ABio materials



ABio materials Co., Ltd.

ADVANCED BIOMATERIALS

www.a-bio.co.kr

2026

BIO-BASED
NEW MATERIALS



Pioneering Biotech Innovation For a Brighter Future

UNLOCKING NEW HORIZONS
WITH BREAKTHROUGH
EXOSOME TECHNOLOGY

Certification



Venture Company



R&D Center







Certificate of Cosmetics, Medical Device and Food Manufacturer



EVE-Vegan(France)



Halal Certificate (IDN)





ISO 9001, 22716 : year 2023 Yongin







ISO 9001, 14001, 22716 : year 2022 Cheonan



EFfCI
(European Federation for Cosmetic Ingredients GMP): year 2024 Cheonan

EFfCI

cGMP

Halal

Greeting

Corporate Philosophy
A Century-old enterprise, ceaselessly creatin new value for the world.

Technical Field
Pharmacologically active substances or bioactive substance derived from living organisms.

Industry Sector
Medical devices, cosmetics, food.

Business Area
Biotech new materials, ODM, Brand.

History

2020
Establishment of
ABio materials Co., Ltd. & corporate
annexed research centrer

2021
Venture company certification
Industrial property right for exosome source
AAPL BIO Cheonan factory
Plant exosome government project R&D joint contract with Amore Pacific
Exosome stabilization technology patent
2021 Korea Excellent Patent Award Receiver

2022
Partnership with Dermafirm Co. Ltd., Neuroventi, Shinsegae International EVE-Vegan (France), ISO 9001, ISO 14001 certification
2022 Korea Excellent Patent Award Receiver

2023
AAPE BIO business acquisition
Japan and Chinese branch establishment
AAPE Yongin factory acquisition

OFFICE | FACTORY

Location



Seoul office



HQ – Yongin
R&D Center & factory



Jecheon factory



Cheonan
R&D Center & factory

Technology

ExoTraction

Innovative patented technology for the isolation and purification of plant/lactobacillus exosomes

EssenTraction

Technology for plant PDRN isolation and purification

Stem Cell Culture Technology

Revolutionary increase in effective growth factors, more than 200% of contents from conventional ones, by using ABIO's proprietary serum-free medium

PLANT EXOSOME

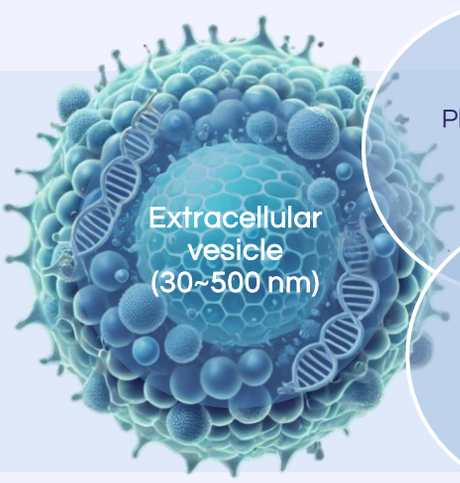
TECHNOLOGY

ExoTraction® = Exosome + Extraction

- Innovative patented exosome-extraction technology
- ABIO's own method for extraction, isolation, and purification of exosomes from plants and probiotics



Smart Farm → ATPs process → Exosome products



Phospholipid bilayer structure

Main properties: phosphatidic acid

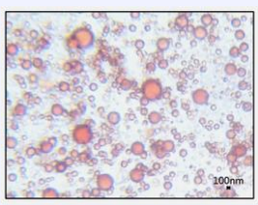
Contains various metabolic materials

ADVANTAGES

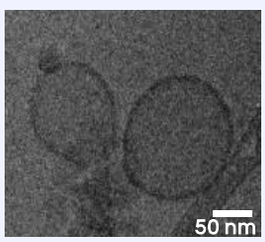
- Low toxicity
- Deficient inflammatory response
- Structurally very stable
- High biocompatibility
- Various efficacy



