



**PLATFORM  
TECHNOLOGIES &  
PLANT INGREDIENTS**



# FIRST LOOK ABOUT THE COMPANY

**Zeus Hygia Lifesciences** is a nutraceutical ingredient research & innovations company based out of Hyderabad, India. The word Zeus Hygia was coined from the Greek mythology

## Zeus

Stands for “**Supreme God**” in Greek Mythology

## Hygia

Derived from “**Hygieia**” ("Hygiene", the Greek goddess/personification of health, cleanliness)

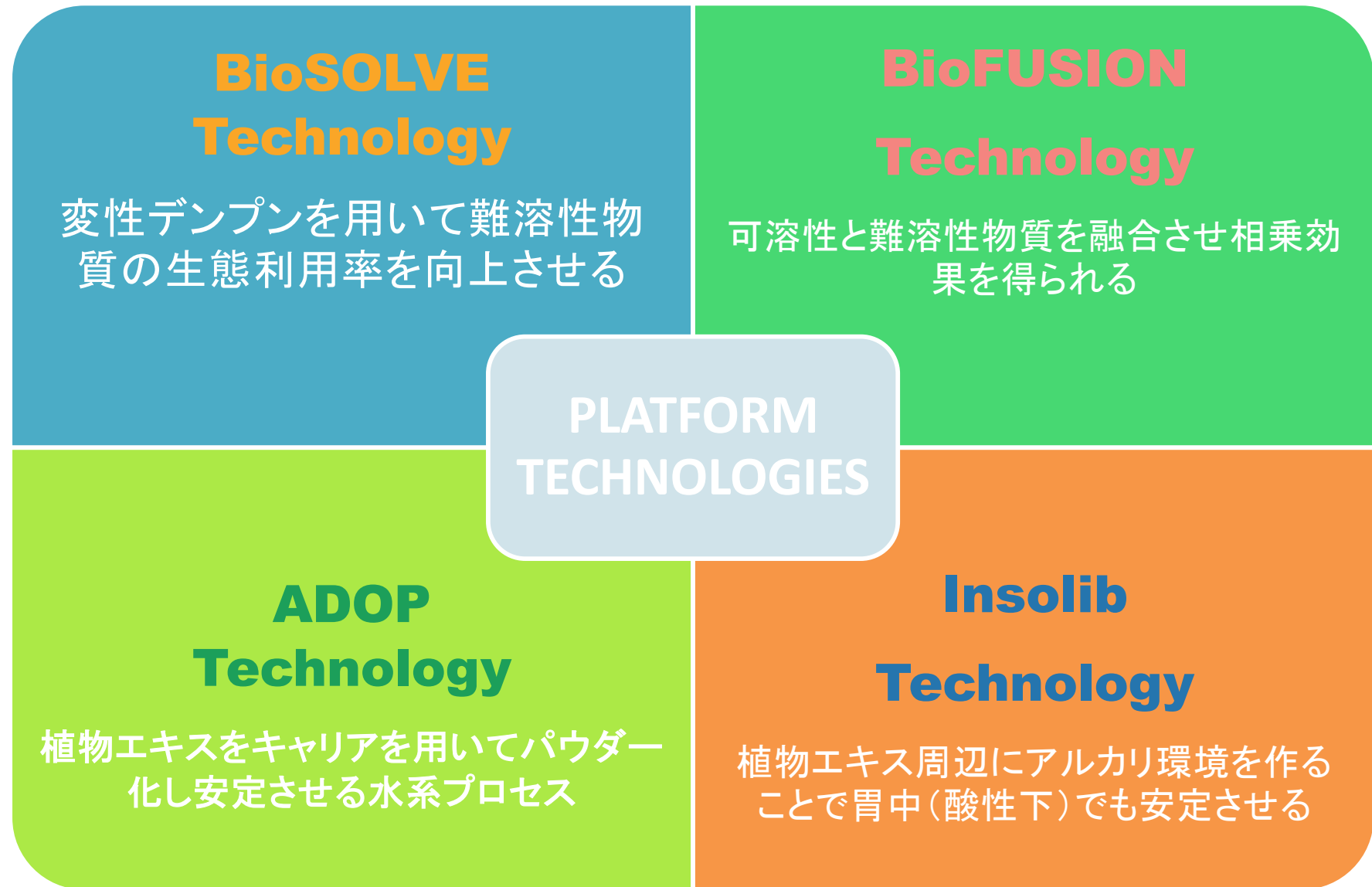
A large, bold, white capital letter 'Z' centered on a solid orange rectangular background.

Zeal for  
Innovations

A large, bold, white capital letter 'U' centered on a solid green rectangular background.

