

William J. Hennen, Ph.D.

William J. Hennen, Ph.D. in Biochemistry. An accomplished researcher, professor and author, Hennen holds more than 100 patents and has published over 100 research papers and books in bioorganic, medicinal and nutritional chemistry.

Fifth Co

Table of Contents

	Page
Introduction.	2
The Immune System	2
TABLE 1. MAJOR LINES OF IMMUNE DEFENSE	3
TABLE 2. CHARACTERISTICS OF IMMUNITY	3
The Acquired Immune System	6
Transfer Factor	8
INTRODUCTION: WHAT IS TRANSFER FACTOR?	8
BENEFITS OF TRANSFER FACTOR	9
SOURCES AND SAFETY OF TRANSFER FACTOR	11
Innate and Adaptive Immunity Working Together	12
Microbial and Malignant Immune Evasion	12
Dietary Supplements	13

Introduction

AIDS, the very mention of the word causes visions of decimated persons, communities and even continents. The year 2000 estimates put the magnitude of the worldwide AIDS problem at 50 million infected, 6 million new cases a

There are remarkable parallels in the innate immune systems of widely separated organisms, indicating that

Enveloped viruses, unlike cells, do not contain membrane repair machinery. This weakness can be exploited by

exhausting itself by over responding and attacking normal tissue. Transfer factor preparations consist of three identifiable fractions named by their discovered effects on the immune system. They are *inducer*, *antigen specific* and *suppressor* fractions.³⁷ The TF inducer fraction triggers a general state of readiness in the immune system, and the antigen-specific fraction is an array of critical tags used by the immune system to identify a host of enemy microbes. Meanwhile, the suppressor fraction keeps the immune system from overreacting to antigens.

religion, philosophy or science, they must be suppressed. ...because they challenge the prevalent paradigm. However, when observations pertain to lethal disorders, their suppression in the name

Originally transfer factor preparations were administered by injection.⁶⁵ However, later studies clearly

immunosuppressive drug prednisolone acetate. These results further substantiate the potential utility of cordyceps in immunodeficient or immunosuppressed patients.

Cordyceps sinensis appears to evoke a balanced immune response. In experimental transplants, high doses of *cordyceps sinensis* (4 g/kg/day) significantly prolonged the survival time of unmatched skin grafts. It has also been suggested that cordyceps may have great potential for the management of human systemic lupus erythematosus

rather than independent of this system. The antitumor activity of acemannan in tumors is believed to result from

anti-inflammatory component found in olives.¹⁴⁷ Inhibition of inflammation may reduce damage to arterial linings. Hydroxytyrosol was also highly protective against DNA damage which is involved in the pathology of several chronic diseases.¹⁴⁸ There is growing evidence that reactive oxygen species are involved in the aetiology of fat-related neoplasms such as cancer of the breast and colorectum.¹⁴⁹ Hydroxytyrosol is a potent inhibitor of free radical generation in the feces providing a clear mechanism for prevention of colorectal carcinogenesis.¹⁵⁰

acids and selectively increases LDL receptor expression resulting in a drop in LDL cholesterol levels.¹⁸⁴

analysis and practical preventive strategies.” *Drug Saf*, 1999; 21(1): 57-74.
Wilson GB, Paddock CV. 2243

1998; 247(1):60-4.

¹³³ Caruso D, Berra B, et al. "Effect of virgin olive oil phenolic compounds on in vitro oxidation of human low density lipoproteins." *Nutr*

¹⁸¹ Becker M; Staab D; Von Bergmann K. "Treatment of severe familial hypercholesterolemia in childhood with sitosterol and