Centella asiatica



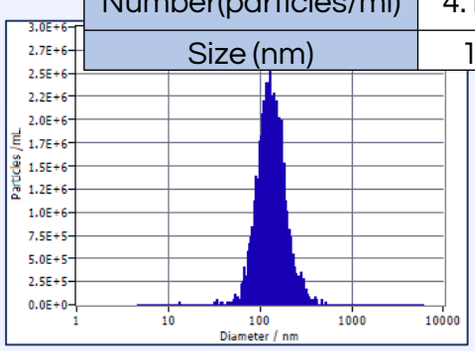
Oil red O staining



Cryo-TEM image

NTA result

Number(particles/ml)	4.1E+10
Size (nm)	174.6



Exosome characterization

Featured Exosome Products

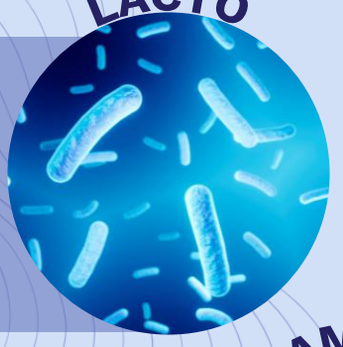
CENTELLA



INCI
Centella Asiatica Leaf Vesicles (PCPC Listed)

- Anti-inflammatory
- Cell regeneration
- Anti-wrinkle

LACTO



INCI
Lactobacillus Extracellular Vesicles (PCPC Listed)

- Anti-hairloss
- Cell regeneration

CAMELLIA



INCI
Camellia Japonica Flower Vesicles (PCPC Listed)

- Moisturizing
- Antioxidant

FIG



INCI
Ficus Carica (Fig) Vesicles (PCPC Listed)

- Anti-hairloss

HEARTLAF



INCI
Houttuynia Cordata Vesicles (PCPC Listed)

- Anti-inflammatory

ABio materials

BIO-EXO FLUID

more than 1 billion particles/mL



(V)BioExo-Fluid (Camellia)
Moisturizing
Antioxidant



(V)BioExo-Fluid (Cica)
Anti-wrinkle
Anti-inflammatory
Cell regeneration



(V)BioExo-Fluid (Heartleaf)
Anti-inflammatory



(V)BioExo-Fluid (Lotus)
Moisturizing
Skin barrier



(V)BioExo-Fluid (Fig)

Anti-hairloss



(V)BioExo-Fluid (Multiflora)

Anti-hairloss



(V)BioExo-Fluid (Peony)

Anti-wrinkle



(V)BioExo-Fluid (Perilla)

Anti-inflammatory
Cell regeneration



(V)BioExo-Fluid (Crispa)
Anti-wrinkle
Anti-inflammatory
Moisturizing



(V)BioExo-Fluid (PGRP)
Anti-wrinkle



(V)BioExo-Fluid (Rose)E
Moisturizing
Cell regeneration
Antioxidant

Plant Exosomes

WATER - PRODUCT LIST



Anti-wrinkle
Anti-inflammatory
Cell regeneration



Anti-wrinkle



Anti-wrinkle
Skin barrier
Cell regeneration



Anti-wrinkle
Skin barrier
Cell regeneration



Anti-inflammatory



Moisturizing
Antioxidant



Anti-hairloss



Anti-hairloss
Anti-inflammatory



Anti-hairloss



Moisturizing
Skin barrier



Anti-inflammatory



Anti-wrinkle



Cell regeneration



Anti-inflammatory
Cell regeneration



Anti-inflammatory
Moisturizing



Skin rejuvenation
Brightening



Anti-hairloss



Anti-microbial
Anti-wrinkle



Anti-inflammatory



Anti-hairloss



Moisturizing
Anti-inflammatory



Anti-hairloss



Cell regeneration



Moisturizing
Anti-inflammatory



Anti-inflammatory



Moisturizing
Cell regeneration
Antioxidant



(under review)



