〔*Chem. Pharm. Bull.*, **36**, 2226 (1988)〕

Studies on Persicae Semen. V. Separation and Characterization of Globulin Polypeptides from Persicae Semen

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Some properties of globulin polypeptides from Persicae semen were investigated. PR-A was separated into acid polypeptides A_1 and A_2, and basic polypeptides, a mixtune of A_3, A_4, and A_5 (A_3-A_5), by ion-exchange chromatography in 6 M urea. N-Terminal amino acids were determined as alanine for A_1, alanine and glutamine for A_2, and glycine for A_3-A_5 by the use of a gas-phase sequencer. As regards amino acid composition, A_1 and A_2 showed higher glutamine (and glutamic acid) content, and lower contents of basic amino acids (lysine, histidine and arginine) as compared with A_3-A_5. It seemed that PR-A existed as disulfide-linked A_1A_3-, and A_2A_4- and A_2A_5- species with molecular weights of 65000, 59000, respectively.

〔*Shoyakugaku Zasshi*, **42**, 116 (1988)〕

Studies on Resources of Crude Drugs (II) Morphological Studies and Constituents of Berberine Type Alkaloids of Chinese *Coptis* Rhizome

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Anatomical studies were carried out on Chines *Coptis* Rhizomes and herbal specimens of their original plants, and the results were compared with those of the plants from Thailand, Burma, India and Japan. Our studies on their internal structures generally confirmed the observations reported in the previous papers. However, we found that stone cells were present in the pith of Weilian and *Coptis chinensis*, Yalian, *C. deltoidea*. The quantities of six protoberine alkaloids, berberastine (**1**), jateorrhizine (**2**), coptisine (**3**), palmatine (**4**), berberine (**5**), epiberberine (**6**), were determined by high performance liquid chromatography. Weilian contained **3**, **5**, and **6** in large quantities than other *Coptis* Rhizomes.

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Induction of (2′-5′) Oligoadenylate Synthetase in Serum-Starved HeLa S3 Cells by Growth Factors and Its Role in Growth Regulation.

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When serum-starved HeLa S3 cells were stimulated to proliferate by addition of FCS, 2-5A synthetase activity was induced. Although no IFN activity was detectable in the HeLa S3 cell-conditioned culture medium after growth stimulation, addition of anti-IFN-β monoclonal antibody inhibited both the expression of 2-5A synthetase gene and the production of the enzyme, suggesting that endogenous IFN-β was involved in 2-5A synthetase induction. Purified preparations of three growth factors, EGF, PDGF, and insulin, also induced 2-5A synthetase through IFN-β. when serum-starved HeLa S3 cclls were treated with FCS, DNA synthesis was initiated synchronously, with peaks after 12 and 32 h, although the level of 2-5A synthetase reached a maximum after the first peak.