

**new**

# The immune system as the biggest determinant of overall health & longevity



## The introduction of a new powerful combination of Transfer Factors

Transfer Factors are **amino acid sequences**, naturally produced by activated T-Lymphocytes during infection.

Research demonstrates the **unique immune advantage** of concentrated Transfer Factors over whole colostrum alone.

\*Our compositions **Multimessenger™** and **Messenger Complex™** = Purification via HPLC, no casein, no lactose

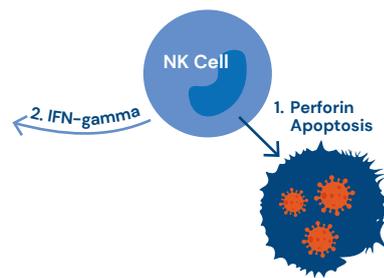
Colostrum component	Relative weight (in kilodaltons)
Immunoglobulins (IgA, IgE, IgG, IgM)	150–900
Lactoferrin	80
Insulin-like growth factors	7,5
<b>Transfer Factor*</b>	3–6
<b>Proline rich peptides*</b>	1–5



## 1. Transfer Factors have the capability to activate Natural Killer Cells

Standardized compositions of Transfer Factors (Multimessenger™) trigger activating receptors on the surface of Natural Killer Cells.

This interaction between Transfer Factors and NK Cells results in better NK Cell activity where more infected cells are eliminated.



## 2. Transfer Factors can transfer cell-mediated immunity between T-Lymphocytes (Messenger Complex™)

Comparable with transferring immunity between patients that were exposed and patients that were not exposed.

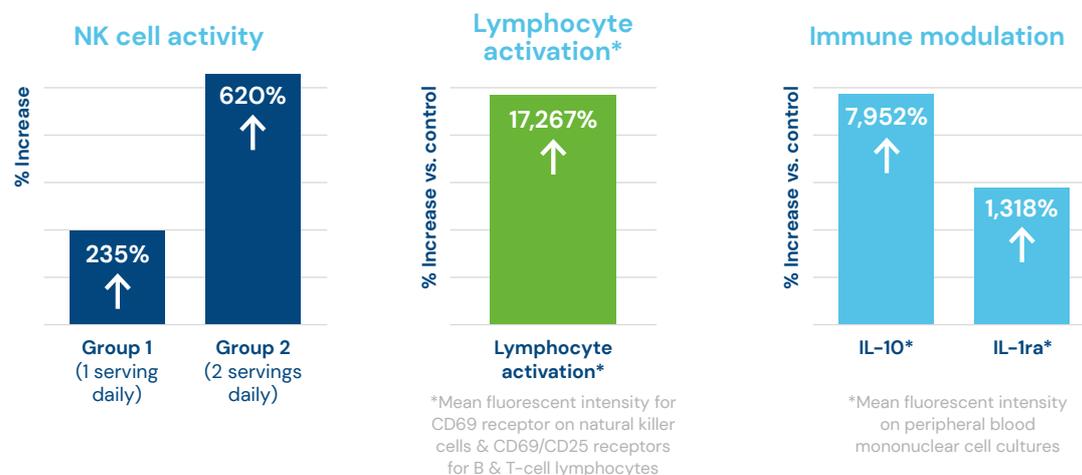
## 3. Transfer Factors have been used to promote a healthy immune response

- A study in *Journal of Experimental & Clinical Cancer Research* (2002) by Viza et al. looked at Transfer Factor as an **immunomodulator in cancer patients**, reporting an **overall improvement in immune markers**.
- A study in *Clinical and Diagnostic Laboratory Immunology* (2005) by Kirkpatrick et al. discussed the **immunomodulatory effects** of TFs in autoimmune conditions.
- Transfer factors were used in the treatment of cancer patients to **address opportunistic infections** most with leukemia, who had fungal, viral or mycobacterial infections that were not responding to conventional therapy.

Transfer Factors have been used successfully in prevention. Data also suggest the use of Transfer Factors as an (adjuvant) treatment during infection.

## Multimessenger™

In vitro research



Jensen, Gitte S., Dina Cruickshank, and Debby E. Hamilton. "Effects of a  $\beta$ -Glucan-Rich Blend of Medicinal Mushrooms and Botanicals on Innate Immune Cell Activation and Function Are Enhanced by a Very Low Dose of Bovine Colostrum Peptides." *Molecules* 29.12 (2024): 2787.



