

# Darryl See, M.D.

---

**JEUNESSE** Inc.  
Institute of Longevity Medicine

## CURRICULUM VITAE

### Darryl Matthew See, MD

Associate Clinical Professor  
World Health Organization, Western Europe  
Director, Orange County Institute of Longevity Medicine  
Co-chairman, Research division, American Nutraceutical Association

#### **EDUCATION:**

##### Fellowships:

1989-91 Infectious Diseases: University of California, Irvine  
1992 Virology: University of California, Irvine

##### Residency:

1986-89 University of California, Irvine

##### Medical School:

1982-86 University of California, Irvine

##### Undergraduate:

1978-82 University of California, San Diego, B.A., Cum Laude

##### Languages:

Spanish -- proficient  
French -- proficient

#### **MEDICAL LICENSURE:**

State of California, 1989

#### **BOARD CERTIFICATION:**

Internal Medicine, 1/90  
Infectious Diseases, 11/92

#### **ACADEMIC APPOINTMENTS:**

7/92 - 10/98 Assistant/Associate Clinical Professor of Medicine  
7/92 - 10/98 Investigator, California Collaborative Treatment Group  
7/94 - 10/98 Infectious Disease Consultant, Liver Transplantation Service

**NON-ACADEMIC APPOINTMENTS:**

- 7/92 - 12/93 Chair, Infection Control Committee, Western Medical Center, Anaheim
- 10/97 - Member, Orange County HIV client services committee
- 9/97 - 8/98 Medical Expert, Pasadena County Court of Appeals (Judge Phillip Simon)
- 6/96 - 8/98 Consultant, Center for Special Immunology
- 1/98 - 10/98 Member, Orange County AIDS Planning Advisory Board
- 1/98 - Co-chair, Research Division, American Neutraceutical Association
- 3/99 - Director, Orange County Institute of Longevity Medicine

**PROFESSIONAL ACTIVITY:**

Awards and Honors:

- Alpha Omega Alpha Society
- Winner, Department of Medicine Fellow's Research Competition, 1991 and 1992

Contracts, Grants and Research Awards:

1. "A Randomized Placebo-Controlled Trial of E-5 Monoclonal Antibody in Patients with Severe Sepsis," Pfizer Pharmaceuticals, 9/93, \$137,500
2. "Randomized, Double-Blind, Placebo-Controlled Comparative Dose Response Study of Two Doses of Ateviridine Mesylate in Combination with Fixed Doses of Zidovudine in HIV+ Patients," Upjohn Pharmaceuticals, 10/93, \$65,202
3. Study of Natural Killer Cell Function in HIV+ Individuals (Unlimited Grant), Schering Pharmaceuticals, 10/93, \$15,000
4. AIDS education grant, Roche Pharmaceuticals, 8/93, \$1,250
5. "A Double-Blind, Randomized, Dose-Response Study of Three Fixed Doses of Delavirdine Mesylate in Combination with Zidovudine versus Zidovudine alone in HIV-1 Infected Individuals with CD4 Counts of 200-500/mm<sup>3</sup>." Upjohn Pharmaceuticals, 2/94, \$165,400
6. "A Double-Blind, Randomized, Comparative Study of Three Fixed Doses of Delavirdine Mesylate in Combination with Didanosine versus Didanosine alone in HIV-1 Infected Individuals with CD4 Counts of <300/mm<sup>3</sup>," Upjohn Pharmaceuticals, 2/94, \$166,960
7. Development of a Rapid Immunoassay for the Detection of Antibodies to HIV, Harvard Biotechnology, 7/94, \$20,000
8. Alpha Interferon Treatment of Patients with Deficiency in Natural Killer Cell Function (Unlimited Grant), Schering Pharmaceuticals, 8/94, \$5,500
9. Detection of Antibodies to HIV in Saliva, Trinity Biotechnology, 9/94, \$1,000
10. Career Development Award, 4/95, \$1,000
11. Study of the immunomodulatory effects of HANSI in mice (Unlimited Grant), HANSI International, 6/95, \$19,200
12. Rapid Detection of Antibodies to HIV, Worldwide Medical Corporation, 10/96, \$81,955
13. Molecular Biology Training Grant (at the WHO Virology Reference Laboratory in Lyon, France), 5/96-10/96, Biosphere Technology, \$22,500
14. Development of an Expert System in the management in HIV-infected individuals, California Collaborative Treatment Group, \$15,000

