

Black cumin seed oil a.k.a black seed oil from *N. sativa* (NS) & Immune Health Support:

What does the science Show?



ThymoQuin® Brings Science and consistency to the Black Seed Oil Market

## *International Immunology*

### *N.S Oil is a Viable choice for Immune support*

“Experimental evidence suggests that *N. sativa* extracts and TQ (thymoquinone) can potentially be employed in the **development of effective therapeutic agents towards the regulation of immune reactions** implicated in various infectious and non-infectious conditions.”<sup>1</sup>

## *Iranian Journal of Basic Medical Science*

“NS seeds have **antimicrobial effects** against different pathogens, including **bacteria, viruses, schistosome and fungus.**”<sup>2</sup>



## *Immune Health Research Recap: Impact in 3 Primary Areas*

- ▶ Antiviral<sup>3</sup>
- ▶ Antifungal<sup>4</sup>
- ▶ Antibacterial<sup>5</sup>



# Antiviral Activity Studies

- ▶ Proven benefits against these types of viruses: Murine cytomegalio, avian influenza (H9N2), Chistosoma Mansoni, PPR, Broad bean mosaic virus, HIV, Hepatitis C, coronavirus, Zucchini Yellow Mosaic, Papaya Ring Spot, HPAI, H7N3, HSN1.<sup>6, 7, 8</sup>
- ▶ Shown to help decrease Viral Load <sup>9</sup>
- Benefits due to multiple mechanisms of action
  - it is unclear which component(s) in NS are directly responsible for the antiviral activities. It is possible that the activity is due to the proper composition of sterols and saponins, phenolic compounds, alkaloids, novel lipid constituents, and volatile oils, etc.<sup>10, 11</sup> (Full Spectrum Oil will provide these compounds)

# Antifungal

- ▶ Exhibited powerful fungicidal activity against dermatophyte strains.<sup>12</sup>
  - ▶ Dermatophytes are a common label for types of fungus primarily impacting the skin, hair and nails. Examples would be ringworm, toenail fungus, athlete's foot and jock itch.



# Antibacterial

- ▶ Thymoquinone obtained from seeds of *NS* revealed broader spectrum activities against multiple strains of gram-positive and gram-negative bacteria<sup>13</sup>
- ▶ Examples: *Bacillus*, *Listeria*, *Enterococcus*, *Micrococcus*, *Staphylococcus*, *Pseudomonas*, *Escherichia*, and *Salmonella*.<sup>14</sup>



# 7 Unique and Scientifically substantiated areas of Immune Health Support:

1. Immunomodulatory: Helps to "balance" the immune system and its response
  - Augmenting the T cell- and natural killer cell-mediated immune responses<sup>14</sup>
2. Antioxidant: essential for an efficient function of the immune system and important for the effects on immune responses.
  - Improve the action of antioxidant enzymes (catalase, glutathione peroxidase, and glutathione-S-transferase) and acts as a free radical.<sup>15</sup>
3. Cytokine Production: interact with cells of the immune system to regulate the body's response to disease and infection. Immune cells use cytokines as messengers to other immune cells.
  - Enhances the production of cytokines including interleukin-3, interleukin-1 beta and interferon (INF)-gamma<sup>16, 17, 18</sup>

## 7 Unique and Scientifically substantiated areas of Immune Health Support:

4. Lymphocyte Production: act to recognize antigens, produce antibodies, and destroy cells that are harmful.
  - Enhanced splenocyte proliferation, significantly enhanced NK cytotoxic activity and augments T cell and NK cell-mediated immune responses.<sup>20, 21</sup>
5. T Helper Cells: most important cells in adaptive immunity, as they are required for almost all adaptive immune responses.
  - Benefit immune function possible due to the increase in number and function of CD4<sup>+</sup> T cells<sup>22, 23</sup>
6. Immunopotentialiation: process that directly enhances one or more specific immune functions, or modifies one or more components to achieve its effects through indirect mechanisms
  - Immunopotentiating effect is mediated through stimulation of macrophage phagocytic activity either directly or via activation of lymphocytes<sup>24</sup>
7. Increased Phagocytosis: Immune cells that engulf bacteria, viruses, fungi and even parasites
  - Significantly increased the phagocytic activity and phagocytic index of macrophages <sup>25, 26</sup>



Why

# ***ThymoQuin***<sup>TM</sup>

**The Only: Full Spectrum Cold Pressed Black Cumin  
Seed Oil with Standardized Thymoquinone Content**

**Organic Certified Now Available**

# What to look for in your Black Seed Oil

## Full Spectrum Black Seed Oil

ThymoQuin is the only Black Seed Oil to use **fresh seeds** and **cold pressed extraction** which yields the **proper ratios and amounts** of 4 key biological compounds.

