Inasmuch as this Medical Journalist Report on Innovative Biologics focuses on the essential amino acid, L-Tryptophan, with its many benefits, restored for public consumption by the US Congress under the 1994 Dietary Supplement & Health Education Act (DSHEA), and since L-Tryptophan is regaining popularity among health professionals for patients in need, I am alerting readers to the product purity offered by Lidtkke Technologies Corporation. Quantities of less expensive L-Tryptophan raw material have been tested and rejected by this formulator for its products, but that is not to say other formulators will be as vigilant.

L-Tryptophan possesses myriad applications for bringing about physiological benefits. It is therapeutic for illnesses relating to serotonin deficiencies including depression, anxiety, irritable bowel syndrome, Crohn’s disease, colitis, neuropathies, estrogen/progesterone imbalance, premenstrual syndrome, alcoholism, carbohydrate addiction, plus other mental and emotional difficulties. This amino acid’s effectiveness for insomnia is relatively high as well.

Use of L-Tryptophan Therapy for Insomnia by Abram Ber, MD

“I am personally using L-Tryptophan to relieve insomnia, which for over two decades has been a source of health difficulty for me,” says Abram Ber, MD, of Scottsdale, Arizona. “Tens of millions of Americans suffer from insomnia today, which was not the case when I began medical practice 25 years ago. It’s no longer a problem of elderly people but does present itself in all age groups, most likely resulting from electromagnetic pollution coupled with heavy metal poisoning. Electromagnetic toxicity is getting worse because of cellular telephone towers, wireless telephones, TV satellite dishes, and other electronic devices of convenience. A major epidemic in which people are unable to fall asleep or stay asleep, I call their condition “malignant insomnia.”

“L-Tryptophan is a primary therapeutic agent for my patients with malignant insomnia. The most effective brand of this amino acid is the product packaged and distributed by Lidtkke Technologies. I’ve witnessed absolutely no adverse effects from use of it. Of all the items I’ve dispensed for the treatment of insomnia, including melatonin, calcium, magnesium, herbs such as valerian, only the Lidtkke Technologies brand of L-Tryptophan works well because of its carefully controlled quality. Melatonin fails to be a major player for insomnia relief because of its variable side effects such as nightmares and a lingering grogginess after some fitful sleep,” continues Dr. Ber. “The electrodermal testing I perform routinely indicates that of the 15 different components used by me against this sleep disorder, L-Tryptophan turns out a winner nearly every time. This food supplement brings about benefits for a minimum of one in three patients to whom I dispense it. While a 33.33% statistic of success may seem unimpressive, my wish is to avoid the several adverse side effects from prescribing sleep-producing drugs such as Ativan® and Ambien®.

“Most insomniacs need to take two capsules of 500 mg L-Tryptophan just before retiring. The 1000 mg-dosage works, and any higher dosage does not seem to produce any better sleep result,” states Dr. Ber. “This is the evening amount I take myself. I have dozens of patients who acquire L-Tryptophan from my dispensary. Moreover, patients sometimes combine L-Tryptophan in a kind of synergistic ‘cocktail’ with melatonin, magnesium, or some other sleep-inducing nutrient.”

“"A Winner"

L-Tryptophan turns out to be a winner nearly every time.

Abram Ber, M.D.
Insomnia Studies Using L-Tryptophan

A series of published clinical journal articles beginning in 1974 pointed out that the extent of sleep latency (length of time to fall asleep) could be significantly reduced by taking as little as 1000 mg of L-Tryptophan per day. Nine experiments conducted at the Sleep and Dream Laboratory in Boston showed that insomnia is eliminated when plasma levels are elevated by L-Tryptophan nutritional supplementation.1-4

Unlike hypnotics, this amino acid produces no distortions in sleep physiology either when it's first administered or on long-term administration or after withdrawal. L-Tryptophan induces sleep best when accompanied by small doses of niacinamide (the amide of vitamin B3) or pyridoxine (vitamin B6). They tend to increase the incidence of REM or dream sleep. In fact, both L-Tryptophan and niacinamide metabolism are metabolically dependent on vitamin B6.5

L-Tryptophan metabolism involves a hydroxylase enzyme which also starts the conversion of tyrosine, phenylalanine, and the other amino acids to neurotransmitters. Dietary intake of L-Tryptophan directly influences the amount of serotonin in the plasma, brain and throughout the entire body so that neurotransmission more readily takes place.6

Low dose melatonin ranging from 0.5 mg to 1 mg combined with L-Tryptophan taken at 500 mg to 1500 mg is known to be effective for providing relief for those with serious insomnia.7

Dr. Carol Van Zelst Cites L-Tryptophan Benefits for those with Mental/Emotional Difficulties

The administrator of natural medicine at the Anew Skin & Wellness Center in Brookfield, Wisconsin, Carol Van Zelst, PhD, MS, FD (Functional Diagnostic Medicine), advises that her patients benefit from taking L-Tryptophan for their mental/emotional problems. "For three years I have been utilizing L-Tryptophan as therapy for increasing levels of serotonin...in disorders of the mind and emotions. This nutrient is useful for helping a patient overcome various illnesses connected to serotonin deficiency syndrome such as manic depression, obsessive compulsion, insomnia, mood suppression, and nutritional deficiencies to the gut," states Dr. Van Zelst.

"For instance, I was visited by a 28-year-old woman, a music teacher, who before she consulted me had attempted suicide five times. I did specific testing of the patient's urine, stools, and saliva to exactly determine which nutrients she was deficient in," Dr. Van Zelst explains. "From amino acid testing of her urine I discovered that the music teacher's level of L-Tryptophan was almost nonexistent. Then, in reviewing her medications, as reported by the attending physician, I learned that this young woman had been prescribed lithium. Now, it has been well established that lithium prescribed in the presence of physiologically absent L-Tryptophan tends to increase one's tendency to commit suicide."

"SSRI's do not replace the essential amino acid, L-Tryptophan"
Pat Hallman, N.M.D.

L-Tryptophan

"For the patient's safety, I did tell her about the danger she was in; thereafter, her lithium dosage was eliminated and with other nutrients, 1000 mg of L-Tryptophan was prescribed to her," affirms Dr. Van Zelst. "Within three weeks this woman improved remarkably. She returned to working full time, performed well in a functioning job with the local symphony orchestra, found a boyfriend, and has remained productive, happy and healthy for over two years.

"Working with L-Tryptophan as a main therapy has been a golden pursuit for me," Dr. Van Zelst says. "While employing L-Tryptophan therapy, I recommend taking niacin, pyridoxine, and glutamine to develop the patient's normal physiological metabolism of L-Tryptophan. It's standard procedure for me, and I see excellent responses from patients right away. Any symptoms of serotonin deficiency syndrome are overcome this way.

"Also, L-Tryptophan with taurine and tyrosine in combination has been a godsend for Parkinson's Disease patients. Taking L-Tryptophan, patients affected by neurological tremors experience nearly total elimination of their tremors. Such results have me completely

Input on Benzodiazepines from Pat Hallman, NMD

Pat Hallman, NMD, a private practitioner and naturopathic consultant from Mesa, Arizona, says, "Avoid benzodiazepines like the plague they are. In all the years I have been personally using and prescribing natural therapies as an alternative to prescription medications, I have heard many complaints and concerns about the side effects and withdrawal challenges of pharmaceutical drugs. By far the greatest outcry has been regarding the addictiveness of benzodiazepines such as Valium® and Ativan®. (Ambien®, while not a true benzodiazepine, shares many of the same characteristics.)

While these drugs are effective in quickly relieving anxiety, the rebound that follows as patients attempt to stop using them has been described as "horrendous." Many patients struggle for years, decreasing their dosages by tiny fractions per week in order to wean themselves off. Some simply give up and resign themselves to a lifetime of "benzo" addiction.