## Multimesseger™

Take 1 x 3 caps/day just before breakfast  
 = strengthening NK Cells  
 = rebuilding balance Th1/Th2/Th17



## Messenger Complex™

Take 1 x 3 caps/day before sleep  
 = mixture of specific Transfer Factors  
 = transferring cell-mediated immunity between T-Lymphocytes

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### References

Viza, D., Pizza, G., & De Vinci, C. (2002). Transfer factor: an overlooked potential for the prevention and treatment of infectious diseases. *Journal of Experimental & Clinical Cancer Research*, 21(1), 21-26.

Kirkpatrick, C. H., Burger, D. R., & Lawrence, H. S. (2005). Transfer factors: current status and future prospects. *Clinical and Diagnostic Laboratory Immunology*, 12(5), 688-697.

Ketchel SJ, Rodriguez V, Stone A, Gutterman JU. A study of transfer factor for opportunistic infections in cancer patients. *Med Pediatr Oncol*. 1979;6(4):295-301. doi: 10.1002/mpo.2950060405. PMID: 225647.

Kirkpatrick CH. Transfer factors: identification of conserved sequences in transfer factor molecules. *Mol Med*. 2000 Apr;6(4):332-41. PMID: 10949913; PMCID: PMC1949950

Fabre RA, Pérez TM, Aguilar LD, Rangel MJ, Estrada-García I, Hernández-Pando R, Estrada Parra S. Transfer factors as immunotherapy and supplement of chemotherapy in experimental pulmonary tuberculosis. *Clin Exp Immunol*. 2004 May;136(2):215-23. doi: 10.1111/j.1365-2249.2004.02454.x. PMID: 15086383; PMCID: PMC1809022.

Viza D, Fudenberg HH, Palareti A, Ablashi D, De Vinci C, Pizza G. Transfer factor: an overlooked potential for the prevention and treatment of infectious diseases. *Folia Biol (Praha)*. 2013;59(2):53-67. PMID: 23746171

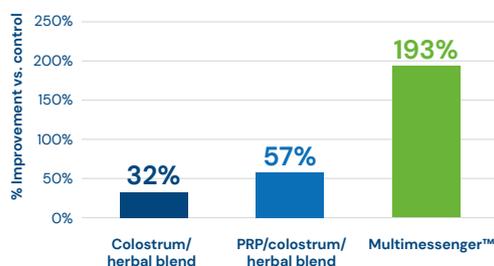
# Multimessenger™



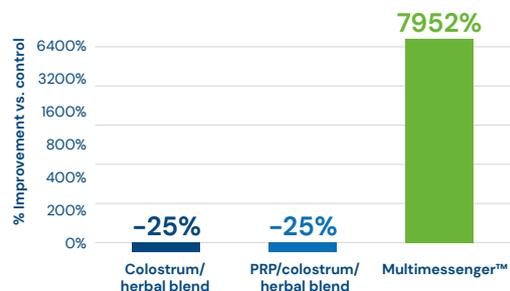
<b>indication</b>	Natural Killer Cell support Supports T reg	
<b>dosage</b>	Take 3 caps per day just before breakfast (acute: 2x3) Children aged 6 m - 2 yr: 1 capsule per day Children aged 2 yr - 6 yr: 2 capsules per day From 6 year and older: 3 capsules per day	
<b>packaging</b>	90 caps per container	
<b>daily dose (based on 3 caps)</b>	Transfer Factors – pure amino acid sequences extracted from Colostrum	500 mg
	Arabinogalactan	333 mg
	Beta Glucan	286 mg
	Inositol	200 mg
	Green tea (Camelia sinensis)	200 mg
	Pomegranate tree (Punica granatum)	200 mg
	Astragale (Astragalus membranous)	70 mg
	Shiitake (Lentinula edodes)	25 mg
	Dancing mushroom = Maitake (Grifola frondosa)	25 mg
	Zinc (as Zinc citrate)	15 mg
	Selenium (as L-Selenomethionine)	70 µg

## Natural Killer Cell activation\*

Innate immune system activation



## Immune modulation IL-10\*\*



\* % improvement in Mean Fluorescent Intensity for CD 69 Receptor on Natural Killer Cells. (CD69 is highly correlated with NK cell activity)

\*\* % improvement in Mean Fluorescent Intensity for IL-10 on Peripheral Blood Mononuclear Cell Cultures (PBMC)

# Messenger Complex™



<b>indication</b>	Transfer of cell-mediated immunity	
<b>dosage</b>	Take 3 caps per day before dinner or before sleep	
<b>packaging</b>	90 vegecapsules per container	
<b>daily dose (based on 3 vegecapsules)</b>	Amino acid sequences (Transfer Factors) extracted from colostrum	1800 mg