Uniqueness

# PLATFORM TECHNOLOGIES



# BioSOLVE Technology

## Product: **BioSOLVE** **Cu**rcumin<sup>TM</sup>

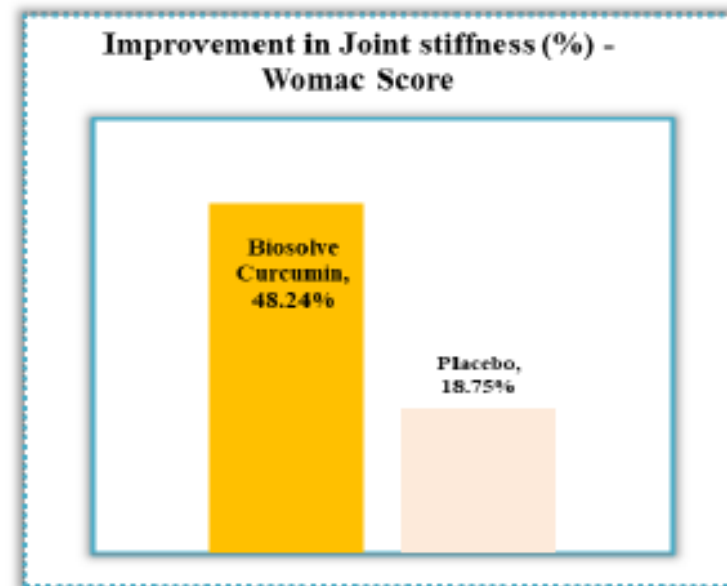
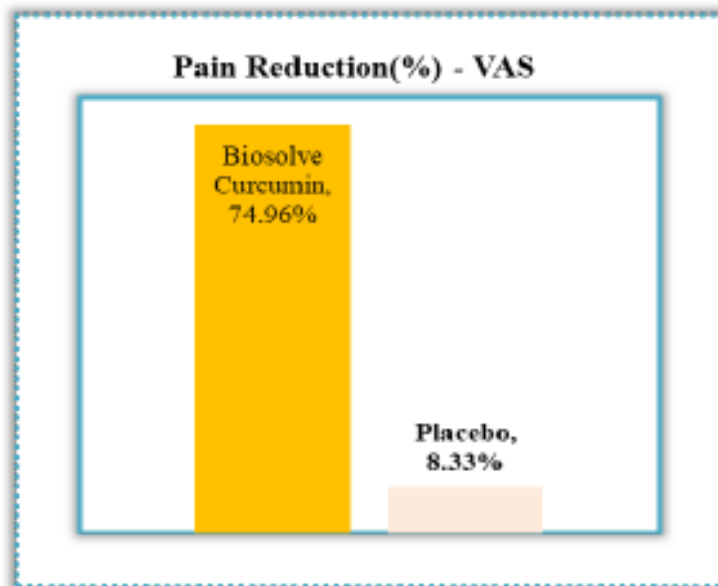
クルクミンをBioSOLVE Technologyを用いてカプセル化、  
生態利用率・水分散性を向上させた商品

	クルクミン	<b>BioSOLVE</b> <b>Cu</b> rcumin <sup>TM</sup>	ブランドA	ブランドB	ブランドC	ブランドD
クルクミノ イド含有量 (%)	クルクミン 95%配合	クルクミン20%配合	クルクミン 60%配合	クルクミン 30%配合	クルクミン18 ~22%配合	クルクミン 95%配合
主な 添加物	なし	デンプン	メタクリレー トポリマー	グリセリン	レシチン	バイオペリン
推奨用量/ 臨床用量 (クルクミンベース)	NA	100mg	150mg	180mg	200mg	1500- 2000mg
有効性	効きが悪い	<b>75%</b> の関節痛を 軽減 (VASスコア)	55%の関節痛 を軽減 (VASスコア)	51%の関節痛 を軽減 (VASスコア)	56%のOA症状 が減少 (WOMACスコア)	45%の関節痛 を軽減 (VASスコア)
生体利用率	ほとんどなし	<b>48倍</b>	10倍	42倍	29倍	20倍

# BioSOLVE Technology

Product: **BioSOLVE Curcumin**<sup>TM</sup>

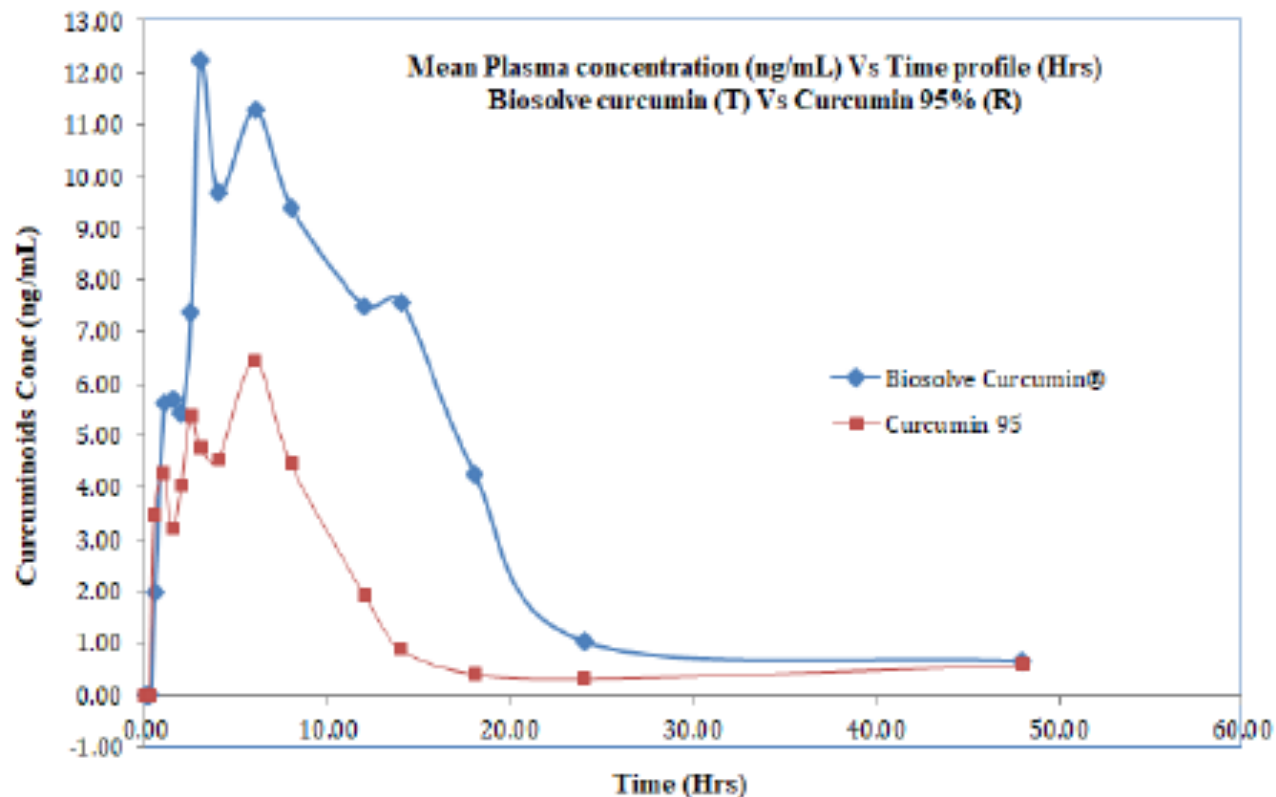
Benefit: 関節痛を緩和(75%が実感)



