

# Transfer Factor: The Immune Connection

“Transfer factors are small proteins that "transfer" the ability to express cell-mediated immunity from immune donors to non-immune recipients.”

Molecular Medicine, April 6, 2000

## About Dr. Townsend

### Curriculum Vitae (Condensed)

1952 – 1955: B. A. University of California at Davis  
Davis, California

1955 – 1957: School of Medicine  
University of California, Los Angeles

1957 – 1958: Student Fellow, Department of Pathology  
University of California, Los Angeles  
While attending medical school Dr. Townsend was awarded a Pathology Fellowship during which he studied the effects of radiation therapy on the metabolism of animals.

1958 – 1960: School of Medicine,  
University of California, Los Angeles

1960 – 1961: Intern, Wadsworth General Hospital  
Los Angeles, California

1961 – 1965: Resident, Obstetrics & Gynecology  
University of California, Los Angeles  
While in residency training, Dr. Townsend was one of the first to conduct fetal monitoring.

### Board Certifications

1968: 1968 American College of Obstetricians and Gynecologists

1974: American Board of Gynecologic Oncology

### Professional Appointments and Highlights:

1965 – 1969: Assistant Professor, OB/GYN,  
University of California, Los Angeles, School of Medicine

- Completed a modified fellowship in perinatology with Fred Kubli who pioneered the method of monitoring fetal well-being using fetal scalp pH.
- Awarded over \$400,000.00 in contracts from the Federal Government and the Los Angeles Regional Family Planning Council.
- Carried out the original work and wrote the premier paper on the use of cryosurgery for the treatment of pre-malignant disease on the uterine cervix.
- Senior author of the first paper to describe the combination of colposcopy, directed cervical biopsies and endocervical curettage in the evaluation of women with abnormal cytology.
- First to train nurses in the extended role of women's health care, which led to the development of the first nurse-practitioner training program.
- Initiated a program to screen indigent women in the Los Angeles basin for cervical and breast cancer, dubbed the "Porta Pap Clinic."
- Did the original work on the study of G6PD to determine if cervical cancer was unicellular in origin.

1969 – 1975: Associate Professor, OB/GYN,  
 Director of Gynecologic Oncology,  
 University of Southern California, School of Medicine

- Developed the original post-graduate training course for colposcopy that is still utilized today. Over 20,000 physicians, residents and nurse practitioners have taken the courses that were personally directed by Dr. Townsend. Countless others have used this format to direct their own courses that taught thousands of others the technique.

1975 – 1979: Professor, OB/GYN,  
 University of Southern California, School of Medicine

- Investigated the role of the CO2 Laser in the treatment of pre-invasive disease of the vulva, vagina and cervix.
- Awarded nearly \$2,000,000.00 in grants and contracts to evaluate the impact of intrapartum use of Diethylstilbestrol on the female offspring.
- Conducted a study comparing the CO2 Laser and cryosurgery for the treatment of pre-invasive diseases of the uterine cervix.
- Directed over 400 post-graduate courses in colposcopy, cryosurgery and CO2 Laser therapy.
- Co-authored the first textbook on Gynecologic Oncology, now in its 5th edition.

1980 – 1987: Private Practice,  
Cedars Sinai Medical Center, Los Angeles, California &  
Sutter Memorial Hospital, Sacramento, California

- Also served as Clinical Professor of OB/GYN at both USC and UCLA (much to the chagrin of both institutions.)

1987 – 1992: Professor and Vice-Chairman, Dept. of OB/GYN,  
University of California, Davis, School of Medicine

- One of the first to develop the technique of endometrial ablation using electrocautery.
- Developed training protocols for physicians in the use of minimally invasive surgical techniques, i.e. laparoscopy and endometrial ablation, and conducted over 100 postgraduate courses on these and other subjects.

1992 – 1999: Private Practice, Salt Lake City, Utah.

- Director of Gynecologic Oncology and Gynecologic Endoscopy, LDS Hospital, Salt Lake City, Utah.
- Clinical Professor, University of Utah, School of Medicine.

1999 – Present: Private Practice, Park City, Utah

### **Bibliography**

Dr. Townsend has authored 90+ papers in peer review journals and 15+ chapters in books, over half of which deal with various aspects of pre-invasive diseases of the cervix, vulva and vagina. For a complete listing of authored papers and chapters authored, [please click this link](#).

For information about Dr. Townsend's new book, A Maverick of Medicine Speaks to Women (Woodland Publishing, 2003), [click here](#).

### **Medical Society Memberships:**

American College of Obstetricians and Gynecologists  
American Cancer Society  
American Federation of Clinical Oncologic Societies  
American Medical Fly Fishing Association  
American Society of Clinical Oncology  
American Society of Colposcopy and Cervical Pathology (President 1977-78)  
American Society of Cryosurgery  
American Society of Contemporary Medicine and Surgery  
Daniel Morton Society (President 1981-82)

Felix Rutledge Society  
International Society for the Study of Vulvar Disease  
Los Angeles Obstetrical and Gynecological Society  
Southwest OB/GYN Society  
Society of Cryobiology  
Society for Gynecologic Oncologists  
Western Association of Gynecologic Oncologists (President 1970-71)  
Sacramento-El Dorado Medical Society  
Utah Medical Association  
Summit County Medical Society

After I had my melanoma, I didn't want a recurrence. Conventional medicine offered me nothing to draw on when it came to protection. Make no mistake, once cancer appears in one part of your body, your risk of getting it somewhere else goes up. My father died of cancer, my mother died of cancer, my son has had a melanoma, my oldest daughter had a pre-melanotic lesion of her ear, my mother-in law had breast cancer, and her sister had breast cancer twice before she died of a massive stroke. It was obvious that we were doing a lousy job of preventing cancer in our family. So I looked elsewhere for the answer.

A visit to a naturopathic physician who knew his stuff led me to an individual with an immune-enhancing compound called transfer factor. Because I agreed to give a talk on TF, I had to review the literature carefully and I became impressed by the data. Here was a natural product that not only boosted the immune system, it also calmed an over-reactive immune system often seen in people with autoimmune diseases, (something my youngest daughter struggled with).

Now, after countless hours of research and personal use, when anyone asks me about immune system boosters, my answer is always the same — take transfer factor. I have used it for years and have found that my resistance to disease has dramatically improved. In fact, I so rarely get flu or a cold anymore that when I encounter someone who has one, I invariably ask them, “Why are you sick?” It usually doesn't go over well, but I tell them that they must enjoy being ill because it really isn't necessary.

I've been taking transfer factor daily for over 8 years and my immune cells still react aggressively whenever my body is invaded by a new virus or bacteria. Moreover, I believe that my ability to reduce my risk of cancer has vastly improved because of dietary changes coupled with using a short list of supplements that are topped off by transfer factor.

## **A Cure For My Canker Sores**

Transfer factor was the ONLY thing that helped me get rid of persistent canker sores that had plagued me since taking antibiotics as a child. It's a remarkable natural product that doctors should be using and aren't. A transfer factor is a stellar polypeptide which was discovered around 59 years ago. There are scores of studies on transfer factor and its ability to boost immune function. Countless trials describe how it has been used for a whole host of problems which involve the immune system.

# What Exactly Is Transfer Factor?

Transfer factor molecules are comprised of a few amino acids that act as immune messenger molecules that work in white blood cells. They are abundantly found within the colostrum of breast milk. When a mother nurses her baby, transfer factors from her more experienced immune system pass to her baby via the colostrum. Colostrum is rich in immune components that pass to the newborn, affording its more vulnerable and new immune system the advantages of a much older, experienced one (its mother).

Moreover, this transfer of immunity to the infant confers protection on the baby until its immune system can make its own transfer factors.

Transfer factors can now be extracted from cow colostrum, concentrated and offered in supplement form. These molecules are not species-specific making them cross-species compatible. While different mammals may have a unique colostrum mix, the transfer factors contained within their colostrum are the same. Transfer factors produced by a cow can work just as effectively in humans as they do in animals. The ability to receive immune data that is transferred from the cow to the human has the potential to revolutionize the way we look at disease prevention in medicine.

## The Tri-fold Benefits of Taking TF

When you take taking factor, you get three benefits.

First your immune system is strengthened so that when new viruses or bacteria invade your body, your heightened immune cells react very rapidly. By so doing, they prevent the foreign organism from getting a toe hold; consequently, even if you do get sick, the infection will be milder.

Secondly, when you take transfer factor, you store these borrowed messenger molecules in your own immune data banks. As a result, when you are invaded by an organism that had previously infected the cow, the acquired transfer factor molecules stimulate you immune system to specifically recognized and react to this particular microorganism.

Third, if your immune system is over-reactive (something seen in autoimmune diseases like arthritis, lupus, etc.) transfer factor will modulate or calm immune defenses which inadvertently attack healthy tissue thereby improving one's health.

### **You Can Lead A Horse to Water . . .**

Informing my medical colleagues about TF along with other natural compounds like genistein, ginkgo biloba, etc., motivated me to intensely study the value of these and other alternative medicines. And, generally speaking, their reception was surprisingly warm. In other words, I was not openly rebuked.

Of course, these were the same doctors I taught several of my new gynecological procedures to

(cryosurgery, colposcopy, endometrial ablation, etc.). In spite of their polite responses, and to my disappointment, none of these physicians took up transfer factor either personally or for their patients.

This was especially unfortunate for their cancer patients who all need a tremendous amount of immune system support. The results my own cancer patients on TF experienced were quite dramatic and I searched for new ways to inform more physicians about the spectacular benefits of TF. Regardless of the success I was having with my own patients, my fellow physicians remained reluctant to suggest TF or genistein, or any natural compound to their own patients. I call their predictable response to complementary medicine a knee jerk reaction at its worst.

## **TF: Preventive Medicine At Its Best**

TF increases our army of natural killer cells. These remarkable cells seek and destroy potentially harmful invaders. Simply stated, the increased killer cell activity we get from taking supplemental transfer factor significantly increases our ability to stay healthy. It is the epitome of preventive medicine. Let me reiterate at this point that I would not presume to suggest any natural product unless it came with impressive scientific credentials, and TF does. Like genistein, TF had to win me over. Naturally, when word got out that I was interested in natural products, a number of prominent companies approached me with their line of products. Unfortunately, the science supporting many of their flagship supplements was lacking. Consequently, so was my interest.

## **My Introduction to 4Life Research**

I met with the principles of a company called 4Life Research, and I became impressed by their emphasis on scientific support.

They had secured the patent for the extraction of transfer factors from colostrum, and not only did they want to back transfer factor with their name and reputation, they also saw the health potential of genistein as well. After much interaction and input, I became convinced that these were people with integrity and sound scientific support for their product development. More importantly, I believed that their concern for impacting individual health was sincere.

## **TF is Sophisticated Immune Support**

Through a special and patented process, concentrated transfer factors can now be “lifted” out of cow colostrum, collected and offered in a pure and powerful concentrated extract. A 1996 issue of Biotherapy reported that transfer factors can stimulate an immune system response in less than 24 hours. I believe that adding more transfer factors to our immune arsenal enhances the transfer of information from cell to cell. Our immune defenders are given more information, and as a result, we develop a stronger, more efficient immune system capable of fighting off constant assaults.

## **TF is Backed By Sound Scientific Data**

To date, over 3,000 clinical studies and papers have been published on transfer factors. Scores of international, well-respected scientists and physicians have established the effectiveness and safety of transfer factors. Over the last fifty years, an estimated \$40,000,000 has been spent on research. The data strongly suggests that transfer factors offer extraordinary immune benefits.

Well-documented and scientifically validated, transfer factors emerge as profoundly important to health maintenance worldwide. Recently, a symposium on transfer factors was held in Italy where transfer factor researcher, Dr. D. Viza spoke about the potential of transfer factor in an era when "the toll of several diseases, such as cancer, continues to rise and the pathogenesis of AIDS remains elusive."

## **Transfer Factor: From My Personal Notes**

My 15 year old daughter was diagnosed with juvenile arthritis when she was eleven. Prior to the diagnosis, she had been suffering with swollen and extremely tender thumb joints. This had been going on for some time before she brought it to the attention of her mother and I. When I examined her joints and noted their condition, my heart sank. I knew immediately that it was arthritis.

Her mother promptly took her to our pediatrician, who confirmed the diagnosis and referred her to a pediatric rheumatologist at the University of Utah who specializes in childhood arthritis. There are less than fifty such specialists in the United States. He too confirmed the diagnosis and suggested we give our daughter a very powerful anti-inflammatory drug. The side effects of this drug in adults are extensive — so what would it do to our eleven year old daughter?

I consulted with another pediatrician who had been using transfer factor in his patients. He suggested that we give her six capsules a day plus a capsule of a special joint medication also manufactured by 4Life. Within six weeks, our daughter was pain-free and her swelling had dramatically decreased.

Well, she's a teenager now and isn't nearly as diligent in taking the immune-modifying supplement plan we had designed for her years ago. She still experiences a little swelling and an occasional twinge of pain in her thumbs, and once in a while, one of her knee joints will swell after vigorous exercise. Still, the improvement is remarkable and she did it without going on harsh drug therapy. She plans to go out for the volleyball team next spring and wants to take up tennis. In the winter, she snowboards and has no problem recovering from its inevitable spills.

You have no idea how thankful my wife and I are for transfer factor. Since becoming acquainted with it over 8 years ago, I've placed hundreds of individuals on TF. The results continue to be nothing short of spectacular.

## **TF and The Yeast Wars**

Vickie was a 38 year old patient who had been treated with antibiotics for recurrent bladder infections

and now had to deal with a severe yeast infection of the vagina (sound familiar?) I suggested a course of transfer factor and acidification. Her response to the treatment was dramatic. When I saw her three months later, she remarked that this was the first time in years that she had been free of both bladder and vaginal yeast infections. Of equal importance — she had not taken any antibiotics for three months. I suggested that she come back and see us in 6 months. Unexpectedly, she returned after only 4 months because she had run out of transfer factor! Three weeks after she stopped taking it, she developed sinusitis and was given an antibiotic by her physician. Within 5 days, she had a rip-roaring vaginal yeast infection that she controlled with the acidification protocol. However, within 20 days, she realized that she was getting another bladder infection — hence the office visit. I put her back on TF, and within a few days, she was feeling fine. Since this episode, Vickie has not been without TF for over 3 years and has been free of bladder infections, sinus infections, and vaginal yeast infections.

## The Chicken and The Egg

Recently, 4Life has developed very unique transfer factors that are extracted from chicken eggs. That's right — eggs. As I mentioned earlier, all kinds of animals make transfer factors. By using extremely sophisticated methodology, scientists have been able to make “designer” transfer factor molecules in chicken eggs that target specific organisms. These products are now available to the public (for example - 4Life's TF Cardio for the heart; TF Recall for the brain; Belle Vie for the breast; TF Plus that increases Natural Killer cell activity by over 437%). Imagine a transfer factor molecule that works specifically against HIV or the West Nile Virus. The possibilities are endless, and the scientists and researchers at 4Life are continuing such research with urgency.

## A Man in Montana

I came to know a man in Bozeman, Montana named Jim. He had multiple myeloma, a very serious and potentially fatal disease and was so incapacitated by the illness that he could barely walk. He took transfer factor combined with a variety of other immune-enhancing compounds (that I talk about below) and experienced a remarkable remission. Last I heard, Jim was climbing a local Montana mountain. While his cancer may return, the extraordinary effects seen with his immune-boosting protocol cannot be underestimated, or worse yet, unacknowledged.

## Compounds That Complement TF

While the immune-enhancing pathway that TF provides is unique, the addition of certain compounds can create a potent, multifaceted approach to immune defense building. The following natural substances have proven immune-boosting actions and work in tandem with the actions of TF molecules through different pathways. These compounds are all included in the Transfer Factor Plus product.

**Echinacea:** Echinacea stimulates the production of immune natural killer cells and destroys a broad range of disease-causing bacteria. Echinacea can be a boon to elderly individuals who are particularly susceptible to bacterial infections. A new study conducted by scientists at McGill University in Montreal, Canada showed that two weeks of supplementation with echinacea rejuvenated the production



and action of immune killer cells even in animals of advanced age. In addition, several other studies have concluded that echinacea taken orally stimulates the function of a variety of immune cells, particularly natural killer cells.

**Cordyceps Sinensis:** This fungal botanical medicine has been tested in over 2000 subjects. It works to enhance a variety of immune actions by boosting immune chemicals such as interleukin-1 and 2 and boosting the count of helper-T and NK natural killer cells to fortify and expand the immune systems ability to respond to invaders (infectious, carcinogenic etc). Of equal importance in that Cordyceps also suppresses inappropriate immune reactions as seen in autoimmune diseases and has anti-tumor properties as well.

**Beta-Glucans:** These complex sugars (polysaccharides) are found in astragalus, maitake and coriolus mushrooms have the unique ability to act as “immunomodulators.” They are currently being researched for their potential role in AIDS and cancer. New studies indicate that at the very least these compounds can prevent white blood cell numbers from falling in people given chemotherapy and radiotherapy, and work to elevate antibody levels in healthy persons. Betaglucans are considered the workhorse of the immune activating polysaccharides and are well absorbed when taken orally. They are currently under investigation as a supportive tool for HIV infection.

**Mannans:** Mannans (specifically acemannan) is a carbohydrate extracted from the gel of the aloe vera leaf. It is this compound which is thought to make aloe gel so healing for burns and other skin disorders. Studies show that acemannan increases the number and killing capacity of T-lymphocytes by almost 50 percent. It also has significant anti-tumor activity and can help prevent the replication of viruses in the body. Acemannan is one of a few plant extracts used in people with AIDS. Studies confirm that it has significant value for bacterial, viral, and fungal infections.