Anti-inflammation
Moisturizing



Anti-wrinkle
Anti-inflammatory
Moisturizing

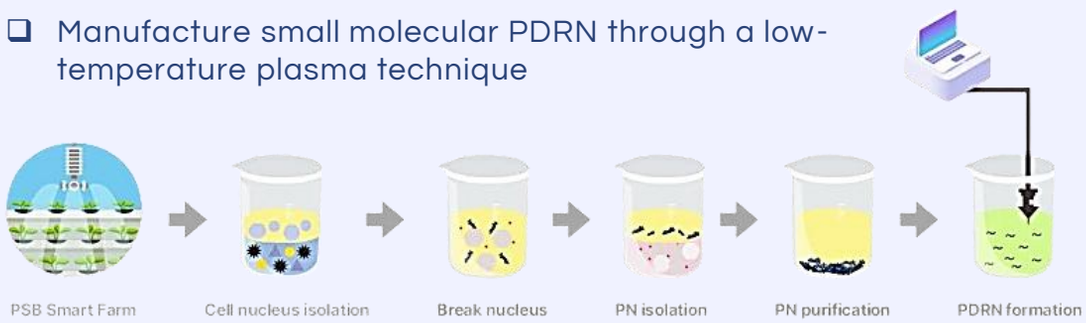
Polydeoxyribonucleotides

PLANT PDRN

TECHNOLOGY

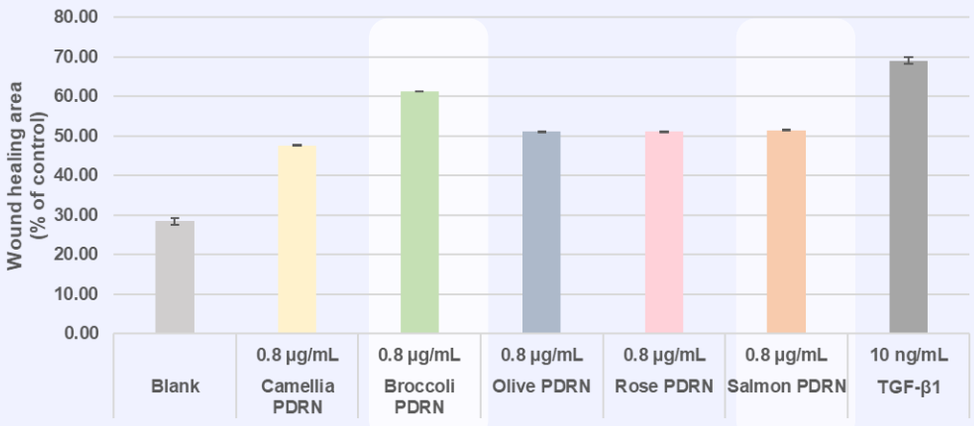
EssenTraction™

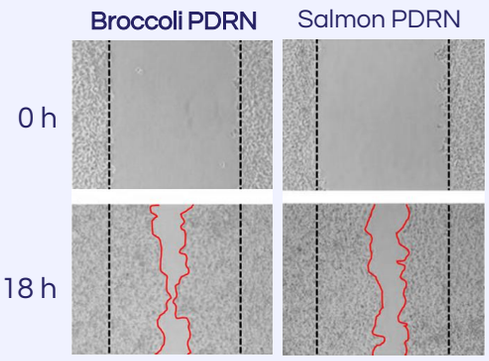
- Efficiently elute DNA in the cell using ABIO's proprietary extraction buffer
- Purify the DNA
- Manufacture small molecular PDRN through a low-temperature plasma technique



