Wellnex™ Collagen Peptide Technical Information

Papers related to Nitta Gelatin

Field	Year	Section	Author name, Title, Journal name
Absorption	2009	In vivo	Liu C., et al. Absorption of hydroxyproline-containing peptides in vascularly perfused rat small intestine in situ. Biosci. Biotech. Bioch.; 73:1741-1747, 2009
Absorption	2012	Clinical	Sugihara F., et al. Quantification of hydroxyprolyl-glycine (Hyp-Gly) in human blood after ingestion of collagen hydrolysate. J Biosci. Bioeng.; 113:202-203, 2012
Absorption	2021	Clinical	Osawa, Y., et al. Monitoring urinary collagen metabolite changes following collagen peptide ingestion and physical activity using ELISA with anti active collagen oligopeptide antibody. Sci Rep 11, 13527 (2021).
Skin	2012	Clinical	Sugihara F., et al. Clinical effects of collagen hydrolysates ingestion on UV-induced pigmented spots of human skin: A preliminary study. Health Sciences; 28:153-156, 2012
Skin	2014	In vivo	Shimizu J., et al. Oral collagen-derived dipeptides, prolyl-hydroxyproline and hydroxyprolyl-glycine, ameliorate skin barrier dysfunction and alter gene expression profiles in the skin. Biochem Biophys Res Commun. 9;456(2):626-30, 2014
Skin	2015	Clinical	Sugihara F., et al. Clinical effects of ingesting collagen hydrolysate on facial skin properties. Jpn. Pharmacol. Ther.; 43:67-70, 2015
Skin	2016	Clinical	Inoue N., et al. Ingestion of bioactive collagen hydrolysates enhance facial skin moisture and elasticity and reduce facial ageing signs in a randomized double-blind placebo-controlled clinical study. J Sci Food Agric. 96(12):4077-81, 2016
Skin	2016	In vivo	Hyun-Jun Shin., et al. The Effect of Collagen Peptide Intake on UVB-induced Skin Damage in Hairless mice. Journal of the Korea Academia-Industrial cooperation Society;17(3): 611-621, 2016
Skin	2017	Clinical	Koizumi S., et al. Effects of Dietary Supplementation with Fish Scales-Derived Collagen Peptides on Skin Parameters and Condition: A Randomized, Placebo-Controlled, Double-Blind Study; International Journal of Peptide Research and Therapeutics, 1-6, 2017
Skin	2019	Clinical	Koizumi S., et al. The effects of collagen hydrolysates derived from tilapia scales or skin on human facial skin-a randomized Double-blind placebo controlled clinical study-, Japanese pharmacology and Therapeutics, vol. 47, no.1, 2019
Skin	2022	Clinical	Himeno, A., et al. Effect of Reducing Pigmentation by Collagen Peptide Intake: A Randomized, Double-Blind, Placebo-Controlled Study. Dermatology and therapy, 2022
Joint	2009	In vivo / In vitro	Nakatani S., et al. Chondroprotective effect of the bioactive peptide prolylhydroxyproline in mouse articular cartilage in vitro and in vivo. Osteoarth. Cartilage; 17:1620-1627, 2009
Joint	2014	In vitro	Nakatani S., Transcriptome of ATDC5 Cultured with Glucosamine Hydrochloride and Collagen Hydrolysate Indicates a New Candidate Gene for the Differentiation of Chondrocytes. J Chitin Chitosan Sci; 2:233-237, 2014
Joint	2014	Clinical	Kumar S., et al. Venkateswarathirukumara S: A double-blind, placebo-controlled, randomized, clinical study on the effectiveness of collagen peptide on osteoarthritis. J Sci. Food Agric.; 95:702707, 2014
Joint	2017	In vivo	Isaka S., et al. Evaluation of the effect of oral administration of collagen peptides on an experimental rat osteoarthritis model. EXPERIMENTAL AND THERAPEUTIC MEDICINE 13: 2699-2706, 2017
Joint	2024	Clinical	Devasia S., et al. Management and Amelioration of Knee Joint Osteoarthritis in Adults Using a Novel High-Functional Bovine Collagen Peptide as a Nutritional Therapy: A Double-Blind, Prospective, Multicentric, Randomized, Active and Placebo Controlled, Five-Arm, Clinical Study to Evaluate the Efficacy, Safety, and Tolerability. CARTILAGE. 0(0), 2024
