

## **Editorial Backgrounder**

### **Inflammation and Inflammatory Conditions**

Inflammation may play a role in the development of a variety of serious conditions that affect millions of Americans. Inflammation is a process by which our body protects itself from harmful substances such as bacteria and viruses. It is the body's first defense against infection and injury, and it is often accompanied by heat, redness, swelling, and pain. Inflammation can occur in different places in the body: joints, organs, or arteries.

Sometimes our immune system mistakenly triggers an inflammatory response, even when there is no immediate risk of infection. This low-grade inflammation can lead to cumulative damage and disease later on.

### **Treatment Options**

While the current, popular medical treatments for inflammatory conditions may relieve the pain, some medical professionals believe that these treatments actually worsen the underlying condition. The primary drugs used in treating the most common inflammatory conditions are nonsteroidal anti-inflammatory drugs (NSAIDs), such as aspirin and ibuprofen. In addition to their negative side effects in the stomach and intestinal tract, NSAIDs may actually accelerate the progression of joint destruction.

Increasingly, people suffering with inflammatory disorders are turning to a more natural approach that encompasses nutrition and therapies that enhance the body's response toward health. These approaches seek to address the underlying disease process, and in turn provide relief from pain and disability.

**Celadrin: The Natural Way to Reduce Inflammation**

One of the newest therapies for reducing inflammation and promoting joint health is Celadrin, a natural compound that is available in tablets, capsules or as a cream. Celadrin is medically and clinically proven to alleviate pain, and was developed through a proprietary process of esterifying fatty acids, so they become stable and do not react with oxygen. Both humans and animals have shown extensive reduction in pain and swelling and increased range of motion with Celadrin, with no reported side effects.

Research has shown that the special fatty acids in Celadrin inhibit inflammation in endothelial cells (the thin cells that line the inside of various body cavities) and decrease the pro-inflammatory effects of arachidonic and other fatty acids. Celadrin has also been shown to reduce the production of the negative immune factor IL-6 and to control the immune factors responsible for inflammation. In addition, Celadrin may help to lubricate an affected joint, resulting in pain relief and increased mobility.

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## **Fact Sheet**

### Celadrin

**Product Source:**

Celadrin® is a natural ingredient for joint health composed of esterified fatty acid carbons and other active synergists. The esterifying process makes the fatty acid stable so it does not react with oxygen.

**Product Applications:**

Celadrin has been shown to reduce pain and improve mobility in people suffering from a variety of joint, muscle and tendon-related ailments.

**Product Safety:**

Celadrin is an all-natural compound with no reported side effects after extensive clinical research. Toxicity testing has shown Celadrin to be safe and non-toxic at high dose levels.

**Products Forms:**

Celadrin is available in capsules, tablets or as a cream.

**Typical Dosages:**

Orally: 1500 mg per day.  
Topically: apply twice a day.

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**For Release: AT WILL**

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**Celadrin Joint Health Supplement Featured in Peer-Reviewed Journal**

**ANAHEIM, CA, MARCH 18, 2005** – Proprietary Nutritionals Inc. (PNI) announced today that a research study conducted with Celadrin®, a natural supplement for joint health, was published in the February issue of the *Journal of Strength and Conditioning Research*.

The study, titled “The Effects of Treatment with a Cetylated Fatty Acid Topical Cream on Static Postural Stability and Plantar Pressure Distribution in Patients with Knee Osteoarthritis,” was conducted at the University of Connecticut. It found that Celadrin topical cream can help people with painful joint conditions to have better balance and less pain, enabling them to engage in regular exercise.

“The publication of this study is extremely significant because it shows that people with painful joint afflictions, who use Celadrin, can successfully renew exercise programs without pain,” says Bill Spencer, President of Imagenetix, the company that developed Celadrin. “Without exercise, these individuals are subject to a host of health problems from obesity, to diabetes and heart disease.”

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A similar study conducted earlier at the University of Connecticut showed that patients with knee joint afflictions using Celadrin were able to move faster, with less pain when climbing stairs or rising from a chair. This study was published in the *Journal of Rheumatology*.

Based in San Diego, CA, Imagenetix Inc. is an innovator of scientifically tested and proprietary bioceutical products developed to enhance human and animal health. Visit [www.imagenetix.net](http://www.imagenetix.net) for more information, or call 858/674-8455.

Proprietary Nutritionals, Brantford, ON, markets Celadrin and other patented, scientifically proven, branded ingredients to the nutraceutical industry. For further information, call 519/647-2071.

**For Release: AT WILL**

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**Proprietary Nutritionals Attains Marketing Rights  
for Celadrin Joint Health Ingredient**

**BRANTFORD, ON** –Proprietary Nutritionals Inc. (PNI) announced today that it has been granted the license to develop the market for Celadrin®, a natural ingredient for joint health developed by Imagenetix Inc. PNI will market the product worldwide, with the exception of India and China.

Celadrin is a natural compound composed of esterified fatty acid carbons (EFACs) and other active synergists. It can be formulated into both pill and cream forms. Published research has shown that people taking both forms of Celadrin had significant improvement in knee range of motion and decreased knee pain, without side effects.

