

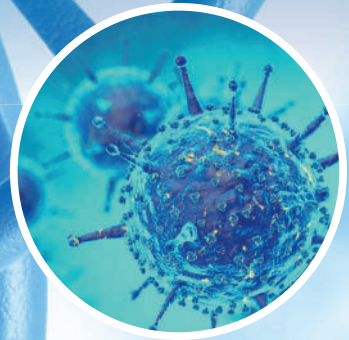
- Detecting Viral Reactivations
- Understanding Immune Disorders
- Utilizing Highly Diluted Immunologic Messenger Molecules

Corinne I. Heitz, PhD

# Micro-Immunotherapy

## Diagnostics and Therapy of Immunological Diseases

LESEPROBE



# Micro-Immunotherapy

Diagnostics and Therapy of  
Immunological Diseases

Corinne I. Heitz, PhD



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## Preface to the First Edition in English by the Author

I am delighted to present this book to my colleagues who do not speak German. The book "Mikroimmuntherapie" was originally published in 2011. The version you are holding is the translation of the third revised edition, published in 2021.

This book represents the first English edition and covers the fundamental knowledge of Micro-Immunotherapy. However, it is essential to note that the field of immunology is constantly evolving, and new research findings continuously update our understanding of cytokines and information on pathogens. As a result, this book may not be exhaustive, and I make no claim to absolute completeness.

Throughout my work, I have aimed not to disassemble and analyse everything in isolation but to discover the synthesis of interconnected elements. The immune system, in particular, serves as a remarkable example of interconnectedness and forms an intricate network. My training and practical experience have taught me to approach the complexity of the immune system with humility and utmost respect.

I am fully aware that the Ultima Ratio – the final conclusion – may remain elusive and may never be fully attained. Within the immune system, I perceive something akin to a "divine plan," or for those preferring a scientific perspective, a genius plan of creation that bestows uniqueness on each individual through genetics and the immune system.

The immune system is a remarkable system within our body. In my opinion, the notion that the immune system functions incorrectly and causes aggressive autoimmune diseases is not accurate. Suppressing the immune system or certain parts of it cannot be the right approach. The immune system performs its task efficiently, but there may be underlying causes (often viral reactivations) that lead to an abnormal immune response. Identifying these causes is a key aspect of Micro-Immunotherapy, known as diagnostics.

Micro-Immunotherapy treatment relies on immunological knowledge, utilizing the immune system itself to "heal" diseases. Healing is achievable because the human body is dynamic. The immune system eliminates damaged cells while healthy cells multiply, eventually resulting in more healthy cells than sick ones. This leads to a path of self-healing, which is why this form of therapy may take longer.

If the therapy does not seem effective, there could be various reasons: blockages (such as dental interference fields, psychological factors, traumas, etc.), toxic stresses, and/or deficiencies (vitamins, trace elements, minerals, etc.). Sometimes, the wrong therapy might have been chosen, but that does not imply the therapy itself is ineffective.

For patients reading this book:

If you have acquired this book as a patient, you likely seek to learn more about Micro-Immunotherapy. However, to effectively treat diseases, it requires knowledge beyond the scope of this book. Attempting to self-treat is not advisable.

I've encountered instances where patients brought this book to their family doctor and requested the blood tests mentioned. However, without interpretation, the doctor may not know what needs to be examined. It is not beneficial, neither for you nor the doctor, and certainly not for your budget to undergo unnecessary blood tests.

Instead, seek a well-trained therapist. If the therapy is planned over several months, please be patient and do not stop prematurely. This is the only way to achieve the therapeutic goal.

Lifestyle plays a crucial role in the therapy's success. Adopt a healthy diet, avoid toxic stresses like food additives, fast food, nicotine, and alcohol. Engage in regular exercise outdoors and in nature. Cultivate positive thoughts in life and daily routines; stress and anger can burden the immune system.

*Corinne I. Heitz, PhD, Wolfhalden, 2024*

## Introduction to Micro-Immunotherapy

Micro-Immunotherapy consists of two parts:

1. diagnostics and
2. the actual therapy with specific medication, which follows the diagnostics.

Complex immune processes, such as those involved in autoimmune diseases, can be detected through a relatively simple blood test. This book will provide you with a step-by-step explanation and understanding.

Micro-Immunotherapy was founded about 40 years ago by the Belgian physician and homoeopath Dr Maurice Jenaer. At that time, he began to treat his patients, who were suffering from cancer, with homeopathic dilutions of deoxyribonucleic acid (DNA), and thus achieved first pioneering successes.

Cytokines, which serve as messenger substances in the immune system, have been discovered gradually. Due to their significant role in controlling immunological processes, researchers naturally explored the possibility of influencing these processes using homeopathically diluted cytokines.

It's important to note that Micro-Immunotherapy differs from the classical homeopathic approach. For instance, it does not rely on the principle of similarity that forms the foundation of homeopathy. However, since Micro-Immunotherapy utilizes diluted cytokines, it aligns with isopathic therapy, a method that treats similar conditions with similar substances.

The dilution process in Micro-Immunotherapy follows the principles of homeopathic potentization, which involves shaking and dynamization. These dilutions mimic the physiological conditions found within the human body. Remarkably, the immune system operates effectively with extremely high dilutions, displaying various effects using the same substance. Micro-Immunotherapy capitalizes on this knowledge by employing different dilutions of cytokines to achieve distinct therapeutic goals.

