

Immune Benefits of Mushroom Mycelium & Cultured Substrate Confirmed*

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Founder, owner and Director of Research of Fungi Perfecti LLC, **Paul Stamets, D.Sc.** has been recognized for decades as a leading innovator in the field of applied mycology, with a focus on revealing the health-supporting properties of mushrooms.

Scientists demonstrate significant health benefits of Host Defense® mycelium & cultured rice.*

In 2017, Paul Stamets and his team at **Fungi Perfecti, LLC** (FP) partnered with Natural Immune Systems, Inc. (NIS) to further clarify the immune-enhancing impacts of various mushroom ingredients. NIS Labs specializes in bio-relevant assays, integrating their laboratory and clinical facilities to evaluate how natural products impact human physiology. Together, NIS Labs and FP are uncovering some remarkable truths about mushroom ingredients used in the supplement industry.

To check for activation of various immune factors, three **Host Defense®** brand products were put to the test: **MyCommunity®** capsules, **Reishi** mycelium capsules and **Agarikon** mycelium capsules.

Testing by NIS Labs confirmed that these three mycelium-centered products:

- increase innate immune cells for protection*
- activate white blood cells for immune strength*
- regulate immune cell compounds for a balanced immune response*

A separate research effort by FP and NIS Labs sought to understand the immune impact of organic brown rice substrate after being cultured by Turkey Tail (*Trametes versicolor*) mushroom mycelium.

As mushroom mycelium grows through brown rice, it produces a near-inseparable matrix of mycelium and enzymatically-converted material. Utilizing an expensive and time-consuming laboratory process, researchers were able to separate pure Turkey Tail mycelium from the cultured rice substrate.

Testing verified both the mycelium and the cultured rice substrate as immunologically active.* Furthermore, the mycelium and the cultured rice substrate are active in different ways, each conferring unique and complementary immune benefits.*

By contrast, the same immune assays were performed on organic brown rice substrate that was not cultured by mushroom mycelium. With the plain, uncultured rice, no significant immune activity was detected.

This data definitively demonstrates that cultured mycelium on organic brown rice is extraordinarily active in supporting immunity.*

Fig. 1 Immune Activation: Turkey Tail Mycelium Cultured Rice vs Plain Rice

100		
90		
80	80	
70	Mycelium Cultured Rice	
60		
50		
40		
30		
20		10
10		Plain Rice
0	Average % Change from Baseline - 5 Types of Immune Cells	

Fig. 2 - Immune Activation Comparison

Host Defense® Product	Increases Innate Immune Cells for Protection*	Activates White Blood Cells for Immune Strength*	Regulates Immune Cell Compounds for Balance*
MyCommunity® Capsules	✓	✓	✓
Reishi Mycelium Capsules	✓	✓	✓
Agarikon Mycelium Capsules	✓	✓	✓
Turkey Tail Mycelium & Cultured Rice	✓	✓	✓
Plain Rice	✗	✗	✗

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure or prevent any disease

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Consumers should keep in mind that it is not possible to separate mushroom mycelium from its grain substrate under normal circumstances. Similar to yogurt, in which beneficial bacteria like Lactobacillus cultures milk, these two nutrient sources exist as a living, interconnected matrix. Alongside the pure mycelium, the cultured rice substrate becomes a new, integrated functional food providing complete and effective support for immune function.*

Some vendors in the mushroom supplement space deceptively argue that mycelium grown on a grain substrate is not useful for consumers and that only mushroom fruitbodies are valuable in supporting health. These claims contradict hundreds of articles published in the scientific literature demonstrating the health-enhancing value of mushroom mycelium grown on grain substrates such as organic brown rice, including an NIH funded study confirming the immunologically supporting activity of Host Defense Turkey Tail mycelium capsules.*

Fungi Perfecti founder, owner, and Director of Research Paul Stamets notes, "In my scientific opinion, mushroom products not incorporating mycelium are at a decided disadvantage, given the results of recent research."

Ongoing research efforts by Fungi Perfecti and NIS Labs are further demonstrating the profound value of mushroom mycelium. Several papers are in preparation for publication in peer-reviewed immunological journals.

To learn more and find Host Defense Mushroom mycelium products, please visit www.HostDefense.com. **T F L**



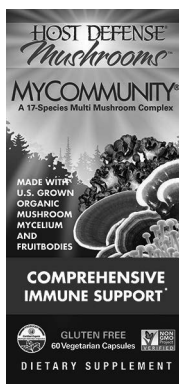
For more information, visit Hostdefense.com or email info@fungi.com

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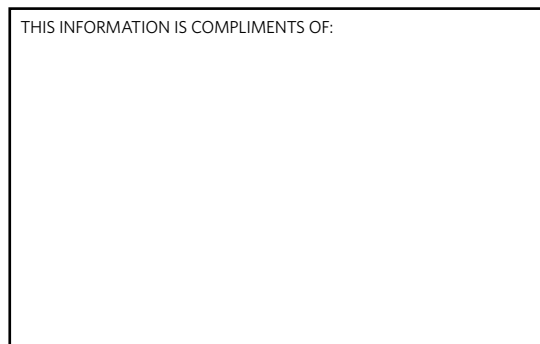
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