



DR. MICHAEL COYLE NAMED CHIEF SCIENCE OFFICER OF HOLOGENIX, LLC

New CSO to lead research and clinical development for Celliant's textile technology

(NEW YORK) OCTOBER 2011 – Hologenix, LLC, the makers of Celliant®, the leading innovative, responsive textile technology for apparel, bedding and veterinary products, has announced the appointment of Dr. Michael Coyle, Ph. D. as Chief Science Officer.

Dr. Coyle will develop, institute and supervise global clinical trials and provide scientific expertise for all products related to Celliant technology. Furthermore, he will assemble and chair a new Scientific Advisory Board which will include key opinion leaders in a variety of applicable fields, while also working in tandem with R&D, managing grant strategy and overall business building objectives.

“Dr. Coyle has a forward-thinking, solutions-driven focus with an impressive 15 years of research experience,” said Seth Casden, CEO of Hologenix. “His expertise in the fields of human performance, health, and wellness will be a great asset for the brand as a whole.”

Prior to joining Celliant, Dr. Coyle served as Principal Scientist and VP of Clinical Development for VivoMetrics, Inc. and was the Director of Wellness for the Culver Educational Foundation. He holds a B.S. in Biology from Butler University and a Ph. D. in Human Performance from Indiana University. He completed a Post-Doctoral Research Fellowship in Respiratory Physiology at the Harvard School of Public Health and is currently an Adjunct Assistant Professor in Indiana University's Human Performance Laboratories.

About Celliant®

Celliant® is a revolutionary, patented technology that harnesses and recycles the body's natural energy through the medium of fibers. Celliant's applied science utilizes a blend of minerals and proprietary ingredients that are embedded into the core of the fiber. Use of products containing this technology has been clinically proven to enhance tissue oxygen levels, improving athletic performance, sleep quality, health and wellness. Fibers, yarns and fabrics with Celliant technology can be found in some of the world's most recognized name brands. For more information, visit www.celliant.com.

About Hologenix, LLC

Founded in 2003, Hologenix, LLC, maker of Celliant technology, is committed to creating, developing and bringing to market products that enhance people's lives through new materials. They strive to deliver the future of healthy innovation through a variety of consumer categories. The Company continues to explore new territories and is currently running FDA-focused, clinical trials to expand into the medical product arena.

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Clinical Study Data Indicates that Celliant® Reduces Pain

Revolutionary Fiber Incorporated into Apparel and Sleeping Products Provides Non-Invasive Pain Relief

SANTA MONICA, CA (June 24, 2009) – Already proven to increase oxygen levels in the body, data from a new clinical study published in online journal BioMed Central (www.BioMedCentral.com) supports claims that Celliant reduces pain.

[Celliant](#) is a specially formulated technical performance fiber designed to enhance oxygen levels in the body, aiding in comfort, healing, performance and overall wellness. Data analysis from a clinical study conducted by Robyn M. Burgess York and Ian L. Gordon, research scientists affiliated with Long Beach VA Healthcare System and UCI Medical Center, shows that the material also has potent pain relief capabilities. In a double blind study using measurement techniques successfully employed in FDA-supervised clinical trials of pain relief medications, the magnitude of pain relief reported by participants using products enhanced with Celliant was significantly greater than that reported by participants using placebo products. Hologenix, LLC, the company behind Celliant, sponsored the trials.

“We have completed a properly designed clinical trial which shows strong results in favor of Celliant,” explains Seth Casden, CEO of Hologenix, LLC. “The results are statistically significant, providing clinical proof that products enhanced with Celliant actually reduce pain.”

These results have obvious implications for the health and medical markets. However, Hologenix believes a broader market for their technical performance fiber exists.

“To date, much of the research conducted on Celliant has been on patients with diabetes, or some form of vascular impairment,” explains Casden. “However, many individuals have trouble staying active because of chronic pain—virtually everyone suffers from some sort of ache or pain during their life.”

In fact, this most recent study included subjects who suffered from diabetic neuropathic pain as well as a second group of non-diabetic subjects. Both groups experienced significant pain relief. The data showing a greater reduction in pain with Celliant was sufficiently strong that the research team is conducting a second, follow-up study to further measure the pain reduction and healing characteristics of Celliant.

“Personally, I was very surprised by the results. In doing these studies, you often hope for a positive result but, in this case, the data points overwhelmingly to Celliant reducing pain,” stated Dr. Ian L. Gordon, Ph.D. and head of Vascular Surgery at Long Beach VA Medical Center. “What we have here is a fiber that can be incorporated into any number of products—garments, bedding, socks, bandages, athletic wear—to non-invasively reduce pain. It’s a very exciting moment for us as research scientists and for the medical and health community at large.”

The technology behind Celliant is based on years of research regarding the effect of certain wavelengths of light on the body and wound healing. Past studies have shown that light can be used to reduce pain, speed healing, increase energy and improve overall wellness. Celliant is a polymer fiber containing



optically active micro-particles – a proprietary mixture of natural materials – which scatter and reflect visible and near infrared light. Products constructed with such optically modified fibers are designed to scatter and reflect light and energy onto the underlying tissue and skin. Numerous anecdotal reports from patients with a variety of chronic pain syndromes indicate that wearing garments or sleeping on bedding containing Celliant led to dramatic improvement or complete resolution of pain. The goal of this study was to scientifically confirm and measure these results. The full study can be found here: <http://www.biomedcentral.com/1472-6882/9/10>.

Hologenix, LLC, is currently conducting three additional clinical studies to further measure the effects of Celliant on sleep, athletic performance and health.

About Celliant

Celliant is a specially formulated technical performance fiber that is knit or woven into fabrics used in garments and bedding materials. Products containing Celliant have been clinically proven to enhance oxygen levels in the body and help balance body temperature. Increased oxygen levels have been clinically proven to relieve pain, promote quicker healing, improve sleep quality, heighten athletic performance and improve overall wellness. For more information about products that include Celliant, how Celliant works, or studies that have been conducted on Celliant, please visit www.celliant.com.

