Resveratrol is a polyphenolic compound produced naturally by the roots of Japanese Knotweed (*Polygonum cuspidatum*). The plant uses Resveratrol as a defense against bacteria or fungi attacks. *Polygonum cuspidatum* is native to eastern Asia, especially common in Japan and China. Japanese knotweed is a rhizomatous perennial plant that can reach 6 feet in height. Resveratrol is well known for its antioxidant properties and its health benefits. Many scientists believe that Resveratrol can explain the «French paradox», low incidence of heart disease among French people who eat relatively a lot of unhealthy fat.

**History**

Japanese knotweed was first introduced to Europe and North America in the late 19th century for ornamental use. This plant was discovered in 1777 in Japan. The dried roots of Japanese knotweed are used in traditional Chinese medicine as a laxative or cholesterol and allergy treatments. During World War II, *Polygonum cuspidatum* was used as a substitute for tobacco. Resveratrol was isolated for the first time from the roots of Japanese knotweed in 1963. This plant is now an important commercial source of Resveratrol.

**Main compounds and recognized properties**

Japanese knotweed is a natural source of Resveratrol, it contains up to 187 mg/kg in the dried root. Naturex owns a specific purification process (US Patent # 6,361,815 B1) allowing the production of extract up to 98% purity. Resveratrol is a naturally occurring antioxidant. In vitro studies have shown the effectiveness of Resveratrol in protecting against oxidative damage induced by different stressors. The antioxidant capacity of Resveratrol reduces the injury on cells due to toxic compounds as naphthalene or heavy metal. Much science has focused on the efficiency of Resveratrol in reducing the risk of cardiovascular diseases. Resveratrol could protect LDL against peroxidative degradation by chelating copper and scavenging free radical. Resveratrol has been found to decrease lipids peroxidation level. It is also a potent inhibitor of lipoxygenase activity. Resveratrol can play an important role against lipids oxidation. A study conducted by a Naturex scientists team has shown that resveratrol is likely to decrease the level of DMBA (Dimethylbenz(a)-anthracene), a carcinogenic agent. These results need to be confirmed with further investigations.

**References**

13. Benaifer and al: Inhibitory effect of Resveratrol and related compounds on the macromolecular synthesis in HL-60 cells and the metabolism of 7,12 Dimethylbenz(a)anthracene by mouse liver microsomes.