Summary of Celergen Studies:

1. Celergen on PubMed
Celergen is featured in April this year on Pub Med in which the research demonstrates that Celergen is effective against chronological skin aging.

Biomarine extracts significantly protect from ultraviolet a-induced skin photoaging: an ex vivo study.


2. Summary of the Independent Clinical Studies of Key ingredients of Celergen.
The criteria for evaluating the effectiveness and potency of Celergen therefore hinges on the comprehensive "Clinical Studies on its bio active ingredients" which you must have a copy. These studies on the key ingredients, though empirical, are double blind placebo controlled studies with more than 2300 clinical subjects in some studies which include evaluation on energy levels, osteoarthritis, mood elevation and many facets of managing metabolic ailments. These studies also emphasize that our core ingredients are active and small in molecular structure which enhances absorption. These micronutrients are bound to peptides which will escort these essential nutrients across the intestinal barrier into our blood stream.

Ingredient 1 - BioDNA Cellular Complex (Fish Peptide Extract of DNA)
BioDNA Cellular Marine Complex is an extraction from special fish milt (wild salmon or herring), is a water-soluble natural substance of marine origin. The original aqueous process makes it possible to preserve the polymerized structure of the DNA, the essential component of the milt, and to obtain peptide hydrolysate in its proteinic structure.

Nutritional Efficiency

Marine Cellular DNA Complex has various applications in dietetics for:
- Treatment in osteoarthritis
- Improvement in physical performances
- Inhibition of Oxidation
- Slackening of Cellular Ageing

Treatment of Osteoarthritis
Its efficiency on essential arthralgia and chondron stimulating properties make MARINE Cellular DNA Complex an effective therapeutic treatment for osteoarthritis. [1][2]
A study of 2,960 volunteers of an average age of 61 years and having osteoarthritis, we concluded by giving them a combination of \textit{MARINE Cellular DNA Complex} (400mg per day) and a complex of vitamins B and E for 1 to 2 months. The benefit of this treatment began to appear after the first month of administration. In 89.5\% of the volunteers, the pains were reduced (21\% totally relieved and 68.5\% partially relieved). Moreover, physical performances were improved in 83.6\% of cases.

Another study was done using the same combination (\textit{MARINE Cellular DNA Complex}, Vitamins A and E) to test against diclofenac (a steroidal anti-inflammatory) on a group of 67 fairly invalid volunteers who had hip or knee osteoarthritis. After 42 days of treatment, pain was reduced by 39\%, and the impotent degree was reduced by 16, 1\% with \textit{MARINE Cellular DNA Complex} (versus 35\% and 26.1\% respectively with diclofenac).

\textbf{Improvement In Physical Performances}

In Sports Management, \textit{MARINE Cellular DNA Complex} could improve physical performances, in particular in raising the VO2 maximum and to reducing the recovery time. [3]

\textbf{Inhibition of Oxidation}

\textit{MARINE Cellular DNA Complex} delays and decreases the formation of conjugate diene, in particular, by its anti-radical activity with respect to the hydroxyl radical. This leads to the formation of a stable product, 8-hydroxy-desoxyguanosine, which avoids the formation of new free radicals and finishes the process of peroxidation. Due to its hydro-solubility, \textit{Cellular DNA Complex} protects the cells from extra cellular oxidative aggressions and cellular ageing. \textit{MARINE Cellular DNA Complex} is a powerful membrane protection and water-soluble anti-oxidant, with nuclear-like power that attacks radical hydroxyls. It is interesting to note that the consumption of \textit{MARINE Cellular DNA Complex} can also fight against stress oxidation and to slow down cellular ageing. It also has healing and immuno stimulating properties that could be used to stimulate immunity and to accelerate cicatrisation. [5] [6] \textit{MARINE Cellular DNA Complex} could be completely absorbed and be tolerated by the body even with strong doses. [7]

\textbf{Other Studies results:}

- Decreases in Physical Fatigue
- Improves Stamina during exercises and improves Recuperation after Exercise
- Decreases Mental Fatigue
- Decreases Osteoarthritis
- Fights the Effects of Aging (maximizes cell life and protects against free radicals
- Increases the Intelligence Quotient
- Improves the tonicity of gum tissue

\textbf{Ingredient 2 - Peptide E Collagen}

\textit{SKIN HYDRATION}
The moisturizing effect of **Peptide E Collagen** is supported by a clinical study involving 44 women over 40 years old. The results show an increase of the entire epidermis hydration by 8% after oral administration of **Peptide E Collagen** for 3 months. Under the conditions of the study, **Peptide E Collagen** showed no side effects.