15. Application of an Expert System in the management of HIV-infected individuals, Roche Molecular Systems, \$59,600
16. Motor Control in Chronic Fatigue Syndrome (subinvestigator), 1/98-1/01, National Institutes of Health R01 grant, \$640,270
17. The utility of GM-CSF in preventing opportunistic infections in patients with AIDS, Immunex CO., 9/97, \$75,400
18. Use of Remune in enhancing HIV-specific immune responses in HIV-infected patients with CD4 counts >400, Immune Response Co., 6/97, \$48,000
19. Use of an augmented expert system display in the management of HIV-infected patients, 1/98, Roche Molecular Systems, \$63,400
20. Validation of nucleoprotein gene tracking for the detection of Mycoplasma Incognitus, 1/98, Department of Defense, \$12,500
21. The use of PGE-1 as a vasodilator, 7/98, Harvard Scientific, \$15,000
22. Immunomodulatory effects of glyconutrients, 7/98, Mannatech Inc., \$32,000

Presentations at Professional Meetings:

Treatment of Coxsackievirus A9 Myocarditis in Mice with WIN 54954:

American College of Physicians (ACP) 6/91

Intersciences Conference on Antimicrobial Agents and Chemotherapy, (ICAAC) 1991

Treatment of Viral-Induced Diabetes in Mice:

ICAAC, 1992

Pathogenesis of Viral-Induced Diabetes in Mice:

ICAAC, 1993

Alpha Interferon Treatment of Patients with Chronic Fatigue Syndrome:

ICAAC, 1994

First Check HIV 1-2, a two-step, five minute whole blood immunochromatographic assay to detect HIV 1-2 antibodies:

XI International AIDS conference, Vancouver, Canada, 1996

The use of an Expert System in the management of HIV infection:

UARP collaborative meeting, 9/97

Application of a Genotypic Driven Rule-based Expert Artificial intelligence Computer system in Treatment Experienced HIV-infected patients, XIIth International Conference on AIDS, Geneva, 1998

Long-Term Effectiveness of HAART in a Large Clinical Group and the Role of Viral Resistance in the Treatment Failure, XIIth International Conference on AIDS, Geneva, 1998

Membership in Professional Organizations:

Alpha Omega Alpha (1985 - present)  
Orange County Medical Society

**UNIVERSITY AND PUBLIC SERVICE:**

Instructor, Physical Examination Course, UCI Medical School, 1990 and 1991

Instructor, Introduction to Medicine Course, UCI Medical School, 1991 and 1992

Lecture, "Chronic Fatigue Syndrome," Department of Medicine Grand Rounds,  
1/31/93

Instructor, Sexually Transmitted Diseases Course, Long Beach Health Department:  
5/93, 9/93, 10/93, 2/94, 6/94

Attending Physician, Infectious Diseases clinic, 7/92 -

Instructor, Patient-Doctor II course, 1993-94, 94-95

Lecture, "Sexually Transmitted Diseases and Viral Illnesses," Intensive Review Course  
in Internal Medicine, 9/93, 9/94, 9/95

Attending physician, Infectious Disease consult service, 12/92, 6/94, 1/96, 1/98  
Attending physician, General Medicine ward service, 4/93, 2/94, 11/94, 2/96

Lecture, "Sexually Transmitted Disease and Viral Illnesses," Intensive Review Course  
in Family Medicine, 6/94

Department of Medicine Core Lectures: "Sexually Transmitted Diseases" (7/93),  
"Newly Discovered Infections" (7/94)

Independent Research Supervisor: Biology 199 students, medicine residents

College of Medicine Interviewer, 1993- present

Lecture, "Treatable Viral Infections," Academie of Family Practitioners, 4/95

Lecture, "Overview of Hepatitis B and C," Huntington Beach Hospital Grand Rounds.  
9/14/95.

Lecture, "Pathogenesis of HIV infection," for the conference, "Infectious Diseases:  
New Problems, New Treatments  
and how they affect your practice," 10/95

Presentation, "Development of a Polyvalent Coxsackie Group B Virus Vaccine," for the J. Wayne Ebrite Infectious Diseases Research Conference, 11/1/95

Lecture, "Current Concepts of Hepatitis C Infections and Therapy," for the Association for Professional Infection Control and Epidemiology, 11/14/95.

Lecture, "Current Research in Chronic Fatigue and Immunodeficiency Syndrome," Dept. of Medicine Grand Rounds, 1/11/96

Co-Director, Chronic Fatigue Syndrome and Fibromyalgia Clinic, UCIMC, 5/96 - present

Lecture, "New Concepts in the Etiology and Treatment of Chronic Fatigue Syndrome," Scripps Hospital Medical Grand Rounds, 12/11/96

Lecture, "Alternative and Complementary Therapies in AIDS," AIDS on the Front Line, 4/1/97

Lecture, "Complementary therapies in AIDS," fifth annual HIV/AIDS Advanced Nursing Management Conference, 9/97

Lecture, "Complementary therapies in AIDS," 9/97 Westin Hotel

Lecture, "New Concepts in the Diagnosis and Management of Chronic Fatigue Syndrome," Department of Medicine Grand Rounds, 10/97

Physician consultant, Nutrition/Education/Training committee, Orange County AIDS Services Foundation, 4/97-

CME accredited lectures, multiple national sites, "The scientifically-validated benefits of glyconutrients," 5/98-

Lecture series, Mechanisms of Disease, Second year Medical School Class, "Pathogenesis of Sepsis," 1994-1998

**PUBLICATIONS:**

Book Chapters, peer reviewed:

1. See DM, Tilles JG. Myocarditis. In: Current therapy of infectious disease, Schlossberg D, ed. Mosby-Year Book, Philadelphia, PA pp. 114-115, 1996
2. See DM, Tilles JG. Pericarditis and Myocarditis. In: Infectious Diseases, second edition, Blacklow N, ed. W.B. Saunders, Philadelphia, PA, pp. 246-259

3. See DM, Tilles JG. Infections of heart and muscle. In: *Clinical Virology*, first edition, Richman D, Whitley R, Hayden F, eds. Churchill Livingstone, New York, pp. 113-125, 1997
4. See DM. Endocarditis and Immunosuppression in the ICU. In: *Handbook of Medical Intensive Care*, first edition, Brenner M, Williams J, eds. Current Clinical Strategies Publishing, Fountain Valley (in press)
5. See DM, Tilles JG. Myocarditis. In: *Current Therapy in Adult Medicine*. Kassirer J, ed. Mosby-Year Book Inc., Philadelphia, PA, 1997, pp. 223-224
6. See DM, Gurnee K. The Immunological effects of Glyconutrients. In: *Recent Research Developments in Immunology*. Padalai, S, ed. Research Signpost, Trivandrum, India (in press)

Journal Articles, peer reviewed:

1. See DM, Tilles JG. Viral Myocarditis. *Reviews of Infectious Diseases* 1991;13:951-56.
2. See DM, Tilles JG. Treatment of Coxsackievirus A9 Myocarditis in Mice with WIN 54954. *Antimicrob Agents Chemother* 1992;36:425-28.
3. See DM, Tilles JG. WIN 54954 Treatment of Mice Infected with a Diabetogenic Strain of Group B Coxsackievirus. *Antimicrob Agent Chemother* 1993;37:1593-98.
4. See DM, Tilles JG. Efficacy of a Polyvalent inactivated-virus Vaccine in Protecting Mice from Infection with Clinical Strains of Group B Coxsackieviruses. *Scand J Infect Dis* 1994;26:739-47.
5. See DM, Tilles JG. Pathogenesis of Viral-induced Diabetes in Mice *J Infect Dis* 1995;171:1131-8.
6. See DM, Tilles JG. Alpha interferon treatment of patients with Chronic Fatigue Syndrome. *Immunological investigations* 1996;25:153-64.
7. See DM, Tilles JG. Pathogenesis of viral-induced diabetes. *Current Opinions in Infectious Diseases* 1996;9:161-164.
8. Lina B, Valette M, Foray S, Luciani J, Stagnara J, See DM, Aymard M. Surveillance of Community-Acquired viral infections due to respiratory viruses in Rhone-Alpes (France) during winter 1994-1995. *J Clin Microbiol* 1996;34:3007-3011.
9. See DM, Broumand N, Sahl L, Tilles JG. In vitro effects of Echinacea and ginseng on natural killer and antibody-dependent cell cytotoxicity in healthy subjects and chronic fatigue syndrome or acquired immunodeficiency syndrome patients. *Immunopharmacology* 1997;35:229-235.
10. Dube M, Sattier F, Torriani F, See D, Havlir D, Kemper C, Dezfuli M, Bozzette S, Bartok A, Leedom J, McCutchan J. A Randomized study of Clarithromycin Plus Ethambutol, for Treatment and Prevention of Relapse of Disseminated MAC (DMAC) in AIDS. *Journal Infect Dis* 1997;176:1225-32.
11. Beaulieux F, See DM, Leparc-Goffart, Aymard M, Lina B. Use of magnetic beads versus guanidium thiocyanate-phenol-chloroform RNA extraction followed by polymerase chain reaction for the rapid, sensitive detection of enterovirus RNA. *Research in Virology* 1997;148:11-15.

