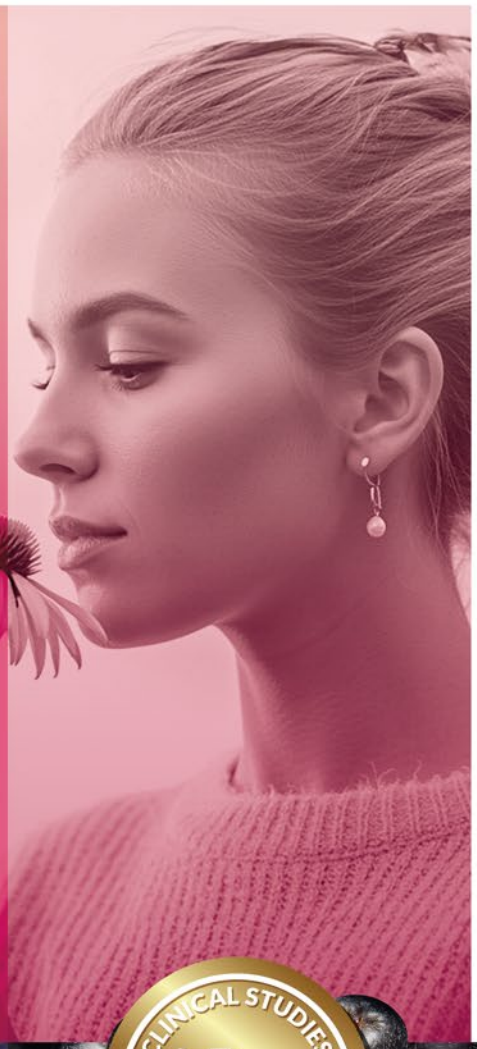
RESCOVIN®

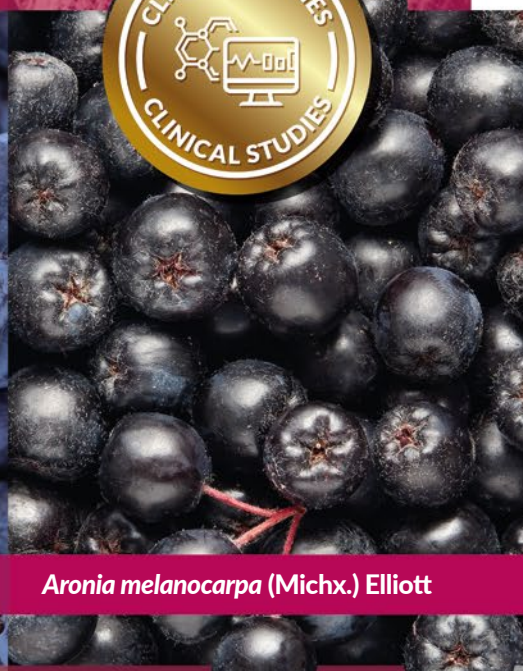
by Greenvit®

Immunity recovery



Echinacea purpurea (L.) Moench

Lonicera caerulea L.



Aronia melanocarpa (Michx.) Elliott

PREVENTS INFECTIONS

ALLEVIATES INFLAMMATION

BOOST ENERGY AND STRENGTH

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by Greenvit®

What is RESCOVIN®

RESCOVIN® is a preparation based on precisely standardized plant extracts with scientifically confirmed biological potential. It focuses on utilizing the immunoregulatory and antiviral properties of plant extracts. Thanks to the precise standardization of active ingredients, **RESCOVIN®** ensures consistent efficacy and action coherence. The extract blend consists of plant extracts obtained from three different plants.

- *Echinacea purpurea* (L.) Moench,
- *Aronia melanocarpa* (Michx.) Elliott,
- *Lonicera caerulea* L.

Who is RESCOVIN® intended for?

RESCOVIN® is designed for people presenting with symptoms such as:

- frequent and recurrent respiratory infections,
- declining immunity with age,
- weakened immune system after infections,
- active infections with influenza or coronavirus.

What makes RESCOVIN® unique?

Plant extracts are rich in polyphenolic compounds. They have immunomodulatory and antioxidative properties crucial for respiratory diseases, aiding in the prevention and treatment of viral infections and are promising in preventing and treating coronavirus infections.