The results of the study confirmed previous published research [1, 2, 3] on collagen peptides. By combining the two main constituents of the extracellular matrix, **Peptide E Collagen** has a synergetic anti-wrinkle action: elastin fibers will give the dermis the suppleness and then complete the collagen fibers tensile strength. When orally administered at 2g/day, **Peptide E Collagen** and elastin peptides will stimulate the biosynthesis of the dermis main constituents to lift and tone slackened areas. **Peptide E Collagen** minimizes apparent lines and wrinkles as shown in the results of the clinical study.

**Peptide E Collagen** has a full anti-aging action with potent antioxidant properties. The structural constituents of the dermis are thus protected against environmental damage (see graph).

**Peptide E Collagen** antioxidant activity is also substantiated by ORAC test.

**Peptide E Collagen** delays the skin aging process by protecting the skin and stimulating its main structural constituents

### Nutritional Efficiency

Hydrolyzed collagen can be easily dissolved and digested because of the polypeptide nature of the molecule (about 2,000 Da). Bibliographical studies have shown that collagen, in its hydrolyzed form, can be easily absorbed. This property makes it both effective and beneficial to be at low dose level in dietetic formulae for osteoarthritis, rheumatoid arthritis etc.

### Ingredient 3 - HYDRO MN Peptide

#### Clinical Study Results

**Objective**

The objective of the study was to evaluate the metabolic effect of fish peptides (**Hydro MN Peptide**), fish fillet, milk protein (casein), and soy protein isolate as part of composite meals, with similar macro-nutrient composition, in healthy subjects.

**Design & Subjects**

17 female volunteers (32 - 64 years old) were asked to eat the 4 meals randomly, with one week in between each meal. The meals consisted of food with similar nutrient composition, but different types of protein, namely **Hydro MN Peptide**, fish fillet (angler), milk and soy protein isolate. Total amount of energy was 1,970 kJ (or 470 kcal). Blood samples were taken for assay of B-glucose, S-insulin, S-free fatty
acids, S-triglycerides, and C-peptide in the fasting state and 7 times after eating the test meal up to 240 min.

**Results**

**Hydro MN Peptide** supplementation showed a significant lower blood glucose response than those with fish fillets or milk proteins. It also had a smaller area under the curve (AUC) with \( p = 0.0052 \) and \( p = 0.02 \), respectively (see graph 1).

The serum insulin response (AUC) for the fish diet was significantly lower than those of all other diets (see graph 2).

**Hydro MN Peptide** reduces glucose impact, it also promotes satiation. Results of a preliminary clinical trial showed that food with marine **Hydro MN Peptide** supplementation will lead to increase in plasma PYY level and decrease in plasma ghrelin level. These 2 hormones act synergistically to reduce the appetite on one hand, and to increase the feeling of satiation on the other.

**SWISS PROPRIETARY COLD EXTRACTION TECHNOLOGY**

This extraction eliminates all intense heat application (\(+125\) degrees Celsius to \(+225\) Degrees Celsius) or physical distortion during the extraction of the fish cellular extracts through an all natural enzymatic digestion and multiple step ultra filtration to retain the highest degree of bioactivity and potency of the cellular materials.

Celergen is also fortified with special double-enteric coated soft gels and strengthened by superior Anti-Reflux Technology to form a superior transport mechanism that effectively prevents acid-alkaline digestion of the bioactive extracts at the stomach and ensures that the product will release its active ingredients in the small intestines, for more effective absorption.

Celergen is positioned as a cell therapy supplement that provides effective nutrition at the cellular level.

Finally Celergen is manufactured in Swiss Caps (which manufacture high end supplements and Novartis drugs) and therefore product safety and product credibility should not be a concern. Celergen also has outstanding certification and accreditation, cGMP, GLP and other accolades.