Secondary Metabolites

NTHRYS offers a comprehensive range of secondary metabolites, including alkaloids, terpenoids, flavonoids, phenolics, glycosides, and more. These bioactive compounds are essential for pharmaceutical, agricultural, and industrial applications, providing solutions for research and product development.

Alkaloids

Bioactive compounds found in plants, often with potent pharmacological effects.

Terpenoids

A large and diverse class of organic chemicals derived from five-carbon isoprene units.

Phenolics

A diverse group of chemical compounds characterized by the presence of phenol units.

Flavonoids

Polyphenolic compounds with antioxidant properties found in a variety of plants.

Glycosides

Compounds that yield a sugar and one or more non-sugar substances upon hydrolysis.

Polyketides

A class of secondary metabolites produced by certain fungi, bacteria, and plants.

Steroids

Organic compounds with four rings arranged in a specific molecular configuration.

Saponins

Amphipathic glycosides that produce soap-like foaming when shaken with water.

Quinones

Aromatic compounds with two carbonyl groups in a six-membered unsaturated ring.

Coumarins

Aromatic organic chemical compounds in the benzopyrone chemical class.

Tannins

Astringent, polyphenolic biomolecules that bind to and precipitate proteins and other organic compounds.

Lignans

A group of chemical compounds found in plants, known for their antioxidant properties.

Anthocyanins

Water-soluble vacuolar pigments that may appear red, purple, or blue depending on the pH.

Carotenoids

Organic pigments produced by plants and algae, responsible for the bright red, yellow, and orange colors.

Glucosinolates

Sulfur-containing compounds found in cruciferous vegetables, known for their role in plant defense.

Resins

Solid or highly viscous substances of plant or synthetic origin, used in various industries.

Essential Oils

Concentrated hydrophobic liquids containing volatile aroma compounds from plants.

Phytosterols

Plant sterols with chemical structures similar to cholesterol, known for lowering blood cholesterol.

Pigments

Colored substances produced by plants, often responsible for the colors in flowers, fruits, and leaves.

Phenolic Acids

A type of aromatic acid widely distributed in the plant kingdom, contributing to flavor and color.

Isoflavonoids

A class of flavonoids that have a similar structure to estrogen, found in legumes.

Cyanogenic Glycosides

Plant compounds that can release cyanide when metabolized, involved in plant defense.

Nonribosomal Peptides

Peptides synthesized by nonribosomal peptide synthetases, found in fungi and bacteria.

Mycotoxins

Toxic secondary metabolites produced by fungi, known to contaminate food and feed.

Phytoalexins

Antimicrobial compounds produced by plants in response to pathogen attack.

Prenylated Flavonoids

Flavonoids with a prenyl group, showing enhanced biological activity.

Bitter Principles

Bitter-tasting compounds in plants, often used for medicinal purposes.

Alkylamides

Compounds found in some medicinal plants, known for their bioactivity, including immune modulation.

Terpenoid Lactones

Terpenoid compounds that include a lactone ring, known for their medicinal properties.

Volatile Organic Compounds (VOCs)

Organic chemicals with high vapor pressure at ordinary room temperature, often responsible for plant scents.

Oxylipins

Oxygenated fatty acids involved in plant defense and signaling.

Benzoxazinoids

Defense-related secondary metabolites produced by some plants.

Furanocoumarins

Phototoxic compounds found in some plants, affecting herbivores and pathogens.

Thiocyanates

Sulfur-containing compounds derived from glucosinolates, known for their antimicrobial properties.

Alkaloidal Amides

Bioactive compounds combining the properties of alkaloids and amides.

Polyphenols

Compounds with multiple phenol units, known for their antioxidant properties.

Oxazoles

A class of five-membered ring heterocycles with diverse biological activities.

Betalains

Plant pigments found in the Caryophyllales, responsible for red and yellow colors.

Pteridines

Compounds containing a pteridine ring, involved in various biological processes.

Phytocannabinoids

Active compounds found in the cannabis plant, known for their therapeutic potential.

Coumarin Glycosides

Compounds that combine coumarins and sugars, found in various medicinal plants.

Triterpenoids

Compounds composed of six isoprene units, known for a variety of biological activities.

Stilbenes

Phenolic compounds found in certain plants, often associated with disease resistance.

Pyrrolizidine Alkaloids

Hepatotoxic compounds found in some plants, involved in plant defense.

Thiophenes

Compounds with a sulfur-containing five-membered ring, often found in Asteraceae family plants.