About Hologenix

Hologenix, LLC, maker of Celliant, is committed to creating, discovering and marketing products that enhance people's lives through pain relief, increased comfort and improved overall well-being. The research that led to the creation of Celliant began in the 1990s when a team of pioneers in the field of alternative medicine visited Asia and observed the use of several natural substances that were thought to have a positive effect on health. After seven years of research and study, the team was able to integrate some of these materials into fabrics that could be made into apparel, bedding and medical products. Hologenix was founded in order to commercialize and bring this material, known as Celliant, to market. The Celliant technology is protected by patents worldwide.

For more information regarding Celliant or Hologenix, please contact:

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Hologenix Introduces World's First Clinically Proven Therapeutic Textile

Revolutionary Celliant® Material Incorporated into Health, Medical and Sports Apparel Products

SANTA MONICA, CA (January 1, 2008) – Hologenix today announced the introduction of a new formulation of Celliant, the world's first clinically proven therapeutic textile.

Celliant is a specially formulated technical performance fiber designed to enhance oxygen levels in the body, aiding in comfort, healing and overall wellness. Celliant represents a breakthrough in fiber technology – *a patented textile with clinically proven efficacy*. In several U.S.-based clinical studies, products enhanced with Celliant have been proven to help balance body temperature and increase oxygen levels in the skin and tissues. These effects are known to have significant benefits including pain relief and quicker healing, better-quality sleep, heightened athletic performance and improved overall wellness.

"Imagine wearing a garment that actually helps you to heal or recover faster, reduces aches and pains, and increases your performance and stamina," said Hologenix CEO, Dean Jensen. "Because Celliant can be added to almost any fabric or design, the applications are virtually limitless."

The research that led to the creation of Celliant began in the 1990s, when a team of pioneers in the field of alternative medicine visited Asia and observed the use of several natural substances that were thought to have a positive effect on health, healing and physical comfort. After seven years of development, the team was able to integrate these materials into Celliant, a textile fiber that can be woven or added to other fibers and yarns. Today, Celliant is used in several product categories including bedding, athletic apparel, hosiery and medical bandages. Celliant's product applications span five primary channels including sleep, medical, sport, wellness, and veterinary.

Celliant has been tested in two previous clinical studies at both the Loyola University Medical Center in Chicago and at the Hyperbaric Treatment & Training Services Center in Houston. Both of these studies showed significant results.

"Our study provides objective evidence to support what many of us have observed or heard from people that have worn products enhanced with Celliant," said Dr. Lawrence A. Lavery, DPM, MPH. "It shows a significant increase in blood flow in the skin when study subjects wore the garments."



Dr. Lavery is an Associate Professor in the Department of Orthopedic Surgery and Rehabilitation at Loyola University Medical Center and Hines Veterans Administration Hospital in Chicago.

“Building on the results of the Loyola study, we wanted to further test the effects of Celliant,” said Dr. Graham M. McClue, Ph.D. “Our study proved that patients wearing products with Celliant showed a statistically significant increase in transcutaneous oxygen. The increase was significant, showing that Celliant does, in fact, increase oxygen perfusion levels by 10% to 24% in a healthy non-compromised population.”

The company is currently sponsoring its third clinical study of the effects of Celliant on the body and health.

“We’ve conducted a properly designed double blind clinical trial to measure the pain reduction effects of Celliant. The study is now complete except for the final statistical analysis,” explains Dr. Ian Gordon, M.D., Ph.D. “The preliminary data analysis shows a strong trend in favor of Celliant compared to placebo products.”

Dr. Gordon is Director of the University of California Wound Clinic, Associate Clinical Professor of Surgery at the University of California, Irvine and Chief of the Vascular Surgery Section at the VA Long Beach Healthcare System as well as a member of the attending staff at the University of California, Irvine, Medical Center.

Unlike other holistic products that make health and wellness claims, Celliant has been tested in several U.S.-based clinical studies conducted by independent third parties and leading universities. These studies consistently and undeniably show Celliant effects to be compelling, reliable and real.

These results have obvious implications for the health and medical markets. However, Hologenix believes a broader market for their therapeutic textile exists. Because Celliant can be woven into almost any material, including wool, cotton and other polyesters, the company believes it has applications across a wide array of markets and products. Currently, Celliant is featured in several products including bedding, pillows, socks and medical wraps and the company sees a future where Celliant becomes the ingredient of choice in apparel for athletes, active adults and medical patients.

About Celliant

Celliant is a specially formulated technical performance fiber that is knit or woven into fabrics used in garments and bedding materials. Products containing Celliant have been clinically proven to enhance oxygen levels in the body and help balance body temperature. Increased oxygen levels have been clinically proven to relieve pain, promote quicker healing, improve sleep quality, heighten athletic performance and improve overall wellness. For more



information about products that include Celliant, how Celliant works, or studies that have been conducted on Celliant, please visit www.celliant.com.

About Hologenix

Hologenix, LLC, maker of Celliant, is committed to creating, discovering and marketing products that enhance people's lives through pain relief, increased comfort and improved overall well-being. The research that led to the creation of Celliant began in the 1990s when a team of pioneers in the field of alternative medicine visited Asia and observed the use of several natural substances that were thought to have a positive effect on health. After seven years of research and study, the team was able to integrate some of these materials into fabrics that could be made into apparel, bedding and medical products. Hologenix was founded in order to commercialize and bring this material, known as Celliant, to market. The Celliant technology is protected by patents worldwide.

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Celliant Management Team



Seth Casden, President and Chief Executive Officer:

Seth Casden joined Hologenix, LLC in 2008 as the Company's President and CEO, bringing with him a varied professional background in the areas of finance, accounting and business development. Mr. Casden's interest in Hologenix began in 2001, when he invested in the Company after learning about Celliant®, the Company's core technology. After following the Company's progress for more than seven years as an investor, Mr. Casden decided to take a more active role in the Company's growth. In less than two years, Mr. Casden has been able to affect exponential growth at Hologenix and expand the business on a global scale. The results of his efforts include a 600% increase in revenue and securing several key strategic partnerships with Fortune 1000 brands including Saucony, Adidas TaylorMade, Invista, Asics, Ironman and Serta. Mr. Casden's efforts to validate Celliant technology resulted in successfully completing five positive clinical trials and the approval of patents in thirteen countries. Mr. Casden believes passionately in the power of human energy and impacting people's lives through Celliant. His primary goal for the Company is to expose the innovative technology to a wider range of potential partners and customers. Along with overseeing global operations for Hologenix, he continues to maintain the Company's vision of consistently bringing revolutionary products and technologies to the commercial market. Mr. Casden began his career at Colony Capital and later, as an entrepreneur, went on to run a number of successful ventures. He holds a B.S. in Business Administration from Pepperdine University, and enjoys running, practicing yoga and spending time with his dog, Boris.

Michael Conchuratt, Chief Operating Officer:

Mr. Conchuratt brings over 20 years of wide-ranging professional experience to Hologenix with a background in operations and financial markets. Prior to joining Hologenix, Mr. Conchuratt successfully managed commodities trading desks in both New York and Houston where he was instrumental in adding new financial products that led to substantial gains in both earnings and market share. As the Director of Correspondent Lending at IndyMac Bank he led a five-man pricing desk and drafted the business requirements for the software responsible for pricing and tracking thousands of correspondent mortgage loans. As Manager of Business Development at Avante Global, he was responsible for deal structuring, establishing strategic partnerships for client companies, and driving new business. In addition to his deep knowledge of financial markets, Mr. Conchuratt also has significant experience in start-up companies, managing employees across multiple functional areas. Mr. Conchuratt earned a Bachelors of Science degree in Finance from Arizona State University in 1991.

David Horinek, Founder/Chief Innovation Officer:

For more than twenty years Mr. Horinek studied physics under the direction of John Schnurer, the former Director of Applied Sciences and Physics Engineering at Antioch College in Yellow Springs, Ohio. He then spent most of his professional career as an entrepreneur in the health and wellness business, including having owned and operated his own health supply store. An accomplished golfer, Mr. Horinek competed on a semi-professional level. After suffering a serious shoulder injury in a car accident that threatened his ability to compete, and learning his grandmother was suffering from knee problems, Mr. Horinek began to research and experiment with different applied compounds to alleviate pain naturally. It was through this research that he learned about the therapeutic benefits certain minerals and other materials have on the body, including the ingredients found in Celliant today. Mr. Horinek has dedicated the past two decades to developing and perfecting Celliant products with Hologenix, LLC with the intention of helping others achieve the very same benefits he had discovered for himself. In his current role as Chief Scientist, Mr. Horinek oversees research and development and production of Celliant. He has also developed rigorous



testing protocols to demonstrate the efficacy of Celliant fibers, and a series of proprietary testing devices that demonstrate the underlying science of how Celliant Products work.

Michael Coyle, Chief Science Officer:

Dr. Michael Coyle is an innovative, solutions-driven professional with more than 15 years of research experience and history of achievement in business operations, strategic planning, and relationships management. Progressive career includes roles in academic and industry settings; recognized as subject matter expert in fields of cardio-pulmonary physiology, health/wellness, and public health and safety. Proven success serving as lead investigator on multiple clinical trials investigating chronic illnesses. Adeptly directs trials from protocol design and site identification, through data collection and analysis; carefully monitors timelines and tracks trial milestones to ensure compliance with regulatory guidelines and research protocols.

He is highly regarded strategist who balances scientific and business acumens and contributes significantly to ambitious R&D efforts; holds multiple patents and publications in leading scientific journals. Directs, mentors, and motivates cross-disciplinary teams, fosters innovation, and promotes open sharing of knowledge to encourage professional excellence.

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Backgrounder

Hologenix, LLC is the maker and worldwide distributor of Celliant®, the world's first technological textile with proven therapeutic efficacy. Founded in 2003, the company is committed to creating, discovering and marketing products that enhance people's lives through non-invasive pain relief, increased comfort and improved overall well-being.

While competitive offerings only serve to protect the body against outside elements, Celliant represents a breakthrough in material technology – *a patented textile with clinically proven benefits to the human body*. In five U.S.-based clinical studies, products enhanced with Celliant have been proven to help balance body temperature and increase oxygen levels in the skin and tissues. These effects are known to have significant benefits including pain relief, faster healing, better sleep quality, heightened strength and athletic performance and improved overall wellness. In an ongoing study, subjects using sleep products enhanced with Celliant are showing improved sleep efficiency coupled with less nocturnal awakenings.

The research that led to the creation of Celliant began in the 1990s, when a team of pioneers in the field of alternative medicine visited Asia and observed the use of several natural substances that were thought to have a positive effect on health, healing and physical comfort. After seven years of development, the team was able to integrate these materials into Celliant, a technical performance fiber that can be knit or woven with other fibers and yarns into fabrics. Today, Celliant is used in several product categories including bedding, athletic apparel, hosiery, medical and veterinary products.

Hologenix, LLC is headquartered in Santa Monica, California, with sales and distribution partners in North and South Carolina, and abroad in Asia, Australia, South America and Europe. By remaining competitively priced and constantly improving the product formulation, the Company continues to experience rapid growth through the expansion of its manufacturing, sales and distribution partners.

For more information, visit www.celliant.com.



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FACT SHEET



About the Company

Celliant® is the leading responsive textile technology for apparel, bedding and veterinary products. Celliant's revolutionary, patented technology harnesses and recycles the body's natural energy through the use of fibers. Celliant's parent company, Hologenix, LLC, is committed to developing and bringing to market products that improve people's lives through increased cellular oxygen levels. They strive to deliver the future of healthy innovation through a variety of consumer categories.

Technology

Celliant technology absorbs and stores the electromagnetic energy emissions from the human body and reemits them back into the body, where they are reabsorbed into muscle tissue. The unique technology incorporates thirteen optically responsive minerals, embedded into the core of the fibers, which modify visible and infrared light. These fibers are then knit or woven into fabrics, and when worn or placed near the body, oxygen levels are increased.

Benefits

Products containing Celliant technology have been clinically proven to:

- Enhance tissue oxygen levels in the body
- Stimulate quicker recovery and healing
- Heighten strength and athletic performance
- Balance body temperature
- Improve sleep quality

Studies

Tested and proven in five U.S.-based clinical studies, Celliant's applied science consistently demonstrates significant, compelling and verifiable results:

- Effect of Shirt with 42% Celliant Fiber on TCPO2 Levels and Grip Strength in Healthy Subjects, Dr. Ian Gordon (2011)
- Pilot Sleep Study, Dr. Marcel Hungs (2009-2010)
- Effect of Optically Modified Polyethylene Terephthalate Fiber Socks on Chronic Foot Pain Study, Dr. Ian Gordon (2008)
- Celliant Study of Thirteen (13) Healthy Subjects, Dr. Graham McClue (2005)
- Celliant Blood Flow Study, Dr. Lawrence Lavery (2003)

The Company continues to explore new applications for their technology and is currently running FDA-focused, clinical trials to expand into the medical product arena.

Brands

Celliant's patented technology is utilized in the following brands. For a complete list of brands, please visit www.celliant.com/products:

Apparel	Bedding	Veterinary
Adidas TaylorMade Golf	Serta	Draper Therapies
Reebok	Fabrictech	Equipedic
Saucony	Ironman	Soar Pet Products
Asics	Ambient	



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Frequently Asked Questions

Q: What is Celliant?

A: Celliant® is a revolutionary, patented technology that harnesses and recycles the body's natural energy through the use of fibers. The result is a responsive textile clinically proven to benefit the human body, utilizing a blend of minerals and proprietary ingredients embedded into the fiber's core.

Q: How does Celliant work?

A: Celliant technology absorbs and stores the electromagnetic energy emissions from the human body and reemits them back into the body, where they are reabsorbed into the skin and muscle tissue. Celliant's blend of proprietary ingredients reflect light, both visible and infrared, and are able to alter the wavelengths, allowing easier absorption into the muscle tissue. The electromagnetic emissions affect biological processes resulting in enhanced oxygen levels by an average of 7% and a more balanced body temperature.

Q: What is Celliant made from?

A: Celliant is specially formulated with 13-optically responsive minerals including titanium dioxide, silicon dioxide and aluminum oxide. Additional proprietary ingredients are blended with polyester fiber to create a variety of staple fibers, spun and filament yarns, and fabric blends.

Q: What is a "responsive" textile?

A: A responsive textile is a material that interacts with the body, using its energy to be more effective.

Q: Will I feel Celliant working?

A: While you will not necessarily be able to perceive or feel an increase in circulation, oxygenation or blood flow, clinical testing has measured an increase in skin oxygen levels (TCPO2) and consistently recorded significant improvements across a wide spectrum of test subjects. Consumers who try Celliant often experience increased comfort and an overall improved sense of health.

Q: Does Celliant have to touch my skin for a heightened effect?

A: Products enhanced with Celliant technology can be covered or layered without losing effectiveness. Clothing, sheets, and laminated or waterproof fabrics do not hinder the efficacy of Celliant to recycle energy to the body. The body's electromagnetic emissions travel through clothing, wood, glass and even concrete. This is what allows military satellites in space to see if a building is occupied.

Q: Is Celliant using my body's heat?

A: No, this is a misconception. Celliant utilizes metabolic energy that is emitted from the body. While an increase in body temperature will cause an increase in circulation, Celliant is tested and proven to deliver an additional increase in TCPO2 levels not available through heating. The benefits of Celliant are a result of factors not related to heat or temperature.



Q: Will my skin temperature increase if I'm reusing my body's energy?

A: No, by reemitting this energy back to the body, the process acts as a thermal regulator to help balance body temperature. When circulation is increased, the body is able to either warm up or cool down, depending on the external environment, more easily through convection.

Q: Are there clinical studies to prove Celliant works?

A: Celliant technology has been tested and proven in five U.S. based clinical studies. Additional information on each study can be viewed within the digital press kit or online at www.celliant.com/in-the-lab/clinical-studies.

Q: Are there any negative side effects to Celliant?

A: Celliant is a non-invasive technology. Allergic reactions to any materials can occur; however, since Celliant products became available in 2003, there have been no reported cases of allergic reactions. However, as Celliant requires a synthetic carrier, you should not use Celliant if you are allergic to polyester fibers.

Q: Do Celliant products require special care or laundering?

A: Celliant's patented technology is embedded into the core of the fibers so that it cannot wash or wear out. The technology is not based on a coating or an application. Therefore, the benefits of Celliant technology last the life of the fiber and products do not require special care.

Q: Where can I find products enhanced with Celliant?

