

Bonerge Highlights Longevity & Fisetin Innovations at Natural Products West



bonerge.com/news/natural-products-west-anaheim-longevity-fisetin

We're excited to share with you the highlights from our recent participation at the Natural Product West exhibition in Anaheim! Bonerge garnered a lot of attention from attendees, with our flagship product, StanYouth Fisetin Extract, making its debut at the event.

BeFisetin, our premium branded fisetin, represents Bonerge's commitment to pursuing high-quality, safe ingredients. It has a total flavonoid content greater than 99%, Fisetin content greater than 98% and total impurities smaller than 1%. We are the only Branded Fisetin at the exhibition, capturing the interest of many visitors.

As the global population ages and consumer need for healthy lifestyles continues to rise, the need for anti-aging supplements is on the rise. At Natural Product West, our longevity and metabolism-boosting products received considerable interest and inquiries.

Our featured products

- **Urolithin A**, known for its unique mitophagy effects, Urolithin A helps maintain mitochondrial health. Studies have shown its ability to prolong the lifespan of animals and enhance muscle levels and sports performance across all age groups.
- **BeFisetin® Fisetin Extract**: Fisetin, is one of the most powerful senolytic from plants that effectively clears senescent cells and reduces inflammation in the body. Given that senescent cells accumulate with age and are present in multiple organs, fisetin's role in combating aging is indispensable.
- **Dihydroberberine (DHB)**: Offering more direct absorption compared to Berberine. Berberine is popular for its weight loss benefits, but its absorption has been suboptimal. Studies indicate that after the oral administration of DHB and berberine, DHB achieves higher blood concentrations, demonstrating greater bioavailability.

During the exhibition, our team engaged in insightful discussions, forging valuable connections with peers, brands, and potential collaborators. It was inspiring to witness the growing interest for our products and the positive impact they can have.



Looking ahead, Bonerge remains persistent in our commitment to innovation. We are continuously exploring new aspects for product development, innovative dosage forms, and our formulations to ensure improved efficacy and customer satisfaction.

We extend our gratitude to everyone who visited our booth, engaged with our team, and expressed interest in our products. If we didn't have the opportunity to connect during the exhibition, please don't hesitate to reach out. We're here to answer any questions you may have and provide assistance in any way we can.



Dihydroberberine vs Berberine: Benefits, Bioavailability & Key Differences



bonerge.com/research-articles/dihydroberberine-vs-berberine-benefits-bioavailability

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With the evolution of the food industry and modern lifestyle changes, metabolic health challenges such as obesity, diabetes, and cardiovascular disease have become increasingly prevalent worldwide.

At the core of many of these conditions is metabolic dysfunction, often referred to as metabolic syndrome, which disrupts glucose regulation, lipid metabolism, and overall energy balance. As a result, maintaining healthy metabolic function has become a key focus of modern health management.

Beyond their impact on individual health and quality of life, metabolic disorders also place a substantial burden on healthcare systems. In response, brands have developed a wide range of solutions targeting weight management and blood glucose control, among which berberine has gained significant attention for its ability to support insulin sensitivity and lipid metabolism.

Since 2022, Berberine has gone viral on TikTok in the US, catalyzed by a user sharing her successful weight loss journey with the supplement. These short videos garnered widespread attention, and the internet quickly dubbed Berberine 'Nature's Ozempic' or 'Natural GLP-1 agonist'.

Experiences related to weight loss using Berberine amassed billions of views, leading to a dramatic surge in demand. Many Berberine products sold out, even causing a shortage of raw materials.

Enter dihydroberberine—a superior, more bioavailable form of berberine with enhanced health benefits. In this guide, we compare dihydroberberine vs berberine, explore dihydroberberine benefits, and highlight why dihydroberberine supplements are the next evolution in metabolic health.

What is Berberine ?

Berberine, primarily derived from plants with a long history of use, was first recorded in ancient Chinese medical 'Shen-Nong's Herbal Classics' over 3,000 years ago. Initially,

Berberine was mainly used for its antibacterial, antiviral, and diarrheal relief properties.