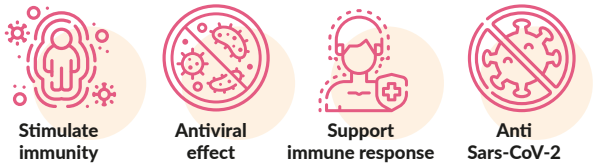
To create **RESCOVIN®**, we selected ingredients with broad-spectrum antiviral and immunomodulatory action. The blend includes extracts standardized for: anthocyanins (HPLC), polyphenols (UV), and cichoric acid (HPLC).[1]

RESCOVIN® by Greenvit®

Benefits of Aronia extract:

- Aronia extract is rich in polyphenols, anthocyanins, and flavonols.
- Many studies have found that aronia berries exhibit strong inhibitory activity against various types of infections, attributed to their potent antioxidative components.
- Based on clinical studies, quercetin shows a positive effect in the early treatment of COVID-19.
- Aronia demonstrates in vivo effectiveness against various influenza virus subtypes, including strains resistant to oseltamivir.
- Extracts from aronia berries show antimicrobial activity against strains of Escherichia coli, Staphylococcus aureus, and Streptococcus pyogenes.[2]

Benefits of Echinacea extract:



- Numerous studies have shown that *Echinacea purpurea* enhances innate immunity by stimulating neutrophils, macrophages, granulocytes, and natural killer cells.
- Echinacea has antiviral effects, exhibiting maximum activity on recurring infections and is used in the prevention of infections.
- Chicoric acid present in echinacea has confirmed antiviral activity against RSV and SARS-CoV-2.[3]

Benefits of Haskap Berry extract:

Antioxidative

Antivirus activity

Antimicrobial

Anti-RSV, -HIV, -HSV, -NDV

- Haskap berries have been found to possess antioxidative, anti-inflammatory, and antiviral properties.
- The antibacterial activity of haskap berry extracts is mainly attributed to their high content of polyphenols, which damage bacterial cell membranes and inhibit their growth, as well as to the presence of essential oils that contain compounds with bactericidal properties.
- Since the 1980s, the antiviral activity of Lonicera caerulea L. berries, such as anti-RSV, anti-HIV, anti-HSV, anti-PRV and anti-NDV, has been studied and proven.[4]

Patent pending

RESCOVIN® composition has been filed for patent protection:

"Pharmaceutical Composition Supporting the Immune System Before and During Upper Respiratory Tract Infections."

in Poland:
Application no. P.444627 and P. 446422
and internationally:
Application no. PCT/PL2024/000018

Gold Medal for RESCOVIN®

RESCOVIN® won the Golden Medal at NutraFood Poland for Excellence in Immunity Support.

16 - 18 APRIL 2024, WARSAW
WorldFood Poland
Gold Medal
2024

RESCOVIN®, the flagship brand of **GREENVIT®**, has been awarded the **2024 Gold Medal** at **NutraFood Poland**, the leading industry exhibition dedicated to innovations in nutrition. **RESCOVIN®** is not only a unique product but also a **patented formula** that combines the best achievements of science and nature to support immune health.

The **Gold Medal** is awarded to products that meet the **highest standards of quality and consumer satisfaction**, highlighting our **commitment to delivering scientifically backed, effective solutions for health and wellness.**

Clinical studies

The composition of **RESCOVIN®** is supported by research under the CovidAron project. The composition of **RESCOVIN®** has been filed for patent protection in Poland under application numbers P. 446422 and P.444627: "Pharmaceutical composition supporting the immune system before and during upper respiratory tract infections."

In vitro studies confirm that **RESCOVIN®** is a potent component in the treatment of viral infections. **RESCOVIN®** offers a multifaceted approach to combating infections caused by beta-coronaviruses, including:

- impeding the virus's entry into host cells,
- enhancing the body's antiviral defense,
- mitigating harmful inflammatory states,
- protecting against oxidative stress and hypoxia.

All the above mechanisms contribute to the effectiveness of **RESCOVIN®** in treating beta-coronavirus infections, such as SARS-CoV-2. In summary, the results of clinical studies indicate that:

- **RESCOVIN®** blocks the adsorption of viruses onto host cells,
- **RESCOVIN®** may enhance the body's natural healing forces in the early stages of infection,
- **RESCOVIN®** induces the host's response at the early stage of infection and mitigates harmful inflammation at later stages,

Results suggest that **RESCOVIN®** alleviates or prevents the harmful effects of hypoxia caused by lung damage after an inflammatory state induced by the SARS-CoV-2 virus, **RESCOVIN®** has shown a strong inhibitory effect on the replication of the beta-coronavirus before and after infection in HCT-8 cells, **RESCOVIN®** at a concentration of 150 µg/mL reduces the replication of the VSV virus (vesicular stomatitis virus) almost to zero, demonstrating its antiviral properties.[5]

Clinical trial

*„Evaluation of the clinical effectiveness and safety of the plant extract mixture M3 (**RESCOVIN®**) in adult patients with increased susceptibility to viral and/or bacterial upper respiratory tract infections."*

The study aimed to assess the clinical effectiveness and safety of **RESCOVIN®** in areas such as:

- Preventing or reducing the frequency of episodes of upper respiratory tract infections during peak illness periods – autumn/winter,
- Reducing the severity or duration of symptoms associated with upper respiratory tract infections,
- Stimulating the immune system for antiviral defense, and impact on oxidative stress.