While many are helped by natural therapies in recovering from this pharmaceutical addiction, the best advice I can give is to avoid them in the first place by using L-Tryptophan and other natural therapies.
L-Tryptophan

enthusiastic about use of this amino acid," says Dr. Carol Van Zest. "I have never experienced a single negative side effect from L-Tryptophan by any patient. For that health professional who wants to aid his or her patient, this is the number one product to use."

The Psychobiology of Serotonin Deficiency Syndrome

Existing as among the most common and widespread disorders of human psychobiology in Western industrialized countries, Serotonin Deficiency Syndrome (SDS) manifests as a broad array of emotional and behavioral problems. Such problems include depression, anxiety, sleep disturbances, obsessive-compulsive actions, fear, anger, over-arousal, violence, aggression, and the inclination to commit suicide as occurred with Dr. Van Zelst's patient. A chronic deficit of serotonin in the nerves that use it as their neurotransmitter is the pathology.

Dysfunctional L-Tryptophan metabolism or L-Tryptophan deficiency are the primary sources of SDS. Of all the 22 amino acids, L-Tryptophan is one of the eight essentials that must be acquired from food or nutritional supplements. A person's usual diet of animal- or vegetable-based protein provides an average of just 1.25 grams per day of this essential amino acid - not quite enough for many individuals suffering from sleep or mood disorders. It is the least plentiful of all 22 amino acids.

Taking L-Tryptophan as a nutritional supplement is the most natural and effective means of increasing the brain's serotonin production.

Should It be L-Tryptophan or 5-HTP?

After the tragedy of contaminated L-Tryptophan brought on by Showa Denko K.K. in 1989,8-11 it was believed that another precursor for serotonin would be a viable substitute. The health professional community and nutrient distributors who supply it turned to 5-Hydroxy-L-Tryptophan (5-HTP) as the alternative supplement. In fact, the 5-HTP has been effective therapy for some, but according to Joan Mathews Larson PhD, author of the book, Depression Free Naturally, 5-HTP has been somewhat troubling as a therapeutic agent. Because it bypasses the body and brain's regulatory control mechanisms, 5-HTP may put patients at risk for the same heart-valve problems caused by the pharmaceutical diet drug Fen-Phen®. As with 5-HTP, Fen-Phen® also promotes uncontrolled creation of serotonin. L-Tryptophan, unlike 5-HTP, is an essential amino acid, which the body also uses to create proteins, vitamins (niacin), and enzymes. L-Tryptophan can be readily converted to 5-HTP as needed, but 5-HTP is no substitute for L-Tryptophan.

Since research has shown that 5-HTP is poorly absorbed across the blood-brain barrier in patients who have ever had major depression (See Diagram 1) these individuals would more likely respond to treatment with L-Tryptophan than to 5-HTP.

Uncontrolled or excess serotonin levels can also be a factor in an illness related to the overabundance of serotonin, known as Serotonin Syndrome (SS). Though serotonin syndrome can occur with any substance that manipulates serotonin levels, the greatest risk for SS occurs in patients taking MonoAmine Oxidase (MAO) inhibitors which produce an antidepressant effect. Thus MAO inhibitors should be strictly avoided in combination with any prescription or natural depression therapy such as Tryptophan. To reduce the risk of SS, other natural or pharmaceutical antidepressants should only be combined with the approval and close supervision of the patient's health-care provider.

Experience with Selective Serotonin Reuptake Inhibitors

The lead author of Healing Nutrients Within,12 Eric Braverman, MD, is Medical Director of the Place for Achieving Total Health (PATH) Medical Inc., located in New York City. Dr. Braverman uses L-Tryptophan therapy for relieving serotonin deficiency syndrome and L-Tryptophan depletion syndrome.

Diagram 1 - 5-HTP is inhibited at the Blood-Brain Barrier (BBB) for patients who have had major depression.