It's worth mentioning that in Micro-Immunotherapy, we refer to these preparations as low dose or ultra-low dose dilutions, rather than homeopathic remedies.



Today, Micro-Immunotherapy has become an established therapeutic concept that employs carefully selected combinations of diluted cytokines. It aims to modulate and harmonize the intricate network of the immune system without causing any negative impact, which is often seen with allopathic agents such as interferon<sup>1</sup>, corticoids<sup>2</sup>, or cytostatics<sup>3</sup>.

One of the notable advantages of this therapy is that it adheres to the dilution principles of homeopathy, ensuring that there are no toxic burdens or undesirable side effects associated with its use.

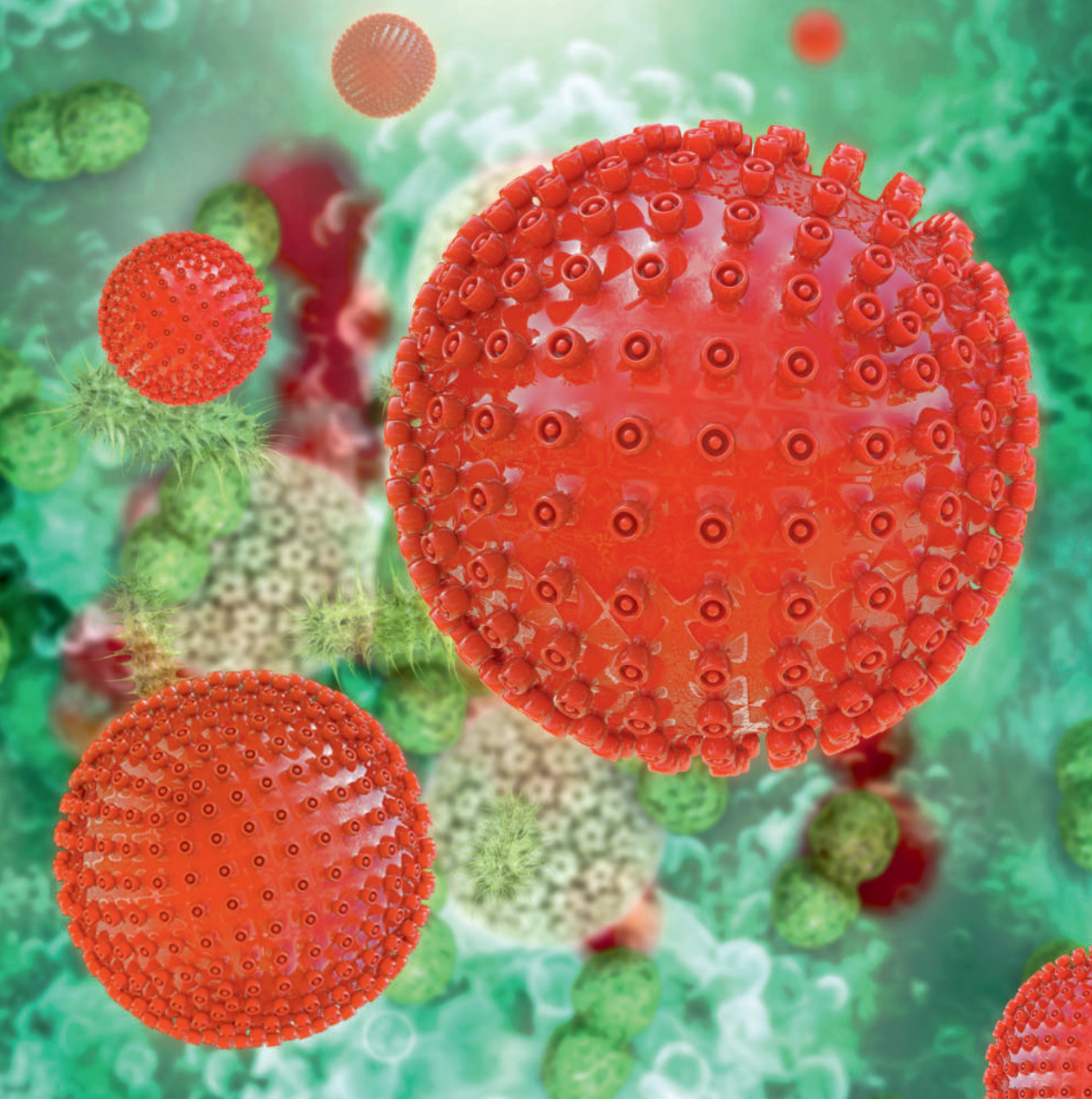
Similar to the application of homeopathic remedies, Micro-Immunotherapy may initially lead to a temporary worsening of symptoms. However, it does not result in the development of new perceptible illnesses or measurable disturbances of the immune system.

---

1 Interferons play a significant role in immunotherapy, with distinct types such as alpha, beta, and gamma interferons. Beta interferons are primarily utilized in the treatment of autoimmune diseases, particularly multiple sclerosis.

2 Corticoids find application in the treatment of various conditions such as asthma, autoimmune diseases, cluster headaches, eczema, epilepsy, acute hearing loss, acute tinnitus, nephritis, neurodermatitis, and specific chemotherapies for Hodgkin's disease and non-Hodgkin's lymphoma. They possess immunosuppressive properties, meaning they inhibit and weaken the immune system.

