



[AntiAgingPhD.com](https://AntiAgingPhD.com)

April, 2024

[AntiAgingPhD.com](https://AntiAgingPhD.com)

1. Corporate Vision and Mission
2. Patented Technology
3. Characteristics of Peptide Action
4. Product Introduction & Testimonials
5. Market Analysis



## Corporate Vision and Mission

### **Vision**

Become the world's leading peptide development and manufacturing group, providing customized services and bulk raw materials to global enterprises.

### **Mission**

Harnessing our proprietary peptide technologies to collaborate with industries across sectors and benefit society.



# What are peptides?

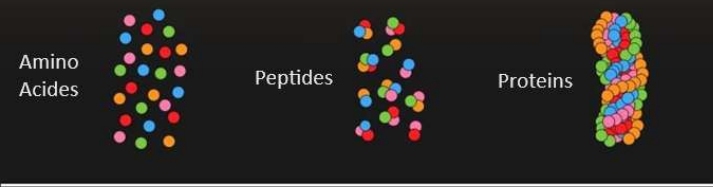
Proven by a century of scientific researches

## Peptides, the most important functional regulators of the human body

- ✓ **Peptides** are a class of compounds formed by the linkage of two or more amino acids through peptide bonds. They are intermediate substances between amino acids and proteins.
- ✓ **Peptides** are the building blocks of proteins and serve as their structural and functional units. They form the active sites of proteins that enable their biological functions.
- ✓ **Peptides** serve as cellular messengers, regulating cellular expression, replication, and repair.

All life processes in the human body, including growth, development, reproduction, metabolism, and behavior, are inseparable from peptides.

Peptides are a class of compounds formed by the linkage of two or more amino acids through peptide bonds. They are intermediate substances between amino acids and proteins.



Summary of the potential effects of peptides:



Thousands of peptides exist in living organisms, encompassing hormones, nerves, cell growth, reproduction, tumorigenesis, neurohormone transmitters, and immune regulation, extensively participating in and regulating the functional activities of various systems, organs, and cells within the body.



# Multi-peptide Expression System

## > Animal Breeding & Growth



## > Health & Recovery



## > Skin Care



## > Food Additive & Flavoring Peptides



## > Metal Peptide for Mining



# Technical Core Value

## 100% Amino Acid Sequence Accuracy

Achieving 100% accuracy for both long and short peptides, overcoming the limitations of low accuracy in chemical synthesis, and leading to more powerful functionalities.

## Unlimited Production Scale

Large-scale Production with Significant Cost Advantages

Orally Effective Protection Design  
Alternative to Injection

Addressing the Challenge of Oral  
Delivery for Peptide Drugs

## High Concentration + Combination Innovation

Concentration can reach 50% or even higher, and multiple different peptides can be combined at the same time for stronger functionality.