Diagram 2 - S.S.R.I. Therapy

Over time, S.S.R.I. drugs lose effectiveness because they deplete the number of serotonin receptors.
“Whenever I might employ Zoloft®, Paxil®, Prozac®, or other SSRIs [Selective Serotonin Reuptake Inhibitors], my preferred product of choice is to substitute the nutrient, L-Tryptophan,” says Dr. Braverman. “And I succeed with the patient as indicated by blood level tests for L-Tryptophan. If I find an imbalance from mapping a person’s brain and do observe that the workings of its left and right sides are uncoordinated, a tryptophan deficiency becomes recognizable as the pathology. Therefore, my prescribing an SSRI becomes unnecessary.”

(Please note: See Diagram 2 which shows that the SSRI’s decrease serotonin levels in the brain over time and cause this neurotransmitter’s receptors to atrophy. In contrast to the actions of SSRI conventional drugs, L-Tryptophan increases serotonin levels and enhances the number of serotonin receptors.)

As Medical Director of the Stockton Family Practice in Stockton, New Jersey, Stuart Freedrenfeld, MD, says, “For treating depression, anxiety syndrome, serotonin deficiency, irritable bowel syndrome,

**Symptoms Eliminated**

*My patient’s symptoms were eliminated by his taking L-Tryptophan instead of a selective serotonin reuptake inhibitor (SSRI)*

Stuart Freedrenfeld, M.D.

and fibromyalgia, I use quite a bit of the Lidtke Technologies L-Tryptophan. I see excellent results from it. I generally start dosing at 1500 mg daily and go up to 3 grams a day or even higher. Since it is costly because of Lidtke’s high standards of quality, I try to keep the dosage down out of consideration for my patient’s pocketbook. And the reduced dose seems to do as good a job as the more elevated dosage.

“My preference is to dispense L-Tryptophan, not for insomnia alone but only when this condition is associated with anxiety, depression, or some other mental dysfunction,” says Dr. Freedrenfeld. “Because there is more serotonin made in the gastrointestinal tract than in the brain, my observation is that irritable bowel syndrome responds very well to L-Tryptophan. It calms down the anxious and irritable bowel.

“After visiting lots of other doctors, a 55-year-old male patient consulted me. He reported numbers of symptoms such as loss of libido, nightmares, and a sense of being drugged from taking prescribed SSRI’s,” Dr. Freedrenfeld says. “Subsequently, my substituting L-Tryptophan for the patient to take, returned him to once again feeling like his old self. My patient’s symptoms were eliminated by his taking L-Tryptophan instead of a selective serotonin reuptake inhibitor.”

**Naturopathic Physicians Enjoy Using L-Tryptophan**

Naturopathic physicians, Alan Christenson, PhD, ND, Medical Director of Integrative Health Care in Scottsdale, Arizona and Pat Hallman, NMD, describe their success in using L-Tryptophan therapy with their patients.

Dr. Alan Christenson states: “Because it is exceedingly helpful for treating starch cravings, insomnia, anxiety, depression, and for those patients with markers indicating low Tryptophan levels, I prescribe the Lidtke Technologies L-Tryptophan product. My patient, Alice P., age 16, had suffered with bulimia and took lots of different antidepressants as treatment. Nothing helped. I performed an amino acid test and followed up with a separate dosing using L-Tryptophan. Four months later she exhibited a remarkable improvement. The young woman’s food binges had reduced substantially and weight was stabilized at normal for her. Such good results make it very enjoyable to utilize L-Tryptophan in this manner.”

Dr. Pat Hallman confirms: “L-Tryptophan is the precursor for serotonin, a shortage of which leads to a variety of neurotransmitter illnesses including clinical depression, insomnia, anxiety, aggression, and a lack of satiety or “fullness” in overeating disorders. SSRI drugs, on the other hand, force serotonin to remain in contact with its neural receptor. Over time, receptors decrease and SSRI’s can cease to be effective. In contrast, L-Tryptophan brings about an increase in serotonin recirculation. It’s enjoyable to see this happen, for the patient then thrives over time.