Plant vs Salmon

Cell regeneration effect

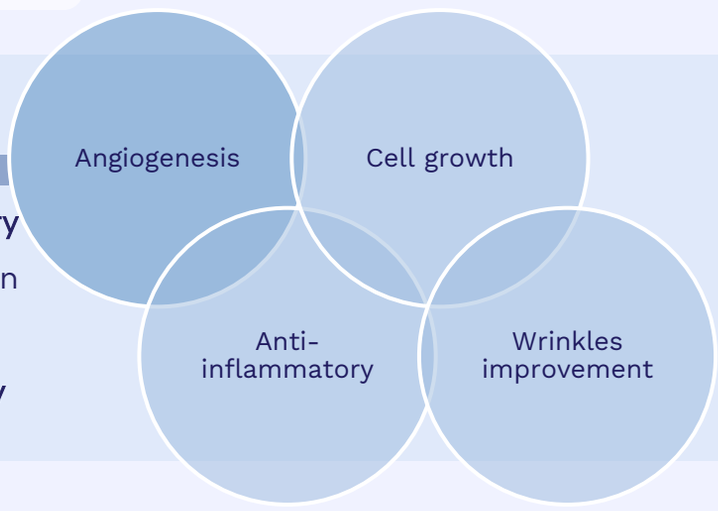




Plant-based PDRN

An alternative to salmon PDRN

- Develop Plant PDRN with **higher stability** and **efficacy** compared to conventional salmon PDRN
- Low-molecular PDRN with **high purity/efficiency**



ABio materials

HYPDRN FLUID

Concentrated PDRN



HyPDRN Fluid (AppleMint)
Cell regeneration
Antioxidant



HyPDRN Fluid (BlackRice)
Cell regeneration
Anti-wrinkle
Antioxidant



HyPDRN Fluid (BrownRice)
Cell regeneration
Moisturizing
Antioxidant



HyPDRN Fluid (Carrot)
Cell regeneration
Antioxidant



HyPDRN Fluid (LC)
Cell regeneration
Skin brightening
Anti-inflammatory



HyPDRN Fluid (Marine)
Cell regeneration
Anti-inflammatory



HyPDRN Fluid (Olive)
Cell regeneration
Antioxidant
Hair care effect



HyPDRN Fluid (Peony)
Cell regeneration
Antioxidant
Skin brightening



HyPDRN Fluid (RiceGerm)
Cell regeneration
Moisturizing
Anti-inflammatory

Plant PDRN

WATER - PRODUCT LIST

PDRN is a low molecular weight DNA complex ranging from 50 to 2,000 base pairs. It influences all stages of the inflammatory response and wound healing, demonstrating **anti-inflammatory effects, promoting cell proliferation, and stimulating cell regeneration factors.**



Cell regeneration
Skin brightening
Anti-inflammatory



Cell regeneration
Moisturizing
Elasticity



Cell regeneration
Antioxidant
Hair care effect



Cell regeneration
Anti-wrinkle
Anti-inflammatory



Cell regeneration
Antioxidant
Anti-inflammatory



Cell regeneration
Anti-wrinkle
Antioxidant



Cell regeneration



Cell regeneration
Anti-wrinkle



Cell regeneration
Antioxidant



Cell regeneration
Moisturizing
Antioxidant



Cell regeneration
Antioxidant



Cell regeneration
Skin brightening
Anti-inflammatory



Cell regeneration
Anti-inflammatory



Cell regeneration
Antioxidant
Skin brightening



Cell regeneration
Moisturizing
Anti-inflammatory



Cell regeneration
Anti-wrinkle
Anti-inflammatory

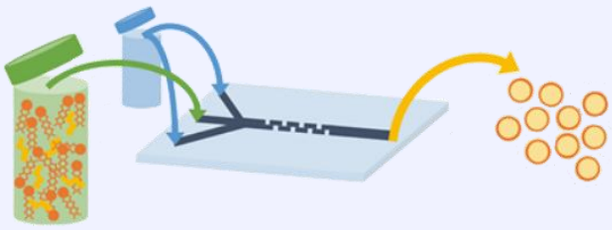
LIPID NANO PARTICLE
TECHNOLOGY

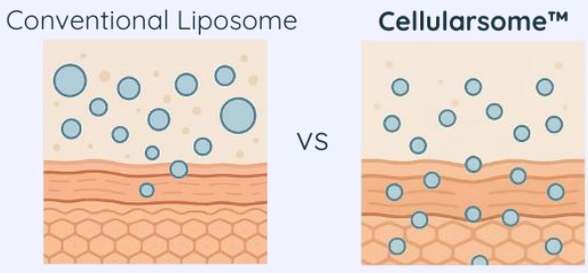
Cellularsome™

Cellularsome™
ABIO's unique liposome product based on Lipid Nanoparticle (LNP) technology. Overcomes key limitations of conventional liposomes through precise particle control.