# BioSOLVE Technology

Product: **BioSOLVE Curcumin**<sup>TM</sup>

USP: 生態利用率が48倍



# BioSOLVE Technology

Product: **BioSOLVE Curcumin<sup>TM</sup>**

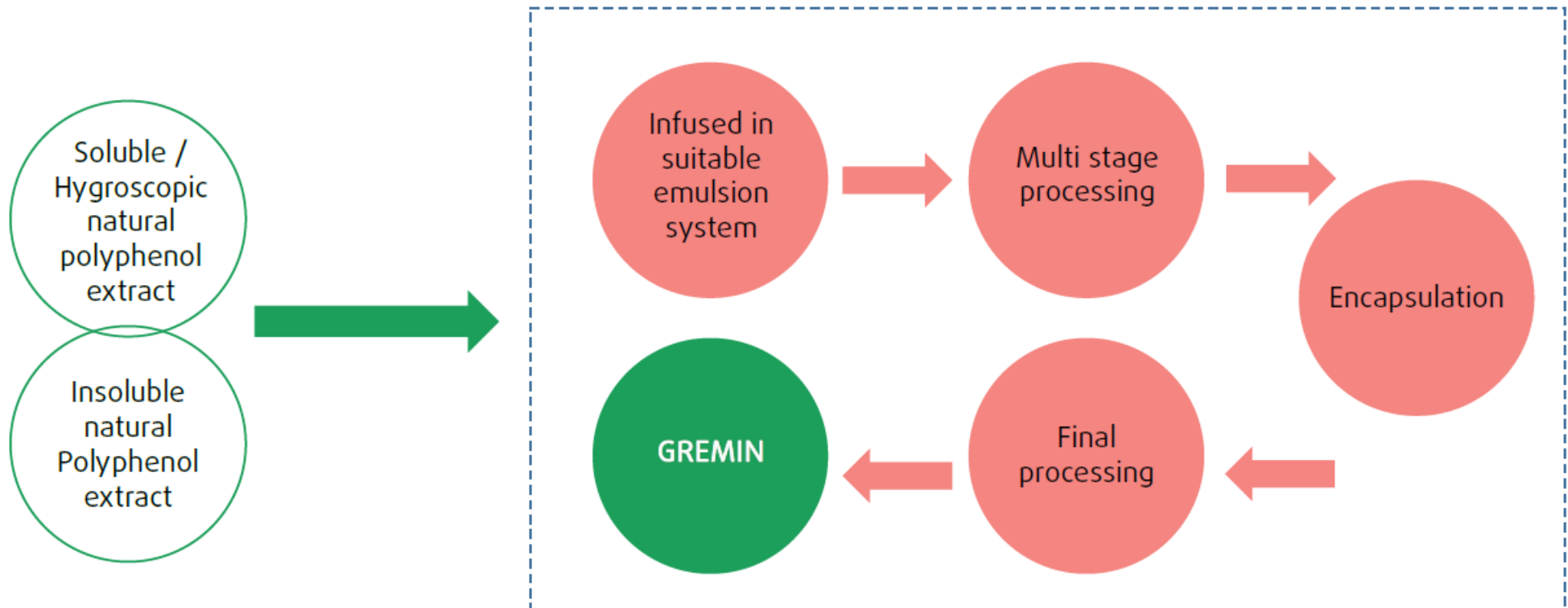
Clinical study: プラセボでVASスコアを3か月観察

<b>Title of Study</b>	A randomized, double-blind, placebo-controlled parallel group study to evaluate the safety and comparative efficacy of investigational product BioSOLVE Curcumin in active Rheumatoid Arthritis patients.	
<b>Study Center (s)</b>	Single-centered	
<b>Objectives</b>	<ol style="list-style-type: none"><li>1. To assess the comparative efficacy of investigational product BioSOLVE Curcumin<sup>TM</sup> in active rheumatoid arthritis patients in terms of ACR-20, VAS and WOMAC scale.</li><li>2. To assess the safety of investigational product BioSOLVE Curcumin<sup>TM</sup> in active rheumatoid arthritis patients.</li></ol>	
<b>Number of Subjects</b>	Recruited = 24 Group A= Group B= 12	Completed = 24 Group A= Group B= 12
<b>Investigational product, Dose, Mode of administration</b>	BioSOLVE Curcumin <sup>TM</sup> - 2 capsules to be taken orally per day (in morning before breakfast and at night after dinner)	
<b>Placebo Control</b>	Microcrystalline Cellulose (MCC)	
<b>Duration of Treatment</b>	12 Weeks (3 months)	
<b>Primary and Secondary parameters</b>	Change from baseline to end of the study in: <ol style="list-style-type: none"><li>1. ACR-20</li><li>2. WOMAC Index</li><li>3. Pain VAS</li></ol>	

