**Title:**

Analysis of nutrient composition and determination of active substances of *Craterellus cornucopioides.*

**Abstract:**

**Keywords:**

*Craterellus cornucopioides*

Nutritional composition

Polysaccharides

Antidiabetic activity

1. **Abstract**
2. **Introduction**

Diabetes is a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both, and caused a series of health problems1. Diabetes is the result of an integrated metabolic disorder that leads to higher cardiovascular disease morbidity and mortality2. At the same time, diabetes can lead to many complications, including retinopathy that may lose vision, kidney disease leading to renal failure, neuropathy, etc1. Epidemiological studies have shown that the risk of diabetes and its complications is mainly affected by daily diet3. Reasonable supplementation of edible fungi in the diet will be of great benefit to the prevention and treatment of diabetes and vascular diseases4.

Edible fungi are an ideal dietary supplement for people with diabetes because they contain very low fat and cholesterol and are rich in protein, vitamins and minerals5. Many edible fungi with hypoglycemic activity have been reported so far, and many edible fungi have also been reported to have other medicinal activities, such as anti-tumor, blood pressure lowering and immunity enhancement6.

Although there have been some reports on the nutrient composition of *Craterellus cornucopioides*, such as protein content, amino acid composition and so on7. However, there is still a lack of systematic and complete coverage of its nutrients.

Therefore this study will systematically evaluate the nutrient composition and anti-diabetic activity of *C.cornucopioides*, determine the main active substances in the extract, and separate and purify the active substance and preliminary structure identification. Finally, the results of in vitro and animal experiments are combined to establish the theoretical basis of the structure-activity relationship. This study not only provides an important reference for nutritious diet, but also has important academic and practical significance for the development and utilization of wild edible fungi resources.

1. **Materials and methods**
2. **Results and discussion**
3. **Conclusion**

**Conflict of Interest**

**Acknowledgments**

**References Primary Sources**

**Secondary Sources**

**Uncategorized References**

1. American Diabetes Association, Diagnosis and classification of diabetes mellitus, *Diabetes care,* 2014, 37, S81-S90.
2. Kayama, Y., Raaz, U., Jagger, A., Adam, M., Schellinger, I. N., Sakamoto, M., ... & Tsao, P. S. Diabetic cardiovascular disease induced by oxidative stress. *International journal of molecular sciences*, 2015, 16(10), 25234-25263.
3. Tourlouki, E., Matalas, A. L., & Panagiotakos, D. B. Dietary habits and cardiovascular disease risk in middle-aged and elderly populations: a review of evidence. *Clinical interventions in aging*, 2009, 4, 319.
4. Roncero-Ramos, I., & Delgado-Andrade, C. The beneficial role of edible mushrooms in human health. *Current Opinion in Food Science*, 2017, 14, 122-128.
5. Valverde, M. E., Hernández-Pérez, T., & Paredes-López, O. Edible mushrooms: improving human health and promoting quality life. *International journal of microbiology*, 2015.
6. Giavasis, I. Bioactive fungal polysaccharides as potential functional ingredients in food and nutraceuticals. *Current Opinion in Biotechnology*, 2014, 26, 162-173.
7. Kalač, P. Chemical composition and nutritional value of European species of wild growing mushrooms: A review. *Food chemistry*, 2009, 113(1), 9-16.