“Many of my patients need relief from the side effects of prescription antidepressants, which include anxiety, fatigue, and even seizures,” Dr. Hallman continues. “Food avoidance is a problem with taking the SSRI’s, and food cravings are troublesome with the tricyclics. Some also complain that the prescription drugs that once helped no longer work. An effective therapy for mood disorders includes L-Tryptophan with P5P, the active form of B6, niacin, and in some patients, melatonin. A few patients have commented: ‘Tryptophan doesn’t fatigue you,’ ‘Never any side effects occur,’ and ‘It worked so well I bought some for my neighbor.’

“I usually recommend that insomnia patients start with one capsule an hour before bed and increase the dose if needed. This works well for most patients, but some have to experiment with other amounts and time of day. A computer programmer, for example, who drinks tea to keep alert during his late-hour shift found that swirling the L-Tryptophan powder in his mouth helped him fall asleep more quickly,” says Dr. Pat Hallman in his concluding remarks. “One patient’s
L-Tryptophan

wife spent a year trying different drugs for sleep without success. She finally agreed to try L-Tryptophan and by the fourth night was, ‘sleeping better than I have in years.”

Tryptophan for Eating and Digestive Disorders
California naturopath, Elisa S. Lotter, PhD, ND, conducts her nutrition practice at Pacifica Women's Health Care in Los Angeles. Dr. Lotter, author of Female and Forgetful, published in 2001 by Warner Books, describes the success she experiences from using L-Tryptophan for a variety of patients' health difficulties. She states: “I do feel excitement using L-Tryptophan for patients with eating disorders such as bulimics and anorexics plus digestive problems including GI problems like acid reflux and gastric ulcers. L-Tryptophan really works well for these conditions.

"Loves Lower Weight"
I put her on tryptophan and the woman wrote that she loves what I've done for her to help her lower and maintain her weight.

Elisa Lotter, Ph.D., N.D.

“A note just arrived from one of my eating disorder patients who is highly compulsive about watching her weight which had been rising steadily. I put her on tryptophan, and the woman wrote that she loves what I've done to help her lower and maintain her weight,” says Dr. Elisa Lotter.

A Cautionary Note Regarding the Quality Control of Supplements
One of the most serious problems facing the nutrition industry today is the fact that a flood of inferior ingredients is pouring into our country and into nutritional supplements from unmonitored manufacturing plants around the world. Raw materials from these companies typically cost a fraction of the price of nutrients produced by established and responsible “high-end” manufacturers. The dangerous part is that manufacturing plants in developing regions of the world sometimes exercise the same primitive level of quality control that Showa Denko exercised when it became responsible for contaminating L-Tryptophan about fourteen years ago. There are extremely high-quality products available, but now, just as then, some supplement producers - pressured by the marketplace – often seek out the cheapest raw materials and take the position that someone else will have to pay if there is a problem.

Samples of nutrients received from “cheap” manufacturers are often badly contaminated with organic solvents used in the manufacturing process. These Organic Volatile Impurities (OVI’s) are solvents such as acetone, toluene, hexane, and other.

Although there are many steps a health professional or consumer can take to ensure the safety and quality of one’s nutritional supplements, your chances are better if:
• Your supplement manufacturer does business with the most respected (and usually most expensive) producers/suppliers of raw materials.
• Your supplement manufacturer tests every batch of ingredients that comes through their door.
• Your supplement manufacturer employs the most advanced techniques and reference standards for identifying impurities.
• Your supplement manufacturer utilizes clean facilities and well-trained personnel in the encapsulation and bottling processes. You would be amazed how many companies are lax in this regard, with the unnecessary handling and exposure to contaminants of food supplements.

Perhaps the most important factor that drives manufacturers to cut corners is the economic pressure placed on them by consumers. When consumers rush in droves to purchase their supplements at discount prices, the entire industry is forced, as a matter of survival, to follow the whims of the consumer. Thus, through your purchasing power and vigilance, there are many ways that consumers can signal manufacturers to adhere to quality standards.

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