3 Cytostatic drugs disrupt metabolic processes associated with cell growth and division. As a result, they primarily target rapidly dividing cells, including hair follicle cells and mucosal epithelium in the mouth and gastrointestinal tract. Tumor cells, which have an increased rate of cell division and limited repair capacity, are more sensitive to cytostatic drugs compared to healthy cells. It is this difference that enables therapy with these highly toxic substances.



# Theoretical Part

The theoretical part provides a simplified explanation of how the immune system functions and introduces the concepts of analytics for Micro-Immunotherapy and the theory of therapy.

In the subsequent practical part, the step-by-step interpretation of the analysis and the corresponding therapy are explained.

To understand and interpret the analytics (special blood tests), it is necessary to acquire some basic knowledge of immunology.

Although the workings of the immune system are highly complex, the evaluation and determination of the appropriate therapy can be simplified by following the basic guidelines described.

Micro-Immunotherapy focuses on identifying the causes and triggers of diseases. It operates under the assumption that chronic diseases are associated with pathogens, such as viruses, bacteria, or parasites, which burden our immune system and lead to illness. Alternatively, immune system dysregulation, either weakened or overreactive, can also contribute to the development of diseases.

Another area of interest in Micro-Immunotherapy is the treatment of various types of cancer, including solid tumours and leukaemia (blood cancer).

In essence, the following factors are examined during the analysis:

- Triggers (pathogens)
- State of the immune system
- And, where applicable, the genetic predisposition

In response to popular demand, a list of individual pathogens and their corresponding symptoms is provided. However, it is important to note that not every patient experiences the same symptoms, and the manifestation of symptoms can vary.

# 1 Viruses

The primary triggers are viruses, although bacteria can also be involved but less frequently. The focus is typically on viral reactivations or initial infections, especially those pathogens that integrate their genetic material into the host's DNA, making them capable of reactivation or persistence. DNA viruses, in particular, have the ability to influence cellular processes during division, leading to chronic diseases and potentially cancer.

DNA viruses are classified into five families.

## 1.1 Herpesvirus Family

Herpesviridae, named after the Greek word "herpes" meaning "to crawl," are enveloped, double-stranded DNA viruses characterized by an icosahedral capsid (a protein envelope consisting of triangular surfaces) surrounded by an envelope membrane. While herpes viruses are often associated with HSV-1 and HSV-2, the herpes virus group encompasses eight different human pathogenic herpes viruses (HHV) divided into three groups.

### Alpha-Herpesviruses

... reproduce rapidly, have a wide host range, and establish lifelong infections in the host's ganglia:

- ▶ *HHV-1: Herpes Simplex Virus Type 1 (HSV-1)*
- ▶ *HHV-2: Herpes Simplex Virus Type 2 (HSV-2)*

Symptoms and clinical manifestations include:

- Herpes labialis (cold sores)
- Genital herpes
- Bell's palsy
- Trigeminal neuralgia
- Stomatitis aphthosa
- Prostatitis
- Urethritis
- Cervical changes
- Possible association with abortions
- Tendency to form cysts
- Endometriosis may also be linked to Herpes viruses types 1 or 2

Reactivations of alpha herpesviruses are often observed in chronic inflammation of the digestive tract with positive IgA.

From personal experience, they are frequently involved in tinnitus and neurodermatitis.

► *HHV-3: Varicella-Zoster Virus (VZV)*

Disease patterns include:

- Chickenpox
- Reactivation leading to shingles (herpes zoster)
- Zoster ophthalmicus affecting the face and eyes, which can cause corneal scarring and partial or complete blindness. Facial nerves may be affected, resulting in temporary paralysis (facial paresis) or loss of taste sensation.
- Zoster oticus affecting the auditory canal and/or auricle. Along with the severe pain associated with zoster, it can lead to hearing difficulties (cochlear nerve) and balance disturbances (vestibular nerve). Consider herpes zoster in cases of tinnitus.
- Zoster generalisatus, a systemic involvement of the entire nervous system, which is life-threatening but usually occurs in individuals with weakened immune systems (e.g., AIDS, leukaemia, or other forms of cancer).
- Zoster genitalis occurring in the genital area, accompanied by lymphatic swellings.
- Zoster disseminatus when the viruses spread through the bloodstream.
- Zoster meningitis, encephalitis, and myelitis.

## Beta-Herpesviruses

... reproduce slowly and have a limited host range:

► *HHV-5: Cytomegalovirus (CMV), causing cytomegaly.*

Disease patterns include:

- Initial infection is usually asymptomatic.
- Rarely, symptoms may resemble flu, including fever, liver swelling, muscle pain, and body aches.
- CMV infections during pregnancy can cause severe damage to the central nervous system and brain in new-borns.

...

## 4 Brief Introduction to the Immune System

### 4.1 Origin of the Immune Cells

Immune cells are derived from a common stem cell that possesses two fundamental properties. Firstly, it has the ability to self-renew and sustain itself as a stem cell. Secondly, it has the capacity to differentiate into various types of cells with distinct properties.

The process of differentiation occurs through three primary pathways:

1. The hematopoietic stem cell gives rise to the myeloid progenitor cell, the lymphoid progenitor cell, and the null cell.
2. The myeloid progenitor cell further differentiates into cells responsible for nonspecific immune defense, such as monocytes, macrophages, and granulocytes.
3. The lymphoid precursor cell generates cells involved in specific immune defense. These cells form the lymphatic defense system, including B and T lymphocytes.

