

## **Polysaccharopeptides of *Coriolus versicolor*: physiological activity, uses, and production.**

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The protein-bound polysaccharides or polysaccharopeptides produced by *Coriolus versicolor* are effective immunopotentiators, which are used to supplement the chemotherapy and radiotherapy of cancers and various infectious diseases. Antitumor activity of polysaccharopeptides has been documented. Several kinds of protein-bound polysaccharides have been shown to be produced by the white rot fungus, *C. versicolor*. Although some of these polymers are structurally distinct, they are not distinguishable in terms of their physiological activity. This review focuses on the physiologically active polysaccharopeptides of *C. versicolor*. In nature, *C. versicolor* occurs as a mushroom body, but the fungus can be grown as mycelial biomass in submerged culture in bioreactors. Mushrooms gathered in the wild, cultivated mushrooms, and the mycelial biomass of submerged culture are used to produce the polysaccharopeptides. Submerged cultures are typically carried out in batches lasting 5-7 days and at 25-27 degrees C. Hot water extraction of the biomass is used to recover the thermostable polysaccharopeptides that are concentrated, purified, and dried into a powder for medicinal use. In view of the documented physiological benefits of these compounds, extensive research is underway on the structure, composition, production methods, and use of new *C. versicolor* strains for producing the therapeutic biopolymers. Properties, physiological activity, recovery, and purification of the bioactive polysaccharopeptides are discussed.