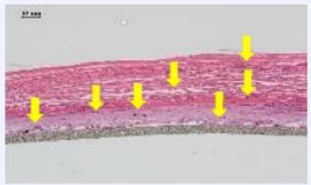
Key Features
- Particle size: ~100 nm (precisely controlled)
- Size distribution: Highly uniform and consistent

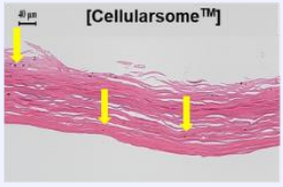
Manufacturing Technology
- Produced via MEMS-based microfluidic channel
- Utilizes laminar flow effect for uniform particle formation
- Factory-on-a-chip: eliminates need for large-scale facilities

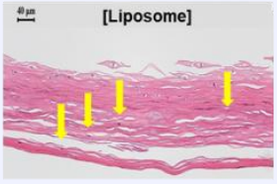


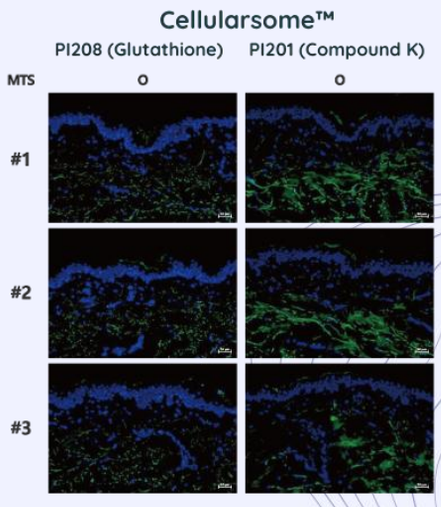


Skin penetration test result





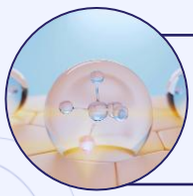




Cellularsome

PRODUCT LIST

Lipid nano particles encapsulation technology using microfluidic chip to encapsulate bioactive substances in phospholipids for stabilization, significantly enhancing skin permeability. The next generation technology enabling formation of liposome that drastically improve penetration rate through the skin.



