Oceanicure-SC-23P: Concentrated Sea Cucumber Extract

Bioactive Compounds & Clinical Relevance

Cucumaria frondosa represents one of the most extensively researched sea cucumber species, distinguished by its unique profile of bioactive compounds and associated therapeutic benefits. Wild-caught from pristine deep North Atlantic Ocean waters—far removed from industrial pollution and terrestrial runoff—this species contains specific bioactive compounds that may be absent or present in significantly varying concentrations in other sea cucumber species.

Eight Years of Proprietary Research

Primary Nutrition, Inc. has dedicated over eight years to meticulously researching and perfecting proprietary extraction and concentration methods. Our rigorous scientific approach ensures maximum preservation of the most therapeutically active bioactive compounds, resulting in a highly pure and potent formulation suitable for clinical applications.

Cucumaria frondosa is increasingly becoming a focal point in nutraceutical and pharmaceutical research, with investigators actively exploring the therapeutic potential of its diverse bioactive profile across multiple therapeutic areas.

Documented Biological Activities

Anti-Cancer Properties

Demonstrated antitumor and anti-angiogenic activities through multiple mechanisms

Cardiovascular Support

Anticoagulant, antithrombotic, and anti-hypertensive effects documented

Anti-Inflammatory

Significant reduction in inflammatory markers across multiple pathways

Antimicrobial Activity

Broad-spectrum antimicrobial properties against various pathogens

The therapeutic properties of sea cucumbers can be attributed to a wide array of bioactive compounds, including triterpene glycosides (saponins), chondroitin sulfates, glycosaminoglycans (GAGs), sulfated polysaccharides, sterols, phenolics, cerebrosides, lectins, peptides, glycoproteins, glycosphingolipids, and essential fatty acids.

Frondosides: Triterpene Glycoside Saponins

Cucumaria frondosa is particularly distinguished by its elevated concentration of Frondoside-A, a specific triterpene glycoside saponin that stands among the most extensively studied compounds in this species. While various sea cucumber species produce different types and concentrations of glycoside saponins, Frondoside-A remains one of the most clinically relevant.

1

Apoptosis Induction

Triggers programmed cell death in cancer cells through membrane disruption and metabolic pathway interference

2

Immunomodulation

Enhances immune recognition and attack capabilities against tumor cells

3

Metastasis Inhibition

Reduces cancer cell migration and invasion potential

Frondosides: Mechanistic Pathways

Key Mechanisms

- Powerful antioxidant activity protecting against DNA damage
- Synergistic enhancement of chemotherapeutic efficacy
- Cell cycle regulation affecting cancer progression
- Modulation of NF-κB, PI3K/Akt, and MAPK signaling pathways
- Promotion of angiogenesis in wound healing contexts

These multifaceted mechanisms position triterpene glycosides as compounds of significant interest for both standalone applications and as adjunctive therapies in oncology.

Fucosylated Chondroitin Sulfate

A Uniquely Potent Glycosaminoglycan

Cucumaria frondosa contains exceptionally high levels of a uniquely potent form of chondroitin sulfate: Fucosylated Chondroitin Sulfate. Fucosylation—a specialized type of glycosylation occurring across vertebrates, invertebrates, plants, fungi, and bacteria—is critical for numerous biological functions including cell-to-cell interactions, cellular signaling, and leukocyte adhesion.

1

Clinical Significance

Abnormal fucosylation patterns are strongly associated with cancer progression and inflammatory diseases. Modulation of fucosylation represents an emerging therapeutic strategy in oncology.

2

Preservation Priority

Maintaining this compound's structural integrity in our formulation is considered a key factor in delivering the exceptional clinical results observed in cancer patients using SC-23P.

Glycosaminoglycans (GAGs)

Extracellular Matrix Modulators

Cucumaria frondosa demonstrates remarkably high glycosaminoglycan content compared to other sea cucumber species. These complex carbohydrates play pivotal roles in connective tissues and influence multiple physiological processes impacting health and disease progression, including oncological conditions.

Key Therapeutic Actions

- **Tumor Microenvironment Modulation:** GAGs influence extracellular matrix composition, potentially affecting tumor growth and metastatic potential
- **Angiogenesis Regulation:** Fucosylated GAGs interact with growth factors like VEGF, modulating endothelial cell function
- **Anti-inflammatory Properties:** Reduction of chronic inflammation, a known cancer progression factor
- **Bone Health Support:** Chondroitin sulfate inhibits enzymes involved in cancer progression while supporting skeletal integrity

Comprehensive Bioactive Profile

Xanthins (Astaxanthin & Canthaxanthin)

Among the most powerful known antioxidants. Astaxanthin provides cardiovascular protection, enhanced immune function, skin health benefits, and neuroprotective effects. Canthaxanthin exhibits superior free radical scavenging properties compared to most carotenoids.

Sterols (Glycosides & Sulfates)

Unique sterol compositions support cholesterol regulation, provide antioxidant protection, and maintain cellular membrane integrity. Combined with sulfated polysaccharides, these contribute to anti-inflammatory effects and immune support.

Phenolic Compounds

Powerful antioxidants that neutralize free radicals, reduce inflammation, support cardiovascular health, exhibit antimicrobial properties, and show neuroprotective potential. Emerging evidence suggests cancer prevention capabilities through inhibition of cancer cell proliferation.

Essential Fatty Acids

Omega-3 (EPA and DHA) and omega-6 fatty acids provide cardiovascular protection, anti-inflammatory effects, brain health support, skin integrity maintenance, hormonal balance, and immune system modulation.

Advanced Bioactive Components

Glycoproteins & Glycosphingolipids

Critical for immune system support, cell signaling, antioxidant activity, wound healing, anti-inflammatory responses, and antimicrobial defense. Cerberosides, a specific glycosphingolipid class, demonstrate immunomodulatory effects, antitumor activity, neuroprotective benefits, and metabolic support.

Structural Proteins

Type I and II collagen providing regenerative properties. Myofibrillar proteins (actin and myosin), various proteases including cathepsins for tissue remodeling, and antimicrobial peptides (AMPs) providing pathogen defense.

Essential Vitamins & Minerals

Comprehensive vitamin profile including A, B-complex (B1, B2, B3, B5, B6, B12), C, D, and E. Rich mineral content: calcium, magnesium, zinc, iron, manganese, selenium, phosphorus, copper, and iodine. These contribute to anti-inflammatory, immune-boosting, and regenerative properties.

Additional pharmacologically relevant components include collagen, peptides, polypeptides, gelatin, and lectins—each contributing to the comprehensive therapeutic profile of SC-23P.

Clinical Implementation Protocol

Recommended Clinical Trial Parameters

We invite clinicians to identify candidates from their patient populations, preferably those with confirmed cancer diagnoses and/or significant inflammatory diseases, for a structured observational trial of SC-23P.

Dosing Protocol

- 8-10 capsules daily
- Minimum 3-week consistent administration
- Select odd number of patients (5 or more)

Monitoring Parameters

- Baseline cancer markers, cell counts, tumor dimensions
- Reassessment at 3-week endpoint
- Documentation of adverse events and patient-reported outcomes

Important Safety Information

Contraindications & Precautions

- **Contraindicated:** Patients with fish/shellfish allergies
- **Significant Drug Interaction:** Anticoagulant effects—use extreme caution or avoid in patients on warfarin (Coumadin), apixaban (Eliquis), or other anticoagulants. Close monitoring required if co-administered.
- **Individual Variability:** Results may vary between patients

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. SC-23P is a nutritional supplement with exceptional potency, priced accessibly to maximize patient access.