12. Berger M, See DM, Bernhard R, Aymard M, Lina B. Direct in situ reverse transcriptase polymerase chain reaction for the detection of enterovirus genome in liver tissues. *J Virol Methods* 1997;65:55-66.
13. Gupta S, Aggarwhat S, See D, Starr A. Cytokine production by adherent and non-adherent mononuclear cells in Chronic Fatigue Syndrome. *J Psych Res* 1997;31:149-156
14. See DM, Khemka P, Sahl L, Bui T, Tilles J. The role of natural killer cells in viral infections. *Scand J Immunol* 1997; 46:217-224
15. See DM, Tilles JG. Protection from hepatitis in baby rabbits infected with clinical strains of group B coxsackieviruses by an inactivated-virus vaccine. *Proc Nat Soc Exp Bio Med* 1997;216:52-56
16. Pazzani M, See D, Schroeder E, Tilles JG. Use of an expert system in the management of HIV infected individuals. *J AIDS and Hum Retroviruses* 1997-15,356-362
17. See D, See J, Clark T, Tilles J. Successful immunization of mice using liposomes containing inactivated, prototype strains of all six types of coxsackie group B viruses. *Vaccine Research* 1997;6:27-32
18. Berger M, See D, Bernhard R, Aymard M, Lina B. Detection of viral genome in murine myocardial cells using in situ PCR after infection with a myocardiotropic strain of Coxsackievirus B3. *Research in Virology* 1997;148:409-416
19. See DM, Tilles JG. Pathogenesis of viral-induced diabetes. *Clinical and Diagnostic Virology* 1998;9:144-9
20. Berger M, See D, Aymard M, Lina B. Demonstration of persistent enterovirus in the pancreas of diabetic mice by in situ polymerase chain reaction. *Clinical and Diagnostic Virology* 1998;9 141-3
21. Rudich S, Kinkhabwala M, Murray N, See D, Busuttill R, Imigawa D. Successful treatment of mycotic hepatic artery pseudoaneurysms with arterial reconstruction and Liposomal Amphotericin B. *Liver Transplantation and Surgery* 1998;4:91-93.
22. See D, Tilles J, Hirschman J, Bertacchini C. The in vitro and in vivo immunomodulatory effects of Hansi. *Am J Nat Med* 1998;5:10-14.
23. See D, Cimoch P, Chou S, Chang J, Tilles J. The in vitro immunomodulatory effects of glyconutrients on peripheral blood mononuclear cells of patients with Chronic Fatigue Syndrome. *J Integr Physiol Beh Med* 1998;33:280-287.
24. See D, Berman S, Justis J, Broumand N, Chou S, Chang J, Tilles J. A phase 1 study of the safety of Echinacea angustifolia and its effect on viral load in HIV infected individuals. *JANA* 1998;1:14-17.
25. Khemka V, See D, See J, Chou S, Chang J, Tilles J. The efficacy of an oral liposomal hepatitis B and C vaccine in mice. *Viral Immunology* 1998;11:73-78.
26. Dube M, Torriani F, See DM, Havlir D, Kemper C, Leedom J, Tilles J, McCutchan A, Sattler F. Treatment of clarithromycin-resistant MAC bacteremia in AIDS. *Clinical Infectious Diseases* (in press).
27. See DM. Complementary therapies in Arthritis. *JANA*;1:7-14.
28. See DM, Gurnee K, LeClair M. An in vitro screening study of 196 natural products for toxicity and efficacy. *JANA*;2:25-41.

29. Dube M, Torriani F, See D et al. Successful Short-term suppression of clarithromycin-resistant mycobacterium avium complex bacteremia in AIDS. *Clin Inf Dis* 1999;28:136-8.

Articles in General Readership Magazines and Newspapers:

1. See DM, Tilles JG, WIN 54954 Treatment of Mice Infected with a Diabetogenic Strain of Group B Coxsackievirus. *International Antiviral News* January 1994, vol. 2, no. 1, page 4.
2. Lathrop R, Steffen N, Raphael M, Deeds-Rubin S, Pazzani M, Cimoch P, See D, Tilles JG. Knowledge-based avoidance of drug-resistant HIV mutants. *Proceedings of the AAI*, 1998, pp. 1071-78.
3. See DM. An overview of glyconutrient use in CFS. *CFIDS Chronicle*, Sept./Oct. 1998, p, 15.
4. Lathrop R, Steffen N, Raphael M, Deeds-Rubin S, Pazzani M, Cimoch, P, See D, Tilles JG. Knowledge-based avoidance of drug-resistant HIV mutants. *AI magazine*, Spring 1999, pp. 13-25.

