

**THE *POPULUS NERVIRUBENS* ALB. SCLERENCHYMA:  
GENESIS OF CELLS**

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The paper presents a brief overview of information on the Genesis of plant sclerenchyma cells, indicating the role of leaves and lateral buds in the induction of their differentiation, some phytohormones, the position of cells in the body. For anatomical studies, samples of the stem and trunk of *Populus nervirubens* Alb. were used different age: one and seven years. In stem annual escape poplar cells sklerenhima presented extradinarily fibers and sclereids located generally solitary cove in the parenchyma under phelloderma or near the fibers. In the cortex of the stem of the seven-year-old *P. nervirubens* shoot, soft cell bast cell complexes alternate with groups of solid bast fibers that intersect the cells of the phloem parenchyma parenchyma, some of which differentiate into fibrous sclereids of various shapes. Between groups of fibers of hard bast, a part of the cells of the soft bast parenchyma is differentiated into sclereids, which are associated with fibers. In the outer part of the cortex, some cells of phelloderm and phelleme differentiate into sclereides, the sclerenchyma fibers lose most of the pore channels. A model of the phytomere integration system of a dicotyledon woody plant is considered, in which attention is paid to the axial and radial integration of cells and tissues due to the activity of the apex shoot and cambium, as well as the value of the auxin and potassium gradient. In the case of mechanical pressure of an elastic film on the stem of the shoot of *P. nervirubens* and in case of mechanical damage to the stem, its anatomical and morphological structure is determined, determined by the regeneration ability of the cambium and phellogen, their derivatives in relation to the applied impact. Dedifferentiation of sclerenchyma fibers by phelloderm cells and the formation of sclereids in callus parenchyma were noted.

**Key words:** sclerenchyma, fibers, sclereides, cell genesis, phelloderm.

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