# BioFUSION Technology

Product: **GreMin**<sup>™</sup>

水溶性であるクロロゲン酸（グリーンコーヒ豆抽出物）と難溶性であるクルクミンをBioFUSION Technologyを用いてカプセル化





# BioFUSION Technology

Product: **GreMin**<sup>™</sup>

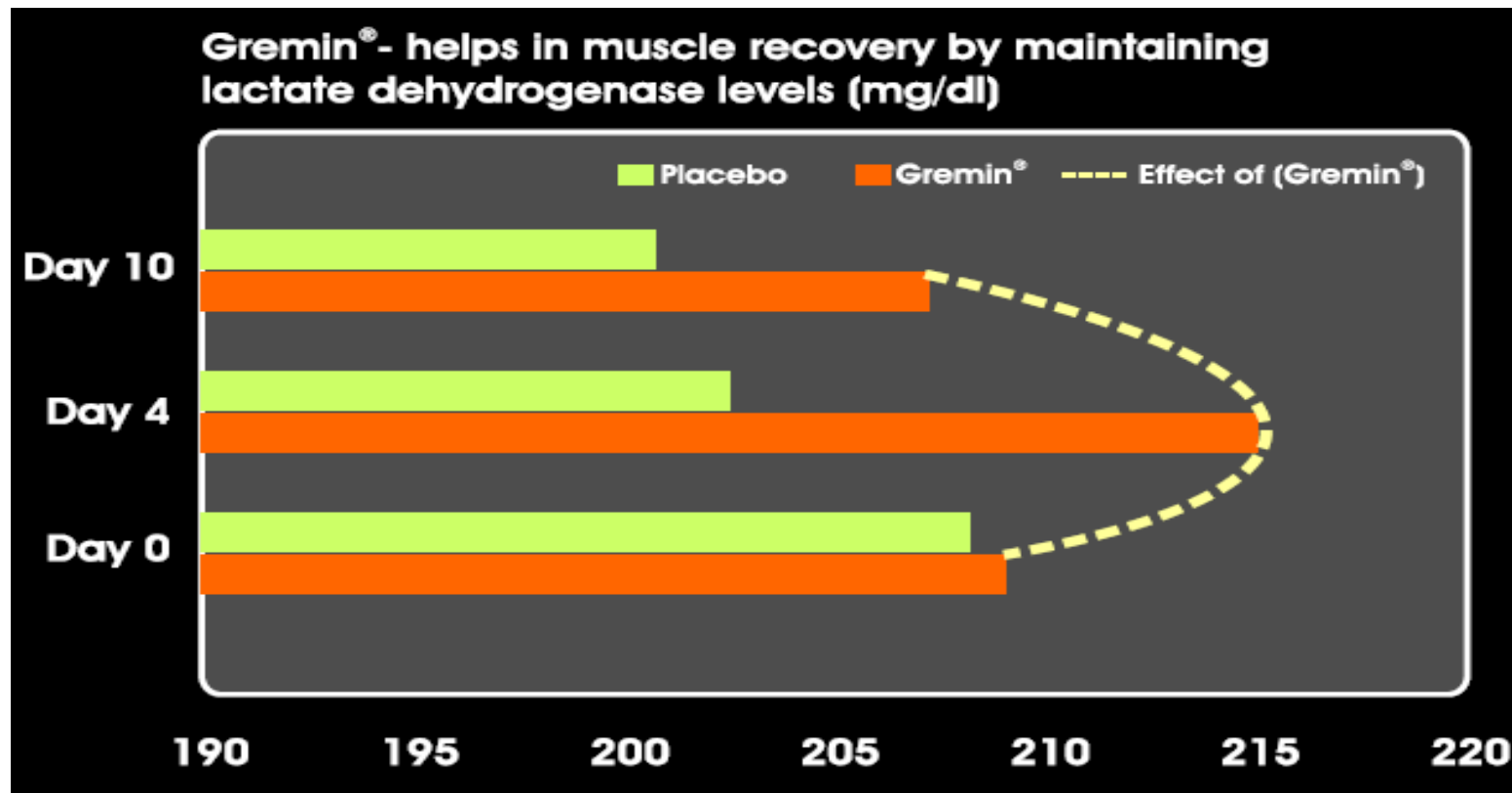
Benefit: 筋肉損傷回復、より効率的な筋トレ



## BioFUSION Technology

Product **GreMin™**

USP: クロロゲン酸(グリーンコーヒ前抽出物)の  
筋肉損傷回復効果を発見(特許申請中)