PI109 (VITA)
Brightening

VITA COMPLEX

PI111 (CERA COMPL)
Moisturizing

CERAMICE COMPLEX



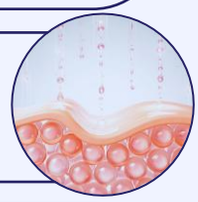


PI117 (CYS)
Brightening

CYSTEAMINE HCL

PI118 (COLA)
Anti-Aging

COLLAGEN COMPLEX



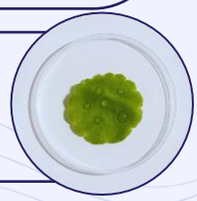


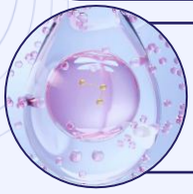
PI201 (CK)
Anti-Aging

COMPOUND K

PI202 (TECA)
Moisturizing
Anti-Aging
Anti-inflammatory

TECA





PI207 (P-XYLENE)
Anti-aging

PRO-XYLENE

Halal Certificate

Customization available

INCI NAME

Fluid – Exosome

No.	Product	Origin	INCI Name
1	(V)BioExo-Fluid(Camellia)	*Camellia japonica*	Camellia Japonica Flower Vesicles
2	(V)BioExo-Fluid(Cica)	*Centella asiatica*	Centella Asiatica Leaf Vesicles
3	(V)BioExo-Fluid(Crispa)	*Sparassi crispa*	Sparassis Crispa Vesicles
4	(V)BioExo-Fluid(Fig)	*Ficus carica*	Ficus Carica (Fig) Vesicles
5	(V)BioExo-Fluid(Heartleaf)	*Houttuynia cordata*	Houttuynia Cordata Vesicles
6	(V)BioExo-Fluid(Lotus)	*Nelumbo nucifera*	Nelumbo Nucifera Leaf Vesicles
7	(V)BioExo-Fluid(Multiflora)	*Polygonum multiflorum*	Polygonum Multiflorum Root Vesicles
8	(V)BioExo-Fluid(Peony)	*Paeonia lactiflora*	Paeonia Lactiflora Root Vesicles
9	(V)BioExo-Fluid(Perilla)	*Pteridium aquilinum*	Pteridium Aquilinum Juice Vesicles
10	(V)BioExo-Fluid(PGRP)	*Panax ginseng*	Panax Ginseng Vesicles
11	(V)BioExo-Fluid(Rose)E	*Rosa damascene*	Rosa Damascena Flower Extract

Water – Exosome

No.	Product	Origin	INCI Name
1	(V)BioExo-Water(Cica8)VE	*Centella asiatica*	Centella Asiatica Leaf Vesicles
2	(V)BioExo-Water(Portula8)VE	*Portulaca oleracea*	Portulaca Oleracea Vesicles
3	(V)BioExo-Water(Heartleaf8)VE	*Houttuynia cordata*	Houttuynia Cordata Vesicles
4	(V)BioExo-Water(TeaTree8)VE	*Melaleuca alternifolia*	Melaleuca Alternifolia (Tea Tree) Vesicles
5	(V)BioExo-Water(Cabbage8)VE	*Brassica oleracea Capitata*	Brassica Oleracea Capitata (Cabbage) Leaf Vesicles
6	(V)BioExo-Water(Rosemary8)VE	*Rosmarinus officinalis*	Rosmarinus Officinalis (Rosemary) Vesicles
7	(V)BioExo-Water(Skullcap8)VE	*Scutellaria baicalensis*	Scutellaria Baicalensis Root Vesicles
8	(V)BioExo-Water(Lotus8)VE	*Nelumbo nucifera*	Nelumbo Nucifera Leaf Vesicles
9	(V)BioExo-Water(Bracken8)VE	*Pteridium aquilinum*	Pteridium Aquilinum Juice Vesicles
10	(V)BioExo-Water(Peony8)VE	*Paeonia lactiflora*	Paeonia Lactiflora Root Vesicles
11	(V)BioExo-Water(Makino8)VE	*Cnidium officinale*	Cnidium Officinale Root Vesicles
12	(V)BioExo-Water(Fig8)VE	*Ficus carica*	Ficus Carica (Fig) Vesicles
13	(V)BioExo-Water(Multiflora8)VE	*Polygonum multiflorum*	Polygonum Multiflorum Root Vesicles
14	(V)BioExo-Water(Grapefruit8)VE	*Citrus paradisi*	Citrus Paradisi (Grapefruit) Fruit Vesicles
15	(V)BioExo-Water(Camellia8)VE	*Camellia japonica*	Camellia Japonica Flower Vesicles
16	(V)BioExo-Water(Spinach8)VE	*Spinacia oleracea*	Spinacia Oleracea (Spinach) Leaf Vesicles
17	(V)BioExo-Water(Perilla8)VE	*Perilla ocymoides*	Perilla Ocymoides Leaf Vesicles
18	(V)BioExo-Water(GreenTea8)VE	*Camellia sinensis*	Camellia Sinensis Leaf Vesicles
19	(V)BioExo-Water(Oat8)VE	*Avena sativa*	Avena Sativa (Oat) Kernel Vesicles
20	(V)BioExo-Water(Broccoli8)VE	*Brassica oleracea Italica*	Brassica Oleracea Italica (Broccoli) Vesicles
21	(V)BioExo-Water(PGRP8)VE	*Panax ginseng*	Panax Ginseng Vesicles
22	(V)BioExo-Water(Aspara8)VE	*Asparagus officinalis*	Asparagus Officinalis Stem Vesicles
23	(V)BioExo-Water(LactoP8)VE	Lactobacillus	Lactobacillus Extracellular Vesicles
24	(V)BioExo-Water(Chrysan8)VE	*Chrysanthemum zawadskii*	Chrysanthemum Zawadskii Flower Vesicles
25	(V)BioExo-Water(Ginkgo8)VE	*Ginkgo biloba*	Ginkgo Biloba Leaf Vesicles
26	(V)BioExo-Water(Rose8)	*Rosa damascena*	Rosa Damascena Flower Extract
27	(V)BioExo-Water(Rice8)	*Oryza sativa*	Oryza Sativa (Rice) Seed Extract
28	(V)BioExo-Water(BlackRice8)	*Oryza sativa*	Oryza Sativa (Rice) Seed Extract

