



OUR SCIENCE, YOUR SUCCESS

Powered by **BIORESOURCE DATA MINING**

TCI透過獨家的生物挖礦開發模組，
專利原料及產品配方皆可快速產出大量科學驗證數據支持

產品在廣告宣傳必需遵守各國法規

TCI uses BIORESOURCE DATA MINING in developing
patent materials and product formula, to generate mass supportive scientific data.

The advertising of products must follow local regulations.

Key Ingredient



VeCollal®
VEGAN COLLAGEN ALTERNATIVE

VeCollal type II

Vegan Collagen Alternative Type II

The world's only scientifically-based, non-GMO plant-based collagen formula, designed specifically for joint and bone health, with type II collagen amino acids.

Joint Cartilage Rejuvenation

Activation of Chondrocyte Type II Collagen Gene

Promotion of Chondrocyte Type II Collagen Secretion - Coming soon

Promotion of Chondrocyte Hyaluronic Acid Secretion - Coming soon

Bone Health and Anti-aging

Activation of Osteoblasts

Inhibition of Osteoclasts

Reducing Joint Inflammation and Degeneration

Inhibition of NO Inflammatory Factors Released by Joint Macrophages

Lowering of Cartilage Inflammatory Factors IL-1 β , TNF- α , and iNOS



Biomimetic of human Collagen

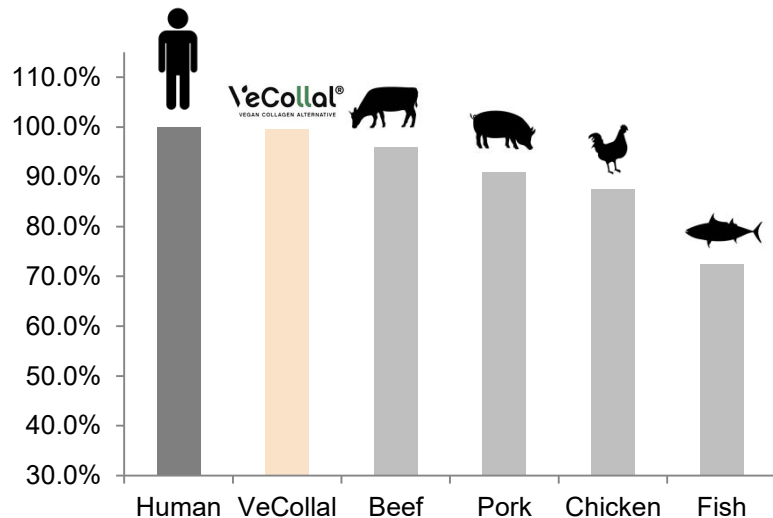
VeCollal has an amino acid composition that mimics human collagen.