## Product GreMin™

### Clinical study: プラセボでLDHを観察

#### CLINICAL STUDY SUMMARY

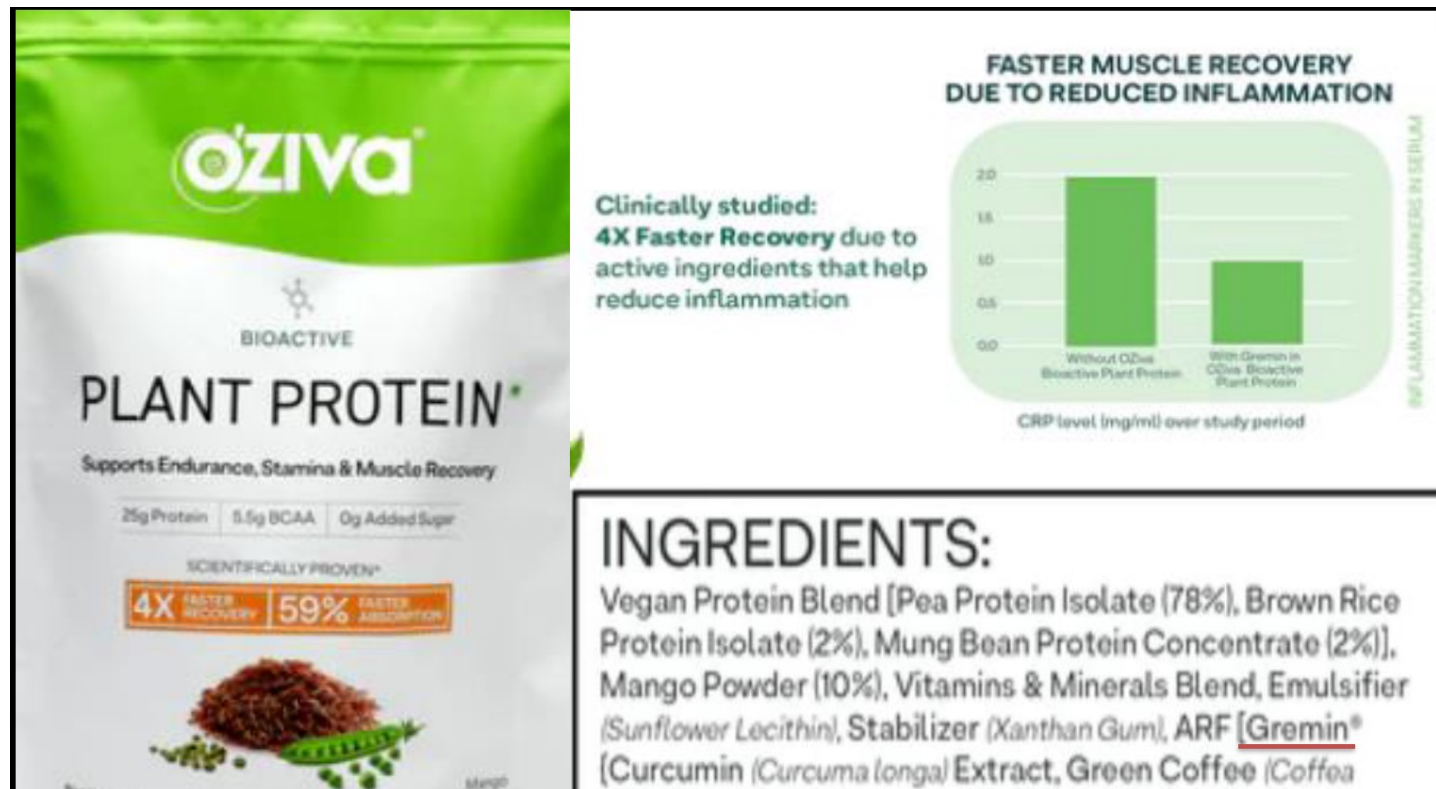
Sr. No.	Studied Parameter	Intervention Group (Gremin®)	Placebo Group
Recovery from Muscle Damage & Muscle pain/spasms improvement- Biomarkers and PAIN Scores (Post Eccentric Exercise Phase Day 3 – day 10)			
1	% Drop Creatine Kinase Levels	30.6%	1.53%
2	% Drop Lactate Dehydrogenase Levels	4%	0.7%
3	% Drop in Blood Urea Nitrogen Levels	2.3%	Negative or Nil
4	% Improvement VAS Pain score	60%	31.6%
Regulating Inflammation (Change from day 0 to day 10)			
5	C-Reactive protein Levels	Minimal inflammation observed during eccentric exercise.	CRP Levels peaked by around 400% shows higher inflammation & later decreased.
6	TNF alpha (% Drop)	12.5%	3%
Increased Endurance (Change from day 0 to day 10)			
7	Number of squats –% Changes	Increased by 28%	Increased by 13%
8	Number of press ups – % Changes	Increased by 15%	No change

# BioFUSION Technology

Product **GreMin™**

## News : Greminを使用した商品OZIVAがUnileverブランドに

[HUL makes strategic investments in 'OZiva' and 'Wellbeing Nutrition' | Unilever](#)



The image displays the packaging for OZIVA Bioactive Plant Protein, a product by Unilever. The packaging is white with a green top section featuring the OZIVA logo. It highlights 'PLANT PROTEIN' and 'BIOACTIVE' properties, claiming to support endurance, stamina, and muscle recovery. Key nutritional facts include 25g Protein, 5.5g BCAA, and 0g Added Sugar. It also states 'SCIENTIFICALLY PROVEN' with '4X FASTER RECOVERY' and '59% FASTER ABSORPTION'. The ingredients list includes a Vegan Protein Blend (Pea Protein Isolate 78%, Brown Rice Protein Isolate 2%, Mung Bean Protein Concentrate 2%), Mango Powder (10%), Vitamins & Minerals Blend, Emulsifier (Sunflower Lecithin), Stabilizer (Xanthan Gum), ARF [Gremin®] (Curcumin (Curcuma longa) Extract, Green Coffee (Coffea

**FASTER MUSCLE RECOVERY  
DUE TO REDUCED INFLAMMATION**

Clinically studied:  
**4X Faster Recovery** due to active ingredients that help reduce inflammation

INFLAMMATION MARKERS IN SERUM

CRP level (mg/ml) over study period	
Without OZiva Bioactive Plant Protein	2.0
With Gremin in OZiva Bioactive Plant Protein	1.0

**INGREDIENTS:**  
Vegan Protein Blend [Pea Protein Isolate (78%), Brown Rice Protein Isolate (2%), Mung Bean Protein Concentrate (2%)], Mango Powder (10%), Vitamins & Minerals Blend, Emulsifier (Sunflower Lecithin), Stabilizer (Xanthan Gum), ARF [Gremin®] (Curcumin (Curcuma longa) Extract, Green Coffee (Coffea