**IP6:** Also known as inositol hexaphosphate or phytic acid (IP6) this compounds is found in legumes and the bran portion of several grains. The reason that high fiber diets are considered anti-cancerous may be due to this very phytochemical. Several laboratory tests have confirmed that IP6 has impressive anti-cancer actions and in 1992, a patent was obtained to mix IP6 with inositol. IP6 is rapidly absorbed and is one of the most impressive anti-cancer compounds found in nature.

**Thymic Factors:** The thymus gland produces a complex array of factors which work together to transform immature lymphocytes (white blood cells) into T-cells. Two decades ago, a key thymic protein was discovered and isolated. This protein actually programs T-4 helper cells in the immune system to seek out an invading pathogen and gives the go to T-8 killer cells to search and destroy disease organisms. A patented process has been developed to grow this specific protein for commercial use in supplement form. **Glutamine:** An amino acid called glutamine is important for immune system function. Liquid diets high in glutamine have been reported to help critically-ill people recover more rapidly. One double blind study giving athletes who were prone to respiratory infections glutamine reported 81% without subsequent infection compared to 49% in the placebo group.

**Lactobacillus acidophilus:** Helps replace friendly bacteria in the gastrointestinal tract which may help protect the body from potentially harmful organisms that reside in the intestine and can cause infection. Infectious diarrhea in children has been successfully reduced with acidophilus supplementation.

**Zinc:** Zinc supplements have been reported to considerable increase immune function. This effect may be especially important in the elderly who can easily become zinc deficient.

**Vitamin A and Beta-carotene:** Vitamin A plays an important role in immune system function and helps mucous membranes, including those in the lungs, resist invasion by microorganisms. Beta-carotene and other carotenoids boost immune cell numbers and activity in both animal and human research. Placebo-controlled research has confirmed the positive benefits of beta-carotene supplements in increasing numbers of some white blood cells and enhancing cancer-fighting immune functions.

**Vitamin C:** Vitamin C stimulates the immune system by enhancing interferon levels and boosting the activity of certain immune cells. In controlled reports studying people doing heavy exercise, cold frequency was reduced an average of 50% with vitamin C supplements ranging from 600–1,000 mg per day.

**Vitamin E:** Vitamin E enhances some aspects of immune cell activity especially in the elderly. A combination of antioxidant vitamins A, C, and E significantly improved immune cell number and activity compared to placebo in a group of hospitalized elderly.

## The Last Word on TF

Transfer factor is nothing less than an amazing natural compound that should be used by physicians everywhere. Last year alone, I flew over 200,000 miles in teaching capacities throughout the United States and Europe, and I NEVER BECAME ILL. We all know about the microbial hazards of re-circulated plane cabin air and yet here I sit, infection free. At the risk of going overboard, let me just say that I love what transfer factor has done for me, for my family, and for my patients.

### Duane Townsend, M.D. • Gynecologic Oncologist

#### Objective:

Our medical practice has been collecting data for the past year for a variety of gynecologic conditions to determine what 4Life Research™ products could do for our patients. Each trial was observed for at least two months and most are ongoing.

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#### Conditions: Fibromyalgia, Arthritis, CFS

57 patients, primarily women ages: 40 - 50

dosage/protocol: [Fibro Free Protocol Phases 1-3](#)

Results: 55 have had major improvement (4 - 6 weeks time response)

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### **Condition: Menopausal symptoms**

**81 women - ages: 42 - 75**

**Dose: usually one BioGenistein Plus™ and apply FemRite™ twice daily.**

21 had mild hot flashes requiring some estrogen

15 required daily estrogen doses (time response varied)

**Results:** 45 exhibited no symptoms of disease.

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### **Other gynecologic problems:**

**ages:** women 25 - 50 years

**dosage:** usually one BioGenistein Plus™ and apply FemRite™ twice daily

**Results: 7 women with fibroid tumors:** in six, the tumors are shrinking  
(3 - 4 months time response)

### **35 women with PMS**

**Results:** symptoms controlled in 33 women (4 week time response)

### **32 women with abnormal uterine bleeding**

**Results:** 26 returned to normal (some had results immediately, others saw results by 4 - 6 weeks)

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Transfer Factor used with over **300 individuals.**

**Conditions: Cancer, herpes, yeast, condyloma, arthritis, colds, sore throats, and lupus.**

**Ages:** 2 - 80 years

**Dose:** maintenance - 3 TF daily  
Illness - triple daily dose

**Results:** all have noticed dramatic improvement [time response varied according to seriousness of condition (most serious - 4 weeks or more)]