Type I collagen amino acid sequence analysis

Human	159	APQLSYGYDEKSTGGISVPGPMGPGSGRGLPGPPGAPGPQGFQGGPPGEPGEPGASGPMGF	220
Porcine	162	APQLSYGYDEKSTAG-ISVPGPMGPGSGRGLPGPPGAPGPQGFQGGPPGEPGEPGASGPMGF	222
Bovine	159	APQLSYGYDEKSTG-ISVPGPMGPGSGRGLPGPPGAPGPQGFQGGPPGEPGEPGASGPMGF	219
Chicken	149	APQMSYGYDEKSTG-VAVPGPMGPGRGLPGPPGAPGPQGFQGGPPGEPGEPGASGPMGF	209
Fish	151	SPQMSYVDHKSSTG-PAVPGPMGPMGARGPPGAGYSGGPQGMPPAGEPGEPPGATGPMGF	211
Human	221	PPGPPGKNGDDGEAGKPRPGERGPPPGQAGRLPGTAGLPGMKHRRGFSGLDGAAGDA	282
Porcine	223	PPGPPGKNGDDGEAGKPRPGERGPPPGQAGRLPGTAGLPGMKHRRGFSGLDGAAGDA	284
Bovine	210	PPGPPGKNGDDGEAGKPRPGERGPPPGQAGRLPGTAGLPGMKHRRGFSGLDGAAGDA	281
Chicken	210	PAGPPGKNGDDGEAGKPRPGERGPPPGQAGRLPGTAGLPGMKHRRGFSGLDGAAGDA	271
Fish	212	PVGPPEGKNGDDGEAGKPRPGERGAGPGQAGRLPGTAGLPGMKHRRGFSGLDGAAGDA	273
Human	283	GPKGEPGSPGENGAPGQMGPRGLPGERGRPGAPGAGARGNDGATGAAGPPGPTGPAGP	344
Porcine	285	GPKGEPGSPGENGAPGQMGPRGLPGERGRPGAPGAGARGNDGATGAAGPPGPTGPAGP	331
Bovine	282	GPKGEPGSPGENGAPGQMGPRGLPGERGRPGAPGAGARGNDGATGAAGPPGPTGPAGP	343
Chicken	272	GPKGEPGSPGENGAPGQMGPRGLPGERGRPGAPGAGARGNDGATGAAGPPGPTGPAGP	333
Fish	274	GPKGEPGSPGENGIPGALGLRGLPGERGRPGPSGAGARGNDGATGAAGPPGPTGPAGP	335
Human	345	FPAGVAGKGEAGPQGRGSEGGPQGVRRGEPGPPGAGAAAGPAGNPGADGQPGAKGANGAPG	405
Porcine	332	FPAGVAGKGEAGPQGRGSEGGPQGVRRGEPGPPGAGAAAGPAGNPGADGQPGAKGANGAPG	392
Bovine	344	FPAGVAGKGEAGPQGRGSEGGPQGVRRGEPGPPGAGAAAGPAGNPGADGQPGAKGANGAPG	404
Chicken	334	FPGAAGAKGETTGPGQARGSEGGPQGVRRGEPGPPGAGAAAGPAGNPGADGQPGAKGANGAPG	394
Fish	336	FPGAAGAKGETTGPAAGRGSEGGPQGVRRGEPGPPGAGAAAGPAGNPGADGQPGAKGANGAPG	396

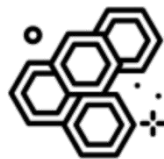
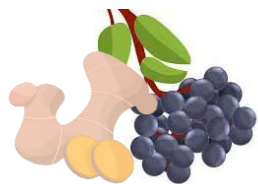
Data from NCBI (The National Center for Biotechnology Information)

Similarity in amino acid profile (%)

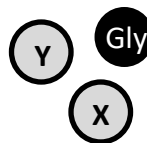
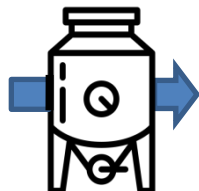


