

August 15, 2023

Ms. Rini Paiva
Executive Vice President
NATIONAL INVENTORS HALL OF FAME
3701 Highland Park NW
North Canton, OH 44720

Re: Letter of Endorsement for **Dr. Albert B. Crum**
Owner, The ProImmune Company, LLC,
64 East Market Street, Rhinebeck NY 12572
Inventor, Dr. Albert B. Crum
Invention, Glutathione Progenitor Synthesis Formula

Dear Ms. Paiva:

I am writing you to express my strong support of the nomination of Dr. Albert B. Crum for induction into the National Inventors Hall of Fame. Dr. Crum is a world renowned expert on the human immune system (hereinafter "H.I.S.") and has developed an in-depth understanding of the inner workings of the H.I.S. Dr. Crum has created a continuation education course approved by the New York State Medical Society (for continuing education of licensed physicians) which is being prepared as a book. Dr. Crum has discovered and patented the precursor physiological method to replenish the life sustaining immune molecule, Glutathione, regarding the proper protection by Glutathione of the H.I.S. The Glutathione molecule is necessary and vital for actual life and accordingly it is present and functions in every cell of the human body.

As a result, Dr. Crum has devised a method to strengthen the human immune system based on his deciphering of a procedure used by the human body to build and replenish the powerful antioxidant—Glutathione—which is properly introduced into the human body at a cellular level. Accordingly, Dr. Crum used his knowledge of the makeup of Glutathione and the way it is manufactured to postulate an approach for replenishing the body with this powerful antioxidant on an ongoing basis. Specifically, Dr. Crum understood that Glutathione is manufactured by the body only when Glutathione's sufficient constituent parts (the Amino Acids L-Cysteine, L-Glutamate source and Glycine) are located inside a cell of the body.

Glutathione was discovered in France by De Rey-Pailhade, J. in 1888, but it was not known how this molecule could predictably and physiologically be replenished until Dr. Crum discovered how to properly and effectively synthesize Glutathione 125 years later. At the 100th anniversary of the discovery by Dr. Pailhade, 95 world Glutathione scientists made their contributions to Glutathione science. However, it was not until Dr. Crum's discovery, that it was known how to physiologically synthesize Glutathione without bypassing the crucial substrate specific enzymes that allowed for the constituent parts of Glutathione to be properly combined. This discovery was ultimately patented by Dr. Crum.

Glutathione is produced by the body and presents itself in cells throughout the body ready to attack "invaders" such as viruses, toxins, and processes such as the overproduction of Reactive Oxygen Species (ROS) that can damage the cells of the human body. The key to successful usage of Glutathione is to maintain the proper level of Glutathione in the cells of the body allowing it to protect the body from oxidizing agents, viruses, toxins, and the like.

The main problem was that Glutathione cannot enter the cells of the human body. Dr. Crum, however, correctly postulated that precursors of Glutathione (i.e., the components of Glutathione) comprising three Amino acids, viz., L-Cysteine, a Glutamate source, and Glycine can be used to enter all bodily cells and produce Glutathione. Dr. Crum surmised that these

Amino Acids—unlike Glutathione—are able to enter the cells, and the body is then able to combine these Amino Acids inside the cell to produce Glutathione. With such a design approach, Dr. Crum has been able to affect the lives of human beings around the world in a most significant manner. Major University research has been undertaken to verify the “proof of concept” of this patented precursor physiological method. The resulting research articles from University research appear in peer review journals, which can be provided on request.

It is interesting and important to note that Glutathione as described above has certain complex “shape shifting” capabilities that on the surface appear to contradict the usual perception of Glutathione as only an antioxidant. To wit, one of the constituent parts of Glutathione—L-Cysteine, by itself operates as an auto-oxidizing agent, but it is one of the main components of Glutathione. This is clearly counterintuitive as Glutathione, which is the most powerful **antioxidant** in the human body has a main component (L-Cysteine, which is an auto-**oxidizing agent**).

Yet another benefit that arises from Dr. Crum’s design is the reduction of severe synthetic STATIN side effects suffered by many in the U.S. and throughout the world who have been prescribed synthetic STATIN based drugs to combat relatively high cholesterol levels. Dr. Crum postulated that pathological lipid metabolisms are interrelated to the H.I.S. and that physiological Glutathione could be used to fight against hypercholesterolemia, hypertriglyceridemia, and hyperlipidemia (which are toxic and are often referred to as pathological lipid metabolisms) suffered by individuals with those conditions. Accordingly, the power of physiological Glutathione (which does not bypass the substrate specific enzymes) to reverse these toxins could conceivably affect how synthetic STATINS are prescribed around the world.

In addition to the reduction of severe side effects resulting from usage of synthetic STATIN drugs, the **Glutathione progenitor synthesis composition** has also been devised by Dr. Crum to also fight certain diseases associated with pathological lipid metabolisms. This composition is the progenitor Glutathione synthesis formula (i.e., the combination of L-Cysteine, a Glutamate source, and Glycine) which is used to fight the pathological lipid metabolisms. The compositions are disclosed in claims 1-5 of one of Dr. Crum’s patents: **European patent EP 3 193 824 B1** wherein the diseases associated with pathological lipid metabolisms include coronary heart disease, stroke, peripheral vascular disease, hypertension, arteriosclerosis, diabetes, or a combination thereof. These are diseases that affect much of the world’s population. The relief can be provided by the **Glutathione progenitor synthesis formula** - (i.e., the above mentioned Amino Acids).

For his brilliant work, Dr. Crum has been awarded 22 patents in various jurisdictions including the U.S., Canada, Australia, UK, Germany, France, Japan, Mexico, and Brazil. He has several more patent applications that are currently pending.

I have studied many of Dr. Crum’s patents and comprehensively studied the science associated with the contents of these patents in preparation for this evaluation. I humbly ask you to sincerely consider my nomination of Dr. Crum ultimately leading to his induction into the National Inventors Hall of Fame.

Best regards,

Claude R. Narcisse

Claude R. Narcisse
Attorney at Law

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