Jouin & Muscle	2019	Clinical	Kimira Y., The effects of collagen peptide supplementation on knee joint health - a doble-blind, placebo-controlled, randomized trial in healthy university students belonging to a running club-. Japanese pharmacology and Therapeutics, 47(9), 1455-1462, 2019
Bone	2014	In vitro	Kimira Y., et al. Collagen-derived dipeptide prolyl-hydroxyproline promotes differentiation of MC3T3-E1 osteoblastic cells. Biochem. Biophys. Res Co; 453:498-501, 2014
Bone	2017	In vitro	Kimira Y., et al. Collagen-derived dipeptide prolyl-hydroxyproline promotes osteogenic differentiation through Foxg1, Cellular & Molecular Biology Letters, 22:27, 2017
Bone	2019	In vitro	Nomura K., et al. Collagen-derived dipeptide prolyl hydroxyproline directly binds to Foxg1 to change its conformation and inhibit the interaction with Runx2, BIOSCIENCE,BIOTECHNOLOGY,ANDBIOCHEMISTRY, 2019
Bone & Muscle	2017	Clinical	Kamada Y., et al. Effects of collagen peptide consumption on the muscle mass and osteo sono assessment index in young females, Annual Report of the Institute of Living and Environmental Sciences, 49, 2017
Muscle	2016	In vivo / In vitro	Kitakaze T., et al. The collagen derived dipeptide hydroxyprolyl-glycine promotes C2C12 myoblast differentiation and myotube hypertrophy, Biochem Biophys Res Commun., 478(3):1292-7, 2016
Blood pressure	2009	In vivo	Ichimura T., et al. Antihypertensive effect of enzymatic hydrolysate of collagen and Gly-Pro in spontaneously hypertensive rats. Biosci. Biotech. Biochem., 73:2317-2319, 2009
Blood vessel	2018	Clinical	Igase M., et al. A double-blind, placebo-controlled, randomised clinical study of the effect of pork collagen peptide supplementation on atherosclerosis in healthy older individuals., Biosci. Biotech. Biochem., 2018 :1-3.
Pressure ulcer	2015	Clinical	Sugihara F., et al. Collagen hydrolysate enhanced pressure ulcer healing in a randomized double-blind placebo-controlled clinical study. Japanese pharmacology and Therapeutics, 43:1323-1328, 2015
Pressure ulcer	2021	In vivo	Jimi S., et al. Collagen-derived dipeptide Pro-Hyp administration accelerates muscle regenerative healing accompanied by less scarring after wounding on the abdominal wall in mice. Sci Rep 11, 18750, 2021
Pressure ulcer	2021	In vivo	Jimi S., et al. A novel mouse wound model for scar tissue formation in abdominal muscle wall, Journal of Veterinary Medical Science, 83(12):1933-1942, 2021
Diabetes	2016	In vivo	Iba Y., et al. Administration of Collagen Hydrolysates Improves Glucose Tolerance in Normal Mice Through GLP-1-Dependent and GLP-1-Independent Mechanisms, J Med Food., 19(9):836-43, 2016

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Diabetes	2018	Clinical	Devassia S., et al. Double Blind, Randomized Clinical Study to Evaluate Efficacy of Collagen Peptide as Add on Nutritional Supplement in Type 2 Diabetes. ., Journal of Clinical Nutrition and Food Science, Vol.1, Issue 1-1002, 2018
Diabetes	2019	Clinical	Devasia S., et al. A Double Blind, Randomised, Four Arm Clinical Study to Evaluate the Safety, Efficacy and Tolerability of Collagen Peptide as a Nutraceutical Therapy in the Management of Type II Diabetes Mellitus, J Diabetes Metab, Vol. 10 Iss. 11 No: 839, 2019
Cognition	2019	Clinical	Koizumi S., et al. Effects of Collagen Hydrolysates on Human Brain Structure and Cognitive Function: A Pilot Clinical Study, Nutrients 12, 50; doi:10.3390/nu12010050, 2020
Visceral fat	2022	Clinical	Koizumi S., et al. Ingestion of Fermented Collagen Peptide Reduces Visceral Fat Mass: A Randomized Double-Blind Placebo-Controlled Study, Japanese pharmacology and Therapeutics, Vol.50 (10): 1845-54: 2022.