In recent years, modern science has gradually uncovered various pharmacological effects of Berberine, leading to its widespread use in clinical practice. Research has found that Berberine exerts its health benefits through several mechanisms.

Berberine: Key Health Benefits and Mechanisms

1. Promotes GLP-1 secretion

- Berberine increases GLP-1 secretion by promoting the expression of glucagon mRNA and the proliferation of intestinal L-cells.²
- It also activates the bitter taste receptor TAS2R38 in the intestine, stimulating GLP-1 secretion from L-cells.²

2. Regulates blood sugar metabolism and improves insulin resistance

- Berberine enhances insulin receptor expression, enhances insulin sensitivity and improves insulin resistance.³
- It upregulates glucose transporter type 4 (Glut4) expression, promoting glucose uptake by cells and reducing blood glucose levels.⁴
- In addition, Berberine reduces oxygen consumption and ATP production in mitochondria, and inhibits the expression of gluconeogenesis transcription factors (G6Pase and PEPCK), thereby lowering fasting blood sugar levels.⁵

3. Increases brown fat content and improves fat metabolism

- Berberine promotes the expression of browning genes in white adipose tissue, increasing brown fat quantity and enhancing brown tissue function, leading to increased energy expenditure and thermogenesis.⁶
- It also inhibits the expression of transcription factors related to fat production (SREBPs and ChREBP) via the AMPK α pathway, reducing fat synthesis enzyme levels and improving fat metabolism.^{7,8}

4. Regulates cholesterol metabolism

- Berberine downregulates the expression of acyl-CoA cholesterol acyltransferase-2, reducing cholesterol uptake and cell monolayer permeability.⁹
- It further upregulates the gene expression of sterol 27-hydroxylase and cholesterol-7 α -hydroxylase, inhibiting intestinal cholesterol absorption.¹⁰
- Through AMPK pathway activation, Berberine lowers plasma levels of LDL cholesterol, free fatty acids (FFAs), and total cholesterol, while increasing HDL cholesterol levels.^{11,12}

5. Reduces inflammation and oxidative stress damage

- Berberine exerts anti-inflammatory effects by inhibiting cyclooxygenase-2 expression through the suppression of AP-1 binding.¹³
- It also modulates oxidative stress markers and antioxidant enzyme levels through complex mechanisms like AMPK activation, NF- κ B and AP-1 pathway inhibition, and Nrf2 pathway regulation, reducing pro-inflammatory cytokine levels.¹³

Dihydroberberine vs Berberine: Key Differences

Despite the huge enthusiasm for Berberine, scientific studies have found limitations in its application, such as low bioavailability, poor intestinal absorption, and potential irritations on the GI tract.¹⁴

Sub-chronic toxicity of Berberine indicates the potential damage of lung and liver in animal at very high dosage.¹⁵ This has motivated Bonerge to step forward to test the safety of Berberine and Dihydroberberine.



Figure 1: Reasons causing limited bioavailability of Berberine.¹⁶

Feature	Berberine	Dihydroberberine
Bioavailability	Low (~1%)	54x higher
Absorption speed	Slow	Rapid
GI Side Effects	Possible (bloating, diarrhea)	Minimal
Effective Dose	High (500-1500mg/day)	Lower (100-200mg/day)

Why Dihydroberberine Is Better?

Dihydroberberine is a research-proven bioactive form of Berberine derivative. When Berberine is orally ingested, it is reduced to Dihydroberberine in the intestine, absorbed through the intestinal wall, and then converted back to Berberine in the blood to exert its effects. Thus, Dihydroberberine can be absorbed more rapidly by the intestinal wall, resulting in higher bioavailability compared to Berberine.¹⁷

Berberine absorption in intestine

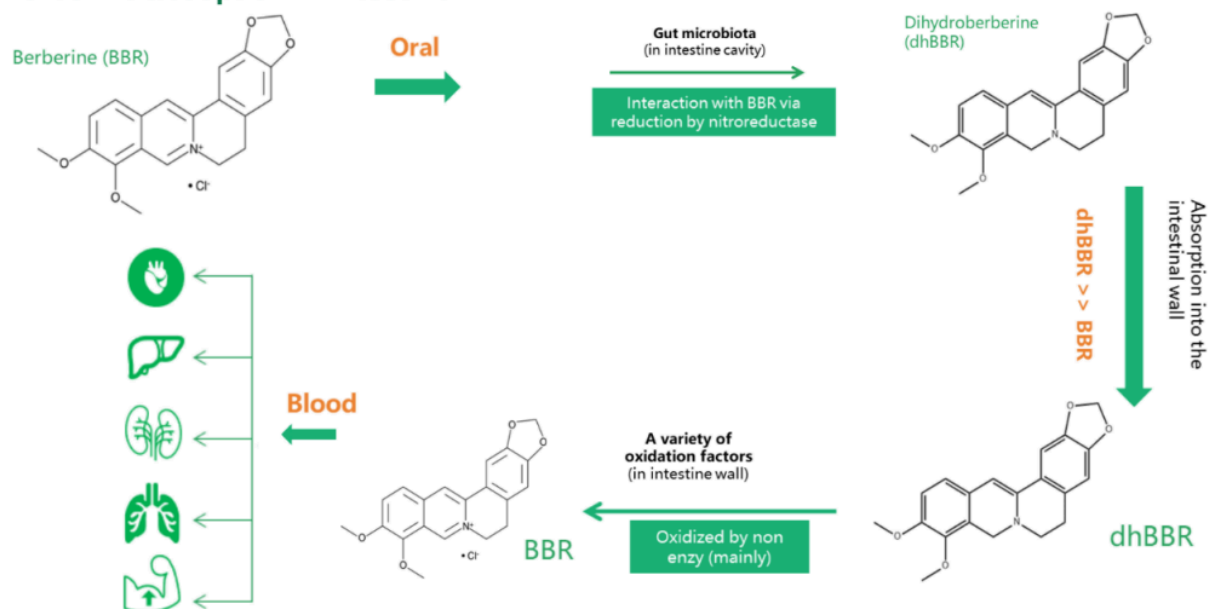


Figure 2: Berberine absorption mechanism in intestine.¹⁷

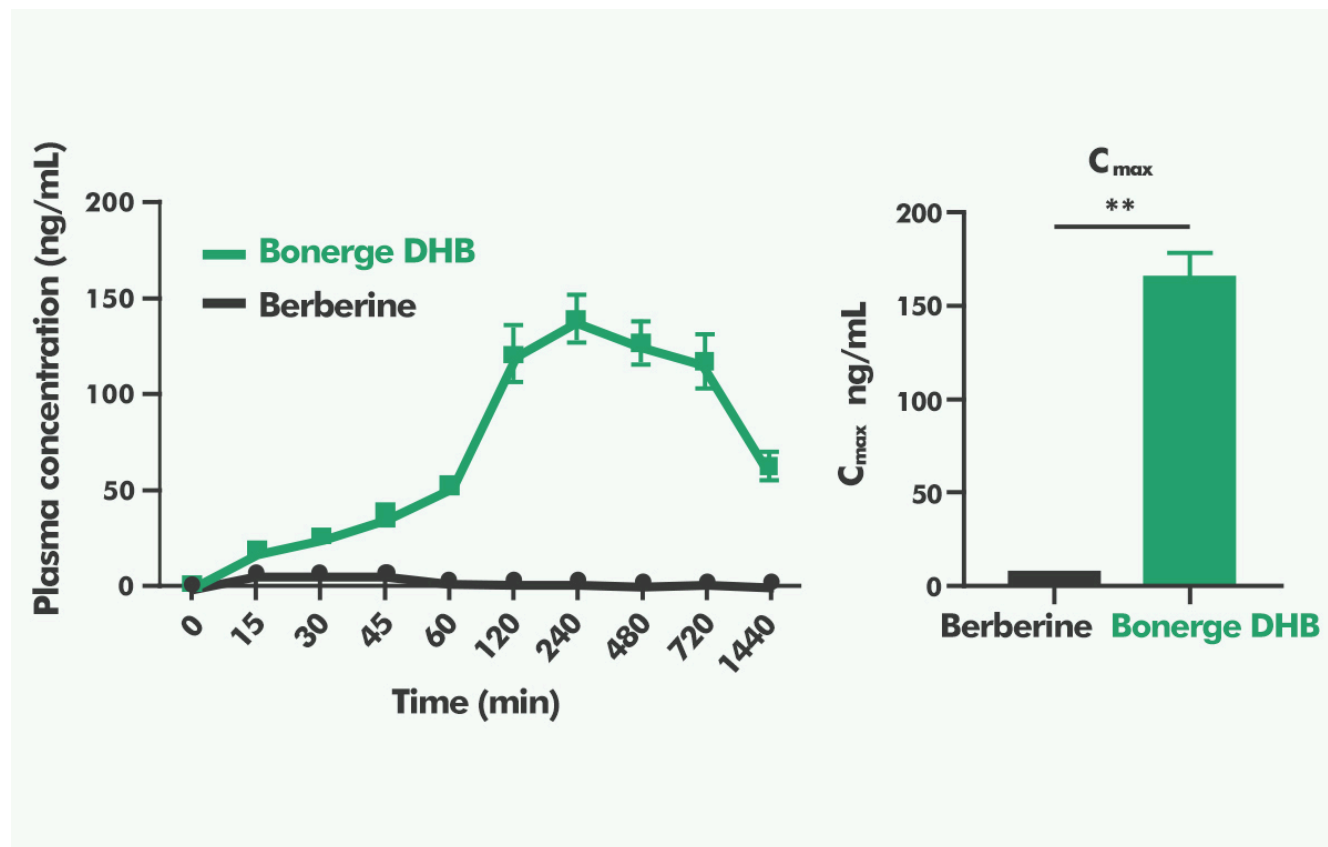
Better absorption efficiency

To investigate the bioavailability advantage of GlucoSober Dihydroberberine over conventional Berberine, pharmacokinetic studies were conducted in mice.

Following oral administration of Dihydroberberine, plasma analysis revealed undetectable levels of Dihydroberberine, while Berberine concentration showed rapid elevation.

Pharmacokinetic evaluation based on Berberine's plasma concentration-time profile demonstrated that GlucoSober™ exhibits 54-fold higher oral bioavailability than Berberine.

Maximum Plasma Concentration (C_{max}) : GlucoSober Dihydroberberine achieved a maximum plasma concentration (C_{max}) 19.12 times greater than that observed in the Berberine group.



Dihydroberberine Benefits

Dihydroberberine has been scientifically shown to be more effective than Berberine in improving insulin sensitivity, reducing adiposity, and supporting cardiovascular health^{18,19}. The stable, high-quality GlucoSober™ Dihydroberberine is a promising product that delivers the fuller range of health benefits associated with Dihydroberberine.

1. Enhanced insulin sensitivity

In the high-fat diet (HFD) rat model, supplementation with 100 mg/kg/day Dihydroberberine had a better effect on metabolic health than 560 mg/kg/day Berberine. The insulin sensitivity increased by 44% in the Dihydroberberine group, while it increased by only 10% in the Berberine group.¹⁸

2. Reduced visceral fat

In mice fed an HFD (high fat diet), treatment with Dihydroberberine (100 mg/kg/day) markedly reduced adiposity (epididymal fat, muscle fat, liver fat), compared with HFD controls. At the same dose, Berberine had no effect on adiposity. Dihydroberberine is of great help in reducing visceral fat.¹⁸

3. Better atherosclerosis effect

Research shows that Dihydroberberine is better at inhibiting inflammation and reducing atherosclerotic plaque size and vulnerability. This indicates that Dihydroberberine reduces plaque area in mice arteries by 44.4%, while Berberine reduces it by 15.5%.¹⁹

4. Better anti-colitis effect

Dihydroberberine treatment effectively alleviates ulcerative colitis by relieving clinical manifestation better than Berberine via a similar beneficial effect to azathioprine. 25 mg/kg Dihydroberberine was as effective as a 50 mg/kg dose of Berberine.²⁰

How to Choose the Best Dihydroberberine Supplement

Bonerge Lifescience has initiated the patent application process for GlucoSober™ – a high-quality Dihydroberberine ingredient tailored to fulfill the escalating market demand for Berberine.