Chalcones

Precursor compounds in the biosynthesis of flavonoids, known for their biological activities.

Napthoquinones

Quinone derivatives found in some plants, used for their antimicrobial properties.

Sesquiterpene Lactones

Terpenoid compounds with a lactone ring, often with anti-inflammatory and anticancer properties.

Anthraquinones

Compounds with laxative properties, found in plants like senna and aloe.

Cardiac Glycosides

Compounds that influence the contractility of the heart muscle, found in plants like foxglove.

Isoquinoline Alkaloids

Alkaloids derived from the isoquinoline structure, with various pharmacological effects.

Benzofurans

Aromatic compounds with a fused benzene and furan ring, found in some medicinal plants.

Avenanthramides

Polyphenolic alkaloids found in oats, known for their antioxidant and anti-inflammatory properties.

Fucoidans

Sulfated polysaccharides found in brown algae, known for their anticoagulant properties.

Glucuronides

Compounds formed by the conjugation of glucuronic acid with other substances, involved in detoxification.

Guggulsterones

Plant sterols found in the resin of the guggul plant, used in traditional medicine.

Proanthocyanidins

Flavonoid polymers that contribute to the astringency of fruits, used for their antioxidant properties.

Rotenoids

Compounds found in some legumes, used as insecticides and piscicides.

Withanolides

Steroidal lactones found in the nightshade family, known for their anti-inflammatory properties.

Secoiridoids

Bitter-tasting compounds found in olive oil, with antioxidant and anti-inflammatory effects.

Camptothecins

Alkaloids derived from the Chinese tree Camptotheca acuminata, used in cancer treatment.

Lignosulfonates

Water-soluble anionic polyelectrolytes derived from lignin, used in various industrial

applications.

Betulinic Acid

A naturally occurring pentacyclic triterpenoid, known for its anticancer properties.

Capsaicinoids

Compounds responsible for the pungency of chili peppers, used for pain relief and in food products.

Isoxazoles

Five-membered ring heterocycles with nitrogen and oxygen atoms, found in some biologically active molecules.

Pyranocoumarins

Coumarin derivatives with a pyran ring, known for their medicinal properties.

Bakuchiol

A meroterpene found in the seeds of Psoralea corylifolia, known for its anti-aging properties.

Amarogentin

A bitter secoiridoid glycoside found in Gentiana species, used in traditional medicine.

Esculetin

A coumarin derivative with anticoagulant and anti-inflammatory properties.

Safranal

An organic compound responsible for the aroma of saffron, used in flavoring and fragrance.

Brevicomin

A pheromone produced by some insects, used in pest management strategies.

Thiourea Derivatives

Compounds containing thiourea, used in pharmaceuticals and as agrochemicals.

Hinokitiol

A natural monoterpenoid found in the heartwood of trees, known for its antimicrobial properties.

Paclitaxel

A diterpenoid compound used as a chemotherapeutic agent, originally derived from the Pacific yew tree.

Lovastatin

A polyketide derived from Aspergillus terreus, used to lower cholesterol.

Chlorogenic Acid

A polyphenolic compound found in coffee, known for its antioxidant properties.

Phlorotannins

Tannins found in brown algae, known for their antioxidant and antimicrobial properties.

Pulegone

A monoterpene found in mint oils, used as a flavoring agent and in traditional medicine.

Capsinoids

Non-pungent analogs of capsaicinoids, used for their thermogenic effects in weight management.

Bromelain

A mixture of proteolytic enzymes found in pineapple, used for its anti-inflammatory properties.

Hederagenin

A pentacyclic triterpenoid found in ivy, known for its anti-inflammatory and anticancer properties.

Psoralen

A furanocoumarin used in PUVA therapy for skin disorders like psoriasis and vitiligo.

Piperine

An alkaloid responsible for the pungency of black pepper, used to enhance the bioavailability of drugs.

Costunolide

A sesquiterpene lactone found in medicinal plants, known for its anti-inflammatory properties.

Artimisinin

A sesquiterpene lactone derived from Artemisia annua, used in the treatment of malaria.

Phytosterols

Plant-derived sterols used for their cholesterol-lowering properties.

Astragalin

A flavonoid glycoside found in various plants, known for its anti-inflammatory and antioxidant effects.

Cardamonin

A chalcone found in Alpinia species, used for its anti-inflammatory and anticancer properties.

Ellagic Acid

A natural phenol antioxidant found in numerous fruits and vegetables, used for its anticancer properties.