

#### 14. PLANT PRODUCTS GEMMAE - SOURCES OF ACTIVE PRINCIPLES

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**Introduction:** Gemotherapy is based on using the so-called "stem cells", which are embryonic plant tissues, namely young parts that hold the regenerating power of the plant. Plant products used as sources of active ingredients with valuable therapeutic qualities are buds, branches, internal bark or root bark of young branches, sap, seeds germinated and young seedlings. Bioactive complex of these plant products can quickly intervene in human metabolism, producing series of reactions at the molecular and cellular level of eliminating foreign substances that help detoxify the locked cells (based on the specific action of certain organs) and resume their functionality. Use of gemmoderivates shows a gentle therapy, with a deep action and without negative consequences. Classical gemmotherapy was initiated by Belgian doctor Pol Henry (in 1950), which has withstood time and in the last decades show a rising interest.

**Purpose:** Qualitative and quantitative analysis of flavonosids and tannins in buds *gemmae* of woody plants.

**Materials and Methods:** As a biological material for chemical study served buds of horse chestnut trees, walnut, white birch, white poplar and cherry. Flavonosids qualitative study was conducted by applying color or precipitation reactions and quantitative- spectrophotometer. Qualitative analysis was performed by tannins specific reaction on TLC, here quantified by titrimetric method.

**Results:** The result of the chemical study of flavonosids in plant products *gemmae* of *Aesculus hippocastanum*, *Juglans regia*, *albosinensis Betula*, *Populus alba*, *Prunus avium* established the presence of the following constituents flavonoids. In the result of qualitative reactions we determined the presence of flavones, flavonols, flavanols, anthocyanins, aurons and chalcones in *Pv gemmae*. The spectrophotometric study of flavonoids shows that the maximum content belong white poplar buds-7.208 %, then decreasing at Walnut - 6.808 %, cherry-3,508 % horse chestnut-2.912 %, white birch-2.746 %, birch-2.220 %. The specific reactions for tannins identification demonstrate the presence of condensed tannins and hydrolyzable tannins in buds. The titrimetric dosage denotes the presence of a high content in analyzed buds, most being in the horse chestnut buds ( 20.541 % ), followed by the walnut ( 15.406 % ). The cherry buds contain ( 9.928 % ), followed by white poplar buds ( 6.847 % ) and white birch ( 6.505 % ) and the lowest content of tannins have the buds of white birch (2, 326 %).

**Conclusions:** Thus, the analyzed buds besides the specific biocomplex conditioned by the presence of specific meristematic tissue may also contain large quantities of tannins and flavonosides with valuable therapeutic qualities. The buds represents a complex biological entity, in which is realized a synergy of the components in the human body.

**Keywords:** gemotherapy, meristems, flavonosids, tannins

#### 15. NEW VEGETABLE DRUGS GEMMAE - SOURCES OF ACTIVE PRINCIPLES

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**Introduction:** Gemmotherapy is based on using the so-called "stem cells", which are embryonic tissues, namely young parts that hold the regenerating power of the plant. Buds, branches, internal bark of roots or bark of young branches, sap, germinated seeds and young seedlings represent a valuable source of active principles with important therapeutic qualities. Bioactive complex of these vegetable drugs quickly intervenes in human metabolism, producing series of reactions at the molecular and cellular levels, participating in evacuation of toxic substances. These processes help to detoxify the locked cells (based on the specific action of certain