**Original  
Unique  
Innovative  
Mature**

## Whole Process Without Chemical Additives

Greener, Safer, More  
Secure

## Wide Range of Applications

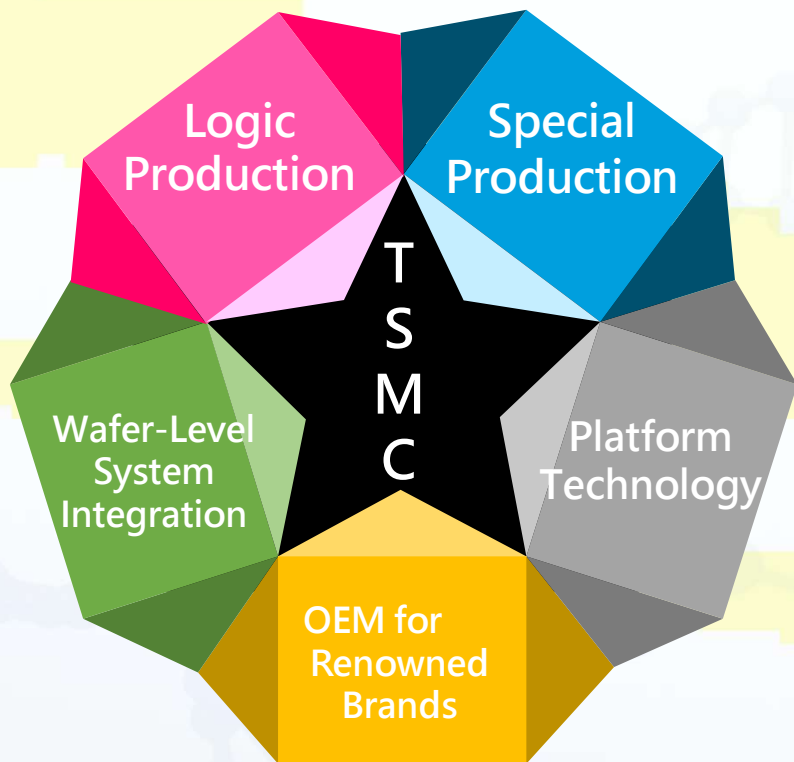
Biopharmaceuticals/Cosmetics

Functional foods/Dietary supplements

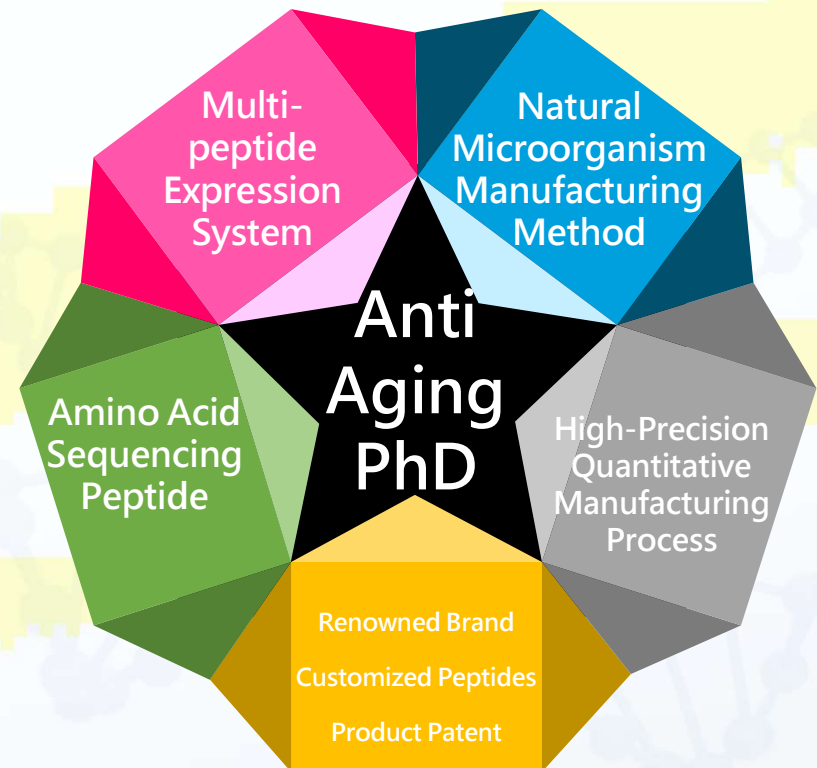
Agriculture, fishery, and animal husbandry



# TSMC of Peptides



VS



TSMC's Unique Global Patented Processes: **High Yield, High Technology, High Output**

The Foundation of Global Semiconductor Innovation

AntiAgingPhD offers a range of **high-quality, high-tech, and high-yield** peptide services to clients worldwide.

A Pioneer in Global Peptide Manufacturing Technology  
[AntiAgingPhD.com](http://AntiAgingPhD.com)



# SGS Analysis Report



**SGS** 食品實驗室-台中  
FOOD LAB-TAICHUNG  
測試報告  
Test Report

客戶編號: BA2018041644  
報告日期: 2018/05/06  
頁數: 1 頁

以下測試係根據中華民國食品衛生管理法之規定:

品名: 綠豆椪  
規格/標準: 衛生福利部公告  
品名: 綠豆椪  
規格/標準: 衛生福利部公告  
品名: 綠豆椪  
規格/標準: 衛生福利部公告

SGS TAIWAN LTD. **PASSED**

✓ Non-toxicity Test Results

**SGS** 食品實驗室-台中  
FOOD LAB-TAICHUNG  
測試報告  
Test Report

客戶編號: BA201702619-01  
報告日期: 2017/05/06  
頁數: 1 頁

以下測試係根據中華民國食品衛生管理法之規定:

品名: 綠豆椪  
規格/標準: 衛生福利部公告  
品名: 綠豆椪  
規格/標準: 衛生福利部公告

品名	規格/標準	測試方法	結果	備註
綠豆椪	衛生福利部公告	SGS	合格	

SGS TAIWAN LTD. **PASSED**

✓ Microbiological & Heavy Metal Testing Report

**SGS** 食品實驗室-台中  
FOOD LAB-TAICHUNG  
測試報告  
Test Report

客戶編號: BA201702619-02  
報告日期: 2017/05/06  
頁數: 1 頁

以下測試係根據中華民國食品衛生管理法之規定:

品名: 綠豆椪  
規格/標準: 衛生福利部公告  
品名: 綠豆椪  
規格/標準: 衛生福利部公告

品名	規格/標準	測試方法	結果	備註
綠豆椪	衛生福利部公告	SGS	合格	

SGS TAIWAN LTD. **PASSED**

✓ Plasticizer Testing Report

**SGS** 食品實驗室-台中  
FOOD LAB-TAICHUNG  
測試報告  
Test Report

客戶編號: BA201702619-03  
報告日期: 2017/05/06  
頁數: 1 頁

以下測試係根據中華民國食品衛生管理法之規定:

品名: 綠豆椪  
規格/標準: 衛生福利部公告  
品名: 綠豆椪  
規格/標準: 衛生福利部公告

SGS TAIWAN LTD. **PASSED**

✓ Multi-Pesticide Residue Detection Report

**SGS** 食品實驗室-台中  
FOOD LAB-TAICHUNG  
測試報告  
Test Report

客戶編號: BA201805020  
報告日期: 2018/05/09  
頁數: 1 頁

以下測試係根據中華民國食品衛生管理法之規定:

品名: 綠豆椪  
規格/標準: 衛生福利部公告  
品名: 綠豆椪  
規格/標準: 衛生福利部公告

SGS TAIWAN LTD. **PASSED**

✓ No Western Medicine Detection Test Report

# Product Liability



Insurance policy covers all ingredients for global marketing



國泰世紀產物保險股份有限公司

Cathay Century Insurance Co., Ltd.

CERTIFICATE OF LIABILITY INSURANCE		DATE(MM/DD/YY) 03/28/2023
PRODUCER Cathay Century Insurance Ltd. TEL : 886-2-27551299 FAX : 886-2-27557420	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICY BELOW.	
<b>INSURERS AFFORDING COVERAGE</b>		
INSURED 美商二維有限公司台灣分公司	INSURER A: Cathay Century Insurance Co., Ltd.	
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	

### COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSION AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

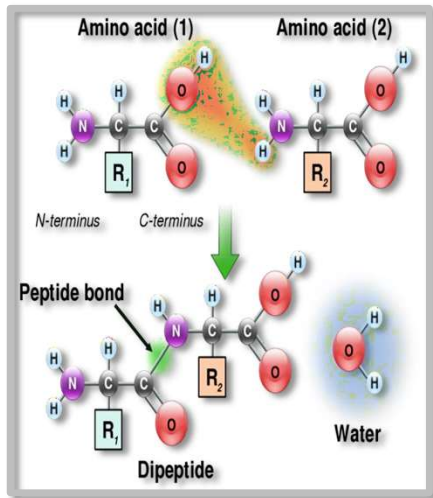
NO.	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE(MM/DD/YY)	POLICY EXPIRATION DATE(MM/DD/YY)	LIMITS
A	GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR <input checked="" type="checkbox"/> PRODUCTS LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER POLICY <input type="checkbox"/> PRO. <input type="checkbox"/> SUCT. <input type="checkbox"/> LOC	150112PD01220	Mar. 27 <sup>th</sup> , 2023	Mar. 27 <sup>th</sup> , 2024	EACH OCCURRENCE US\$340,000 MED EXP (Any one person) N/A Personal & adv injury N/A GENERAL AGGREGATE N/A PRODUCTS LIABILITY AGG US\$340,000
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS				COMBINED SINGLE LIMIT (Ex accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - ACCIDENT \$ OTHER THAN AUTO ONLY EA. ACC \$ AGG \$
	EXCESS LIABILITY <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE <input type="checkbox"/> RETENTION				EACH OCCURRENCE \$ AGGREGATE \$ \$ \$
	WORKS COMPENSATION AND EMPLOYERS LIABILITY				WC START-UP OTH. POLICY LIMITS \$ E.L. EACH ACCIDENT \$ E.L. DISEASE-EA EMPLOYEE \$ E.L. DISEASE-POLICY LIMIT \$

DESCRIPTION OF OPERATIONS/LOCATIONS/VISITORS/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS  
 Lowe's Companies, Inc. and any and all subsidiaries are additional insured on the General Liability policy where required by written contract.  
 A waiver of subrogation is required on all policies where required by written contract.

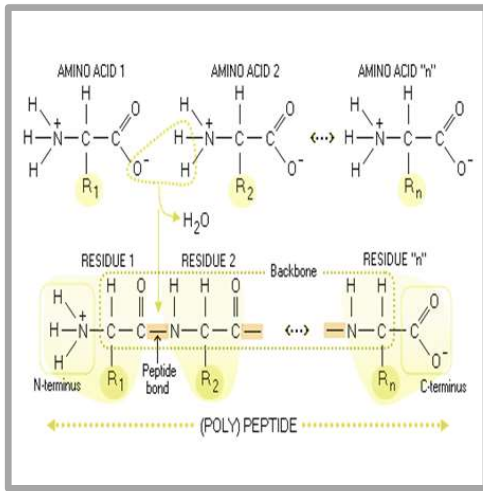
(It's warranted that all products insured are complied with mandatory and/or voluntary safety standards of importing countries)  
 GEOGRAPHICAL LIMIT & JURISDICTION: Worldwide including USA/Canada  
 The certificate holder is named as an additional insured vendor per the vendors endorsement attached to the above referenced policy.

CERTIFICATE HOLDER	ADDITIONAL INSURED INSURER LETTER	CANCELLATION
Which named insured		SHOULD YOU BE THE BENEFICIARY OF A CLAIM OR IF THE EXPIRATION DATE THEREOF THE ISSUING INSURER WILL ENDEAVOR TO MAKE 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED IN THE LEFT. IF YOU FAIL TO DO SO SHALL IMPOSE NOTICE TO THE BENEFICIARY OF ANY AND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES. 2023-4-7 Lee Senior Vice President CASUALTY DEPARTMENT (N2)

# Pioneering and Leading Global R&D and Manufacturing Processes



100% Accurate Amino Acid Sequence



Multi-peptide Expression System



Natural Microbial Manufacturing Method  
Peptide Chain Protection to Prevent Degradation



High-Precision Quantitative Production Process for Natural Small Molecule Peptides

# Comparative Analysis of Different Peptide Technologies



Key Metrics	AntiAgingPhD Fermented	Chemical Synthesis	Gene Synthesis	Enzyme-Catalyzed Hydrolysis
Taken Orally?	Yes	No	No	Yes but cleaved
Administration Method	orally/injected	75% injected		No
Amino Acid Accuracy	100%	High	Middle	Low
Peptide Concentration	High(60%)	High	Middle	Low
End Product Peptide Concentration	Very High (10mg/g)	High	Middle	Low
Functionality	Very Strong	Strong	Middle	Week
Amino Acid Synthesis Length	Unlimited	10-100aa	Long	No order
Single Product Output	Tonnage	Kilograms	Kilograms	100 Kilograms
Applications	Drugs Food Cosmetics	Drugs Cosmetics	Drugs Cosmetics	Food

# Miraculous Peptide Nobel Evidence

Hermann Emil Fischer won the Nobel Prize for the world's first peptide in 1902



Sir Frederick Grant Banting  
1923 Nobel Prize in Medicine



Vincent du Vigneaud  
1955 Nobel Prize in Chemistry



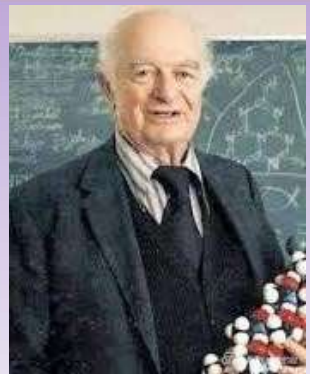
Herber Boyer 1958  
Nobel Prize in Biology



Rosalyn Sussman Yalow  
1977 Nobel Prize in Physiology or Medicine



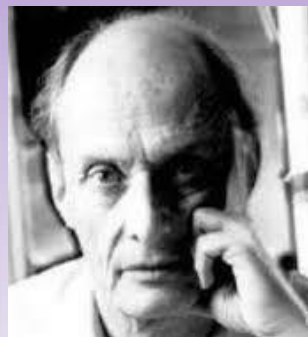
Robert Bruce Merrifield  
1984 Nobel Prize in Chemistry



