

МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ  
МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ  
НАЦІОНАЛЬНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ ІМЕНІ О.О. БОГОМОЛЬЦЯ  
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АСОЦІАЦІЯ ВИРОБНИКІВ ФІТОСИРОВИНИ УКРАЇНИ

## **«PLANTA+. НАУКА, ПРАКТИКА ТА ОСВІТА»**

### **Матеріали**

**III Науково-практичної конференції з міжнародною участю,  
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## PROTEOLYTIC ENZYMES OF MEDICINAL PLANT RAW MATERIALS

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Some herbal medicines are of great importance in the pharmaceutical and medical fields because they break down proteins. Plants which contain such substances include papaya, pineapple, kiwi, and actinidia. Those substances are called proteolytic enzymes, or proteases. Proteolytic enzymes are produced in the process of plant biosynthesis; they promote the breakdown of proteins into amino acid components and thus promote assimilation. The action of proteolytic enzymes is enhanced by chemical reactions that support normal metabolic functions in the human body. Drugs that contain plant proteolytic enzymes are also widely used in anti-inflammatory therapy. Reviews of various studies show that enzymes help reduce the levels of substances that are responsible for inflammation, because they stimulate the immune system to excrete substances that fight it [1,2].

Actinidia (*Actinidia* spp) are species of shrubs (sometimes vining) with abundant annual fruiting. Actinidia are medicinal, ornamental, and food plants. Medicinal raw materials are fruits (*Fructus Actinidae*), harvested during the fruiting period. They are used in medicine and pharmacy as fresh fruit, in the form of tablets and capsules, or in combination with other types of plant raw materials and active substances. Actinidia is prescribed as a laxative, an anti-inflammatory (preventive treatment of arthritis), or as an enzyme preparation. It is widely used in Chinese folk medicine. One of the valuable substances of actinidia is actinidin, used in medical practice for the normalization of digestion and anti-inflammatory effect, which leads to the repair of tissues and metabolic processes in the gastrointestinal tract [1,2].

There is a collection of Actinidia species in M.M. Grishko National Botanical Garden of National Academy of Sciences of Ukraine (Kyiv, Ukraine). This collection includes 6 species and over 300 different cultivars and forms; at least 15 cultivars have been established and registered in Ukraine. This collection provides valuable material for further phytochemical research on actinidia [1].

Actinidia is currently cultivated in Ukraine and is well established as a raw material, so there is high interest in further research on the content and activity of proteolytic enzymes in this domestic raw material.

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