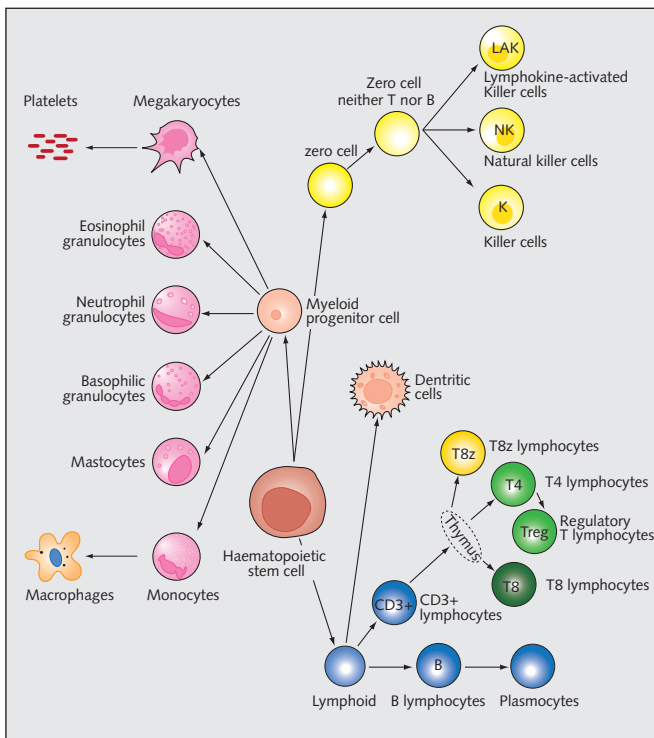


Fig. 1:  
Origin of the Immune Cells

Among T lymphocytes, the initial development involves naïve CD3+ lymphocytes, also known as "T3 lymphocytes." They are referred to as "naïve" because they have not yet undergone thymus-mediated maturation. The effector functions of T lymphocytes originate from these naïve cells and are divided into CD4+ and CD8+ lymphocytes, known as T4 and T8 lymphocytes, respectively. B lymphocytes are also produced in the bone marrow. The name "B lymphocytes" originated from their discovery in birds, where they are produced by a gland in the intestine called the bursa fabricii. Plasma cells or plasmacytes, which develop from B lymphocytes, are the effector B lymphocytes responsible for the humoral immune response. They produce specific antibodies targeted against viral or bacterial antigens, contributing to antigen-specific immune defense.

Apart from T and B lymphocytes, natural killer cells or NK cells develop from the hematopoietic stem cell via the null cell. These cells represent a distinct subgroup of lymphocytes that defend against pathogens in a nonspecific manner.

The dendritic cell holds a unique role in immune cell development. It also originates from the hematopoietic stem cell and is commonly referred to as an "antigen-presenting cell." Collaborating with T and B lymphocytes, the dendritic cell facilitates antigen-specific immune defense.

## 4.2 Defence Mechanisms

As previously mentioned, the immune defense mechanisms can be categorized into two distinct types:

**Non-specific or innate immune response:** The non-specific immune response is the first line of defense against pathogens and does not require prior exposure or learning. It is a rapid and generalized response aimed at eliminating a wide range of pathogens. The innate immune system includes physical barriers like the skin and mucous membranes, as well as various cellular and molecular components. These components, such as neutrophils, macrophages, natural killer cells, and complement proteins, work together to identify and eliminate foreign invaders. The innate immune response is not specific to pathogens but provides immediate protection until the specific immune response can be activated.



Specific or acquired immune response: The specific immune response, also known as the acquired immune response or adaptive immune response, is a highly specialized defense mechanism that develops after exposure to specific pathogens or antigens. Unlike the innate immune response, the specific immune response is characterized by specificity, memory, and the ability to distinguish between self and non-self. This response involves lymphocytes, particularly B and T lymphocytes. B lymphocytes produce antibodies that can recognize and neutralize specific antigens, while T lymphocytes coordinate cell-mediated immune responses and directly eliminate infected or abnormal cells. The acquired immune response has the remarkable ability to "remember" encountered pathogens, enabling a quicker and more efficient response upon subsequent exposures.

By functioning in tandem, the non-specific and specific immune responses provide a comprehensive defense against a wide range of pathogens, contributing to the overall immune system's effectiveness.

### 4.3 Non-Specific Immune Defence

The non-specific immune response is activated in infections caused by bacteria and can be divided into cellular and humoral defense (from Latin [h]umor = moisture, also juice, liquid). The humoral immune system, which relies on plasma proteins rather than cells, plays a significant role in this response. The humoral immune system consists of specific and non-specific components. The non-specific defense is primarily mediated by the complement system, while the specific defense involves immunoglobulins (such as IgA and IgG).

The cellular defense is executed by natural killer cells (NK cells), macrophages, and neutrophil granulocytes, which are types of phagocytes (cells that engulf and destroy pathogens). When a germ enters the skin through a wound, macrophages quickly intercept it. These macrophages release various cytokines, including IL-1, IL-2, and TNF- $\alpha$ , which help recruit more macrophages. This cellular response also involves the release of cell adhesion molecules, allowing eosinophilic and neutrophilic granulocytes to enter the capillaries and reach the site of the wound. Macrophages and neutrophil granulocytes work together to destroy the protein coat of bacteria and eliminate them.

Bacteria that remain outside of cells are eliminated locally through the cellular response (as shown in the left side part of Figure 2).



## 13 How does Micro-Immunotherapy Work?

Micro-Immunotherapy uses the following components:

### ▶ *Cytokines*

These are proteins that are responsible for communication between the cells of the immune system. They ensure the coordination of an immune response.