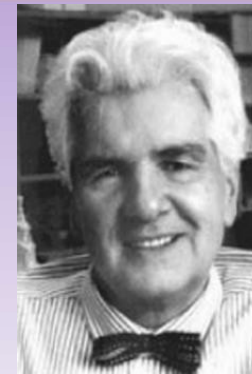
Stanley Cohen and Rita  
Levi-Montalcini  
1986 Nobel Prize in Medicine



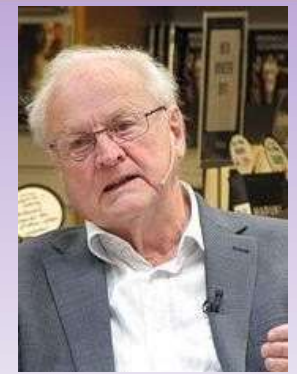
Alan Sieber  
1993 Nobel Prize



Gunter Blobel 1999  
Nobel Prize in Biomedicine

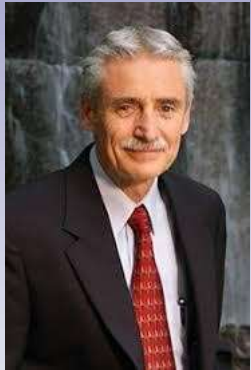


Arvid Carlsson  
Nobel Prize in Chemistry 2000

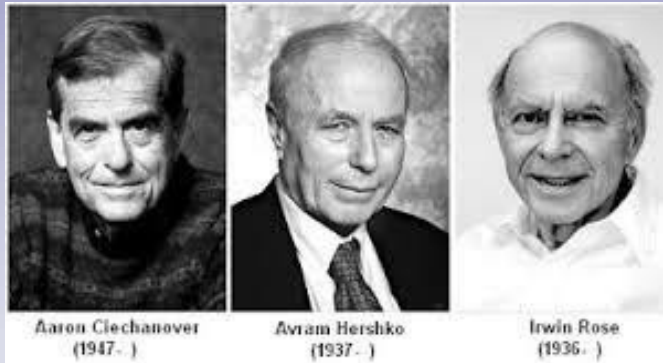


# Miraculous Peptide Nobel Evidence

Leland Hartwell 2001  
Nobel Prize in  
Chemistry



Aaron Ciechanover, Avram Hershko and Irwin Rose  
2004 Nobel Prize in Chemistry



Andrew Z. Fire, Craig C.  
Mello 2006 Nobel Prize in  
Physiology or Medicine



Roger D. Kornberg  
2006 Nobel Prize in  
Chemistry



Jack W.Szostak, Carol W.Greider,  
Elizabeth H.Blackburn  
2009 Nobel Prize in Physiology or  
Medicine



Aziz Sancar, Tomas Lindahl and Paul  
Modrich  
2015 Nobel Prize in Chemistry



Frances H. Arnold, George P. Smith and  
Gregory P. Winter  
2018 Nobel Prize in Chemistry





# AntiAgingPhD Products

Ranking	Health products: suitable for a variety of animals	Skin Care	Others
1	Longevity I, Longevity II	Whitening	Sugar Protein (Brazzein etc.)
2	Bone & Muscle	Sun Protection	Endotoxin Neutralizer
3	Sleep Well	Anti Wrinkle	(Chicken, duck, beef, pig, puffer fish, etc.) flavor peptides
4	Anti Allergy	Anti Allergy	(coffee, cocoa, chocolate, etc.) food peptides
5	Lower Sugar Level	Eye Bag Remover	(Precious metals, rare earths, lithium, cobalt, etc.) metal mining peptides
6	Growth Protein	Anti Hair Loss	(Anti moisture, dust, odor) textile peptides
7	Healthy Organ Protein	Black/Red Hair	
8	Healthy Bones		
9	Better Slim		
10	6 in 1 (Lower blood pressure + blood sugar + blood lipids + cholesterol + gout + allergies)		

Note: Some products are still under trial and development

Note: Peptide Biotech has developed more than 30 products in Taiwan over the past 20 years. Each product includes 1-25 peptides, with a total of more than 500 peptides.

---

**BIOGERONTOLOGY**

---

**Peptide Promotes Overcoming of the Division Limit in Human Somatic Cell**

V. Kh. Khavinson, I. E. Bondarev, A. A. Butyugov, and T. D. Smirnova

Translated from *Byulleten' Eksperimental'noi Biologii i Meditsiny*, Vol. 137, No. 5, pp. 573-577, May, 2004  
Original article submitted January 24, 2004

Biogerontology (2010) 11:139–149  
DOI 10.1007/s10522-009-9249-8

RESEARCH ARTICLE

**Peptide bioregulation of aging: results and prospects***The FASEB Journal* • Review**Biological activities of thymosin  $\beta_4$  defined by active sites in short peptide sequences**Gabriel Sosne,<sup>\*,†</sup> Ping Qiu,<sup>†</sup> Allan L. Goldstein,<sup>†</sup> and Michelle Wheeler<sup>‡</sup>

<sup>\*</sup>Department of Ophthalmology and Anatomy/Cell Biology, Wayne State University School of Medicine, Detroit, Michigan, USA; <sup>†</sup>The George Washington University School of Medicine and Health Sciences, Washington, District of Columbia, USA; and <sup>‡</sup>University of Detroit Mercy School of Dentistry, Detroit, Michigan, USA

Ann. N.Y. Acad. Sci. ISSN 0077-8923

ANNALS OF THE NEW YORK ACADEMY OF SCIENCES

Issue: *Thymosins in Health and Disease***Thymosin  $\beta_4$ : structure, function, and biological properties supporting current and future clinical applications**

David Crockford, Nabila Turjman, Christian Allan, and Janet Angel

RegeneRx Biopharmaceuticals Inc., Rockville, Maryland, USA

Address for correspondence: David Crockford, RegeneRx Biopharmaceuticals Inc., 15245 Shady Grove Road, Suite 470, Rockville, MD 20850, USA. dcrockford@regenerx.com