A: Celliant technology is found in existing products, not as a standalone product itself. Items that contain the technology are available at retail and online stores throughout the world. For a complete list of brands that incorporate Celliant technology, please see www.celliant.com. A partial list of brands that incorporate Celliant technology includes:

Apparel	Bedding	Veterinary
Adidas TaylorMade Golf	Serta	Draper Therapies
Reebok	Fabrictech	Equipedic
Saucony	Ironman	Soar Pet Products
Asics	Ambient	



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The Science Behind Celliant®

Founded in 2003, Hologenix, LLC is committed to creating, discovering and marketing products that enhance people's lives through non-invasive pain relief, increased comfort and improved overall well-being. The Company's primary product, Celliant, is a specially formulated technology that is knit or woven into fabrics to enhance oxygen levels in the body. Products enhanced with Celliant have been clinically proven to increase comfort and aid in healing by increasing oxygen levels and helping to balance body temperature. Increased oxygen levels have been clinically proven to relieve pain, promote faster healing, improve sleep quality, heighten strength and athletic performance and improve overall wellness. Celliant is now available in a variety of products including bedding, pillows, mattresses, athletic apparel, hosiery, medical bandages, wraps, braces and veterinary products. New products are being developed and introduced regularly.

While competitive offerings only serve to protect the body against outside elements, Celliant represents a breakthrough in material technology – a patented textile with clinically proven benefits to the human body. In five U.S.-based clinical studies, Celliant consistently showed the material's effects to be compelling, reliable and real. In fact, clinical testing of Celliant products have been shown to reduce pain, increase oxygen levels and balance body temperature. Increased oxygen levels are known to have significant benefits including pain relief, faster healing, better sleep quality, heightened strength and athletic performance and improved overall wellness.

The research that led to the creation of Celliant began in the 1990s, when a team of pioneers in the field of alternative medicine visited Asia and observed the use of several natural substances that were thought to have a positive effect on health, healing and physical comfort. After seven years of development, the team was able to integrate these materials into Celliant, a technical performance fiber that can be knit or woven with other fibers and yarns into fabrics.

For information on these clinical studies conducted on Celliant, please see the following pages:

Study, 2009-2011 – Effects of Celliant on sleep and pain management;
Study, 2009-2010 – Effects of Celliant on strength;
Study, 2009 – Effects of Celliant on oxygen levels in the skin;
Study, 2008 – Effects of Celliant on pain and pain reduction;
Study, 2005 – Effects of Celliant on oxygen levels in the skin;
Study, 2003 – Effects of Celliant on oxygen levels in the skin.



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Current Studies Being Conducted on Celliant®

Study, 2011

Effects of Celliant on Performance

This study is being conducted at the Human Performance Laboratory at the University of Indianapolis by Dr. Michael Coyle, Ph.D. Dr. Coyle is an expert in physiology and human performance with a Post-Doctoral Fellowship at the Harvard School of Public Health and a Ph.D. in Human Performance from the University of Indiana. Before joining Hologenix as Chief Science Officer he conducted research for Bioscientia, LLC, a company that provides strategic scientific guidance for Pharma in validation and adoption of biotechnology. The study is a double blind, placebo controlled clinical study conducted on six healthy track and field athletes with no history of cardiovascular, pulmonary or renal disorders. Subjects will perform progressive treadmill activity to determine maximum exercise capacity and exercise bouts at 50% and 75% of maximum capacity in both Celliant and placebo garments. It will measure VO2max, minute ventilation, heart rate and additional metabolic data.

Study, 2011

Effects of Celliant on Recovery

This study is being conducted at the Human Performance Laboratory at the University of Calgary by Dr. Darren Stefanyshyn. Dr. Stefanyshyn is an Associate Professor of Kinesiology at the University of Calgary and is an expert in physiology and human performance. The study is a double blind, placebo controlled clinical study conducted on six healthy track and field athletes with no history of cardiovascular, pulmonary or renal disorders. Subjects will perform physical activity to exertion using blood lactate levels as the key indicator. Blood lactate levels are an industry-accepted measurement for recovery and will be measured throughout the active recovery process.

Study, 2011

Effects of Celliant on Wound Healing

This study is being conducted at the University of Texas Southwestern Medical Center by Dr. Lawrence Lavery, DPM, MPH. Dr. Lavery is a surgeon in the Department of Plastic Surgery and Orthopaedic Surgery at the University of Texas Southwestern Medical Center and has published over 140 papers and performed over 150 lectures related to diabetes and diabetes treatments. In this study, Dr. Lavery will measure the rate of wound healing in patients with diabetic ulcers using industry standard treatments and 100% Celliant stockings. Hyperspectral and digital imaging will be used to measure wound volume, cytokines, gene expression, biomechanical properties and histopathology as well as long term study for potential determination of MMPs and TIMPs.

Study, 2011

Effects of Celliant on Oxygen Levels in the Skin

This study is being conducted at the Human Performance Laboratory at the University of Indianapolis by Dr. Michael Coyle, Ph.D. Dr. Coyle is an expert in physiology and human performance with a Post-Doctoral Fellowship at the Harvard School of Public Health and a Ph.D. in Human Performance from the University of Indiana. Before joining Hologenix as Chief Science Officer he conducted research for Bioscientia, LLC, a company that provides strategic scientific guidance for Pharma in validation and adoption of biotechnology. This study is a double blind, placebo controlled clinical study conducted on 100 healthy subjects, 18 to 60 years old. Patients will visit the clinic on three separate occasions to measure TCPO2 levels with a placebo shirt, a shirt made with 42% Celliant and a shirt made with 100% Celliant. Each subject will also test grip strength will be measured by use of a Hydraulic Hand



Dynamometer for baseline, placebo and Celliant protocols.

Study, 2010-2011

Effects of Celliant on Pain Reduction in the Wrist and Elbow.

This study is being conducted at the Veterans Administration Long Beach Healthcare Center by Dr. Ian Gordon, M.D., Ph.D. Dr. Gordon is the Director of the University of California Wound Clinic, an Associate Clinical Professor of Surgery at the University of California, Irvine and Chief of the Vascular Surgery Section at the VA Long Beach Healthcare System as well as a member of the attending staff at the University of California Irvine Medical Center. The study is a double blind, placebo controlled clinical study conducted on 80 subjects suffering from chronic wrist and/or elbow pain, 18 to 60 years old. Patients were interviewed by Dr. Gordon and asked to fill out the McGill Short Form Pain Surveys before and after wearing 100% Celliant wrist and/or elbow wraps and 100% polyester placebo wrist and/or elbow wraps. Additionally, grip strength will be measured by use of a Hydraulic Hand Dynamometer for baseline, placebo and Celliant protocols.