Relatively speaking, Dihydroberberine is a newcomer in the market, and the quality varies significantly among different suppliers. Owing to its high bioactivity and potent antioxidant properties, Dihydroberberine is susceptible to oxidative and light degradation.

Furthermore, similar to many powder ingredients, regular Dihydroberberine tends to agglomerate when exposed to moisture and generates static electricity during encapsulation. This leads to excessive production losses and poses challenges in cleaning equipment.

To overcome the issues of Dihydroberberine's light sensitivity and clumping, Bonerge has developed GlucoSober, accomplished through a patent-pending manufacturing process.

GlucoSober is more stable, possesses better fluidity, has fewer impurities, and both its purity and content exceed 98%. Additionally, there is a distinctive high-density granulation specification of GlucoSober (bulk density greater than 0.6 g/ml), which can enhance the processing efficiency for the production of tablets and capsules.

Dihydroberberine from Different Suppliers



Dihydroberberine from Bonerge

- Remain stable when exposed to the air after one week
- Bulk density greater than 0.6g/ml, great flowability suitable for encapsulation and compact into pills



Dihydroberberine from Other Supplier

- Easily form clumps after opening
- Bulk density smaller than 0.3g/ml, easily to carry static electricity when processing.

Figure 3: GlucoSober vs. Dihydroberberine from other supplier

Apart from developing high-quality product processes, Bonerge intends to conduct human clinical trials in the coming months to further assess the health value of Berberine and Dihydroberberine in blood glucose metabolism and weight management.

Bonerge will persist in investing in product research and evidence-based active ingredients, collaborating with global partners to select GlucoSober. Bonerge are motivated by the delight of witnessing consumers deriving health benefits from its ingredients, which inspires innovation.

Frequently Asked Questions

1. Is dihydroberberine better than berberine?

For most people, dihydroberberine offers a meaningful advantage in absorption efficiency. Research shows it reaches the bloodstream significantly faster and at higher concentrations than an equivalent dose of berberine, which means a lower dose can deliver comparable or greater metabolic effects. However, berberine has a far longer clinical track record in humans, while most dihydroberberine data currently comes from animal studies.

2. What is the effective dose of dihydroberberine compared to berberine?

Standard berberine supplementation is typically taken at 500–1500 mg per day, often split across multiple doses. Due to its higher bioavailability, dihydroberberine may achieve similar effects at 100–200 mg per day. This lower effective dose also reduces the risk of gastrointestinal discomfort associated with high-dose berberine use.

3. Does dihydroberberine cause side effects?

Dihydroberberine is generally considered well-tolerated. Unlike berberine, which can cause bloating, nausea, or diarrhea—particularly at higher doses—dihydroberberine has not shown significant adverse effects in published toxicology studies to date. That said, long-term human safety data remains limited, and individuals on medications affecting blood sugar or blood pressure should consult a healthcare provider before use.

4. How does dihydroberberine work in the body?

When dihydroberberine is ingested, it is absorbed through the intestinal wall and then converted back into berberine once it enters the bloodstream. This two-step process allows it to bypass the absorption bottleneck that limits conventional berberine, resulting in higher plasma berberine concentrations after the same oral intake.

5. Can dihydroberberine support weight management?

Preliminary research suggests dihydroberberine may help reduce visceral fat and improve insulin sensitivity, both of which are relevant to metabolic weight management. In animal studies, dihydroberberine outperformed an equivalent dose of berberine in reducing liver fat, muscle fat, and epididymal fat. Human clinical data is still limited, and dihydroberberine should be viewed as a complementary nutritional ingredient rather than a standalone weight loss solution.

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About Bonerge

Harnessing science to advance healthy aging and extend human vitality





Bonerge Loves Nature, Science & Life

Bonerge Lifescience is an innovative manufacturer that provides comprehensive turn-key solutions within the fields of the Nutraceutical and Cosmeceutical ingredients industries.

With a clear objective, Bonerge endeavors to supply the global market with top-tier ingredients that possess remarkable and robust healthy values. Our core focus lies in the development and manufacturing of ingredients for Ageless Energy, Healthspan and Longevity. We believe that by combining the power of nature with the precision of modern science, we can create nutritional ingredients that truly make a difference in people's lives.