# ADOP Technology

**Product:** Grantria™

エラグ酸、プニカルギン、プニカチン酸の3成分をADOP Technologyを持って単一カプセル化





# ADOP Technology

**Product:** Grantria™

**Benefit:** 血中のチロシナーゼ値を低下させ、メラニン生成を抑え、シミ・くすみを改善

Beauty  
from within

Skin  
glow/Anti  
wrinkle

Healthy  
aging

Healthy  
heart  
/Blood  
flow/LDL  
regulation

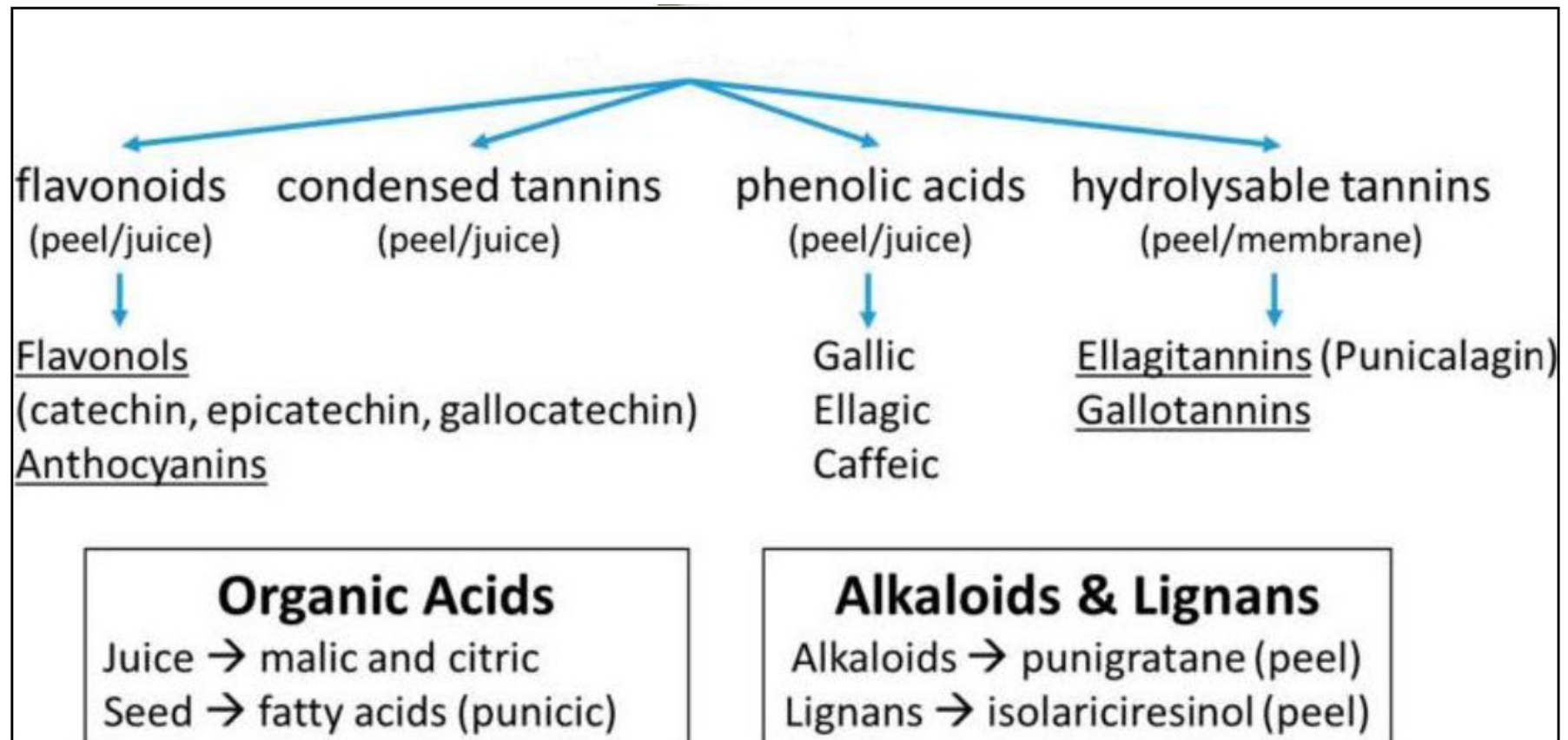
## Special focus GRANTRIA™:

- Healthy blood flow/Energy/anti exhaustion
- skin elasticity, skin texture, radiance and wrinkles.
- Effect on dull skin – Grantria™ may help in hydrating the skin and preventing moisture loss.
- May help increase Collagen/Hyaluronic acid synthesis for skin care
- Grantria™ may help in fighting signs of ageing.
- Wider Cosmeceutical applications

# ADOP Technology

Product: **Grantria™**

USP: 世界初、エラグ酸、プニカルギン、プニカチン酸の  
3成分を同一カプセル化(特許申請中)



# ADOP Technology

**Product:** Grantria™

**Clinical study :23年6月末完了予定**

## CLINICAL STUDIES - SKIN CARE / BEAUTY FROM WITHIN

The ongoing Placebo controlled clinical study to determine the efficacy of Grantria® in skin health/Beauty from within in healthy female adults is expected to complete sooner.