Study, 2009-2011

Effects of Celliant on Sleep and Pain Management.

The pilot study was initiated at the University of California, Irvine, by Marcel Hungs, M.D., Ph.D. Dr. Hungs is director of the Center for Sleep Medicine, a board-certified neurologist and sleep medicine specialist. In late 2010 Dr. Annabelle Wang, M.D. took over the project. Dr. Wang is also a board-certified neurologist and diabetic specialist. The study is a double blind, placebo controlled crossover trial on the effect of Celliant Mattress covers on sleep disturbances in patients with chronic back pain. The study employed several sleep disorder and sleep quality measurement techniques to determine if sleeping on a mattress pad containing Celliant improved the quality of sleep and decreased the number of nocturnal awakenings experienced by subjects. The pilot study was conducted on six subjects over 42 days and the preliminary results were extremely positive. The study is currently being expanded to include additional subjects.

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Study, 2009-2011 – Effects of Celliant on oxygen levels in the skin.

Overview

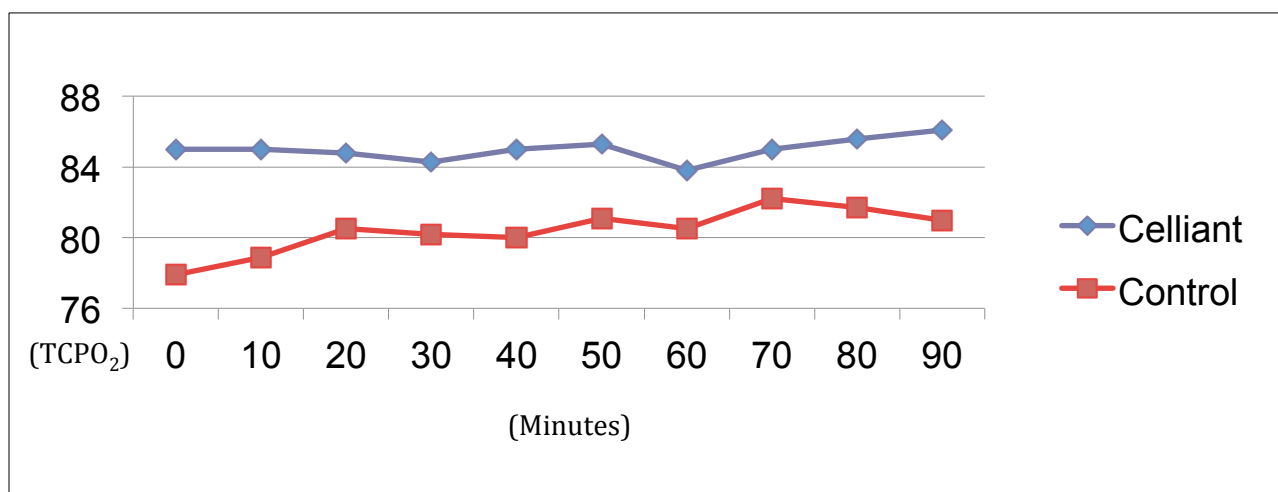
Celliant is a specially formulated material that is knit, woven or added to products to enhance oxygen levels in the body. Products with Celliant have been clinically proven to relieve pain, increase comfort and aid in healing by increasing oxygen levels and helping to regulate body temperature. Below is a summary of the results of a recently completed study designed to measure the ability of Celliant to increase skin oxygen levels (TCPO₂).

Study Background

The study was conducted by Dr. Ian Gordon, M.D., Ph.D. at University of California Medical Center. Dr. Gordon is the Director of the University of California Wound Clinic, an Associate Clinical Professor of Surgery at the University of California, Irvine and Chief of the Vascular Surgery Section at the VA Long Beach Healthcare System as well as a member of the attending staff at the University of California Irvine Medical Center. The study was a single-center, prospective, double blind, randomized trial approved by the institution review board. Twenty-four (24) healthy subjects were enrolled, 16 men and 8 women with an average age of 30.3 years. To be included in the study, participants had to be at least 18 years of age and be in good health. The subjects wore standard polyester shirts for 90 minutes indoors in a constant temperature and indoor light environment and were asked to sit quietly in a chair. After a short rest, the procedure was continued for another 90 minutes with the subjects wearing 42% Celliant/58% polyester shirts. TCPO₂ measurements were measured by standard Clarke electrodes placed on skin heated to 44°C to eliminate an increase in localized skin temperature as a possible source of increased oxygen. 17 participants had one electrode placed on their chests, 7 participants had three electrodes (two on the abdomen, one on the chest). The TCPO₂ measurements were taken at 10-minute intervals. In 2011, 27 subjects were added to the study and experienced similar results.

Results

There was a statistically significant increase in mean TCPO₂ levels associated with wearing the Celliant shirts observed at 30, 60 and 90 minute intervals, with the greatest increase, at 90 minutes, reflecting an approximate 7% overall average increase in skin oxygen levels. The increases in TCPO₂ levels associated with the Celliant shirt corroborated earlier findings performed in the limbs that oxygen levels increase when socks or gloves made from Celliant fibers are worn. Given that in both trials, the transcutaneous oxygen probes were heated to 44°C and skin temperature levels did not significantly vary between the two garments, it is unlikely that the effect observed was due to increases in skin temperature causing secondary effects on skin blood flow.



7% Increase Observed

Study, 2008 – Effects of Celliant on pain and pain reduction.