Our operations comply with international standards, including FSSC22000, ISO22000, ISO9001, ISO14001, Kosher, Halal, etc. At Bonerge, we're committed to exceeding expectations, ensuring our ingredients deliver the highest quality, safety, and efficacy.

Corporate Values

Naturally Occurring

We painstakingly search for and Develop only the nutrients existing naturally in the food and metabolic chains.



Backed By Science

We strive to Establish evidence-based nutritional ingredients through rigorous scientific research and experimentation.



Time-Tested

The value that withstands the test of time is the real value, and this holds true for our products and the principles upon which our company is built.



Innovation

We turn scientific insight into groundbreaking ingredients through a disciplined, end-to-end development process.

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Advanced Manufacturing

Our cutting-edge facilities and pharma-inspired techniques ensure premium-quality, bioeffective ingredients at scale.

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Uncompromising Quality

From raw materials to finished product, we uphold the highest standards of safety, efficacy, and transparency.

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Partnership & Service

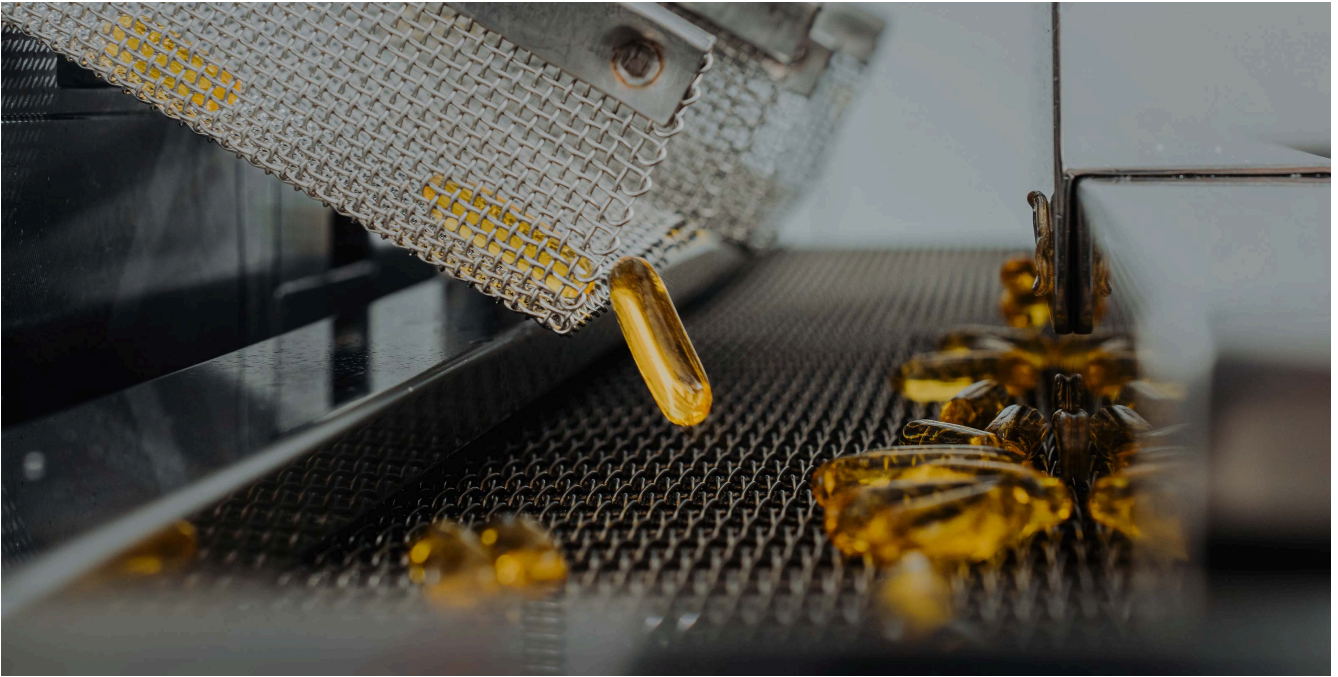
We provide responsive, customized support-from concept to market-helping you launch with confidence.

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Providing end-to-end development expertise to accelerate product innovation from concept to market.