Visceral fat	2022	In vitro	Watanabe T., et al. Reduced Visceral Fat Weight and Body Weight Due to Ingestion of Fermented Collagen Peptide in High-Fat Diet-Fed Obese Mice, Journal of Nutritional Science and Vitaminology, 68(6): 533-539, 2022
Inhibition AGEs	2023	Clinical	Koizumi S., et al. Ingestion of a collagen peptide containing high concentrations of prolyl-hydroxyproline and hydroxyprolyl-glycine reduces advanced glycation end products levels in the skin and subcutaneous blood vessel walls: a randomized, double-blind, placebo-controlled study, Bioscience, Biotechnology, and Biochemistry, 87(8):883-889, 2023
Others	2020	In vitro	Asai TT., et al. Food-Derived Collagen Peptides, Prolyl-Hydroxyproline (Pro-Hyp), and Hydroxyprolyl-Glycine (Hyp-Gly) Enhance Growth of Primary Cultured Mouse Skin Fibroblast Using Fetal Bovine Serum Free from Hydroxyprolyl Peptide. International Journal of Molecular Sciences. 21(1):229, 2020

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Patents of Nitta Gelatin

Patent No.	Title	Abstract
JP- 4490498 US-12/443,298, 13/523,438 CN-200880130932.0 CA-2732402 BE-08877173.8 DE-08877173.8 FN-08877173.8 UK-08877173.8 IN-2798/CHENP/2011 MY-P12011000459 SG-201100714-3	Disease suppressant (Bone, Joint, Pressure ulcer)	A peptide molecule body effective in suppressing various diseases such as osteoporosis, osteoarthritis, and pressure ulcers, particularly a dipeptide that is easily absorbed into the body in the intestinal tract, and that contains the dipeptide as an essential dipeptide. A disease suppressing agent containing a collagen peptide and the dipeptide as an essential active ingredient is provided. A collagen peptide according to the present invention is characterized by containing a dipeptide having a Hyp-Gly structure as an essential dipeptide. The dipeptide according to the present invention is characterized by having a Hyp-Gly structure. The disease suppressing agent according to the present invention is characterized by containing a dipeptide having a Hyp-Gly structure as an essential active ingredient.
JP- 4523339	Materials for improving bone toughness	A material for improving bone toughness comprising, as an active ingredient, a peptide obtained by hydrolyzing collagen and/or gelatin with a protease derived from at least one selected from Aspergillus yellow mold and bacteria of the genus Bacillus.
JP- 4547015	Effervescent beverages and beverage foaming agents	An effervescent drink containing saponin, collagen peptide having an average molecular weight of 20000 or less, and pectin contained in at least one selected from the group consisting of fruits and citrus fruits.
JP- 4709730	Chewable tablet	A chewable tablet obtained by compressing a raw material powder mixture containing collagen peptide in an amount of 25% by weight or more relative to the total amount, wherein the collagen peptide has an average molecular weight of 4000 or less, and the N-terminal amino acid is occupied by glycine. A chewable tablet characterized in that the proportion is greater than 65 mol %.
JP- 4904021	Collagen peptide-containing cosmetic composition and method for producing the same	Collagen peptides with an average molecular weight of 200 to 1500 obtained by subcritical water treatment under conditions of treatment temperature of 180 to 220°C, treatment pressure of 10 to 24 MPa, and treatment time of 30 to 120 minutes are used as cosmetic active ingredients. A cosmetic composition containing collagen peptide.
JP- 5361155	Method for producing degraded gelatin powder and degraded gelatin powder	Production of decomposed gelatin powder by hydrolyzing gelatin to obtain decomposed gelatin so that the average molecular weight according to the Pagii method is 10000 to 30000, and then drying and pulverizing the sol containing the decomposed gelatin without gelling.