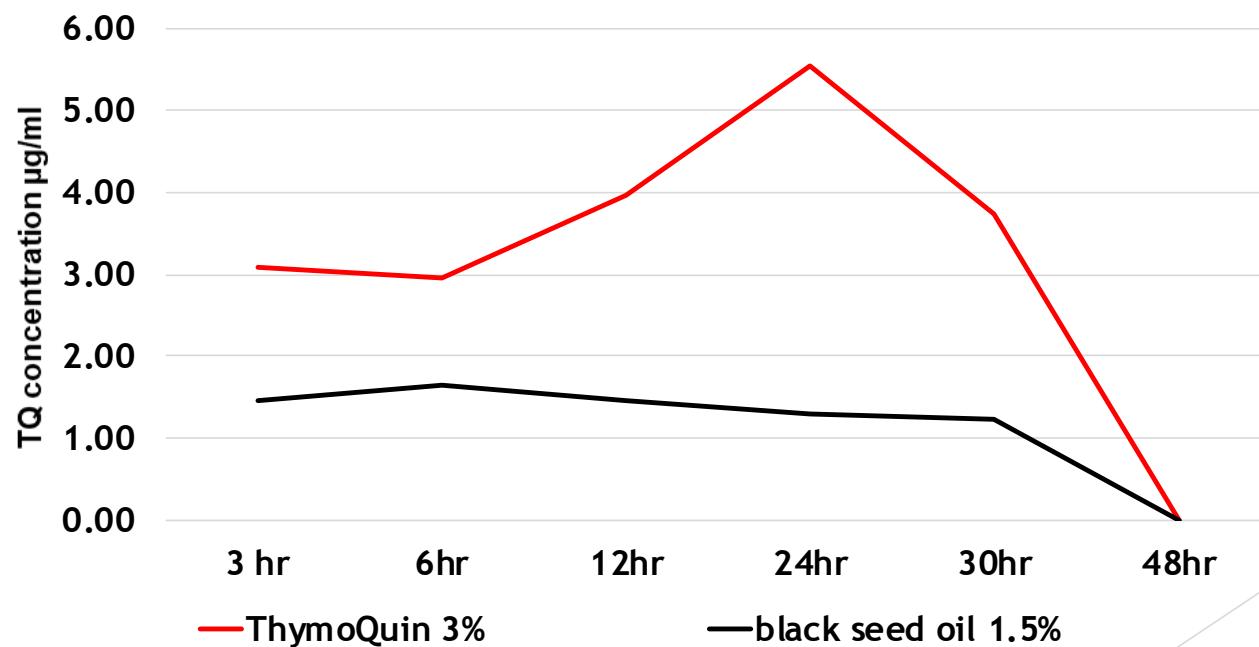
- ▶ Thymoquinone 3%
- ▶ Free Fatty Acids
  - ▶ Higher levels decrease the anti-inflammatory activity
  - ▶ Thymoquinone has **VERY** low levels of free fatty acids
- ▶ P-Cymene
  - ▶ Research Studies show the **best impact on inflammation** is when P-Cymene content is at 1% when combined with 3% Thymoquinone.
    - ▶ This effect is synergistic when fighting inflammation
- ▶ Carvacrol
  - ▶ Higher levels of carvacrol reduces thymoquinone's effectiveness
  - ▶ Thymoquinone has very low levels of Carvacrol



Composition Patent Pending

# Bioavailability of Thymoquinone from ThymoQuin

*Thymoquinone bioavailability (mice)*



1. Standardized to the perfect percentage of Thymoquinone
2. Uses the Proper Extraction Process: Cold Processed using only Fresh Seeds
3. All Biologic Compounds are in the proper percentages yielding the best results
4. Proven Synergy
5. USP Monograph approval pending
6. Composition and Synergistic Patents Pending
7. Vertical Integration from Seed to Farm to Manufacturing
8. Clinical Backed and Published Papers
9. Organic Certified Now Available
10. Self-affirmed GRAS



**TriNutra™**  
*Your Health...Your Way™*



## Farm to Finished Product

- ▶ Traceability
- ▶ History of the farm
- ▶ Varieties produced
- ▶ Cultivation
- ▶ Harvesting conditions
- ▶ Seed storage
- ▶ Processing
- ▶ **Self-affirmed GRAS**

All in One Location to assure the best possible product with guaranteed traceability.

*Thank You*



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