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Have further questions? Our friendly experts will get back to you within 24 hours to assist you further

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I agree to allow Bonerge to store and process my personal data.

Unique Crystal Dihydroberberine(DHB)



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Crystal

What is Bonerge's Dihydroberberine?

Bonerge's Dihydroberberine, produced via a patented process with optimized crystal structure, achieves higher purity and density, along with improved flowability and stability.





54× Higher Bioavailability

Based on berberine plasma concentration-time curves, the oral bioavailability of Bonerge DHB was 54 times higher than that of berberine.



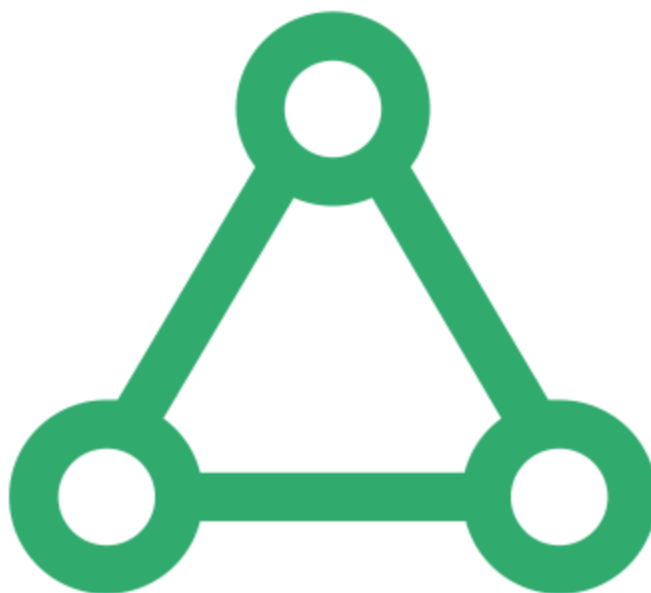
Patented Process

Bonerge DHB produced via a patented process with optimized crystal structure.



Superior Purity

Purity & Assay > 98% (tested by HPLC with German reference standards).



Greater Stability

Enhanced stability—resists moisture absorption and degradation even when exposed to air.