Overview

Celliant is a specially formulated material that is knit, woven or added to products to enhance oxygen levels in the body. Products with Celliant have been clinically proven to relieve pain, increase comfort and aid in healing by increasing oxygen levels and helping to regulate body temperature. Below is a summary of the results of a recently completed double blind study designed to measure the ability of Celliant to reduce pain and increase comfort.

Study Background

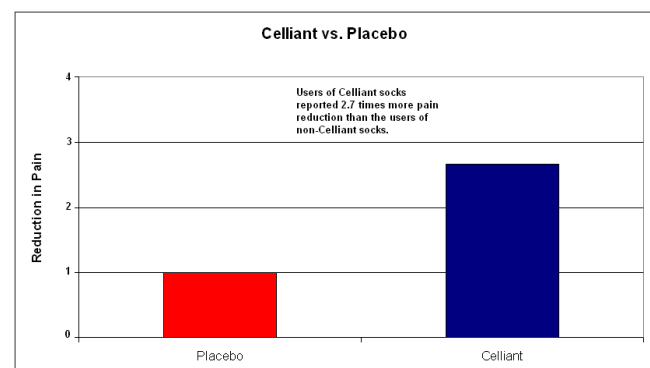
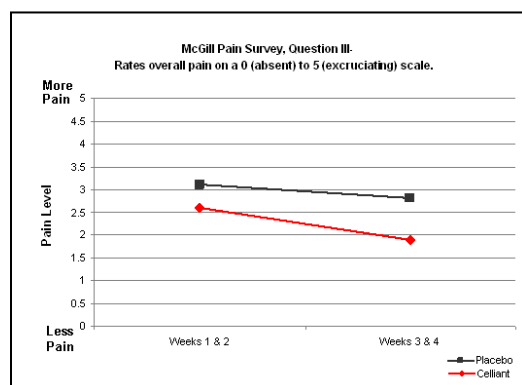
The study was conducted by Dr. Ian Gordon, M.D., Ph.D. at University of California Medical Center. Dr. Gordon is the Director of the University of California Wound Clinic, an Associate Clinical Professor of Surgery at the University of California, Irvine and Chief of the Vascular Surgery Section at the VA Long Beach Healthcare System as well as a member of the attending staff at the University of California Irvine Medical Center. The study was a single-center, prospective, double blind, randomized trial approved by the institutional review board. Fifty-five (55) subjects in total were enrolled, 26 with diabetic neuropathy and 29 with other causes of foot pain; 38 men and 17 women were enrolled, with an average age of 59.7 years. To be included in the study participants had to be older than 21 years of age and have persistent foot pain for at least six months prior to the study. The study has been published in the Journal of Alternative & Complimentary Medicine.

Participants in the study were asked to fill out McGill Short Form Pain Surveys—an industry accepted scale for measuring pain relief that is used in FDA trials for pain relief medications—for two consecutive weeks to measure pain and quality of life. In questions assessing pain, subjects were instructed to answer questions based solely on subjective foot pain. After completing the questionnaire the second week, subjects were given three pairs of socks in a closed container and asked to wear them exclusively for the next two weeks. One week (Week 3) and two weeks (Week 4) later they returned to again fill out the same questionnaires. The control group received socks made from standard Comfortrel XP® polyester fiber, while the Celliant group received socks in which the bottom of the sock was modified by having Celliant incorporated into the yarn. Subjects and study personnel were blinded to the randomization, and study personnel never saw the socks given to the subjects.

***SIGNIFICANT REDUCTION IN PAIN
 WAS OBSERVED IN THOSE WEARING
 CELLIANT ENHANCED PRODUCTS.***

Results

All participants exhibited similar pain scores upon entry into the study. The changes between scores recorded before and after wearing socks showed improvements in both the control and Celliant groups. The fact that the control group demonstrated reduction in pain is consistent with the placebo effect often seen in studies like this one. However, significantly more reduction in pain was observed in the responses from the Celliant group than controls, based on comparisons of the median reduction in pain before and after starting treatment. Figures 1 and 2 below show ***2.7x greater reduction in pain for participants wearing products enhanced with Celliant*** than those wearing placebo products. In 2009 the results were published in the BMC Journal of Contemporary and Alternative Medicine.



Celliant® Study Results

Study, 2005 – Effects of Celliant on oxygen levels in the skin.

Overview

Celliant is a specially formulated material that is designed to enhance oxygen levels in the body. Products with Celliant have been clinically proven to relieve pain, increase comfort and aid in healing by increasing oxygen levels and helping to regulate body temperature. Below is a summary of the results of a double blind study completed in 2005 and designed to measure the ability of Celliant to increase oxygen levels in the skin (TCPO2).

Study Background

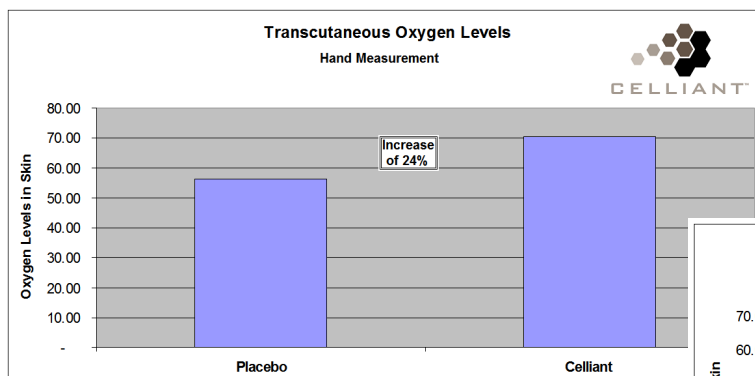
The study was conducted by Graham M. McClue, Ph.D., a researcher with Hyperbaric Treatment & Training Services Ltd., an independent research facility in Houston, Texas. Dr. McClue compared 50% Celliant socks and 100% Celliant gloves to placebo products on the hands and feet of 13 healthy subjects. He measured changes in transcutaneous oxygen, a measure of oxygen in the body, over a period of one hour. The study was double blind, meaning that neither the participants nor Dr. McClue knew which products contained Celliant until after measurements were taken.