Abstracts and Posters:

1. Milefchik E, Leal M, Haubrich R, See D, Bozzette S, Larsen R. High Dose Fluconazole with and without Flucytosine for AIDS Associated Cryptococcal Meningitis (ABSTRACT, presented at the IXth International Conference on AIDS, Berlin, June 7-11, 1993).
2. Gupta S, See D, Michalewski H, Starr A. Cytokine Production and Movement Related Brain Potentials are Abnormal in Chronic Fatigue Syndrome (ABSTRACT, presented at the First National Conference on Chronic Fatigue Syndrome, 10/94).
3. Dube M, Sattler F, Torriani F, See D, Havlir D, Kemper C, Dezfuli M, Bozzette S, Bartok A, Leedom J, McCutchan J. A Randomized study of Clarithromycin Plus Ethambutol, for Treatment and Prevention of Relapse of Disseminated MAO(DMAO) in AIDS (ABSTRACT, presented at the 35th ICAAC).
4. Dube M, Satler F, Torriani F, See D, Havlir D, Kemper C, Dezfuli M, Bozzete S, Bartok A, Leedom J, Tilles J, McCutchan A. Prevention and relapse of MAC bacteremia in AIDS: A Randomized Study of Clarithromycin plus Clofazamine with or without Ethambutol. (ABSTRACT, presented at the Third Conference on Retroviruses and Opportunistic infections).
5. Torriani F, Dube M, Sattler F, See D, Kemper C, Jasura M, McCutchan J, Havlir D and the California Collaborative Treatment Group. A longitudinal analysis of Clarithromycin susceptibilities and genotypes of Mycobacterium Avium Complex (MAC) blood isolates of AIDS patients treated for MAC bacteremia (ABSTRACT, presented at the 36th ICAAC).
6. Berger M, Lina B, See D, Aymard M. Detection and localization of enterovirus in liver tissues by in situ PCR. Joint Meeting of the European Group for Rapid Viral Diagnosis, London, England, 12/96.



7. Dube M, Torriani F, See D, Havlir D, Kemper C, Leedom J, Tilles J, McCutchan J, Sattler F. Treatment of clarithromycin resistant MAC bacteremia in AIDS (ABSTRACT, presented at the 37th ICAAC).
8. See D. Invited speaker at the 16th International Diabetes Foundation Conference in Helsinki, Finland, July 20-25, 1997. Mouse Models for enteroviral-induced IDDM.
9. Berger M, See D, Lina B. Demonstration of persistent enterovirus in the pancreases of diabetic mice by in situ polymerase chain reaction. (Oral presentation, the 16th IDF conference, Helsinki, Finland, 1997).
10. Huang, W, See D, Tilles J. The prevalence of Mycoplasma Incognitus in Normal Controls or Patients with AIDS or the Chronic Fatigue Syndrome (ABSTRACT, American Society for Microbiology conference, September 1997).
11. Dube M, Torriani F, See D et al. Treatment of clarithromycin-resistant MAC bacteremia in AIDS (37th ICAAC, Toronto, 9/97)
12. See D, Gurnee K, McDaniel C, McDaniel R, Akbapour F, McDaniel B. The efficacy of glyconutrients in three biomarkers of the aging process. (First International Conference on Anti-aging Research, Dec. 10-13, 1998, Las Vegas, NV).

#### Work In Progress:

1. See DM, Kopecka H, Julien R, Keen K, Aymard M, Lina B. Complete Sequence of a Polio type-2 Defective Interfering virus from the Cerebrospinal Fluid of a patient with Postpolio Syndrome (submitted).
2. See DM, Clark T, Tilles JG. Oral Desensitization of coxsackievirus-induced diabetes in a subset of infected mice suggests a dual mechanism of disease pathogenesis (submitted).
3. See DM, Broumand N, Choung S, Tilles JG. Alpha interferon treatment of patients with decreased natural killer cell function (submitted).
4. See DM, Berger M, Lina B, Aymard M, Tilles JG. Pathogenesis of chronic hepatitis in baby rabbits caused by infection with coxsackievirus B5 (submitted).
5. See DM, Huang W, Chang J, Tilles JG. Incidence of Mycoplasma incognitus by PCR in Peripheral Blood mononuclear Cells in normal controls and patients with either the Chronic Fatigue Syndrome or Aids and its effect on in vitro immune function.
6. Reiter W, Cimoch P, See D. Long-term effectiveness of HAART in a large clinical group and the role of viral resistance in treatment failure.
7. See D, Pazzani M, Lathrop R, Tilles J. Application of a genotypic driven rule-based expert artificial intelligence computer system in treatment experienced HIV-infected patients: immunologic and virologic response.
8. Clark T, See D. A metaanalysis of NK function from 1980 to the present (submitted).
9. See D, Akbapour F. The in vitro effect of glyconutrients on three parameters contributing to the aging process (submitted).

## **Our Evaluation of Dr. See**

Thank you for your question about Dr. See. I am including a summary of the investigation that Dr. Hennen conducted on Dr. See. Before I contracted with Dr. See to test our product, I was very aware of the accusations against him. The reporter that was involved in the initial accusation has been known for years as an anti-nutritional advocate as well as anti-network marketing. I was interested in discovering the truth, knowing the possible backlash involved. After I conducted my investigation, 4Life conducted their own investigation. We talked to the editor of the JANA publication, as well as many of the same people that the reporter talked to. The editor was firmly behind Dr. See and the study. Several people said they were either misquoted or were asked the wrong questions. We were totally convinced that the accusations were a result of a "witch hunt."

Another factor to keep in mind is that Dr. See has performed research for Upjohn, Pfizer, Harvard, and the Department of Defense. As you will see in our report, Dr. See has been rewarded with grants totalling into the millions of dollars. These companies and institutions will not work with someone who is not credible. Because of fear of lawsuits involving a stock situation where stockholders lost a great deal of money, Mannatech, in my opinion tried to use Dr. See as a scapegoat, in order to avoid lawsuits by stockholders who were affected by stock fluctuations.

Other accusations referred to the fact that Dr. See was paid lecturing fees by Mannatech. This is a common practice and was very justified. Virtually all authors and medical professionals who lecture on specific products or scientific breakthroughs are paid for expenses and their time, especially when they are invited to speak to the distributors of that particular company. Dr. See's resume is outstanding, his credentials as a research scientist and medical professional are beyond reproach.

When I approached Dr. See through certain contacts, he was not aware of an oral form of transfer factor. He had no personal interest in Transfer Factor, until he discovered its potential. Now he uses it in his cancer clinic and lectures about it quite frequently. He does not receive any proceeds from 4Life or myself to lecture about TF. If we ever decided to pay him for lectures, it would be quite appropriate.

I have come to know Dr. See in the past few months as a very warm-hearted individual who cares deeply about others. He is a very honest and sincere person. I have talked to a great number of health professionals who have known him for a long period of time. Without exemption, they praise him for his integrity, his passion to help others, and his professional credibility.

4Life does not need the endorsement of Dr. See. Transfer factor has more science behind it than any nutritional product that I have consumed or worked with during my 32-year career. Its credibility stands alone on the hundreds of studies and individual use. We chose to use this study because of the fact that Dr. See's study printed in JANA would give us a direct comparison with 196 of the most popular products in the world. We came

out on top by 500%. Sixteen times more effective than Noni, 5 times more effective than Ambrotose, and more than five times more effective than Echinacea.

I have been asked about differences between claims by companies such as Morinda (50% increase in NK activity) and Dr. See's test results for Noni (15% actual effectiveness). The difference is in what is being measured. Several products have been tested for the increase in the number of NK cells. Dr. See's test was on the actual increase in the NK cell's ability to kill live cancer cells, effectiveness versus an increase in numbers only. Transfer Factor is unlike any other product in that it stores experienced information, while other nutrients support immune functions. The difference is like a carpenter versus building materials. Transfer factor is like the carpenter with the intelligence to target the use of all materials to build the house, while other nutrients are building materials such as wood, nails, etc. Transfer Factor targets the enemy for the rest of the immune cells and induces the increase in the actual numbers at the same time. Very importantly, TF will command the immune cells through suppressors, to return to their original numbers after the battle with the invaders is over. Once the immune system is incited if it is not commanded to back off, inflammation, immune system exhaustion, and autoimmune disease can occur.

I could go on and on, there is so much to share about Transfer Factor and Dr. See. The following is an overview conducted by the research biochemist at 4Life on Dr. See and the accusations made against him. If you have further questions, please forward them to me. My suggestion is that you do not let a "witch hunt" distract you from experiencing one of the greatest breakthroughs in health care in decades. Dr. See is only one of hundreds of medical professionals who are endorsing TF. As an example, Duane Townsend, M.D. has referred to Transfer Factor as possibly the greatest breakthrough since the discovery of penicillin. Dr. Townsend has written a number of chapters in medical textbooks. He pioneered a medical procedure used in treating a precancerous condition in the cervix, which is used by virtually every gynecologist in this country. This list goes on and on. Thanks again for your interest. Read on concerning Dr. Hennen's rebuttal of accusations against Dr. See.

Mike Akins

**Darryl M. See, M.D.**

**EDUCATION**

Graduated from University of California, Irvine College of Medicine, 1986  
Internship and Residency at University of California Irvine, 1986-89  
Specialized in Internal Medicine and Infectious Disease.

**FELLOWSHIPS**

Infectious Diseases: University of California, Irvine, 1989-91  
Virology: University of California, Irvine, 1992



Publisher of The Journal of the American Nutraceutical Association.

#### **NATIONAL INSTITUTES OF HEALTH (NIH) OFTEN FUND STUDIES OF THIS TYPE**

Critics have questioned Dr. See for stating that the study was partially funded by the NIH. Leigh Sawyer, an NIH program officer has admitted that a grant was given to The University of California, Irvine and Dr. See was involved in using the proceeds of the grant "to study Chronic Fatigue Syndrome, not the merits of natural supplements." Dr. See has stated that his work in the study of Chronic Fatigue Syndrome (CFS) led him to investigate the "merits" of natural supplements as possible relief for those suffering from the Syndrome. It is a common practice of Universities and research facilities to employ a small portion of current funding as "seed money" to examine promising new research. Chronic Fatigue Syndrome is associated with a low Natural Killer Cell activity. The discovery of substances to enhance NK activity would be extremely important to the CFS sufferers.

#### **COMMON PRACTICE TO GIVE CREDIT TO THE FUNDING ORGANIZATION**

It is common for assays such as those reported in the JANA article to be performed during periods when a technician may be waiting for some other experiment to run its course. If the technician was supported by the NIH grant, though such credit may be considered generous on the part of the researcher, the source of the partial funding is often given as a courtesy. NIH funding does not constitute NIH endorsement. Dr. See never at any time suggested or implied that the NIH endorsed the conclusions of the study. He simply was complying with protocol to give credit where credit was due. As a note, The National Institutes of Health have never challenged the conclusions of Dr. See's study.

#### **NATIONAL INSTITUTES OF HEALTH FUNDED BY CONGRESS**

The National Institutes of Health is by far the largest public funding agency for biomedical research in the United States, or in the World. A large portion of NIH funding is spent on drug discovery and development. Only a small percentage of funding is allocated to evaluation and development of alternative medicine. Individuals who have obtained funding from NIH through its Public Health Services (PHS) grants are mandated by the terms of the grant to acknowledge NIH (PHS) support. This is easily understood as NIH is a political as well as a research entity. It must petition Congress each year for funding. The number of scientific papers that are published through NIH support is an easily communicated measure of the effectiveness of the money that is allocated to NIH for this purpose. The more papers the better the agency's chance of funding.

#### **UNSUBSTANTIATED CONTROVERSY CREATED**

Dr. See's association with a private supplement company which (unknown to Dr. See) was being investigated by a securities watch-dog organization for improprieties in its Initial Public Offering (IPO) brought the study into question. The watch-dog organization alleged that the supplement company used Dr. See's study to illegally promote its IPO. It is now known that Dr. See's study was done over six years and was unknown to the supplement company until the results were completed. When positive results of products sold by the private supplement company were made public, the company asked Dr. See to

report his findings to customers of the supplement company. This practice is very common in the medical world. The Dietary Supplement Health and Education Act of 1994 (DSHEA) encourages such findings to be made public as long as the material is balanced, truthful and not misleading. Dr. See's peer-reviewed published study certainly has met all requirements of DSHEA.

#### **CONTROVERSY OVER STUDY MAY BE POLITICALLY MOTIVATED**

The political nature of NIH funding is such that good publicity is the only publicity that is allowed. Anyone who brings controversy to NIH is in extreme danger of losing all current and future funding. If a controversy arises it is more expedient for the agency to sever its association than to try to justify any entanglement. Dr. See respectfully withdrew his statement that the study had been partially funded by the NIH rather than create any further problems for the NIH.

#### **MUCH OF RESEARCH FOR STUDY DONE AT UNIVERSITY OF CALIFORNIA, IRVINE**

It has been reported in the press that The University of California, Irvine (UCI) was unable to find evidence that the study was performed at UCI. Dr. Jeremiah Tilles, chairman of the school's infectious disease department and co-author with Dr. See on many peer-reviewed articles is reported to have said he knew nothing about Dr. See's six-year study of nutritional supplements. Lab technician Marikel Chatard is quoted as saying, "I don't know anything about this study."

It has been well documented that many of the lab experiments for the study were done at UCI. They were done over six years with many lab technicians involved in the work. In fact, Dr. See left his lab books documenting the study at UCI when he left in 1998 and was only recently able to retrieve them. The fact that UCI had the lab books documenting the study is evidence that the work was done there. It is not uncommon for other professors and employees of a University to be unaware of specifics of a colleague's ongoing work.

#### **JEREMIAH TILLES PUBLISHED FOUR PAPERS ABOUT NATURAL INGREDIENTS WITH DR. SEE**

It seems somewhat incredulous that Dr. Tilles was not aware of Dr. See's work since they published several papers together including the following:

In vitro effects of echinacea and ginseng on natural killer and antibody-dependent cell cytotoxicity in healthy subjects and chronic fatigue syndrome or acquired immunodeficiency syndrome patients. See DM; Broumand N; Sahl L; Tilles JG. Immunopharmacology 1997, 35:229-35.

A Phase I Study on the Safety of Echinacea angustifolia and its Effect on Viral Load in HIV Infected Individuals. See DM; Berman S; Justis J; Broumand N; Chou S; Chang J; Tilles J. JANA 1998, 1:14-17.

The in vitro and in vivo immunomodulatory effects of Hansi. See DM; Tilles J; Hirshman J; Bertacchini C. Am J Nat Med 1998, 5:10-14.

The in vitro immunomodulatory effects of glyconutrients on peripheral blood mononuclear cells of patients with chronic fatigue syndrome. See DM; Cimoch P; Chou S; Chang J; Tilles J. Integr Physiol Behav Sci 1998, 33:280-7.

In Dr. Tilles's favor, the JANA article as published was a compilation of smaller studies using standard protocols conducted over a six year time span. If a standard assay was being run it would be a simple thing to prepare the necessary samples and test them with very little additional expense or time spent. Compiling the data would be a simple clerical task requiring no laboratory time and was accomplished by Dr. See after he left the University. Dr. Tilles did not contribute to the work and could not be expected to know about it in any significant way.

Dr. See and Dr. Tilles jointly published four previous papers covering natural products safety and efficacy under the auspices of the University (see above references). In fact, the University omitted Dr. See's name when a paper was presented on glyconutrients in London in April of 1999, after Dr. See left UCI. A comparison of the abstract submitted to the Fatigue 2000 symposium and the abstract of the paper submitted by Dr. See and published in the Journal of Integrative Physiology and Behavioral Science (1998, 33:280-7) are identical. The only significant difference between the two works is the omission of the primary author, Dr. See, from the later published symposium record. From primary author to non-author is a huge change. This indicates that the University or members of its faculty were willing to take credit but not criticism for researching the immune system benefits of natural products.

#### **LAB TECHNICIAN**

Marikel Chatard, the laboratory technician who was reported to have said, "I don't know anything about this study" did conduct some of the experiments and obtained some of the data used in the compilation of the study. She was, however, not the main technician who conducted the studies. Technicians who conduct routine testing over an extended period of time are not likely to be aware of or even interested in any overarching research direction. Ms. Chatard certainly could have been expected to remember working on such a large study if it had been done as a concentrated effort specifically for the purpose of assembling the data reported in the JANA paper. Spread this same amount of work over six years and only involving tests at irregular intervals and the comment could be easily made.

#### **DR. SEE'S RESIGNATION FROM THE UNIVERSITY OF CALIFORNIA, IRVINE**

Dr. See resigned in 1998 from the faculty of the School of Medicine at UCI. It has been reported that he was asked to resign because he had "broken rules" of the University, operating on rabbits with the improper anesthetic and not having approval to use human blood.

The animal operations referred to were conducted with a disassociative anesthetic that allows for some muscle twitching but no sensation of pain. These operations were conducted under outside oversight and after approval by the University's Institutional Review Board (IRB) which consists of experienced and responsible scientists and physicians.



The use of blood samples in vitro testing is listed by UCI as an exempt activity with respect to the need for Institutional Review Board (IRB) approval. Correctly interpreted this means that IRB approval is not needed but that only notice for informational purposes was required. Dr. See therefore committed what amounts to a small clerical oversight.

Dr. See has admitted to misinterpreting the University's rules on filing informational notices with the IRB when conducting this type of research.

Neither of these incidents had any bearing on Dr. See's decision to leave the University.

**DR. SEE DID NOT WITHHOLD INFORMATION**

An over-enthusiastic reporter wrote that Dr. See would not turn over laboratory notebooks used in the study when asked.

Not turning over laboratory notebooks implies that the researcher in question has something to hide. At the time of the question, Dr. See was no longer with the University and to his credit he had left the original research notebooks with the University for archiving. As discussed previously, Dr. See did not have the notebooks in his possession and therefore could not comply with the request without the cooperation of the University which did not come until later. In the University's defense, the study reported in JANA was very large. The pertinent data was dispersed through many notebooks of various students and laboratory technicians over a six year time frame. Scientists are not librarians. Scientists tend to look ahead rather than back and once the data is published the records were most likely boxed up and stashed away not neatly cataloged and shelved. It is noteworthy that legal action was required to get the records released by the University.