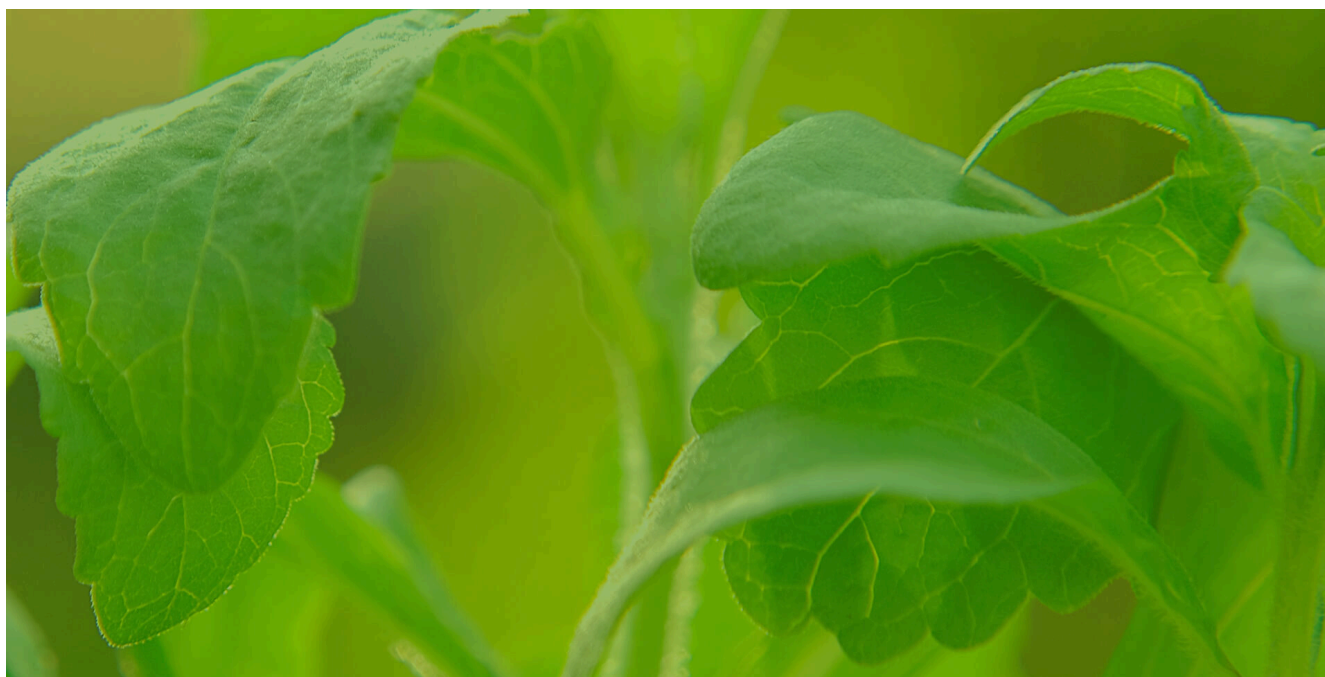
About Dihydroberberine

Dihydroberberine, a natural alkaloid found in plants like Coptis and Phellodendron, is the reduced form of Berberine. It offers higher bioavailability and is more easily absorbed through

the intestine, rapidly converting into Berberine upon entering the body.

Recent studies highlight Dihydroberberine's strong liver-protective effects, ranking top among 2543 compounds tested, with potential to reduce fatty liver, visceral fat, and intestinal inflammation.

About Dihydroberberine



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- Promotes emotional health
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Stand by Youth with
Ultra Pure Urolithin A

- Regulates Circadian Rhythm
- Optimizes Cellular Metabolism
- Supports NAD⁺/NADH Recycling
- Fertility Health Support



Dihydroberberine

Unique Crystal

Dihydroberberine

- Supports Liver Health
- Reduces Visceral Fat
- Promotes Cardiovascular Health
- Improves Intestinal Health



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- Supports cognition & memory.



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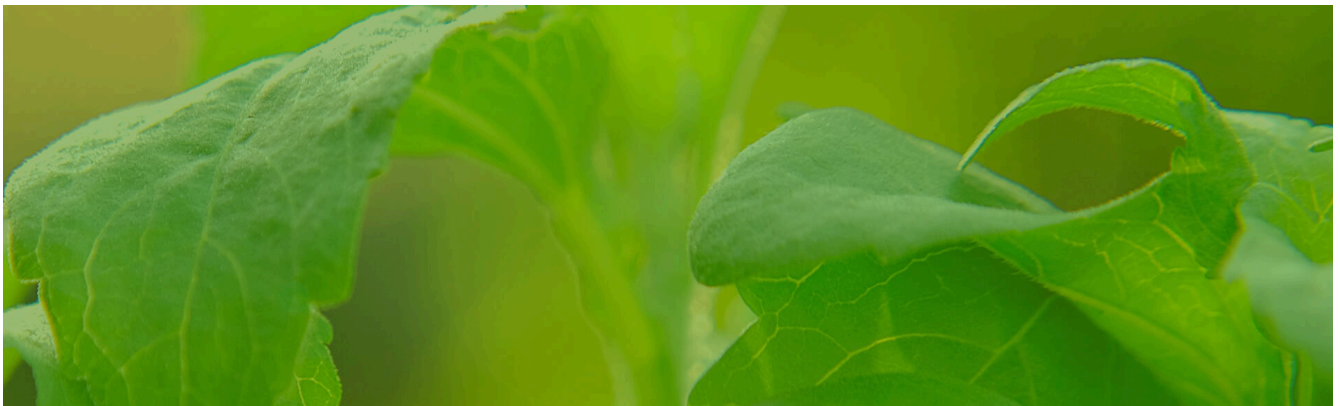
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- Multi-Organ Targeted Anti-Aging
- Promotes Neurological Health
- Supports Cardiovascular Health



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Contact

Call us at: [+1\(425\)866-9043](tel:+1(425)866-9043)

E-mail: sales@bonerge.com

Address: Zhongjian Smart Valley, Yuelu District, Changsha Hunan Province, 410000, China





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