Published studies have described a number of physiological properties and cellular functions of thymosin  $\beta_4$  (T $\beta_4$ ), the major G-actin-sequestering molecule in mammalian cells. Those activities include the promotion of cell migration, blood vessel formation, cell survival, stem cell differentiation, the modulation of cytokines, chemokines, and specific

Review

**From lab to bedside: emerging clinical applications of thymosin  $\alpha_1$** Ilan L Goldstein<sup>†</sup> & Adam L Goldstein<sup>\*</sup>*The George Washington University School of Medicine and Health Sciences, Washington DC, USA**Medical School for International Health at Ben-Gurion University of the Negev, Be'er Sheva, Israel*



# Bone & Muscle Product



The Eurasian  
Journal of Medicine

*Eurasian J Med.* 2016 Jun; 48(2): 95–101.  
doi: [10.5152/eurasianjmed.2015.15030](https://doi.org/10.5152/eurasianjmed.2015.15030)

## Effects of Native Type II Collagen Treatment on Randomized Controlled Trial

[Fulya Bakilan](#)<sup>1</sup>, [Onur Armagan](#)<sup>2</sup>, [Merih Ozgen](#)<sup>2</sup>, [Funda Tascioglu](#)<sup>2</sup>, [Ozge Bolluk](#)<sup>3</sup> and [Ozkan Alatas](#)<sup>4</sup>

▶ Author information ▶ Article notes ▶ Copyright and License information Disclaimer

▶ *Int J Food Sci Nutr.* 2010 Feb;61(1):52-60. doi: [10.3109/09637480903257711](https://doi.org/10.3109/09637480903257711).

## Hydroxyproline-containing dipeptides and tripeptides quantified at high concentration in human blood after oral administration of gelatin hydrolysate

[Satomi Ichikawa](#)<sup>1</sup>, [Masashi Morifuji](#), [Hiroki Ohara](#), [Hitoshi Matsumoto](#), [Yasuo Takeuchi](#), [Kenji Sato](#)

*Int J Med Sci.* 2009; 6(6): 312–321.

Published online 2009 Oct 9. doi: [10.7150/ijms.6.312](https://doi.org/10.7150/ijms.6.312)

PMCID: PMC2764342

PMID: [19847319](https://pubmed.ncbi.nlm.nih.gov/19847319/)

## Safety and efficacy of undenatured type II collagen in the treatment of osteoarthritis of the knee: a clinical trial

[David C. Crowley](#)<sup>1</sup>, [Francis C. Lau](#)<sup>2</sup>, [Prachi Sharma](#)<sup>1</sup>, [Malkanthi Evans](#)<sup>1</sup>, [Najla Guthrie](#)<sup>1</sup>, [Manashi Bagchi](#)<sup>2</sup>, [Debasis Bagchi](#)<sup>2,3</sup>, [Dipak K. Dey](#)<sup>4</sup> and [Siba P. Raychaudhuri](#)<sup>5,6,✉</sup>

▶ Author information ▶ Article notes ▶ Copyright and License information Disclaimer

### Full text links

[Mary Ann Liebert](#)

### Save items

★ Add to Favorites

### Similar articles

Indoleamine 2,3-dioxygenase-expressing dendritic cells are involved in arthritis [Arthritis Res Ther. 2008]

**Review** An overview of a novel, water-soluble undenatured type II collagen [J Am Coll Nutr. 2015]

CTLA4-Ig modifies dendritic cells from mice with collagen-induced arthritis to [J Autoimmun. 2010]

Kirenol exerts a potent anti-arthritic effect in collagen-induced arthritis I [Phytomedicine. 2012]

**Review** Type II collagen oral tolerance: mechanism and role in cc [Mod Rheumatol. 2009]

# Momordica Charantia Peptide

> *J Agric Food Chem.* 2017 Oct 25;65(42):9266-9274. doi: 10.1021/acs.jafc.7b03583. Epub 2017 Oct 17.

## Gastro-Resistant Insulin Receptor-Binding Peptide from *Momordica charantia* Improved the Glucose Tolerance in Streptozotocin-Induced Diabetic Mice via Insulin Receptor Signaling Pathway

Hsin-Yi Lo, Chia-Cheng Li, Feng-Yuan Chen, Jaw-Chyun Chen<sup>1</sup>, Chien-Yun Hsiang, Tin-Yun Ho<sup>2</sup>

Affiliations + expand

PMID: 28994284 DOI: 10.1021/acs.jafc.7b03583

to in **Glucose Tolerance in Streptozotocin-Induced Diabetic Mice via Insulin Receptor Signaling**

> *Food Chem.* 2008 Nov 15;111(2):415-20. doi: 10.1016/j.foodchem.2008.04.006. Epub 2008 Apr 9.

## Purification and characterisation of a hypoglycemic peptide from *Momordica Charantia* L. Var. abbreviat Ser

Xiaoqing Yuan<sup>1</sup>, Xiaohong Gu<sup>2</sup>, Jian Tang<sup>3</sup>

Affiliations + expand

PMID: 26047444 DOI: 10.1016/j.foodchem.2008.04.006



KEYWORDS: *Momordica charantia*; diabetes; gastro-resistant peptide; hypoglycemia; insulin receptor

> *J Clin Diagn Res.* 2016 Apr;10(4):BF01-4. doi: 10.7860/JCDR/2016/18161.7653. Epub 2016 Apr 1.

## Evaluation of Protein Kinase C $\beta$ and PPAR $\gamma$ Activity in Diabetic Rats Supplemented with *Momordica charantia*

Swetha Chandru<sup>1</sup>, Prashant Vishwanath<sup>2</sup>, Devananda Devegowda<sup>3</sup>, Suresha Nagaraja Ramasamudra<sup>4</sup>, Akila Prashant<sup>2</sup>, Basavanagowdappa Hathur<sup>5</sup>

Affiliations + expand

PMID: 27190792 PMID: PMC4866090 DOI: 10.7860/JCDR/2016/18161.7653

Free PMC article

Save items

> *Food Chem.* 2016 Aug 1;204:298-305. doi: 10.1016/j.foodchem.2016.02.135. Epub 2016 Feb 24.

