trans-olefinic protons); mass spectrum, m/z (%): 178 (M^+, 100%), 147 (90), 119 (30)]; permitted it to be regarded as methyl p-coumarate, as was confirmed by the results of a comparison with an authentic sample obtained previously from *H. latifolium* [3].

This is the first time that methyl p-coumarate has been detected in the plant *H. perforatum.*

The results of a comparative investigation of the components of *H. perforatum* collected in the Baisun region (I) and in Chimgan (II) are given below:

Compound	Amounts of substances (on the mass of the dry epigeal part)		mp. °C
	I	II	
Skimmianine	0.04	0,001	175—176
Evoxine	0,025	—	155—156
7-Isopentenyloxy-γ-fagarine	—	0,0005	104—105
Perfamine	0,089	—	164—165
Flindersine	0,016	0,113	190—191
Haplamine	0,116	0,448	200—201
Eudesmine	0,254	0,145	106—107
Methyl p-coumarate	0,0006	—	135—136

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SYNTHETIC ANALOGS OF Peganum ALKALOIDS.

II. SYNTHESIS OF 5-METHOXY- AND 5-HYDROXY-SUBSTITUTED DEOXYVASICINONES AND DEOXYPEGANINES

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Continuing work on the synthesis of analogs of alkaloids of the peganine series [1], we have obtained 5-methoxy- and 5-hydroxy-substituted deoxyvasicinones (DOVs) and deoxypeganines (DOPs). The necessary 6-methoxyanthranilic acid (IV) was obtained from m-dinitrobenzene (I), which was converted into 6-methoxy-2-nitrobenzonitrile (II) as described in [2]. The latter was reduced by the usual method [3] to the amino derivative (III), which was hydrolyzed with 20% NaOH [4] to (IV) (scheme). By the condensation of (IV) with α-pyrrolidone under conditions given previously [1] we synthesized 5-methoxy-DOV (V), mp 140-141°C, hydrochloride 222-225°C (decomp.). NMR ($CDCl_3$), ppm: 3.00 (2 H, t, C-9); 2.13 (2 H, m, C-10); 4.00 (2 H, m, C-11); 3.80 (3 H, s, OCH_3); 7.42 (1 H, t, J = 7.5 Hz, C-7); 6.73 and 7.00 (1 H each, d, J = 7.5 Hz, C-6, C-8). The mass spectrum of (V) showed a difference from the spectra of the 6-, 7-, and 8-methoxy isomers [5] mainly in the relative intensity of M^+ and the fragmentary ions. A certain analogy in the fragmentation of 8-methoxy-DOV consists in the formation of the $(M - 1)^+$ and $(M - 3)^+$ ions. The ejection of HCO, observed in 8-methoxy-DOV has become the main process in the case of (V) (see scheme). The directions of fragmentation were conformed by measurements of the elementary compositions of the fragmentary ions. Thus, analysis of mass spectra permits a determination of the positions of a methoxy group in the aromatic ring of a quinazolone system.

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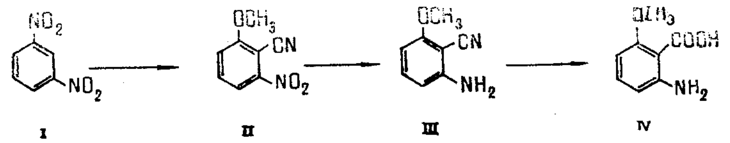

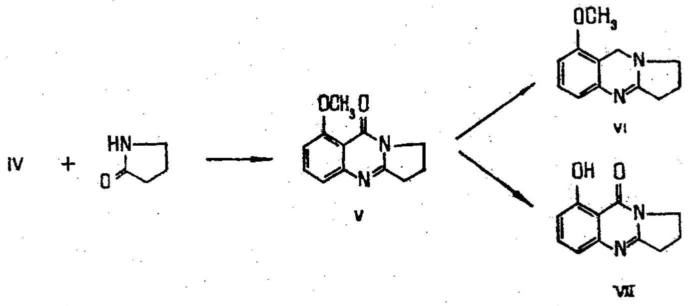

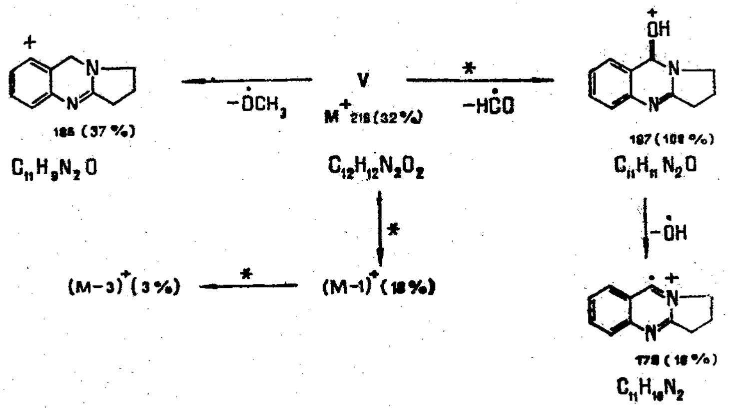

5-Methoxy-DOP (VI), mp 136–138°C; hydrochloride: mp 243–246°C (decomp.) and 5-hydroxy-DOV (VII), mp 155–156°C; hydrochloride, mp 220–225°C; were obtained from (V) by the method described previously [1]. The mass spectra of (VI) and (VII) showed fragmentation similar to that for isomers described previously [5]. The main direction of breakdown is the formation of the $(M-1)^+$ peak, which is comparable in intensity with M^+ (100%).

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