'eCollal[®] The Vegan Collagen Alternative

VEGAN COLLAGEN ALTERNATIVE



Bioactive ingredients
from plant



Plant-based
Collagen Amino acids



Fermented Collagen Alternative: A Key to a Sustainable Future



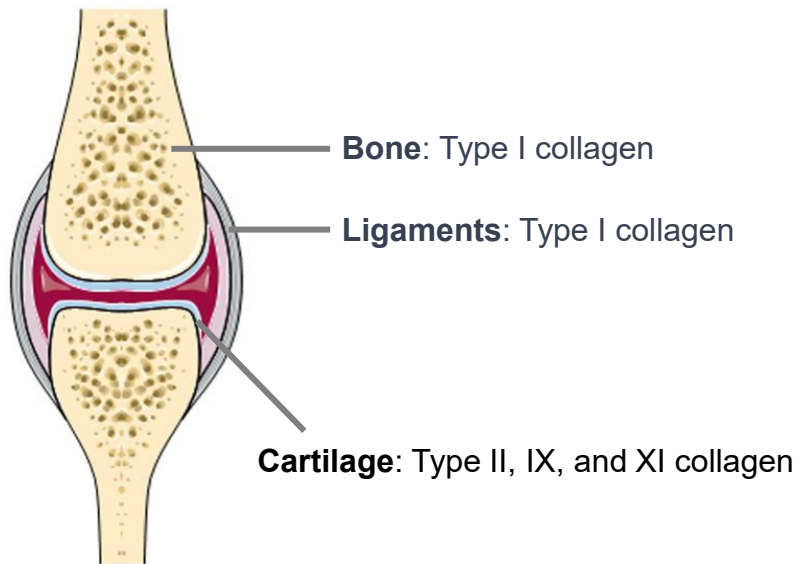
VeCollal®
VEGAN COLLAGEN ALTERNATIVE

Better health for you
kinder planet for all

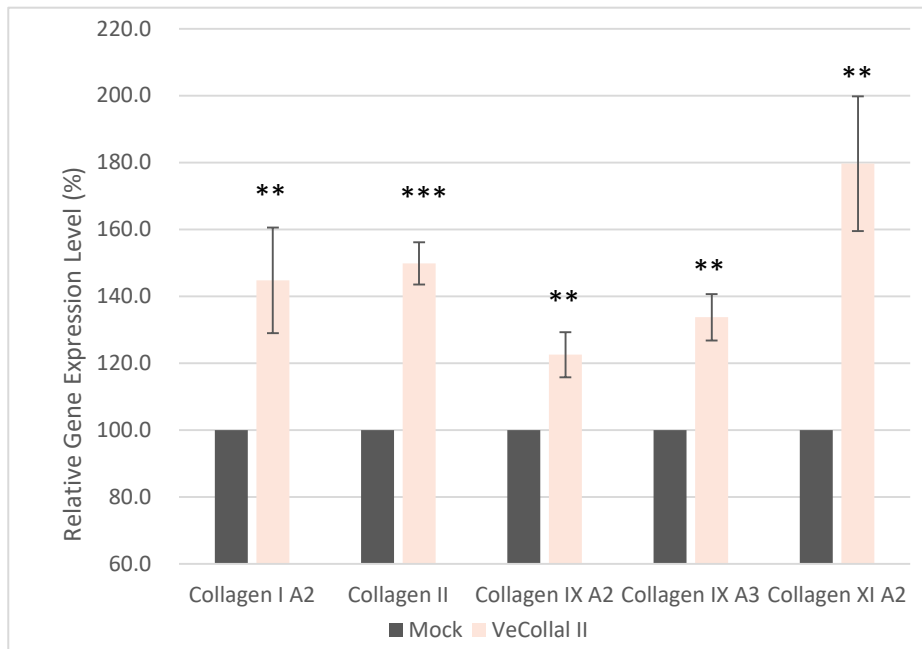
VeCollal®

VEGAN COLLAGEN ALTERNATIVE

VeCollal II can activate chondrocyte collagen gene and promote collagen secretion in cartilage.



It has been experimentally confirmed that VeCollal II can activate up to 50% of the type II collagen gene in chondrocytes and promote joint repair.



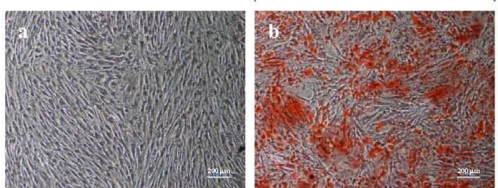
VeCollal II promotes osteoblast differentiation.

Differentiation of Osteoblast

Before

After

mesenchymal
stem cells



PLoS One. 2014 Apr 10;9(4):e94395

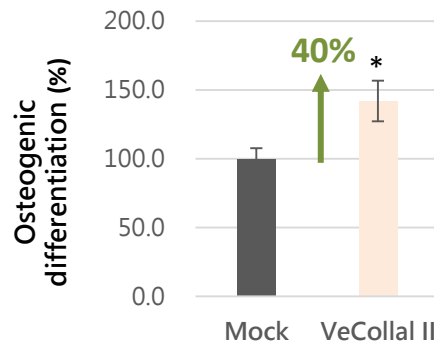
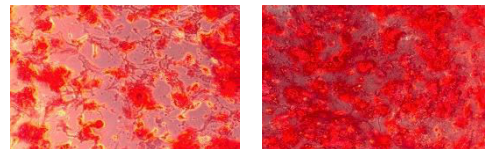
Induction of osteogenesis can be confirmed by staining calcium (red dye) to indicate bone formation.