The results of the clinical studies demonstrated the remarkable impact of **RESCOVIN®** on both the frequency and symptoms of upper respiratory tract infections. **RESCOVIN®**:

- reduces the risk of symptoms during and up to 60 days after supplementation,
- mitigates inflammatory states,
- reduces indicators of oxidative stress,
- results in a significant increase in energy and physical strength during use and after a 2-month observation period.

Discussion of results:

C-reactive protein (CRP) is a marker of inflammation in the body in a blood test. Isoprostanes are products of the free radical-induced peroxidation of polyunsaturated fatty acids that are components of phospholipids.[6] They are widely recognized as reliable biomarkers of oxidative stress. **RESCOVIN®** reduced isoprostane levels by 31% and CRP levels by 50%.

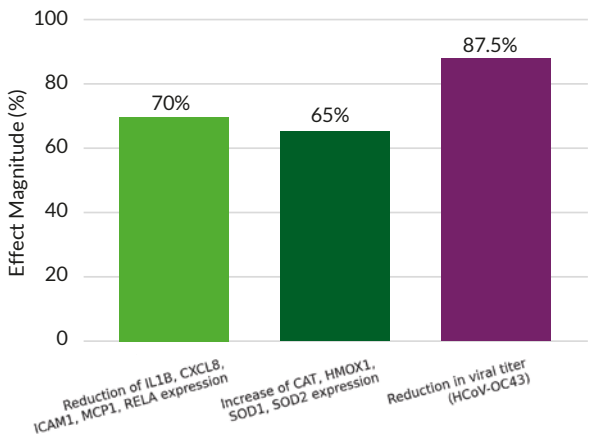
The reduction in serum CRP and isoprostane levels signifies a systemic anti-inflammatory action, potentially contributing to the overall state of health. Concurrently, increased production of TNF-α and IL-6 in PBMCs suggests targeted activation of immune cells, promoting a strong defense against viral infections.

Publication

Exploring the potency of polyphenol-rich blend from *Lonicera caerulea* L., *Aronia melanocarpa* (Michx.) Elliott, and *Echinacea purpurea* (L.) Moench: Promising anti-inflammatory, antioxidant and antiviral properties.

To evaluate the effects of the **RESCOVIN®**, a series of **in vitro** experiments were conducted using **A549 cells** and a **3D mucociliary** tissue model (EpiAirway™). **Inflammation and oxidative stress** induced by **LPS** were assessed through **SOD activity assays, ELISA, and qPCR analysis.** Additionally, **antiviral assays** were performed in a cell-present environment to examine the blend's effectiveness against **HCoV-OC43.**

Biological Effects of RESCOVIN® **Figure 1.**



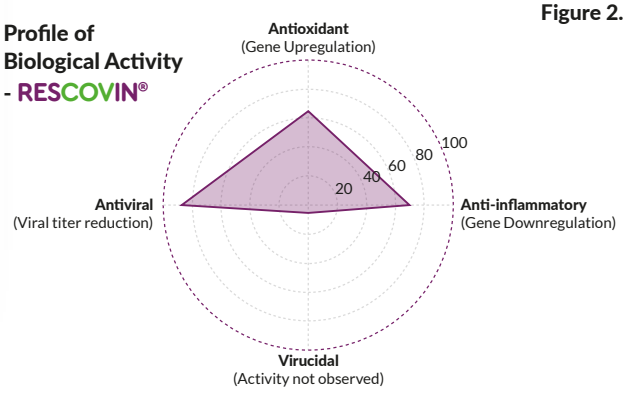
Key Findings

- Cells treated with the **RESCOVIN®** showed a significant reduction in the expression of pro-inflammatory genes **IL1B, CXCL8, ICAM1, MCP1, and RELA** in both **A549 cells** and **EpiAirway™**.
- The blend also **upregulated antioxidant-related genes CAT, HMOX1, SOD1, and SOD2** in A549 cells.
- The **antiviral potential** of the **RESCOVIN®** was further examined through its influence on the viral replication cycle.
- At the highest non-cytotoxic concentration, **RESCOVIN® reduced viral titer by 87.5%** when administered **simultaneously with HCoV-OC43**, suggesting its ability to **block viral entry into host cells**.

Conclusion

The **RESCOVIN® demonstrated significant antiviral activity, as well as immunomodulatory and antioxidant effects**. These findings suggest that **RESCOVIN® has strong potential for both the prevention and treatment of viral infections.**

Figure 2.



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