Dean Mosca, President of PNI, said “Celadrin works faster than other natural ingredients and doesn’t have the side effects of drugs. Since it addresses a wide range of joint, muscle, and tendon-related ailments, we think it is the perfect new product for the \$22 billion joint health market.”

Bill Spencer, President of Imagenetix, added, “Celadrin is effective and easy to use, separately, or in formulations with other compounds. We’re excited about working with Proprietary Nutritionals to help make it a household brand.”

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In a double blind, placebo-controlled study of people with knee pain conducted at the University of Connecticut, researchers found that 100% of patients using Celadrin topical cream were able to move faster, with less pain when climbing stairs or rising from a chair. This data, along with previous research data on the Celadrin pill, has been published in the Journal of Rheumatology.

Celadrin is manufactured in the United States under good manufacturing practices (GMPs) and undergoes a proprietary process that enables it to penetrate the cell membrane for maximum efficacy.

Mosca also announced that Pacific Rainbow, Inc., City of Industry, CA, a major supplier of raw materials, will be the exclusive U.S. distributor of Celadrin.

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**Editor's note: A complete press kit, including digital photos is posted at [www.celadrin.com](http://www.celadrin.com)**

**10/15/04**

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### Celadrin Research Milestones

- 2001** -- Acute toxicity studies by Perry Scientific Inc. on both the oral and topical form of Celadrin determined the compound to be safe and non toxic.
- A study conducted on 64 patients with knee osteoarthritis determined that Celadrin, taken orally, provides an improvement in knee range of motion and overall function over placebo. This study was published in the Journal of Rheumatology 2002; 29:1708-12. (R. Hesslink, Jr, ScD; D. Armstrong III, PhD, Hesslink Ventures; M.V. Nagendran, MD, Medical Center, Manipal; S. Sreevatsan, PhD; R. Barathur, PhD, ClinCyte)
- 2002** -- A study found that cetylated fatty acids (CFAs) may improve the mobility of arthritic canines. (Robert Hesslink, Jr, ScD, Kristee Emens-Hesslink, BA, Imagenetix; and Sharon Sprouse, DVM, Penasquitos Pet Clinic)
- An animal study conducted at the University of Minnesota found that the proprietary mixture of cetylated fatty acids (CFAs) found in Celadrin are well absorbed when administered either orally or topically. The study was published in the Federation of American Societies of Experimental Biology Journal. (Daniel D. Gallaher, PhD, University of Minnesota)

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-- A double-blind, placebo-controlled study was conducted in two phases at the University of Connecticut. In Phase I of the study, 40 patients with osteoarthritis of the knee received either Celadrin topical cream or placebo. All of the patients who used Celadrin showed significant improvement in quality of life measurements, such as getting up from a seated position and stair climbing. The study was published in the Journal of Rheumatology 2004: 31 (4): 767-74.

In Phase II of the study, the Celadrin compound was blended with menthol, a known compound used frequently in topical creams. Patients with knee osteoarthritis were evaluated to validate previous findings, and patients experiencing elbow and wrist pain were also recruited. As in the Phase I study, patients with knee osteoarthritis showed significant improvement in various quality of life measurements. The wrist and elbow patients showed improvement in measures associated with prolonged endurance and activity. (Nicholas Ratamess, William Kraemer, Jeffrey Anderson, David Tiberio, Michael Joyce, Varry Messinger, Duncan French, Matthew Sharman, Martyn Rubin, Ana Gomez, Jeff Vlek, Carl Maresh, Robert Hesslink, JR.)

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**Expo East Speaker Bios**  
**Natural Ingredient Innovations in Joint Health & Pain Relief**  
**Oct. 15, 2004**

**DR. MICHAEL T. MURRAY**

Michael T. Murray, N.D. is widely regarded as one of the world's leading authorities on natural medicine. He is a graduate, faculty member, and serves on the Board of Trustees of Bastyr University in Seattle, Washington. Dr. Murray is the co-author of A Textbook of Natural Medicine, the definitive textbook on naturopathic medicine for physicians, as well as the consumer version – Encyclopedia of Natural Medicine. He has also written over 20 other books including How to Prevent and Treat Cancer with Natural Medicine; The Pill Book Guide to Natural Medicine; Dr. Murray's Total Body Tune-Up; 5-HTP: The Natural Way to Overcome Depression, Obesity, and Insomnia; The Healing Power of Herbs; and the Encyclopedia of Nutritional Supplements.

**LORNA R. VANDERHAEGHE**

Lorna Vanderhaeghe is a medical journalist who has been researching and writing on the subject of nutritional medicine for over 20 years. She has a Bachelor of Science degree in Biochemistry and is currently working on completing her Masters in Nutrition. Her list of accomplishments include: working at the Journal of Orthomolecular Medicine at the Canadian schizophrenia Foundation. She is currently an associate editor for Total Health magazine in the United States and alive magazine in Canada.

Lorna is the co-author of the award - winning, best-selling book The Immune System Cure now published in six countries and translated into French, Dutch and German and author of Get a Grip on Arthritis and other inflammatory disorders. She is also the co-author of No More HRT: Menopause Treat the Cause and Healthy Fats for Life. She is also an internationally known lecturer who believes in empowering people with health knowledge so they can achieve optimal wellness.

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