It has been experimentally confirmed that VeCollal II can promote the differentiation of mesenchymal stem cells into osteoblasts, increasing stem cell differentiation by 30%.

Mock

+VeCo II

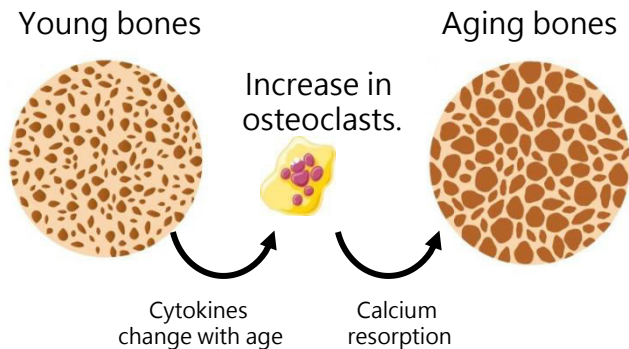
mesenchymal
stem cells



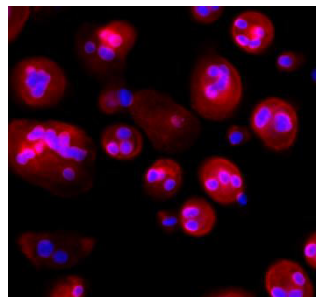


VeCollal II inhibits the differentiation and maturation of osteoclasts.

It has been proven in experiments that VeCollal II can reduce the differentiation and maturation of osteoclasts, lowering the differentiation of mononuclear cells by 70%.

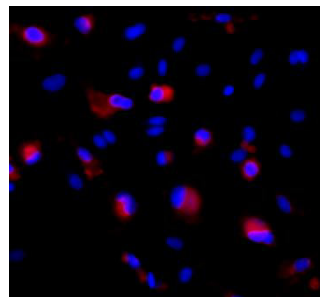


Mock



Mature multinucleated osteoclasts

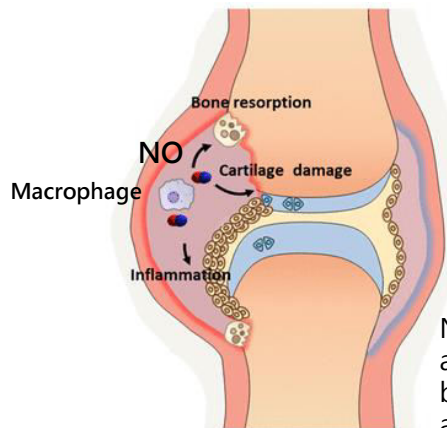
+VeCo II



Undifferentiated mononuclear cells

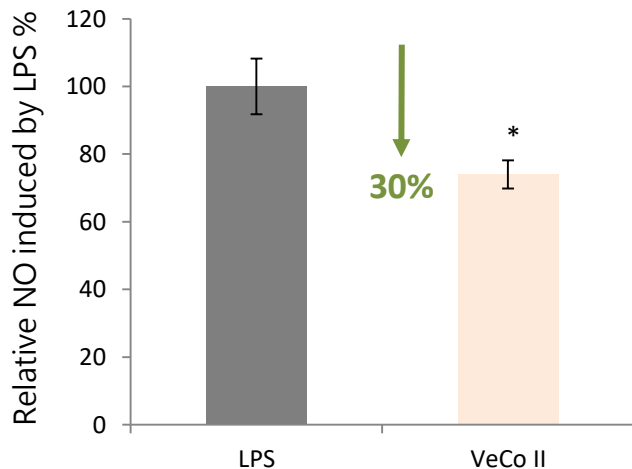
VeCollal II can reduce bone inflammatory factors.

VeCollal II can inhibit the production of nitric oxide (NO) by inflammatory macrophages, thus reducing the secretion of inflammatory substances and bone infiltration.