JP-5612131 CA-2,825,157 CN-201280006535.9 US-13/981,258 TW-101102754	Therapeutic or prophylactic agent for diabetes	Three or more selected from Glu-Hyp-Gly, Glu-Hyp, Leu-Hyp-Gly, Pro-Ala, Ser-Hyp, Ala-Hyp-Gly, chemical modifications thereof and pharmaceutically acceptable salts thereof containing collagen peptide mixtures and Glu-Hyp-Gly, Glu-Hyp, Leu-Hyp-Gly, Pro-Ala, Ser-Hyp, Ala-Hyp-Gly, Pro-Hyp-Gly, Leu-Hyp, Ile- At least one selected from the group consisting of Hyp, Ser-Hyp-Gly, Gly-Pro-Hyp, (Pro-Hyp-Gly) 5, Pro-Hyp, Hyp-Gly, Pro-Gly, Pro-Pro and Ala-Hyp Peptides of the species, chemical modifications thereof, or pharmaceutically acceptable salts thereof have DPPIV inhibitory activity and/or GLP-1 secretagogue activity, and are therefore effective as therapeutic or preventive agents for diabetes.
JP- 5778692	Disease suppressant (Joint, bone and pressure ulcer inhibitors by oligopeptides)	p-Gly-Glu or Glu-Lys-Asp-Gly-His-Pro-Gly-Lys-Pro-Gly-Arg-A peptide consisting of an amino acid sequence represented by Hyp-Gly-Glu or a pharmaceutically acceptable salt thereof.
JP- 6100364	Whitening promoter and atopic dermatitis improving agent	Hyp-Gly, Pro-Ala-Gly, Gly-Pro, Glu-Hyp-Gly, (Pro-Hyp-Gly) 5, (Pro-Hyp-Gly) 2, Pro-Hyp-Gly, Glu-Hyp, Ala- A peptide selected from the group consisting of Hyp-Gly, Ser-Hyp-Gly and Phe-Hyp or a pharmaceutically acceptable salt thereof is useful as a whitening promoter or an atopic dermatitis ameliorating agent.
JP- 6240447	Elastin production promoter	An object of the present invention is to provide an elastin production promoter that is superior to the prior art and can prevent and improve wrinkles and sagging of the skin. [Solution] Glu-Hyp-Gly, Ser-Hyp-Gly, Ala-Hyp-Gly, Glu-Hyp, Leu-Hyp-Gly, Ala-Hyp, Pro-Hyp-Gly, Leu-Hyp, Pro-Hyp, An elastin production-enhancing agent comprising a peptide selected from the group consisting of Pro-Ala and Hyp-Gly or a pharmaceutically acceptable salt thereof.
JP-6407029 CN-201380022730.5 US-15/299172	Myoblast differentiation promoter	A peptide selected from the group consisting of Ala-Hyp-Gly, Hyp-Gly-Pro, Leu-Hyp, Glu-Hyp, Gly-Pro-Hyp, Pro-Ala, Hyp-Gly and Pro-Hyp or a pharmaceutically acceptable thereof the salt obtained has a myoblast differentiation promoting effect superior to that of the prior art.
JP- 6709440	Composition for inhibiting hypertrophic scar formation	An object of the present invention is to provide a composition for inhibiting the formation of hypertrophic scars. Kind Code: A1 A hypertrophic scar formation suppressing agent comprising at least one polypeptide consisting of an amino acid sequence having a dipeptide sequence represented by Pro-Hyp or Hyp-Gly, a chemical modification thereof, or a pharmaceutically acceptable salt thereof. Composition.
JP- 6877924	Epidermal intercellular function enhancer	Epidermal intercellular function-enhancing agent that enhances intercellular functions in the epidermis by containing a specific peptide. [Solution] The epidermal intercellular function enhancing agent is Pro-Hyp, Hyp-Gly, Glu-Hyp, Gly-Pro, Pro-Hyp-Gly, (Pro-Hyp-Gly)2, Pro-Ala-Gly, Glu - containing one or more peptides selected from the group consisting of Hyp-Gly, Ser-Hyp-Gly, Pro-Ala, Phe-Hyp, Ala-Hyp and Ala-Hyp-Gly, derivatives thereof or salts thereof.