INCI NAME

Fluid – PDRN

No.	Product	Origin	INCI Name
1	HyPDRN Fluid(AppleMint)	Apple mint	Hydrolyzed DNA
2	HyPDRN Fluid(BlackRice)	Black Rice	Hydrolyzed DNA
3	HyPDRN Fluid(BrownRice)	Brown Rice	Hydrolyzed DNA
4	HyPDRN Fluid(Carrot)	Carrot	Hydrolyzed DNA
5	HyPDRN Fluid(LC)	Lemon, Cherry	Hydrolyzed DNA
6	HyPDRN Fluid(Marine)	Seaweed	Hydrolyzed DNA
7	HyPDRN Fluid(Olive)	Olive	Hydrolyzed DNA
8	HyPDRN Fluid(Peony)	Peony	Hydrolyzed DNA
9	HyPDRN Fluid(RiceGerm)	Rice germ	Hydrolyzed DNA

Water – PDRN

No.	Product	Origin	INCI Name
1	HyPDRN Water(Aloe)	Aloe	Hydrolyzed DNA
2	HyPDRN Water(AppleMint)	Apple Mint	Hydrolyzed DNA
3	HyPDRN Water(Bean)	Bean	Hydrolyzed DNA
4	HyPDRN Water(Black Rice)	Black Rice	Hydrolyzed DNA
5	HyPDRN Water(Broccoli)	Broccoli	Hydrolyzed DNA
6	HyPDRN Water(BrownRice)	Brown Rice	Hydrolyzed DNA
7	HyPDRN Water(Camellia)	Camellia	Hydrolyzed DNA
8	HyPDRN Water(Carrot)	Carrot	Hydrolyzed DNA
9	HyPDRN Water(Cica)	Cica	Hydrolyzed DNA
10	HyPDRN Water(Crispa)	Crispa	Hydrolyzed DNA
11	HyPDRN Water(LC)	Lemon, Cherry	Hydrolyzed DNA
12	HyPDRN Water(Marine)	Seaweed	Hydrolyzed DNA
13	HyPDRN Water(Olive)	Olive	Hydrolyzed DNA
14	HyPDRN Water(Peony)	Peony	Hydrolyzed DNA
15	HyPDRN Water(RiceGerm)	Rice Germ	Hydrolyzed DNA
16	HyPDRN Water(Rose)	Rose	Hydrolyzed DNA

Cellularsome

No.	Product	Actives	INCI Name
1	Cellularsome PI109 (Vita)	Vita-Complex	Ascorbic Acid (and) Sodium DNA (and) Retinol (and) Tocotrienols (and) Riboflavin
2	Cellularsome PI111 (Cera Compl)	Ceramide-complex	Ceramide NP (and) Ceramide NS (and) Ceramide AP
3	Cellularsome PI117 (Cys)	Cysteamine HCL	Cysteamine HCL
4	Cellularsome PI118 (Colla)	Collagen-complex	Colagen(1), (3)
5	Cellularsome PI201 (CK)	Compound K	Hydrolyzed Ginseng Saponins
6	Cellularsome PI202 (Teca)	Teca	Asiaticoside (and) Madecassic Acid (and) Asiatic Acid
7	Cellularsome PI207 (P-xylene)	Pro-xylene	Hydroxypropyl Tetrahydropyrantriol

ABio materials