NO acts on rheumatoid arthritis and osteoporosis, characterized by increased NO production and activation of cytokines.

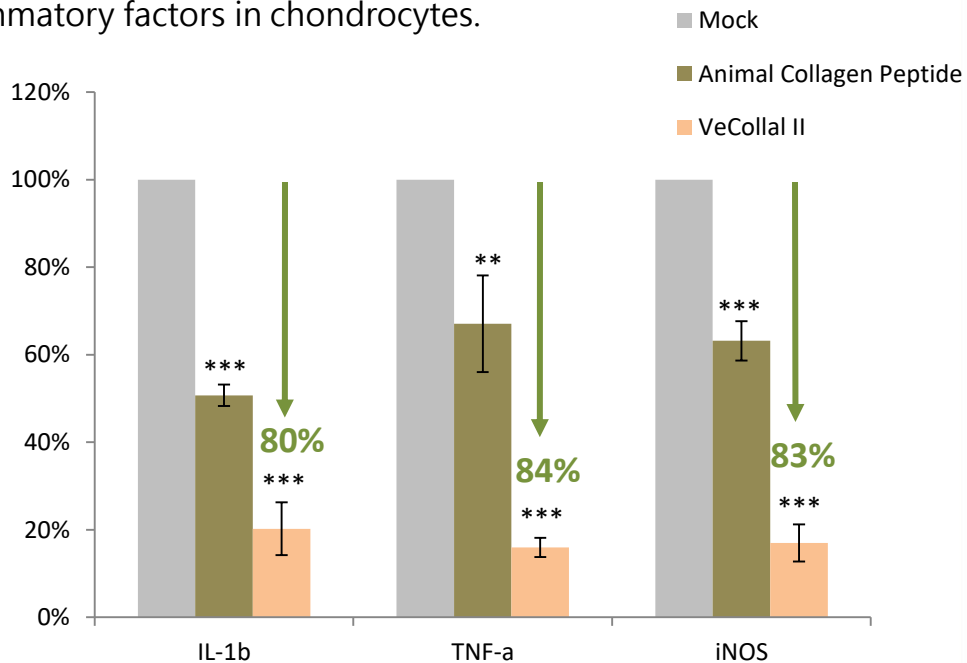
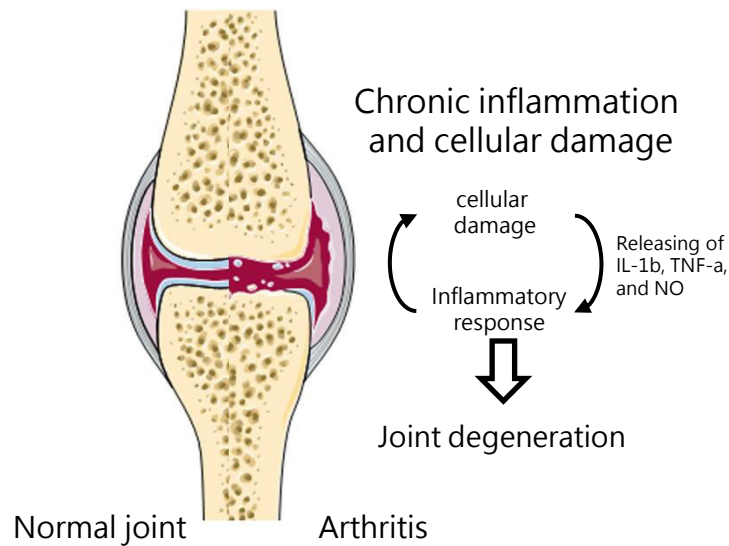
Immunology . 2001 Jul;103(3):255-61.



Compared to the Mock group, the LPS group (200ng/ml) significantly increased the content of NO (* indicates $p < 0.05$).

VeCollal II reduces the inflammatory response of chondrocytes.

VeCollal II can significantly reduce several inflammatory factors in chondrocytes.



DEVELOPING A VISION FOR YOUR FUTURE.

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