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FLAVONOID GLYCOSIDES OF THE LEAVES OF *Pueraria hirsuta*

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In the leaves of *Pueraria hirsuta* L. (Thunberg kudzu bean), fam. Leguminosae, growing in Georgia we have detected six flavonoid compounds derived from quercetin and kaempferol [1], including a flavonoid glycoside, robinin, from which the antiuremic drug flaronin has been created [2].

The individual flavonoid (**1**) crystallized out from a chloroform-purified aqueous alcoholic extract. By extraction with ethyl acetate, the mother liquor remaining after the separation of this compound yielded the total flavonoids, from which the individual compounds (**1**)-(**4**) were isolated.

Flavonoid (1) — mp 192-193°C; $[\alpha]_D^{20}$ −83.5° (c 0.1; ethanol–DMFA 99:1), $\lambda_{max}^{C_2H_5OH}$, nm: 355, 265. This was decomposed by acid into an aglycon — kaempferol, with mp 274-278°C, *D*-galactose and *L*-rhamnose. The yield of the aglycon was 36%. Substance (**1**) was identified as robinin [2].

Flavonoid (2) — mp 182-186°C; $[\alpha]_D^{20}$ −26.5° (c 0.5; DMSO), $\lambda_{max}^{C_2H_5OH}$ nm: 363, 255. This was decomposed by acid into quercetin with mp 302-305°C, *D*-glucose, and *L*-rhamnose. Flavonoid (**2**) was characterized as rutin [3, 5].

Flavonoid (3) — mp 181-184°C; $[\alpha]_D^{20}$ −32.5° (c 0.5; DMSO); $\lambda_{max}^{C_2H_5OH}$, nm: 352, 266. This was decomposed into kaempferol and rutinose. Substance (**3**) was identified as nicotiflorin [3, 4].

Flavonoid (4) — mp 239-242°C; $[\alpha]_D^{20}$ −23.1° (c 0.52; DMSO), $\lambda_{max}^{CH_3OH}$, nm: 250, 260 sh. Acid hydrolysis formed the aglycon daidzein with mp 320-322°C and *D*-glucose. Substance (**4**) proved to be the isoflavone daidzin [3].

The amount of robinin in the leaves of *P. hirsuta* was 1.7%, of which 1.4% was isolated by direct crystallization. The considerable raw material resources of *P. hirsuta* in Georgia and its high robinin content permit this plant to be recommended as an additional source of the drug flaronin [5].

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