



PROSPRUNE™

A Novel *Prunus domestica*
Bark Extract

Powerful antioxidant effects to support
prostate health and comfort*



From Plums to Plum Bark Extract

Scientific Curiosity Uncovers a Better Ingredient for Prostate Health*

At Cepham, we had marketed pygeum (*Prunus Africana* bark extract) for prostate health in the past, but we recognized the *P. Africana* supply was limited due to over-harvesting. *P. Africana* is now protected under appendix II of CITES and in South Africa under the National Forest Act (Act 84) of 1998. Forward-thinking and driven to develop sources with long-term market sustainability, our research team analyzed possible botanical alternatives years before we would need them.

The new prostate health ingredient needed to possess a phytonutrient profile similar to pygeum, so we analyzed other species in the *Prunus* genus. *Prunus domestica* (plum trees) caught our attention. Given the robust antioxidant profile of plums, our researchers grew curious about the tree's bark. Often a plant with high antioxidant activity in its fruit will exhibit a similarly intriguing profile in its bark.

The lab analysis of *Prunus domestica* bark was stunning. H1-NMR, C13-NMR, TLC and HPLC analyses have shown that *P. domestica* bark is 98.5% similar to pygeum. *P. domestica* also contained significant biomarkers—beta-sitosterols and docosyl ferulate. We realized it was possible *P. domestica* bark would demonstrate the same support for prostate health as seen in pygeum.*



From Plums to Plum Bark

Dried plums, commonly called prunes, have been regarded as a healthful food for millennia. Today, prunes are best known for their fiber content and associated laxative effects. We also know that prunes have a complex nutritive profile, as a source of:

- Major minerals – magnesium, calcium, iron
- Trace minerals – zinc, copper, manganese, selenium, boron
- Vitamins – A, K, multiple B vitamins
- Carbohydrates and amino acids
- Plus antioxidant polyphenols

Prunes contain a significant amount of polyphenolic antioxidants, including flavonoids, oligomeric proanthocyanidin, and anthocyanins. The prune's antioxidant activity is typically higher than other dried fruits. Even though there are no established RDIs for botanical phenolics, their antioxidant activity may be more powerful than vitamins C, E, and beta-carotene.

The incredible antioxidant value in the fruit sparked our scientific curiosity about the bark. We wondered if we might find an even more robust antioxidant profile there. We weren't disappointed.



Prosprune™: the Sustainable Alternative to Pygeum

A Prostate Health Ingredient that's Here to Stay

Cepharm scientists took three years to develop an optimal, patent-pending hydro-ethanolic extraction method. We called our new *P. domestica* bark extract Prosprune™.

By spectrophotometric and other analytical techniques we found that Prosprune's™ total sterol concentration is not less than 13.0 percent. Prosprune™ also contains the signature biomarker docosyl ferulate. Docosyl ferulate may provide clues for future MOA research. It also provides a reliable raw material identity confirmation in the manufacturing process.

As a broadly cultivated fruit tree in temperate zones worldwide, we knew we had a reliable cost-effective supply. Plum tree growers regularly prune their trees to encourage fruit growth. These clippings are a constant, long-term supply of the powerhouse antioxidant material.

The men's health industry is well-aware that pygeum supplies are dwindling. As a protected species, it could be another 30-50 years before current cultivation efforts in Africa restore the supply. Thankfully, we have a pygeum alternative with 98.5 percent profile similarity and statistically comparable effects.

Prunus domestica bark
is 98.5% similar to
P. Africana (pygeum).
Prosprune™ offers a
similar antioxidant
profile in a more
cost-effective
fashion.*

Doing Well and Doing Good

Cepharm's *P. domestica* trees are currently grown in our own private nurseries. We have also developed a partnership with orchard owners in the Himalayan foothills, a region where plum trees grow especially well.

Cepharm supplied several orchards with saplings of our specific cultivars, to ensure traceability and optimum yield of biomarkers. This partnership benefits the orchard communities twice—through selling the antioxidant bark material and through usual plum and prune sales.

A Historic Whole Health Companion Origins of Plum Cultivation

Humankind has cultivated plums for at least 3000 years. Over one hundred domesticated species are now grown in temperate zones around the world. One of the most common domestic species, *Prunus domestica*, is also one of the oldest, likely cultivated by early agrarian humans near the Black Sea.

Plum trees are related to other nutrient-rich fruit trees including peach and cherry. Early health traditions encouraged consumption of plums and prunes for digestive and other nutritive benefits. Today they are recommended as a super food, valuable for supporting heart health and to help maintain healthy blood glucose levels.*

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Prosprune™ Ingredient Summary

Prosprune™ is a powerful antioxidant derived from *Prunus domestica* bark. The patent-pending extraction method optimizes it as a prostate health ingredient.*

- Novel antioxidant matrix supports prostate health*
- Botanical profile 98.5 percent similar to pygeum
- Demonstrate broad spectrum safety
- Acute oral toxicity established at 5,000mg/kg body weight
- Ames' bacterial reverse mutation assay, conducted under GLP, confirmed its non-mutagenic potential
- BSE/TSE free
- US patent-pending hydro-ethanolic extraction process
- GMO-free
- Manufactured in NSF-GMP certified plant

Prosprune™ Patent-pending Extraction Application Numbers WO 2013014681 A1 (WIPO) / US2013236574 (A1) (USA) KR20140060500 (A) (South Korea) JP2014523442 (A) (Japan) EP2734215 (A1) (European Union) CN103153324 (A) (China)

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About Cephram

Cephram is an NSF and GMP certified manufacturer of fine herbal ingredients. We draw upon our vast research experience in the pharmaceutical industry to find the most bioactive compounds in herbal medicine. We have offices in both the U.S. and India, and our ethnobotanists travel the globe looking for the most promising and efficacious herbal solutions for human health goals.



Our quality control team monitors every step in our manufacturing processes to ensure full compliance with all GMPs and regulations in Europe, North America, and Asia. We also make it our goal to obtain NSF certification for our products, as well as USDA Organic Certifications and Kosher Certifications when applicable. We're committed to upholding the highest standards for purity, safety, and efficacy.

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* These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease.