

Mycology News

MRL



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Mycology News is a newsletter for health care professionals dedicated to the dissemination of information on the clinical use of mushroom nutrition. In this sixth edition, we have articles on the link between viral pathogens and chronic fatigue related conditions, as well as the progressive relationship between Chronic Fatigue Syndrome, Fibromyalgia and Rheumatoid Arthritis. There is also a discussion of mushroom nutrition in sports supplementation and of the combination formula 'Triton' from a TCM perspective.



Advance information on the 4th International Symposium on Mushroom Nutrition to be held at the University of Westminster on Saturday June 15th, 2002 is included.

TH1/TH2, CHRONIC FATIGUE SYNDROME (CFS), FIBROMYALGIA, RHEUMATOID ARTHRITIS and MUSHROOM NUTRITION

While the use of mushroom nutrition in cases of chronic fatigue-related viral conditions is well established, the link between these and other chronic diseases is only now becoming apparent.

In Mycology News 4 we looked at the connection between viral pathogens and chronic fatigue related conditions and in Mycology News 5 at the imbalance of the immune system characterized by a TH1/TH2 shift that underlies many of them.

It is now clear that the pro-inflammatory state engendered by a TH1/TH2 shift can manifest through several chronic disease states, including CFS, cancer and rheumatoid arthritis and the high levels of viral and other pathogens that accompany them.

With mushroom nutrition established as one of the few ways to reverse a TH1/TH2 shift (see Mycology News 5) we can now begin to understand its effectiveness in helping the body address a whole range of fatigue related conditions (see following diagram):

The following article by **Prof. Garth Nicolson** of the Institute for Molecular Medicine examines the pathogens involved in chronic fatigue related conditions and in particular the prevalence of mycoplasmal infections. He also discusses the similarity between CFS, fibromyalgia and rheumatoid arthritis.

Nuria Lorite's article expands on this connection based on her personal experience and offers some useful insights into the clinical practicalities of treating such conditions with mushroom nutrition.

The article by **Maria Martinez** highlights one potential way of monitoring TH1/TH2 levels indirectly, and thus the progress of treatment, via Epstein Barr Virus (EBV) titres - high when TH2 predominates but low in healthy individuals.



Chronic Fatigue Syndrome, Fibromyalgia and Other Fatigue Related Conditions

by Prof. Garth L. Nicolson - The Institute for Molecular Medicine -Tel:1-714-379-2082 / Fax:1-714-379-2082- gnicolson@immed.org .
This article is reprinted with Professor Nicholson's permission.

Professor Garth L. Nicolson is the President and Chief Scientific Officer of the Institute for Molecular Medicine in Huntington Beach, California. He was formerly the David Bruton Jr. Chair of Cancer Research and Professor and Chairman of the University of Texas M.D. Anderson Cancer Center in Houston.

Chronic fatigue is reported by 20% of all patients seeking medical care and is considered as a non-specific sign that is associated with many well known medical conditions.

Chronic Fatigue Syndrome (CFS), Myalgic Encephalomyelitis (ME), and Fibromyalgia Syndrome (FMS) patients suffer from complex overlapping signs and symptoms. CFS is primarily characterized by persisting or relapsing fatigue, without previous history of comparable symptoms, that does not resolve with rest. In these patients other clinical conditions that could explain the signs and symptoms, such as malignancies or autoimmune diseases, are absent.

In contrast, FMS patients have overall muscle pain, tenderness, and weakness as primary complaints, but they also have most if not all of the commonly found signs and symptoms for CFS. We previously proposed that CFS/ME patients might be suffering from chronic infections that can cause, in part, their complex signs and symptoms. For example, systemic mycoplasmal infections can cause chronic fatigue, muscle pain and a variety of additional signs and symptoms, some of which are related to dysfunctional immune responses and in extreme cases autoimmune-like disorders.

Some mycoplasmas can invade virtually every human tissue and can compromise the immune system, permitting opportunistic infections by other bacteria, viruses, fungi and yeast. When mycoplasmas exit certain cells, such as synovial cells and nerve cells, they can stimulate an autoimmune response. Our recently published studies demonstrated a possible link between mycoplasmal infections and CFS and FMS, since we found high frequencies of mycoplasmal infections in these patients. Previously we examined patients with chronic illnesses for the presence of mycoplasmal infections.

We found that about one half of patients with Gulf War illness and two thirds of patients with CFS/ME and FMS were positive for mycoplasmal infections in their blood. The Gulf War veterans suffer from signs and symptoms similar to patients diagnosed with CFS and FMS. They can be treated using antibiotics effective against mycoplasmal infections, and once they recover, their blood is no longer positive for the presence of mycoplasmal infections. Our recent results indicate that rheumatoid arthritis is also associated with mycoplasmal infections. (see 'Autoimmune Diseases' on our website <http://www.immed.org>)

Recent reports and publications indicate that in addition to mycoplasmal infections, CFS/ME and FMS patients have other chronic infections caused by other intracellular bacteria and viruses. For example, patients with Lyme Disease, caused by intracellular Borrelia infections, have been diagnosed with CFS/ME. Also, CFS/ME and FMS patients can have intracellular Chlamydia species and HHV-6 viral infections. Most of these patients have multiple infections, and they may also have infections from other bacteria that enter their bodies through "leaky gut" syndrome, where the inflammatory bowel syndrome and other gut problems common in chronically ill patients allow pathogenic bacteria to cross the intestinal mucosa.

Patients with CFS/ME and FMS can also have viral infections that complicate their conditions and cause morbidity. Such infections can occur with or without the bacterial infections described above.

Viruses that have been associated with CFS/ME and FMS are Human Herpes Virus-6 (HHV-6) and Cytomegalovirus (CMV). These viruses have been found at high incidence in chronically ill patients, and especially those with CFS/ME.

Patients with CFS/ME or FMS can have predominantly intracellular bacterial infections, predominantly viral infections, or a combination of intracellular bacterial and viral infections. This may be one reason why the underlying causes of these chronic illnesses are so difficult to determine and effectively treat. Other reasons could be the persistent nature of the infections, their ability to hide inside cells where they are essentially refractory to immune system responses, their slow growing natures and their relative insensitivity to therapeutic drugs (see references below).

PUBLICATIONS

- 1) The Pathogenesis and Treatment of Mycoplasmal Infections
Antimicrob. Infect. Dis. Newsl. 1999; 17(11) : 81-88
- 2) Diagnosis and Treatment of Chronic Mycoplasmal Infections in Fibromyalgia and Chronic Fatigue Syndromes: Relationship to Gulf War Illness Biomed. Therapy 1998; 16: 266-271
- 3) Mycoplasmal Infections in Chronic Illnesses: Fibromyalgia and Chronic Fatigue Syndromes, Gulf War Illness, HIV-AIDS and Rheumatoid Arthritis Med. Sentinel 1999; 4: 172-176
- 4) Multiple Mycoplasmal Infections Detected in Blood of Chronic Fatigue Syndrome and Fibromyalgia Syndrome Patients Eur. J. Clin. Microbiol. Infect. Dis. 1999 ; 18 : 859-865
- 5) Identification And Treatment Of Chronic Infections In CFIDS, Fibromyalgia Syndrome and Rheumatoid Arthritis CFIDS Chronicle 1999; 12(3): 19-21
- 6) Role of Mycoplasmal Infections in Fatigue Illnesses: Chronic Fatigue and Fibromyalgia Syndrome, Gulf War Illness and Rheumatoid Arthritis J. Chronic Fatigue Syndr. 2000; 6 (3/4):23-39
- 7) Diagnosis and Treatment of Chronic Infections in Chronic Fatigue Syndrome, Fibromyalgia Syndrome and Gulf War Illness
International Journal of Occupational Medicine, Immunology and Toxicology 1996; 5: 69-78
- 8) Diagnosis and integrative treatment of intracellular bacterial infections in Chronic Fatigue and Fibromyalgia Syndromes, Gulf War Illness, Rheumatoid Arthritis and other chronic illnesses. Clin. Pract. Alt. Medicine 2000; 1(2): 92-102
- 9) Examination of mycoplasmas in blood of 565 Chronic Illness patients by polymerase chain reaction. Intern. J. Med. Biol. Environ. 2000; 28(1): 15-23.

Pathogens	Outcomes
Mycoplasmal Infections	Chronic Fatigue Syndrome
Intracellular Bacteria	Myalgic Encephalomyelitis
Viruses	Fibromyalgia
	Rheumatoid Arthritis

1-800-654-4432

The Relationship between Chronic Fatigue Syndrome (CFS), Fibromyalgia and Rheumatoid Arthritis - A Clinical Perspective

Nuria Lorite (L. Ac, Pharmacist) is a Madrid based TCM practitioner and teacher of TCM in Spain.

Ms. Lorite has been working and lecturing on mushroom nutrition for the past two years. For more information please contact her by e-mail: nurialorite@jazzfree.com

While Epstein-Barr virus (EBV) has long been implicated in chronic fatigue syndrome, recent research by Dr. Blaschke at the University of Goettingen (April 2000 issue of The Journal of Rheumatology) has highlighted its possible role in other fatigue related conditions, including rheumatoid arthritis.

Dr. Blaschke examined the sera of 55 patients with rheumatoid arthritis for antibodies against EBV-encoded antigens and then compared the results with data on a matched control group of 60 individuals without rheumatoid arthritis ⁽¹⁾. In patients with rheumatoid arthritis, Dr. Blaschke's group detected a twofold increase in values of IgG antibodies against Epstein-Barr nuclear antigen 1 compared with the control group. Levels of antibodies against EBV viral capsid antigen were not significantly different between groups ⁽²⁾.

The finding that there may be a common etiology linking CFS and rheumatoid arthritis ties in with my own clinical observations of a connection in my fibromyalgia and rheumatoid arthritis patients with previous exposure to chronic fatigue syndrome. The relationship appears to be progressive, with patients gravitating from chronic fatigue syndrome to fibromyalgia to rheumatoid arthritis over a six (6) to ten (10) year period.

It is clear to me that the time scale and course of this progression is dependent on the immune state of the patient. If the immune state can be strengthened, with corresponding reduction in EBV titres, the above progression can be delayed or avoided altogether. However, if there is prolonged stress and the immune system is further impaired, then the progression is more rapid.

In terms of immune supplementation for both fibromyalgia and rheumatoid arthritis patients, I have found mushroom nutrition to be highly successful. The supplementation I have used has been with *Coriolus versicolor* at a level of 3 grams per day for 12 weeks - 3 tablets in the morning, 30 minutes before meals, and 3 tablets in the evening, 30 minutes prior to dinner. If further supplementation is required beyond the initial 12 week period it is usually at a reduced level of 3 tablets per day (1.5 grams - 30 minutes prior to breakfast).

Based on the above supplementation fibromyalgia patients experience increases in energy and reduction in pain, within 15 to 30 days, while rheumatoid arthritis patients typically start to experience improvement after 30 to 45 days. In all cases I recommend that EBV virus testing should be conducted at 8 weekly intervals to monitor changes in EBV viral titres.

Progression	I	II	III
Syndrome	Chronic Fatigue	Fibromyalgia	Rheumatoid Arthritis
Time Scale (months)	1 to 36	36 to 60	60 to 96

(1) Blaschke et al. "Epstein-Barr Virus May Play A Role in The Development of Rheumatoid Arthritis" J Rheumatol 2000;27:866-873.

(2) Ibid

THE THREE TREASURES AND WOMAN'S TREASURE FORMULAE



The *Three Treasures* and *Women's Treasure* remedies are made from the highest quality concentrated herbal powders. The powders, from the Taiwan-based company *Kaiser* are subject to two sets of quality controls, one at the factory in Taiwan and one in Switzerland by an independent laboratory. Before tableting the powders are also autoclaved not only to eliminate any possible bio-burden but also to maximise the synergy of the formula's ingredients.

These quality controls ensure that the plant species making up the remedy are all properly identified and that the resulting products are guaranteed to be free from aristolochic acid and to be well within international guidelines on levels of pesticides, heavy metals, bio-burden and aflatoxins.



THE THREE TREASURES AND WOMAN'S TREASURE FORMULAE are available from the following distributors:

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ROLE OF EPSTEIN BARR VIRUS (EBV) IN FATIGUE RELATED CONDITIONS – A RATIONAL FOR EBV TESTING

The Epstein-Barr Virus (EBV) is a DNA virus responsible for glandular fever. While the virus is a member of the herpes virus family and quite common, recent research has linked EBV to the development of Chronic Fatigue Syndrome, Fibromyalgia and subsequently to Rheumatoid Arthritis.



Breast cancer, a multiple-step disease, has also been linked to EBV (1,2,3,). In two polymerase chain reaction (PCR) studies. EBV was observed in 20%-40% of breast tumours assessed. Labrecque et al. identified EBV encoded small RNA1 (EBER-1) in a fraction of malignant cells in six different breast cancer tumours while Bonnett et. al. demonstrated the presence of EBV genome in a large subset of breast cancers (2)(4). The virus was restricted to tumour cells and was more frequently associated with the most aggressive tumours (5). The above links between the EBV virus and the outcomes listed have only been confirmed since 1998 (5). However, the implications for preventative medicine and preventative nutrition in cancer care are significant. In particular EBV testing gives health care practitioners and their patients the opportunity to jointly assess the response of EBV viral load to immune enhancing supplementation.

In the United Kingdom, Breakspear Pathologies offers EBV virus testing services to health care practitioners and their patients. For more information, please contact Mr.Alister Grant at Tel:44-1442-261-333 or Fax:44-1442-266-388.

CASE STUDY:

Testing Epstein-Barr Virus while using Coriolus versicolor Supplementation for Chronic Fatigue Syndrome.

Maria Carmen Martinez (L.Ac-TCM) C/Garrabia, 5 17150-San Greorio, Gerona, Spain. Tel: 34-972-42-91-28.

Female, 40 years – presenting symptoms:

Extreme fatigue - Insomnia - Poor memory - Pain in joints
Presenting diagnosis – the patient had been diagnosed with Fibromyalgia.

Update-October 3rd, 2001

During this visit the patient commented on feeling better with:
-more energy to complete day to day activities
-fewer headaches
-better sleep during the night with no need to nap during the day
-less severe and more intermittent joint pain

Furthermore there was a 30% decrease in Blood Serum AC IgG Anti-Virus Epstein-Barr between July 9th and September 14th, 2001.

Coriolus versicolor Supplementation Schedule

Coriolus versicolor (500 mg) supplementation was started on 9th July 2001:

WEEK	TABLETS PER WEEK	TOTAL TABLETS PER WEEK
1	6	42
2	6	42
3	3	21
4	3	21
5	3	21
6	3	21
7	3	21
8	3	21

6 TABLETS (3 GRAMS DAILY) FOR FIRST 15 DAYS

3 TABLETS (1.5 GRAMS DAILY) FOR NEXT 61 DAYS

continued...

LABORATORY ANALYSIS

	Date	09.07.2001	Date	14.09.2001
1	Blood Serum Immunoglobulin G	1.010 mg/dL		1.060 mg/dL
2	Blood Serum Immunoglobulin M	133 mg/dL		133 mg/dL
3	Blood Serum IgG Anti Virus Epstein-Barr	4,6 (index)		3,2 (index)
4	Blood Serum IgM Anti Virus Epstein-Barr	0,3 (index)		0,3 (index)

Clinical Laboratory: Laroratori Rispau-Passeig Dèn Blay, 55, 17800 OLOT - Spain

References:

- (1) Wang F. Pathogenesis of Epstein-Barr virus infection and associated malignancies: development of new primate models. Presented at the 37th Annual Meeting of the Infectious Diseases Society of America; Philadelphia, Pa; November 18-21, 1999. Session 61, S102.
- (2) Labrecque LG, Barnes DM, Fentiman IS, Griffin BE, Epstein-BAR virus in epithelial cell tumors: a breast cancer study. Cancer Research 1995; 55:39-45.D F
- (3) Richardson et al, Is breast cancer caused by late exposure to a common virus? Med Hypotheses 1997;48:491-7.
- (4) Bonnet M, Guinebretiere JM Kremmer E, Grunewald V, Benhamou E, Contesso G, Joab I-Detection of Epstein-Barr Virus in Invasive Breast Cancers"-Journal of the National Cancer Institutes, Vol. 91, No. 16, August 18, 1999.
- (5) Dr. Kent Sepkowitz Virus and Cancer: Finding the Links- MD Infectious Diseases Society of America - 37th Annual Meeting Day 3-November 20, 1999.

TRITON – A TCM PERSPECTIVE

Martin Powell (L. Ac., MRCHM)

(Email: purehealth@zetnet.co.uk)

While medicinal mushrooms are often taken as a single supplement, there is a long history in Chinese medicine of combining them with other herbs and with each other.

When treating a patient, it is often felt that a desired effect is best achieved by bringing together the unique properties of several different herbs. On other occasions herbs are added to a formula to counterbalance undesirable (within the context of the condition being treated) effects of other herbs in the formula, or indeed to counteract possible side effects of the formula.

Triton is a novel combination of three medicinal mushrooms: Cordyceps (Cordyceps sinensis), Reishi (Ganoderma lucidum) and Shiitake (Lentinus edodes), which, though broadly similar, each have particular strengths within the context of the formula that contribute to its overall efficacy.

Firstly Cordyceps strengthens Lungs and Kidneys, Qi and Blood. It is both Yin and Yang and brings with it an important attribute of nourishing the essence.

Secondly Reishi enters the Stomach, Spleen, Lungs and Heart; tonifies Qi, nourishes Blood and calms the Mind. In contrast to Cordyceps it purely relates to the After Heaven Qi and can be considered in some ways as a single herb equivalent to the classical formula Gui Pi Tang, with the additional property of being able to tonify the Wei-Qi.

Thirdly Shiitake, while again reinforcing the Qi and Blood tonifying properties of the formula, also assists in regulating the Damp which often goes along with Qi and Blood deficiency.

The overall effect of the formula is thus to strongly tonify Qi and nourish Blood, while supporting the Kidneys and calming the Mind. This makes it an ideal support for the hectic lifestyle many patients (and practitioners) lead today and one which I have used in this role with great success over several years.

Triton-MRL is available from Mycology Research Laboratories Ltd. (<http://www.mycologyresearch.com>)



Collecting Cordyceps in Nepal – Malcolm Clark



Chad Hawker

The Potential Role of Mushroom Nutrition in Sports Supplementation

William Ahern - e-mail: info@aneid.pt

*In Asia, mushroom nutrition has long been recognized as having nutritional benefits, which improve the body's immune function. In Japan, an extract of *Coriolus versicolor*, known as Krestin or PSK is marketed by Sankyo Pharmaceutical Co. to reduce the side-effects associated with chemotherapy.⁽¹⁾*

Acting as a non-specific immunomodulator, Krestin supports the body's immune system against the side-effects associated with chemotherapy and radiotherapy. Japanese clinical experimentation has demonstrated that Krestin improves five-year survival rates in many cancers (2).

Working with immune depressed HIV+ patients in the United Kingdom, Italy and the Netherlands; TCM practitioners have begun using *Coriolus versicolor* supplementation (non-extracted) as adjunct nutrition to increase both White Blood Count and CD4 levels in HIV+ patients. (3) (4) (5).

The potential for application of mushroom nutrition in sport is primarily in the area of "over-training", in which the athlete has "over-prepared" through excessive training and thereby reduced his or her immune system to such a low level that a virus, typically Epstein Barr, is able to establish a presence. In such "over-prepared" patients, the condition is characterized by excessive tiredness, lethargy and overall change in mood and attitude. i.e. depression, which can last for an average of four to six months. Triathletes and high performance athletes, both of whom are training for more than three to four hours per day, are very susceptible to compromising their immune system in this way.

The "over-prepared" condition resembles Chronic Fatigue Syndrome in many ways and Dr. Jean Monro of the Breakspear Hospital's work with *Coriolus versicolor* supplementation to increase natural killer cell activity in Chronic Fatigue Syndrome patients is particularly relevant in this regard (6)

Dr. Jean Monro's work follows on from the efforts of Dr. Grazia Rotolo, a Milan based medical doctor and TCM practitioner working with HIV+ patients with White Blood Counts (WBC) below 4000 (7). Dr. Rotolo found that *Coriolus versicolor* supplementation was able to increase White Blood Count (WBC) by 27% within 15 days of supplementation (3 grams per day). Furthermore, on continuing supplementation at a reduced supplementation levels of 1.5 grams per day, the WBC increased by a further 14% after 30 days.

Using Dr. Rotolo's *Coriolus versicolor* supplementation schedule in 60 Chronic Fatigue Syndrome patients for six weeks, Dr. Monro was able to increase the natural killer cell count by 44%. All patients experienced an improved sense of quality of life, based on a symptom scoring chart. (8)

Given these results, *Coriolus versicolor* supplementation has begun to be used as adjunct nutrition for high performance athletes suffering from weak immune systems. Since 1998, Mycology Research Laboratories Ltd. has been working with a leading ironman triathlete, Mr. Chad Hawker, providing both *Coriolus versicolor* supplementation for immune support and *Cordyceps sinensis* for stamina support. (9)

In 1997, after his second Ironman, Chad Hawker consulted Dr. Abraham Kryger, a leading expert in the field, regarding the low thyroid levels detected by his endocrinologist. An MRI lead his doctors to determine

that Chad had hypogonadism, hypothyroidism and diabetes insipidus caused by a microadenoma on the pituitary gland. The microadenoma was removed in February 1998.

In April 1998, Dr. Kryger began supplementing Chad's diet with 2 tablets of *Coriolus versicolor* (1 grams) three (3) times per day, to enhance his immune system.

In May of 1999, *Cordyceps sinensis* supplementation was added to enhance stamina. Chad's performance in major triathlons since May of 1999 is provided below:

1999 Ironman New Zealand

7th overall out of 800/2nd USA

1999 Santa Barbara County Triathlon

1st overall out of 1,000

1999 The Triathlon at Pacific Grove, California

1st overall out of 1,000

1999 Ironman World Championship, Hawaii

46th overall / 6th USA

Maizuru International Duathlon, Japan

1999 and 2000 3rd overall out of 1,200/1st USA

Keauhou-Kona International 1/2 Ironman, Hawaii

1999, 2000 and 2001-3 time WINNER - 1st overall out of 800

2000 1/2 Vineman Triathlon, Santa Rosa

5th overall out of 2,500

2001 Ironman Florida

12th overall / 2,300 / 3rd USA

One of the major observations by Chad Hawker and Dr. Kryger has been a lower incidence of illness and more rapid recovery from colds and flu. As mentioned above Dr. Kryger has focused on maintaining the immune function with *Coriolus versicolor* supplementation, while increasing lung capacity (VO2 Max) with *Cordyceps sinensis* supplementation to assist in the post event recovery phase.

The Potential Role of Mushroom Nutrition in Sports Nutrition *continued...*

At present, under Dr. Kryger's supervision, the mushroom supplementation program is:

Coriolus versicolor		
1 Tablet=500 mg		
Pre-Event Supplementation Program	14 days before event	3 grams per day
Maintenance Training Program	1.5 grams per day	
Cordyceps sinensis		
1 Tablet=500 mg		
Recovery Supplementation Program	14 days after event	3 grams per day
Maintenance Training Program	1.5 grams per day	

Dr. Abraham Kryger is a member of MRL's Scientific Advisory Board and he can be reached at drkwellnessmd@earthlink.net

For more information on Chad Hawker please see Mycology News, 2nd Edition. Furthermore, or visit his website at <http://www.teamhawk.org>

Notes:

- (1) The Use of Mushroom Glucans and Proteoglycans in Cancer Treatment -by Dr.Paris Kidd (Ph.D) Alternative Medicine Review, Page 16, Volume 5, Number 1, 2000.
- (2) Ibid, page 16
- (3) The Effectiveness of Coriolus versicolor Supplementation in the Treatment of Secondary Phenomena Associated with HIV-Dr.Grazia Rotolo-Pzza San Theodoro, 27100, Pavia Italy. Presented at the 10th International Symposium on Mucosal Immunology in Amsterdam Holland on June 28th, 1999.
- (4) The Effectiveness of Coriolus versicolor Supplementation in the Treatment of Kaposi's Sarcoma in HIV+ Patients.-John Tindall and Elizabeth Clegg, Gateway Clinic, Community Health Center, South London, NHS Trust 108, Landor Road, London SW9 9NT, England. Presented at the 10th International Symposium on Mucosal Immunology in Amsterdam Holland on June 28th, 1999.
- (5) The Clinical Use of Coriolus versicolor Supplementation in HIV+ Patients and Impact on CD4 Count and Viral Load. by Marijke Pfeiffer -Centrum Voor Integrale Geneeskunde, Amsterdam. Presented at the 3rd International Symposium on Mushroom Nutrition, in Milan Italy on March 10th, 2001.
- (6) Phenotypic and Functional Deficiency of Natural Killer Cells in Chronic Fatigue Syndrome. Caligiuri M et. al.- J.Immunol 1987 139 (10) 3306-13.
- (7) See footnote 3.
- (8) The Use of Coriolus versicolor Supplementation in Chronic Fatigue Patients and the Impact on NK Cell Activity-by Dr.Jean Monro, Breakspear Hospital - Presented at the 3rd International Symposium on Mushroom Nutrition, in Milan Italy on March 10th, 2001.
- (9) See http://www.mycologyresearch.com/mrl_spon.htm

4th International Symposium on Mushroom Nutrition

The Use of Mushroom Nutrition as Adjunct Nutrition in Oncology

Mycology Research Laboratories Ltd, in collaboration with the School of Bioscience and the School of Integrated Health of Westminster University, London are organizing the 4th International Symposium on Mushroom Nutrition. The theme of the symposium will be – *The Use of Mushroom Nutrition as Adjunct Nutrition in Oncology*.

The lectures will focus on clinical application of mushroom nutrition as adjunct nutrition in chemotherapy, radiotherapy and palliative care. In addition to the clinical perspective, a biochemical perspective will be presented to provide information on the polysaccharides, enzymes and secondary metabolites provided by mushroom nutrition.

Attendance is restricted to 200 health care practitioners and students from Middlesex University and Westminster University, with reservations accepted in advance. Please contact Ms. Gabrella Periera at the following email address to confirm space (Fax:00-44-1482-667-859 or email: info@aneid.pt).

Price of admission: £15.00 and £5.00 for students, tea and coffee included.

Saturday, June 15th 2002
Westminster University
Marylebone Campus
Lecture Hall 2
9:00 am - 5:00 pm



Marijke Pfeiffer (left)

Clinical Note on Use of Mushroom Nutrition with Antibiotics

As noted in Ms.Pfeiffer's conclusions on the use of Coriolus versicolor supplementation in HIV+ patients diagnosed with gonorrhoea, (Patient B, see Page 4, Mycology News-5, (<http://www.mycologyresearch.com>)) antibiotic usage appears to significantly decrease the efficacy of mushroom nutrition. Ms. Pfeiffer observed a decrease in CD4 level and sharp increase in viral load that tied in with the use of antibiotics to treat gonorrhoea, despite continuation of Coriolus versicolor supplementation. Upon termination of antibiotic treatment, CD4 levels increased while viral load decreased.

It has been suggested by Dr. Lydeking Olsen that "antibiotic treatment may eliminate key flora in the digestive system which are responsible for assisting in the absorption of mushroom polysaccharides"(1). In light of the above, practitioners may wish to review supplementation during antibiotic treatment.

(1) Dr. Eva Lydeking-Olsen-Institute of Optimal Nutrition Tel:00-45-33-32-44-86. Denmark

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