System (CNS). This back up is the root cause of most neurological conditions including but not limited to Alzheimer's, Dementia, ALS, Parkinson's, Autism, and MS.
  - b) Once the GS pathway is cleared healing immune cell pass the BBB and regenerate most areas of Brain function. These facts have been proven by the work of Dr Michal Schwartz at the famed Weizmann Institute of Science, Rehovot ,Israel.

The ability of Infeperium to modulate, over this period of time, addresses the conditions involved with Bacteria, Virus, Mutation (Cancer), Fungus, Parasite (Malaria, the biggest world wide killer of all), Neurological, Inflammatory, and Autoimmune, establishes and will establish the work of Infeperium and other BRM's that will be developed in the future.

The last important factor is that the cascade lasts between 72-96 hours. So there are no known negative reactions from these modulations lasting too long. If another treatment is needed (in chronic conditions as many as 30 treatments are required), it is given with confidence of its positive effective cascade and not any projected continued modulation.

This is the goal and approach to all ImmunoTherapies and BRM's. This is because of 2 factors. The first is proven results, and the second is lessons or the absence of negative side effects. And this is where medicine is now beginning to look and turn. This is evidenced by the focus on ImmunoTherapy at MD Anderson, The Mayo and Cleveland Clinics.

This is the very action of Infeparium. Within minutes of a treatment an immunological cascade develops and begins to restore proper immune regulation to the body.