Cytokines include, among others, interferons, interleukins, hematopoietic growth factors, chemokines, and growth factors.

### ▶ *Low Doses and Ultra-Low Dose*

Micro-Immunotherapy uses natural dilution levels close to the physiological range, we call these "*low dose*" and "*ultra-low dose*". Therefore, it does not have a toxic effect, and no side effects have been reported thus far.

### ▶ *Dilution Modulation*

Different dilutions are used to achieve different effects. These are achieved with potentiation steps analogous to homeopathy. The Arndt-Schultz law known from homeopathy also applies here.

This means:

- A low dilution stimulates the physiological effect of a substance.
- A medium dilution modulates (harmonises) the physiological effect of a substance.
- A high dilution inhibits the physiological effect of a substance.

In contrast to classical homeopathy, Micro-Immunotherapy uses substances that naturally occur in the immune system. There is no principle of similarity involved. The dilutions used in Micro-Immunotherapy correspond to physiological dilutions, similar to those used by the immune system.

Many scientifically minded readers struggle with the concept of dilution. How can something have an effect when it has been diluted to the point where nothing is measurable anymore? However, in our immune system, cytokines and other messenger substances are present in high dilutions and, as a result, are sometimes not measurable either.

The most spectacular discovery so far was that of Rita Levy-Montalcini, who in the year 1950 found a substance that promotes the growth of nerves - the "Nerve Growth Factor" (NGF). For this, she received the Nobel Prize in Medicine<sup>49</sup> 36 years later, in 1986, together with Stanley Cohen. She demonstrated that the substance still had an effect even at a trillion-fold dilution in vitro (in the test tube).

► *Alignment to Various Levels*

Alignment at various levels is made possible by using the same substances in the composition of micro-immunotherapeutic agents that form a network in the immune system and act simultaneously at different levels.

► *Absorption Through the Lymphatic System*

The individual capsules are opened, and the contents of the capsules (globules) are placed under the tongue. This allows the substances to directly enter the lymphatic system. If the globules were to pass through the digestive tract, the effect would likely not occur. Sublingual administration ensures a direct uptake through the lymphatic system.

► *Sequential Information Transmission*

Just as in the immune system, the substances are released gradually in a specific sequence. For this purpose, blisters containing 10 capsules each are produced. Each capsule contains a daily dose of globules, numbered from 1 to 10. The intake begins with the 1st blister and continues with the 2nd blister after 10 days. The following blisters follow the same rhythm. In total, a package contains 3 blisters, each with 10 capsules, so one package corresponds to a therapy duration of 30 days.

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49 The Nobel Prize in Physiology or Medicine is awarded for discoveries which are of fundamental importance for our understanding of the mechanisms which regulate cell and organ growth. The pattern of cellular growth has long been known, but it is the Italian developmental biologist Rita Levi-Montalcini and the American biochemist Stanley Cohen with their discovery of nerve growth factor (NGF) and epidermal growth factor (EGF), respectively, who could show how the growth and differentiation of a cell is regulated. NGF and EGF were the first of many growth-regulating signal substances to be discovered and characterized.

The discovery of NGF and EGF has opened new fields of widespread importance to basic science. As a direct consequence we may increase our understanding of many disease states such as developmental malformations, degenerative changes in senile dementia, delayed wound healing and tumour diseases. The characterization of these growth factors is therefore expected, in the near future, to result in the development of new therapeutic agents and improved treatment in various clinical diseases.

Source: Rita Levi-Montalcini & Pietro Calissano: The Nerve-Growth Factor. Scientific American 1979, 240, pp. 44-53.

### ► *Specific Nucleic Acid*

The specific nucleic acid (SNA<sup>®</sup>) is one of the ingenious ingredients of Micro-Immunotherapy. SNA<sup>®</sup> prevents pathogenic cell information from being transcribed during cell division or prevents the reading of information and thus the copying into a new cell. It is specific because it has been designed, for instance, for corresponding pathogens, such as SNA-EBV for Epstein-Barr virus or SNA-HERP 1 and 2 for herpes virus type 1 and 2. The discovery of SNA<sup>®</sup> highlights the brilliance of Dr. Maurice Jenaer, the founder of Micro-Immunotherapy. However, the existence of SNA<sup>®</sup> is also owed to the insights of modern research. Research that underpins the mechanisms of action of specific nucleic acids has even been honoured with the Nobel Prize.

In 2006, Roger D. Kornberg was awarded the Nobel Prize in Chemistry for his insights into the "Molecular Basis of Eukaryotic Transcription."<sup>50</sup> He deciphered how the double helix of DNA is split during cell division and how genetic information is read and copied. In the same year, Andrew Z. Fire and Craig C. Mello received the Nobel Prize in Medicine. They described "RNA interference or gene silencing through RNA duplication."<sup>51</sup> In this process as well, the transcription of specific gene segments is blocked.

## 13.1 The Most Important Cytokines and their Mode of Action

Cytokines play a significant role as messengers of the immune system in all immune reactions. The immune system is a network that, in turn, is connected to other networks, such as the hormonal system, acid-base balance, the psyche, as well as the mind and body, along with individual genetic information. Cytokines are categorized into various groups of substances. These are listed below.

---

50 Roger D. Kornberg, Stanford University, CA, USA: Studies of the molecular basis of eukaryotic transcription.

51 Andrew Z. Fire and Craig C. Mello, USA: Nobel Prize 2006 in Physiology and Medicine "for their discovery of RNA interference - gene silencing by double-stranded RNA".