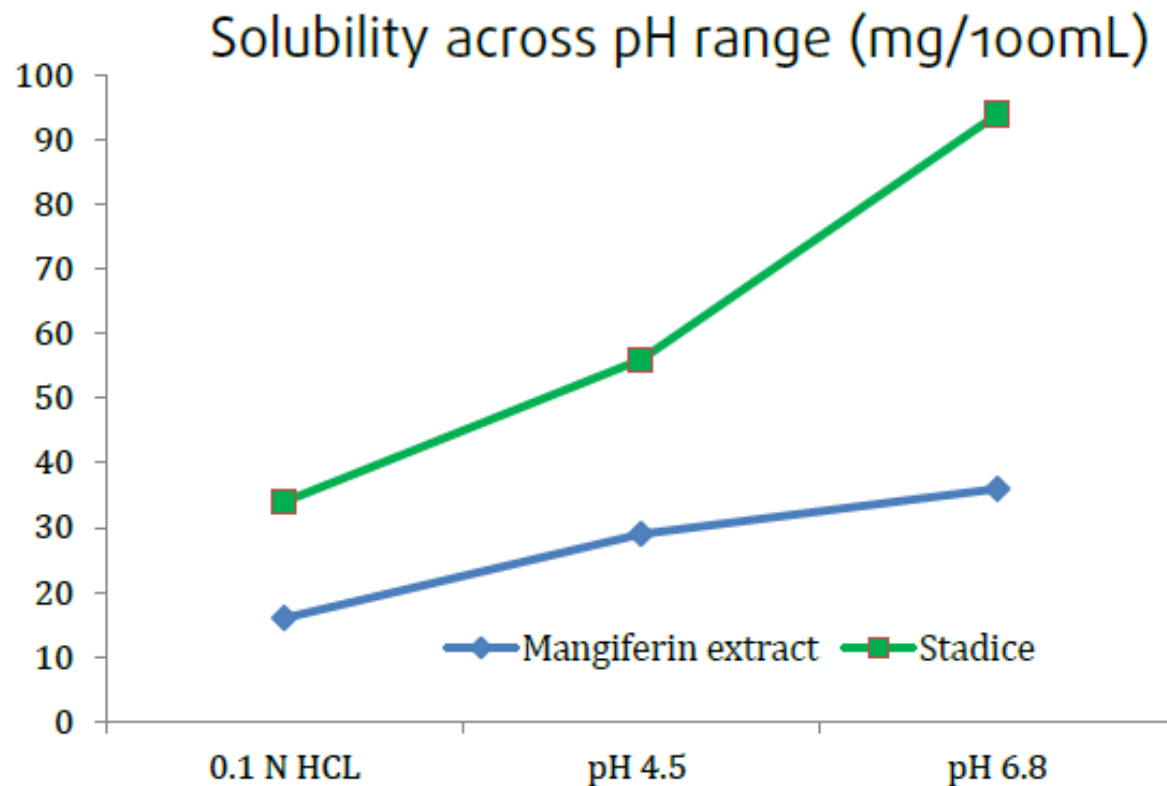




# Insolib Technology

## Product: ▶ **STADICE<sup>®</sup>**

マンゴー抽出物マンギフェリンをInsolib Technologyを用いて安定化



# Insolib Technology

**Product:**  **STADICE<sup>®</sup>**

**Benefit:** マンギフェリンが持つ神経保護作用で  
脳の健康を向上

## MECHANISMS

- 1) Antioxidant system, by free radical scavenging, reduction in reactive oxygen species (ROS) and oxidative stress
- 2) Reduction of lipid peroxidation,
- 3) Preservation of the mitochondrial function
- 4) catechol-o-methyltransferase (COMT) inhibitor
- 5) Preservation of brain-derived neurotrophic factor (BDNF)
- 6) Cholinergic enhancement and acetylcholinesterase (AChE) inhibition
- 7) Reduction of noradrenaline as well as dopamine



	クルクミン	BioSOLVE Curcumin™	ブランドA	ブランドB	ブランドC	ブランドD
クルクミノイド含有量 (%)	クルクミン 95%配合	クルクミン20%配合	クルクミン 60%配合	クルクミン 30%配合	クルクミン18~22%配合	クルクミン 95%配合
主な添加物	なし	デンプン	メタクリレートポリマー	グリセリン	レシチン	バイオペリン
推奨用量/ 臨床用量 (クルクミンベース)	NA	100mg	150mg	180mg	200mg	1500-2000mg
有効性	効きが悪い	75%の関節痛を 軽減 (VASスコア)	55%の関節痛を軽減 (VASスコア)	51%の関節痛を軽減 (VASスコア)	56%のOA症状が減少 (WOMACスコア)	45%の関節痛を軽減 (VASスコア)
生体利用率	ほとんどなし	48倍	10倍	42倍	29倍	20倍

# BioSOLVE Technology

	クルクミン	BioSOLVE Curcumin™	ブランドA	ブランドB	ブランドC	ブランドD
クルクミノイド含有量 (%)	クルクミン 95%配合	クルクミン20%配合	クルクミン 60%配合	クルクミン 30%配合	クルクミン18~22%配合	クルクミン 95%配合
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生体利用率	ほとんどなし	48倍	10倍	42倍	29倍	20倍

# PROPRIETARY PLATFORM TECHNOLOGIES

## BioSOLVE Technology

A proprietary technology to enhance the physico chemical properties of Bio actives/ extracts in a food ingredient carrier. This is mono ingredient driven encapsulation technology.

**\*Commercial Product-  
BioSOLVE Curcumin®**

This technology carries following advantages

1. Encapsulated into a single food ingredient carrier (Modified Starch) Possessing Hydrophilic & Lipophilic characteristics
2. Hydrophilic tail helps the bioactive (curcumin) to dissolve and lipophilic tail helps to get absorbed in the Intestine.
3. The final product Biosolve curcumin comes with better solubility ,Bioavailability and thus improved clinical efficacy.

## BioFUSION Technology

A proprietary technology to infuse multiple Bio actives/ extracts in a food ingredient carrier.

This is a platform base where a soluble & Insoluble extract can be encapsulated to yield final product with synergistic properties and superior stability.

**\*Commercial Product- Gremin®**

1. This technology is developed to infuse together two different plant extracts possessing different physico chemical properties.
2. Here Green coffee bean extract which is water soluble and highly hygroscopic was fused together with Curcumin which is completely insoluble in water.
3. These two plant extracts were encapsulated into modified starch as carrier in the presence of Povidone 30 as well as Polysorbate 80 as supporting additives in lower concentrations.
4. The final Gremin powder is water dispersible, less hygroscopic and stable

# PROPRIETARY PLATFORM TECHNOLOGIES

## ADOP Technology

Advanced processing technology to infuse multiple Bio actives in powder & oil form together into a plant based carrier. This technology yield a free flowing powder without any oil leaching during storage.