## Identification of the bioactive and consensus peptide motif from *Momordica charantia* insulin receptor-binding protein

Hsin-Yi Lo<sup>1</sup>, Chia-Cheng Li<sup>1</sup>, Tin-Yun Ho<sup>2</sup>, Chien-Yun Hsiang<sup>3</sup>

Affiliations + expand

PMID: 26988505 DOI: 10.1016/j.foodchem.2016.02.135

cornucopia of health: a review [Curr Mol Med. 2011]

# Anti Allergy Product

> [Biochemistry](#). 2001 Aug 21;40(33):9828-35. doi: 10.1021/bi010936c

## A novel family of hairpin peptides that inhibits IgE activity by binding to the high-affinity receptor

G R Nakamura <sup>1</sup>, M A Starovasnik, M E Reynolds, H B Lowman

Affiliations + expand

PMID: 11502176 DOI: 10.1021/bi010936c

> [Mol Biosyst](#). 2013 Nov;9(11):2853-9. doi: 10.1039/c3mb70286c.

## An IgE receptor mimetic peptide (PepE) protects mice from IgE mediated anaphylaxis

Joseph S Zhou <sup>1</sup>, Annamaria Sandomenico, Valeria Severino, Oliver T Oettgen, Menotti Ruvo

Affiliations + expand

PMID: 24056872 PMCID: PMC3820499 DOI: 10.1039/c3mb70286c

Review > [Allergy](#). 1997 Dec;52(12):1155-69. doi: 10.1111/j.1398-9995.1997.tb02518.x.

## Peptide blocking of IgE/receptor interaction: possibilities and pitfalls

B A Helm <sup>1</sup>, A C Spivey, E A Padlan

Affiliations + expand

PMID: 9450133 DOI: 10.1111/j.1398-9995.1997.tb02518.x

> [J Biol Chem](#). 2010 May 14;285(20):15314-23. doi: 10.1074/jbc.M110.104281. Epub 2010 Mar 19.

## The signal peptide of the IgE receptor alpha-chain prevents surface expression of an immunoreceptor tyrosine-based activation motif-free receptor pool

Barbara Platzer <sup>1</sup>, Edda Fiebiger

Affiliations + expand

PMID: 20304923 PMCID: PMC2865261 DOI: 10.1074/jbc.M110.104281

# Chunpu Resveratrol Literature

> *Experientia*. 1987 Oct 15;43(10):1110-1. doi: 10.1007/BF01956052.

## A novel fibrinolytic enzyme (nattokinase) in the vegetable cheese Natto; a typical and popular soybean food in the Japanese diet

H Sumi <sup>1</sup>, H Hamada, H Tsushima, H Mihara, H Muraki

Affiliations + expand

PMID: 3478223 DOI: 10.1007/BF01956052

Randomized Controlled Trial > *Sci Rep*. 2015 Jun 25;5:11601. doi: 10.1038/srep11601

## A single-dose of oral nattokinase potentiates thrombolysis and anti-coagulation profiles

Yuko Kurosawa <sup>1</sup>, Shinsuke Nirengi <sup>1</sup>, Toshiyuki Homma <sup>1</sup>, Kazuki Esaki <sup>2</sup>, Mitsuhiro Ohta <sup>3</sup>, Joseph F Clark <sup>4</sup>, Takafumi Hamaoka <sup>1</sup>

Affiliations + expand

PMID: 26109079 PMCID: PMC4479826 DOI: 10.1038/srep11601



PMID: 28315071 DOI: 10.1007/164\_2017\_7



Food and Chemical Toxicology  
Volume 61, November 2013, Pages 215-226



## Antioxidant effects of resveratrol in cardiovascular, cerebral and metabolic diseases

Albino Carrizzo <sup>a</sup>, Maurizio Forte <sup>b</sup>, Antonio Damato <sup>a</sup>, Valentina Trimarco <sup>c</sup>, Francesco Salzano <sup>d</sup>, Michelangelo Bartolo <sup>e</sup>, Anna Maciag <sup>f</sup>, Annibale A. Puca <sup>f, g</sup>, Carmine Vecchione <sup>a, g</sup>  

**View** Utilizing Delta Opioid Receptors and tides for [CNS Neurol Disord Drug Targets...]  
a opioid receptor and its peptide: a receptor-  
id neuroprotection. [Int J Mol Sci. 2013]  
a opioid receptors stimulation with [D-Ala2,  
au5] enkephalin does no [Neurosci Lett. 2007]  
Protective effects of the delta opioid peptide [D-  
Ala2, D-Leu5]enkeph [CNS Neurosci Ther. 2012]

# Anti-gout Peptides

> Arthritis Res Ther. 2009;11(5):R151. doi: 10.1186/ar2827. Epub 2009 Oct 8.

## Melanocortin peptides inhibit urate crystal-induced activation of phagocytic cells

Franco Capsoni<sup>1</sup>, Anna Maria Ongari, Eva Reali, Anna Catania

Affiliations + expand

PMID: 19814819 PMCID: PMC2787256 DOI: 10.1186/ar2827

[Free PMC article](#)

### Abstract

**Introduction:** The melanocortin peptides have marked anti-inflammatory potential, primarily through inhibition of proinflammatory cytokine production and action on phagocytic cell functions. Gout is an acute form of arthritis caused by the deposition of urate crystals, in which phagocytic cells and cytokines play a major pathogenic role. We examined whether alpha-melanocyte-stimulating hormone (alpha-MSH) and its synthetic derivative (CKPV)2 influence urate crystal-induced monocyte

For reprint orders, please contact:  
reprints@futuremedicine.com

REVIEW

## Peptide-based therapies for arthritis

Marina Ali &  
Nicholas Manolios<sup>†</sup>

<sup>†</sup>Author for correspondence  
University of Sydney,  
Rheumatology Dept,  
Westmead Hospital,  
Westmead 2145, Sydney,  
Australia  
Tel.: +61 298 458 099;  
Fax: +61 298 458 317;  
nickm@westgate.wh.usyd.  
edu.au

In this review we focus on peptide and peptidomimetic-based approaches in the treatment of inflammatory arthritis and outline what is in the pipeline for future therapeutic possibilities. Since immunomodulation is the key process influencing an inflammatory response, this review highlights strategies aimed at interfering with the immune synapse. Peptides used to block cytokines, and newer promising therapies on the horizon for arthritis are discussed. Finally, we review the mechanistic-based strategy used to develop transmembrane peptides and outline their potential use in arthritis and other fields of medicine.