### ► *Interferons*

The term originates from English and is derived from "to interfere." Interferons (IFNs) are proteins that have immunostimulant effects, especially antiviral and antitumoral. The interferon family includes the subtypes alpha (IFN- $\alpha$ ), beta (IFN- $\beta$ ), and gamma (IFN- $\gamma$ ).

IFN- $\alpha$  is capable of inhibiting the protein synthesis of virally infected cells. At the same time, it also activates the expression of HLA class I molecules, thereby enhancing antigen presentation to T4 lymphocytes.

IFN- $\beta$  appears to be produced by virus-infected connective tissue cells.

IFN- $\gamma$  is a well-known interferon produced by both T4 and T8 lymphocytes, as well as by macrophages that have phagocytosed bacteria. Interferons are thus part of both immune responses, both innate and acquired.

### ► *Interleukins*

Currently, over 30 interleukins (IL) are known. Discussing each interleukin here would go beyond the scope of this book. It's interesting to note that the same interleukin can convey different messages and interact with different receptors. Interleukins are the classical messengers of the immune system.

To understand how interleukins work, it's important to be familiar with the underlying principles. They can both stimulate and activate, as well as inhibit and reduce. In an autoimmune process, for example, IL-1 acts as an inflammation promoter, and IL-2 acts as an activator of T4 lymphocytes, creating an endless upward spiral: activated T4 lymphocytes, in turn, secrete IL-2 to activate more T4 lymphocytes. To slow down this process, both IL-2 and IL-1 need to be inhibited or balanced. Hence, both substances are found in many Micro-Immunotherapy products for a reason.

It's worth mentioning that, for instance, the Epstein-Barr virus produces a fake IL-10 similar to human IL-10. Normally, IL-10 has an anti-inflammatory effect. However, the IL-10 produced by EBV prevents this effect. Consequently, during an EBV crisis, typical signs of inflammation can occur.

▶ *Tumour Necrosis Factors*

Tumour Necrosis Factor-alpha (TNF- $\alpha$ ) has antiviral and antitumoral effects. An outdated term for TNF- $\alpha$  is cachectin, as this factor is associated with the development of cachexia in cancer patients and triggers fever. Fever is known to be a potent defence against viral and tumour-related burdens. TNF- $\alpha$  also promotes programmed cell death (apoptosis) and therefore plays a crucial role in the destruction of cartilage and bone mass in rheumatoid arthritis.

Tumour Necrosis Factor-beta (TNF- $\beta$ ) is secreted by activated lymphocytes. It also recruits monocytes and macrophages.

▶ *Th-1/Th-2 Cytokines*

Within cytokines, two main groups are distinguished: the Th1 and Th2 cytokines. Intracellular pathogens, such as *Borrelia*, *Rickettsia*, *Chlamydia*, viruses, and cancer cells, primarily stimulate a so-called "Th1 immune response." This response is characterized by the production of INF- $\gamma$ , IL-1, IL-1b, IL-12, IL-18, and especially Tumour Necrosis Factor-alpha (TNF- $\alpha$ ). These cytokines promote inflammation, as local inflammation with an increase in temperature serves for a rapid initial defence against pathogens. Elevated Th-1 cytokine levels in the blood are indirect indications of the presence of ongoing defence processes.

Extracellular pathogens, such as *Streptococci*, *Helicobacter pylori*, parasites, and bacteria that can later become intracellular but are still outside the cells, stimulate a Th-2 immune response, as well as allergens and toxins. The Th-2 response mainly involves the activation of B lymphocytes, which are prompted for specific antibody production. It can also lead to the proliferation of eosinophilic granulocytes and thus allergic reactions. The most important anti-inflammatory Th-2 cytokines are IL-10, IL-2, IL-4, IL-8, and in some cases – such as in multiple sclerosis – IL-6 (refer to page 152).

On page 81, TH1/TH2 are explained in more detail.

From this, the realization can be derived that the immune system, through the action of interleukins, can take two directions: an inflammatory or an allergic one.

### ► *Chemokines*

Chemokines induce the chemotaxis of immune cells. They are divided into inflammatory and homeostatic chemokines. Most chemokines are inflammatory cytokines: their production, for example, is triggered by injury, infection, or inflammation. Their release attracts additional immune cells. Homeostatic chemokines are constantly produced and play a role in organizing lymphoid organs and monitoring healthy tissue. They correspond to global surveillance.

There are a total of four known families: the C family, the CC family, the CXC family, and the CX3C family.

### **Growth Factors**

A variety of growth factors (GF) with different functions are known. Examples of individual growth factors include:

- Colony Stimulating Factor (CSF)
- Erythropoietin (EPO)

Colony stimulating factors (CSF) are cytokines that stimulate the growth of cell colonies. For example, erythropoietin (EPO) promotes the growth of red blood cells, and G-CSF promotes the growth of granulocytes. Few growth factors are as well-known as erythropoietin (EPO). EPO is abused for doping purposes because it promotes the growth of erythrocytes, the red blood cells. The number of red blood cells is significantly increased in relation to the serum fluid. This increase can be quantified by the haematocrit value, which is also elevated compared to the normal value.

The resulting thickening of the blood leads to a slowing of blood flow velocity. This increases blood pressure and can lead to cardiac arrest during increased physical exertion.

An increase in red blood cells allows for enhanced oxygen uptake through the haemoglobin bound to the erythrocytes. This enables increased muscle performance. In healthy individuals, astrocytes in the brain release EPO when there is a threat of oxygen deficiency. This ensures that sufficient oxygen reaches the brain and the neurons do not die. Therefore, EPO also acts as a neural growth factor.

- epidermal growth factor (EGF)
- fibroblast growth factor (FGF)
- granulocyte-macrophage colony stimulating factor (GM-CSF)
- hepatocyte growth factor(HGF)
- insulin-like growth factors (IGF)
- Interleukines IL-1 $\beta$  and IL-8
- nerve growth factor (NGF)

The nerve growth factor (NGF) was discovered by Rita Levi-Montalcini. Researchers are still exploring ways to selectively activate and increase NGF in order to potentially heal paralyzed individuals or treat patients with multiple sclerosis (MS). The synthesis of NGF receptors is promoted by IL-1 and IL-6. In the case of MS, there is a deficiency of IL-6, which directly relates to NGF and the disease. IL-1 is an inflammatory factor that is chronically inhibited by anti-inflammatory drugs such as salicylic acid or corticosteroids. Therefore, IL-1 is also partially responsible for reduced nerve regeneration in conditions like Alzheimer's or dementia. Additionally, Alzheimer's disease involves a deficiency of the neurotransmitter substance P.

- platelet derived growth factor (PDGF)
- transforming growth factor (TGF)
- vascular endothelial growth factor (VEGF).

## 15 Clinical Conditions and Selected Cases from Practice

### 15.1 Attention Deficit/Hyperactivity Disorder (ADHD)

Attention Deficit/Hyperactivity Disorder (ADHD), also referred to as Attention Deficit/Hyperactivity Syndrome or Hyperkinetic Disorder (HKD), belongs to the group of behavioural and emotional disorders with onset in childhood and adolescence (according to ICD-10: F90–F98, see Table). It is characterized by difficulties in attention, self-regulation, impulsivity, and sometimes marked physical restlessness (hyperactivity).

There are numerous theories regarding the causes of these conditions, if one may even label them as "disorders." Some children undoubtedly struggle simply with the expectation of sitting still in school. Not all children can do that, but it is not an illness!

#### Classification According to ICD-10<sup>62</sup>

- F90.– Hyperkinetic disorders
- F90.0 Simple hyperkinetic disorder
- F90.1 Hyperkinetic disorder of social behaviour
- F90.8 Other hyperkinetic disorders
- F90.9 Hyperkinetic disorder, unspecified
- F98.– Other behavioural and emotional disorders with onset usually occurring in childhood and adolescence
- F98.8 Other specified behavioural and emotional disorders with onset usually occurring in childhood and adolescence – Attention disorder without hyperactivity

Among others, the following causal relationships are discussed:

- Emotional, verbal and/or physical violence
- Pressure to perform and stress
- increased sugar consumption
- Food additives
- too much television and online games
- Vaccinations
- poor parental care and attention.

<sup>62</sup> ICD-10 online (WHO version 2016) <http://www.dimdi.de/static/de/klassi/icd-10-who/kodesuche/onlinefassungen/htmlamtl2016/index.htm> [retrieved 3.3.2016]



Children who exhibit noticeable behavior and are recommended to take Methylphenidate (short: MPH) either from the school or after pediatric and school psychological evaluation must undergo micro-immunotherapeutic assessment.

In practice, in addition to the aforementioned potential causes, it has been shown in all cases that a – Epstein-Barr Virus (EBV) or high reactivation could be detected.

### Case 1

A juvenile patient, born in 1995, initially visited the clinic in October 2007 due to concerns raised by the mother about school-related issues. The boy exhibited easy distractibility, struggled with restlessness and an inability to remain seated, and experienced difficulties in maintaining focus. He personally expressed a consistent feeling of Adaptive defence. After a school assessment, Methylphenidate was prescribed.

Furthermore, there was evident immune system deficiency (not depicted). The overall lymphocyte count was diminished, and there was a significant decrease in T4 lymphocytes.

	October 2007	Reference Value
EBV EA IgG (IF)	<20	Titer <20
EBV VCA IgG (IF)	160	Titer <80
EBV VCA IgM (IF)	<10	Titer <10
EBV EBNA-1 IgG (IF)	<20	Titer <20

A primary infection with EBV that has not been completed. EBV VCA IgG is positive, that means, there has been an infection, whereas EBV EBNA IgG is negative which means that the infection has not been completed.

A secondary diagnosis was an allergic situation with elevated IgE.

### Therapy

- The boy first received 2LEID and 2LEBV for 2 months, then only 2LEBV for another 4 months,
- additionally, the single remedy IgE C30 with 2 globules daily for 2 months.

No other therapies were applied or prescribed. The Ritalin® had been discontinued by the mother during Micro-Immunotherapy.

### Control from April 2008

	October 2007	April 2008	Reference Value
EBV EA IgG (IF)	<20	<20	Titer <20
EBV VCA IgG (IF)	160	160	Titer <80
EBV VCA IgM (IF)	<10	<10	Titer <10
EBV EBNA-1 IgG (IF)	<20	40	Titer <20

After a therapy duration of 6 months, EBV EBNA IgG tested positive. The immune system had also returned to normal. Furthermore, no allergies were detectable.

The mother reported that the boy felt significantly more energetic, was more engaged, and, most importantly, his school grades had improved substantially.

He personally described himself as more capable of concentration and handling conflicts. Ritalin® was no longer prescribed to the boy. The therapy is now concluded.