**Commercial product-  
Grantria®**

### ADOP (**AD**vanced technology for **O**il encapsulated in **P**owder)

1. Each part of Pomegranate fruit possess different actives
2. Ellagic acid & Punicalgin obtained from pomegranate fruit powder & Seed oil yields Punicic acid
3. ADOP is developed to encapsulate Punicic acid oil with Pomegranate fruit powder using a natural plant carrier (Gum Arabica)
4. In general converting Oil to Powder is a tedious process as it may tend to leach out and oxidise on storage
5. ADOP ensures a stable water dispersible powder with all three actives optimally encapsulated
6. This is a clean label ,completely aqueous process

## Insolib Technology

This technology address the limitations of herbal extracts which tend to be unstable in acidic environment and leading to poor in vivo absorption.

**\*Commercial Product-  
Stadice®**

### InSolib (**In**situ **Sol**ubility Enhancing Technology)

1. Mango extract is highly unstable in acidic pH and may tend to degrade.
2. If the actives get degraded in acidic Stomach, will have limited active available for absorption in the Intestinal area.
3. Insolib is a technology where an alkaline environment is created around the plant extracts to ensure it is protected in the acidic pH
4. This will improve the solubility,absorption & clinical efficacy of Stadice (Mango extract std to mangiferin)
5. This also is a completely aqueous process

Brand Ingredients	Science backing	Studied/Targeted well ness segments	Recommened dose	Other highlights
Gremin® Powder  (Standardised for Chlorogenic acid & Curcuminoids)	1. Human Clinical studies 2. Preclinical studies 3. Toxicology studies 4. 2nd Clinical beginning soon	Muscle recovery Endurance/Stamina Muscle spasms Sports nutrition	500mg	* <b>BIOFUSION TECHNOLOGY</b> *First in the market where chlorogenic acid & Curcumin are infused together with a proprietary process for synergistic benefits *US Patent awaited *Can be targeted across various age groups,active as well as sedentary groups.
Grantria® Powder  (Total Pomegranate extract - Standardised for Ellagic acid & Punicalgin/Punicic acid)	Human Clinical studies progressing on 80 subjects, completing in June,2023	Beauty from within (Skin glow/Pigmentation/Dark spots/Anti-wrinkle/Hydration & skin elasticity)	300mg	* <b>ADOP TECHNOLOGY</b> *First in the market standardized for triple actives of pomegranate *Minimal daily dose *patent pending *Clean label /Aqueous process
Biosolve curcumin® Powder  (Standardised for Curcuminoids)	1. Human Clinical studies 2. Bioavailability studies 3. Preclinical studies 4. Toxicology studies	Joint health/Inflammation /Mobility	250mgx2	<b>Biosolve technology</b> *Patent granted *Only Curcumin proven effective at 100mg curcuminoid daily intake *Only Curcumin exhibited 75% efficacy in Joint pain *48x bioavailable *minimal dose ,high efficacy
Stadice® powder (Std for mangiferin from mango extract)	Recently clinical studies started for cognitive/alert focus segments	Brain Health/Studies targetd to improve focus ,alertness & stress of e gaming population	300mg	<b>Insolib technology</b> First global brand exploring the benefits of mangiferin by addressing its solubility challenges Targetd for brain health (Memory,focus & alertness), can be explored for diverse population Patent awaited



Brand Ingredients	Applications	Market Highlights/ Advantages with comparators	Remarks
<p>Gremin® Powder</p> <p>(Standardised for Chlorogenic acid &amp; Curcuminoids)</p>	Can be formulated as tablets, capsules,ready to drink powder, gummies , Chewing gums,can be combined with protein powders or can be formulated with protein bars.	<p>1.First Ingredient in the market where GCBE &amp; Curcumin are targeted for Muscle recovery &amp; Endurance</p> <p>2.In general BCAA or Carnitine are used in the sports supplement industry for these benefits,both are synthetic or animal origin,however Gremin is a natural plant origin.</p> <p>3.Rapid Muscle recovery of 31% drop in Creatine Kinase levels and endurance improved by 28% in 10 day supplementation</p>	A rapid water dispersible Powder
<p>Grantria® Powder</p> <p>(Total Pomegranate extract - Standardised for Ellagic acid &amp; Punicalgin/Punicic acid)</p>	Can be formulated as tablets, capsules,ready to drink powder, gummies , oral films,softgels etc	<p>1.First pomegranate based brand ingredient across globe, std to all 3 actives</p> <p>2. Significant skin benefits at a lower dose of 300mg</p> <p>3.ADOP technology ensures solubility,stability and clinical efficacy</p>	Water soluble powder
<p>Biosolve curcumin® Powder</p> <p>(Standardised for Curcuminoids)</p>	Can be formulated as tablets, capsules,ready to drink powder, gummies , Chewing gums,oral films,softgels etc	<p>1.Only one curcumin brand, exhibited 76% drop in Joint pain after 90 day supplementation at a lowest daily dose of 500mg (100mg curcuminoids)</p> <p>2.Patented process &amp; technology</p> <p>3. Exhibited 48 X bioavailability than std extract</p>	A rapid water dispersible Powder
<p>Stadice® powder (Std for mangiferin from mango extract)</p>	Can be formulated as tablets, capsules,ready to drink powder, gummies , Chewing gums,oral films,softgels etc	<p>1.First ingredient globally launched from mango extract , ensuring the challenges of Mangiferin is addressed.</p> <p>2.Clinical studies progressing at 300mg/Day dose</p> <p>3.This natural brain booster can be positioned in E Sports &amp; gaming segment (focus /alertness improvement &amp; stress management)</p>	Water soluble powder