To date, therapeutic drugs used in arthritis have largely consisted of the use of small molecules stability and the high costs involved with manufacturing. However, trends are changing and

# Lipid-lowering Peptides

**JCI** The Journal of Clinical Investigation

## Effect of gastric inhibitory polypeptide on plasma levels of chylomicron triglycerides in dogs.

T Wasada, ... , B Howard, R H Unger

*J Clin Invest.* 1981;68(4):1106-1107. <https://doi.org/10.1172/JCI110335>.

### Research Article

To determine whether gastric inhibitory polypeptide (GIP) promotes the clearance of chylomicron triglycerides (TG) from the circulation in dogs, chyle collected from donor dogs via a thoracic duct fistula was infused at a rate of 2 ml/min i.v. into normal recipient dogs during an infusion of either porcine GIP (1 microgram/kg per h) or saline as a control. In the GIP-infused dogs the rise in plasma TG was significantly below that of the control animals [mean peak of 36 +/- 4 mg/dl vs. 82 +/- 18 mg/dl (P less than 0.05)]. It is concluded that GIP exerts an effect upon the removal of chylomicron TG from the blood. The results suggest that GIP may play a physiologic role in the disposition of ingested fat.

Cyp7a1<sup>-/-</sup> mice. Current studies suggest that increased Cyp7a1 expression and bile acid synthesis and activation of FXR, whereas reduced bile acid synthesis aggravates MCD diet-induced hepatic inflammation and cholesterol homeostasis is important for protecting against liver injury and nonalcoholic fatty liver disease. Copyright © 2016 by the American Society for Biochemistry and Molecular Biology, Inc.

KEYWORDS: Takeda G protein-coupled receptor 5; bile acid; farnesoid X receptor; nuclear receptor



Home Current Browse Info Reprints/Reuse Advertising Subscrip

Section V: The Incretin Pathway

## Gastric Inhibitory Polypeptide and Glucagon-Like Peptide-1 in the Pathogenesis of Type 2 Diabetes

Michael A. Nauck<sup>1</sup>, Birgit Baller<sup>2</sup> and Juris J. Meier<sup>2,3</sup>

[+](#) Author Affiliations

Address correspondence and reprint requests to Prof. Dr. med. Michael Nauck, Diabeteszentrum Bad Lauterbach, Kirchweg 21, D-37431 Bad Lauterbach im Harz, E-mail: [michael.nauck@diabeteszentrum.de](mailto:michael.nauck@diabeteszentrum.de)

[> Diabetes.](#) 1979 Dec;28(12):1141-2. doi: 10.2337/diab.28.12.1141.

## Gastric inhibitory polypeptide enhanced lipoprotein lipase activity in cultured preadipocytes

R H Eckel, W Y Fujimoto, J D Brunzell

PMID: 510813 DOI: 10.2337/diab.28.12.1141

### Abstract

Fat feeding stimulated the release of gastric inhibitory polypeptide (GIP) without concomitant insulin secretion. Since antilipolytic effects of GIP have been demonstrated and the uptake of triglyceride fatty acid by adipose tissue postprandially is a process reciprocally regulated with lipolysis, a stimulatory role of GIP on adipose tissue lipoprotein lipase activity may be present. After cultured preadipocytes were incubated for 2 h with GIP, the release of lipoprotein lipase activity into the culture medium and the total cellular activity present in acetone-ether powders of cells were measured. GIP stimulated significant increases in the lipoprotein lipase activity released into the culture medium and in cells. A dose response relationship was strongest for the effect of GIP on the enzyme activity in extracts of acetone-ether powders of the cells. The increased lipoprotein lipase activity produced by GIP could provide a mechanism for clearance of chylomicron triglyceride after

[AntiAgingPhD.com](http://AntiAgingPhD.com)

# Amyloidin Literature

> Int J Biol Macromol. 2020 Aug 1;156:938-948. doi: 10.1016/j.ijbiomac.2020.03.085.  
Epub 2020 Mar 12.

## A bioactive polypeptide from sugarcane selectively inhibits intestinal sucrase

Shaik Abduldileep<sup>1</sup>, Raja Narayanasamy<sup>1</sup>, Dandamudi Usharani<sup>1</sup>, Ajeet Singh<sup>2</sup>, Ram Rajasekhara<sup>3</sup>

Affiliations + expand

PMID: 32173443 DOI: 10.1016/j.ijbiomac.2020.03.085

### Abstract

Human sucrase enzyme is a key therapeutic target for type 2 diabetes. While sugarcane sucrase inhibitor (sucinh) modulates invertase activity thereby accumulates sucrose. Molecular level understanding of sucinh towards mammalian  $\alpha$ -glucosidases is scarce. The interaction of sucinh with human sucrase was identified and the association of these proteins was confirmed using co-




International Journal of  
*Molecular Sciences*



Article

## Bioactive Peptides from Germinated Soybean with Anti-Diabetic Potential by Inhibition of Dipeptidyl Peptidase-IV, $\alpha$ -Amylase, and $\alpha$ -Glucosidase Enzymes

Marcela González-Montoya<sup>1</sup>, Blanca Hernández-Ledesma<sup>2</sup>, Rosalva Mora-Escobedo<sup>1</sup> and Cristina Martínez-Villaluenga<sup>3,\*</sup> 

**JDI** Journal of Diabetes Investigation  
Official Journal of the Asian Association for the Study of Diabetes



Original Article |  Open Access | 

### Peptide modulators of alpha-glucosidase

Irena Roskar, Peter Molek, Miha Vodnik, Mateja Stempelj, Borut Strukelj, Mojca Lunder 

First published: 03 April 2015 | <https://doi.org/10.1111/jdi.12358> | Citations: 12



## Sugar Protein **Brazzein**

### Properties of Brazzein

**High Sweetness:** Brazzein is approximately 2000 times sweeter than sucrose (table sugar), providing a clean and sugar-like taste without lingering bitterness or aftertaste.