### Case 2

In May 2013, a 13-year-old boy visited our practice for the first time due to severe behavioural issues. He struggled with controlling his aggression, frequently engaged in conflicts, exhibited poor performance in school, and faced difficulties with concentration.

#### Anamnesis

- Parents' divorce,
- Mother with alcohol dependency,
- Father's remarriage; the boy resided with his older brother in his father's household,
- The boy wore dual hearing aids due to almost complete hearing loss.

The laboratory findings indicated a chronic and persistent EBV infection, which improved following 7 months of therapy. Remarkably, his hearing was fully restored. Subsequently, there was a significant enhancement in school performance and concentration ability.

Considering the substantial psychological distress arising from the mother's addiction, seeking psychological assistance was recommended.

	May 2003	December 2013	Reference Value
EBV EA IgG (IF)	<20	<20	Titer <20
EBV VCA IgG (IF)	160	320	Titer <80
EBV VCA IgM (IF)	<10	<10	Titer <10
EBV EBNA-1 IgG (IF)	<b>&lt;20</b>	<b>20</b>	Titer <20

## 15.2 Lyme Disease

From a micro-immunotherapeutic standpoint, the treatment approach for Lyme disease doesn't primarily target the Borrelia bacteria themselves; rather, the focus is on the immune system, which has become inadequately responsive.

The reasons behind an immune system's inability to effectively combat Borrelia bacteria can be diverse.

To identify these factors, the following investigations are essential:

- Lymphocyte typing
  - Serological tests:
    - Herpes virus family,
    - EBV and CMV,
    - Herpes virus types 1 and 2, as well as varicella-zoster virus,
  - HLA typing,
- Exploration of other potential bacterial triggers:
- Yersinia,
  - Chlamydia.

Typically, heavy metal contamination is also detected, necessitating treatment with elimination protocols. Additionally, specialized dental intervention is recommended, involving the replacement of amalgam fillings and the removal of any dental focal points like root-treated teeth.

Experience demonstrates that EBV reactivation is often significant, accompanied by immune system deficiencies. Addressing both of these aspects through appropriate treatment is crucial.

## Therapy

- Treating co-infections, especially targeting EBV
- Strengthening the weakened immune system with approaches like 2LEID
- Using own blood nosodes and borrelia nosodes
- Utilizing wild cardoon, which has demonstrated effectiveness against Lyme disease.

Neuroborreliosis is an exceptionally severe ailment caused by the infiltration of *Borrelia* bacteria into the cerebrospinal fluid surrounding the spinal cord. Diagnosis necessitates the detection of *Borrelia* antibodies within the cerebrospinal fluid. Therapeutic intervention is notably challenging, initially demanding high doses of antibiotics due to the potential development of conditions like meningitis, encephalitis, and paralysis.

A comprehensive therapy that addresses HHV-4: Epstein-Barr Virus (EBV) treatment, heavy metal elimination, and immune system activation frequently yields significant improvement in Lyme disease symptoms. Over time, even *Borrelia* bacteria become undetectable, including in the lymphocyte transformation test (LTT). It is strongly recommended to assess values (immune status and triggers) post-therapy. Treatment continues until Adaptive defence is no longer reactive, a duration that varies from patient to patient. Experience indicates that EBV reactivation may diminish as early as 6 months, but in some cases, it might take up to 24 months or longer.

## Chronic Lyme Disease

The identification of the HLA-DR genotype enables the recognition of patients prone to becoming chronic during the later stages of *Borrelia* infection. The link between the development of therapy-resistant Lyme disease and HLA-DR2 or DR4 has been acknowledged for a while (with a 22-fold relative risk increase!). In a study examining HLA subtypes using a four-digit number sequence, researchers led by STEERE<sup>63</sup> discovered a clear correlation between subtypes DRB1\*01:01, \*15:01, \*04:01, \*04:02, \*04:03, \*04:04, \*04:05, and \*04:07 and the emergence of therapy-resistant Lyme disease.<sup>64</sup>

In conjunction with the aforementioned therapies, HLA-SMM should be prescribed and produced for cases of chronic Lyme disease.

63 Steere A.C. et al. (2006): Antibiotic-refractory Lyme arthritis is associated with HLA-DR molecules that bind a *Borrelia burgdorferi* peptide. *JEM* 203

64 Institute for Medical Diagnostics Berlin - Potsdam MVZ GbR, Diagnostic Info 214



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**Corinne I. Heitz, PhD,** has been operating her own practice in Switzerland for nearly 30 years. Her work primarily focuses on diagnosing and treating chronic diseases, particularly autoimmune conditions, as well as providing cancer therapies, with a specific emphasis on Micro-Immunotherapy. She is also an accomplished author of specialized books and a frequent speaker at international events on naturopathy and alternative medicine.

This guide serves as an introduction to the fundamentals and practical application of Micro-Immunotherapy. The resurgence of viruses, notably the Epstein-Barr Virus (EBV), disrupts the delicate balance of the immune system. Micro-Immunotherapy aids in restoring this balance and effectively treating diseases by utilizing highly diluted messenger molecules like cytokines.

Designed for therapists and professionals seeking an understanding or further insight into Micro-Immunotherapy, this specialized book comprehensively covers:

- The functionality of the immune system,
- Diagnosis and interpretation of laboratory parameters,
- Comprehensive treatment approaches for autoimmune diseases, considering their underlying causes.

Illustrative case studies showcase various treatment modalities, including Micro-Immunotherapy, and supplementary strategies, even for intricate diseases.