**SIGNIFICANT REDUCTION IN PAIN
WAS OBSERVED IN THOSE WEARING
CELLIANT ENHANCED PRODUCTS.**

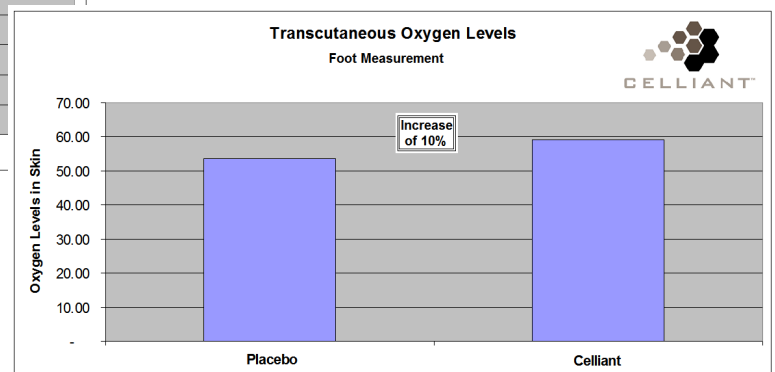
Results

The study successfully showed that patients wearing products with Celliant showed a statistically significant increase in transcutaneous oxygen. As shown in figures below, this increase was significant (10% to 24%). According to Dr. McClue, “Celliant does, in fact, increase oxygen profusion levels by 10% to 24% in a healthy non-compromised population.”

With regard to the benefits of the product, Dr. McClue further states, “Increased oxygen profusion has been shown to aid in the increase of energy. Energy produced at the cellular level will accelerate muscle tissue recovery from exercise, which is known to induce lactic acid increases, rebuild strength in muscles damaged by exercise, and also reduce the incidence of cramping, edema, and muscle fatigue post strenuous exercise in athletic conditioning.”



**24% INCREASE IN OXYGEN
LEVELS MEASURED IN HANDS**



Celliant® Study Results

Study, 2003 – Effects of Celliant on oxygen level in the skin.

Overview

Celliant is a specially formulated technology that is designed to enhance oxygen levels in the body. Products with Celliant have been clinically proven to relieve pain, increase comfort and aid in healing by increasing oxygen levels and helping to regulate body temperature. Below is a summary of the results of a double blind study completed in 2003 and designed to measure the ability of Celliant to increase oxygen levels in the skin.

Study Background

The study was conducted by Lawrence A. Lavery, DPM, MPH, an Associate Professor in the Department of Orthopedic Surgery and Rehabilitation at Loyola University Medical Center and Hines Veterans Administration Hospital in Chicago. Dr. Lavery compared 50% Celliant socks and 100% Celliant gloves to placebo products on the hands and feet of 20 diabetic patients. He measured changes in transcutaneous oxygen, a measure of oxygen in the body. The study was double blind, meaning that neither the participants nor Dr. Lavery knew which products contained Celliant until after the measurements were taken.

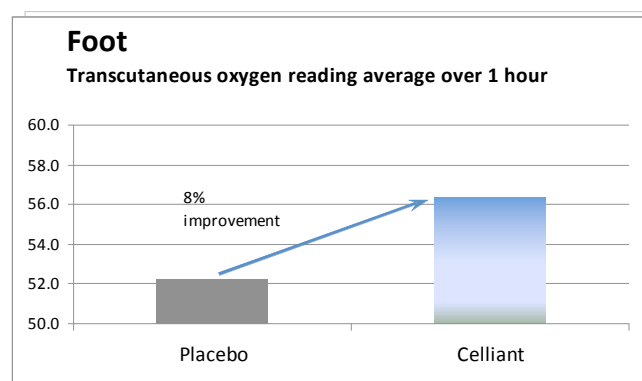
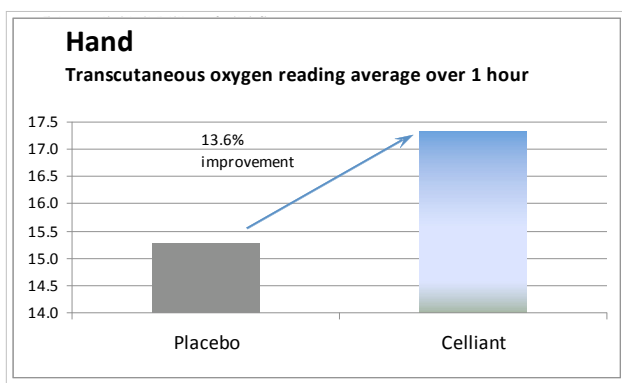
Results

After less than an hour, patients wearing products with Celliant showed a statistically significant increase in transcutaneous oxygen.

As shown in the figures below, this increase was observed at every ten-minute testing interval. According to Dr. Lavery, “This study provides objective evidence to support what many of us have observed or heard from people that have worn products enhanced with Celliant. It shows a significant increase in blood flow in the skin when study subjects wore the garments.”

***SIGNIFICANT REDUCTION IN PAIN
 WAS OBSERVED IN THOSE WEARING
 CELLIANT ENHANCED PRODUCTS.***

With regard to the benefits of the product, Dr. Lavery further states “An 8 to 14% improvement in oxygenation could increase circulation enough to improve wound-healing or eliminate leg pain caused by atherosclerosis or other blood flow obstructions. The significant changes observed are very compelling.”



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*Circular Knitted Fabrics, with & without Spandex;
Jersey Blends with Microfiber, Cotton and Wool;
Stretch & Flat Black Meshes*
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