**Heat Stability:** Brazzein retains its sweetness even under high temperatures, making it suitable for baking and cooking applications.

**pH Stability:** Brazzein maintains its sweetness across a wide pH range, both in acidic and alkaline environments, allowing its use in acidic beverages and alkaline food products.

**Water Solubility:** Brazzein readily dissolves in water, facilitating its incorporation into liquid foods and beverages.

**Safety:** Brazzein has been granted Generally Recognized as Safe (GRAS) status by the U.S. Food and Drug Administration (FDA), affirming its safety as a food additive.





# Metal Peptides for Mining

## Direction

1. Produce iron particles, which are like fine iron powder on a tape, and then coat the iron particles with peptides to become peptide iron particles
2. Grind the ore into fine powder, expose the metal surface, and then add water
3. Add the peptide iron particles into the mineral powder water and stir for a few minutes. The metal will be tightly wrapped by the peptide, that is, it will be wrapped by the peptide iron particles.
4. Use an electrified electromagnet to adsorb and collect the peptide iron particles. Of course, the metal is also collected together.
5. The metal is separated from other minerals, that is, the metal and peptide iron particles are enriched
6. After decomposing the peptide with a special solution, the metal and iron particles are naturally separated.
7. Use the large electric magnet again to absorb the independent iron particles away, and the only thing left is the metal to be collected.

The surface structure of each metal molecule is different. Based on this characteristic, we choose peptides with opposite shapes to bind to the metal. This can produce extremely strong adhesion and is used for metal mining.

## Process Characteristics

- Can be used for precious metals, lithium, cobalt, rare earths, and other metals
- Mining recovery rate is high 90%-99%, existing tailings may be worth processing
- Does not pollute the environment. Only water is used for physical separation. There is no chemical reaction and no chemicals are used. Water and iron particles can be recycled.
- The reaction is fast, more direct and effective than fire method and chemical method.
- Metal specificity, easy separation of different metals
- Can effectively, easily and quickly remove heavy metal pollution in water or soil
- Iron peptide particles can be mass-produced at a reasonable price



# Metal Peptides for Mining

## Advantages

- Cost-Effective Peptide Synthesis and Expanding Applications
- Overcoming Cost Barriers in Peptide Production
- Simplified and Enhanced Peptide Iron Microparticle Coating
- Expanding Production Capabilities
- Global Market Reach

**AntiAgingPhD**'s cost-effective peptide synthesis technology, simplified production processes, and expanding product portfolio position the company at the forefront of peptide innovation. With its commitment to quality, sustainability, and global reach, **AntiAgingPhD** is poised to revolutionize various industries and address critical challenges in metal extraction and purification.

## Development Process

**AntiAgingPhD**'s metal peptide development process involves a series of carefully orchestrated steps to produce high-quality, cost-effective peptide-based solutions for metal extraction and purification.

1. Target Metal Selection and Yeast Engineering
2. Iron Microparticle Synthesis
3. Metal Peptide Coating and Testing
4. Scale-up and Industrialization
5. Continuous Improvement and Optimization
6. Iron Microparticle Recycling and Sustainability

Advanced recycling techniques are implemented to minimize waste generation, promote sustainability, and further reduce production costs.



# Endotoxin Removal Peptide Market Analysis

## Harnessing Endotoxin Peptides to Enhance Wine Marc Utilization in Feed: Unveiling Market Potential

Wine marc, a byproduct generated during wine production, is a rich source of protein, fat, and fiber. However, its substantial endotoxin content, particularly lipopolysaccharide (LPS) from Gram-negative bacteria, poses health risks to animals when used in feed.

The potential market advantages of utilizing endotoxin peptides to enhance wine marc utilization in feed are compelling:

- **Improved Animal Health and Performance:** Endotoxin peptides can counteract the negative effects of endotoxins on animal health, boosting their immune system, disease resistance, growth, and reproduction.
- **Reduced Feed Costs:** Wine marc, a relatively inexpensive feed ingredient, can lower overall feed costs when its inclusion rate is increased.
- **Minimized Environmental Pollution:** Improper disposal of wine marc can lead to environmental contamination. Many wineries incur costs associated with managing this substantial waste stream.

## Driving Factors for Adoption

- **Supportive Government Policies:** Governmental policies promoting feed safety and environmental protection can create a favorable environment for endotoxin peptide utilization.
- **Feed Industry Recognition:** Recognizing the potential value of endotoxin peptides, feed companies are actively developing and promoting these products.
- **Growing Demand from Livestock Producers:** Driven by the desire to enhance animal health, reduce feed costs, and minimize environmental impact, livestock producers are increasingly seeking endotoxin peptide solutions.

## Conclusion

The potential market for endotoxin peptides in enhancing wine marc utilization in feed is vast. As technology advances and market awareness grows, endotoxin peptides are poised to play a significant role in the feed industry and animal husbandry. By adding **AntiAgingPhD's** Longevity and Growth proteins to the feed would further transforming a waste product into a valuable resource.



*Thank you*



Text or WhatsApp:  
+1 949-682-9767