in plasma containing 0.2 $\mu\text{g.}$ of reserpine/ml. showed that the platelet 5HT content decreased slowly to a value, at 75 min., of between 30 and 50% of the preincubation content. Approx. 20% of the 5HT is still retained by the cell after 24 hr. of incubation.

Comparison of the gradient distribution of 5HT in homogenates from control and reserpine-treated platelets revealed that the granule-rich layer *C* was the most reserpine-sensitive subfraction. The 5HT content was decreased to zero after 60 min. in most experiments. Other fractions showed less change in 5HT content.

Preincubation of the platelets with 5HT (2 $\mu\text{g.}/\text{ml.}$), before reserpine treatment, resulted in essentially the same subcellular profiles. Between 70 and 90% of the reserpine in the cell was associated with the low-density membrane fraction *A*, and 40–70% of this was tightly bound to the membrane fragments. Incubation of isolated washed granules with reserpine showed a concentration-dependent 5HT release, which was optimum above 0.2 $\mu\text{g.}/\text{ml.}$

A tentative explanation is presented for the mechanism of action of reserpine in the platelet.

- Bartholini, G., Da Prada, M. & Pletscher, A. (1965). *Nature, Lond.*, **205**, 400.
 Carlsson, A., Hillarp, N. Å. & Waldeck, A. (1963). *Acta physiol. scand.* **59**, Suppl. 215, 1.
 Carlsson, A., Shore, P. A. & Brodie, B. B. (1957). *J. Pharmacol.* **120**, 334.
 Crawford, N. (1965). *Clin. chim. Acta*, **12**, 274.
 Glazko, A. J., Dill, W. A., Wolf, L. M. & Kazenko, A. (1956). *J. Pharmacol.* **118**, 377.
 Hughes, F. B., Shore, P. A. & Brodie, B. B. (1958). *Experientia*, **14**, 178.
 Minter, B. M. & Crawford, N. (1967). *Biochem. J.* **105**, 22P.

Characterization of the Ribonucleic Acid Product Synthesized by an Influenza A₂ Virus-Induced Ribonucleic Acid Polymerase *in vitro*

By M. G. PAGE, B. J. RUCK and K. W. BRAMMER
 (Biochemical Research Department, Therapeutics Research Division, Pfizer Ltd., Sandwich, Kent)

The appearance of an RNA polymerase activity in the microsomes of chick chorioallantoic membranes infected *in vitro* by an influenza A virus (PR8 strain) has been described (Ho & Walters, 1966). A similar enzyme activity has now been identified in the chorioallantoic membranes of embryonated eggs infected with an influenza A₂ virus (Leningrad/62 strain). The induced RNA polymerase activity, as measured by the incorporation of [³H]GMP into RNA from [³H]GTP by the microsomal fraction, reached a maximum at 6–8 hr. after infection (50–100 μmoles of GMP/mg. of protein), which was at least 10-fold greater than

that of microsomes from uninfected cells. The influenza A₂-induced RNA polymerase was dependent upon the presence of Mg²⁺ and all four ribonucleoside triphosphates and was not inhibited by deoxyribonuclease or actinomycin D.

Influenza viruses have been reported to contain heterogeneous RNA components with sedimentation coefficients from 7s to 21s (Duesberg & Robinson, 1967; Nayak & Baluda, 1967; Barry & Davies, 1968). ³²P-labelled RNA components from the influenza virus used in these experiments sedimented on sucrose density gradients at 18s, 14s and 7s. The nucleotide composition of the 18s RNA was: CMP, 27.6; AMP, 15.0; GMP, 22.0; UMP 35.4; that of the 14s RNA was: CMP, 29.8; AMP, 13.8; GMP, 25.6; UMP, 30.8; and that of the 7s RNA was: CMP, 26.5; AMP, 21.2; GMP, 28.1; UMP, 24.2.

Microsomes from infected membranes incubated in the presence of [³H]GTP, the other three ribonucleoside triphosphates and actinomycin synthesized RNA that sedimented in the 12–18s region. A ribonuclease-resistant component sedimenting at about 12s was also detected. 7s RNA was not detectable since degraded RNA, which arose during the *in vitro* incubation, was present in this region of the gradient. The 12–18s RNA extracted from microsomes incubated with all four ³H-labelled ribonucleoside triphosphates had a nucleotide composition of: CMP, 20.4; AMP, 20.4; GMP, 24.9; UMP, 34.3. High-molecular-weight RNA was not detected in incubations of microsomes from uninfected cells.

The RNA polymerase of the microsome fraction of influenza A₂-infected cells therefore synthesized RNA *in vitro* with similar sedimentation properties and base composition to that found in the purified virus.

- Barry, R. D. & Davies, P. (1968). *J. gen. Virol.* **2**, 59.
 Duesberg, P. H. & Robinson, W. S. (1967). *J. molec. Biol.* **25**, 383.
 Ho, P. K. & Walters, C. P. (1966). *Biochemistry*, **5**, 231.
 Nayak, D. P. & Baluda, M. A. (1967). *J. Virol.* **1**, 1217.

The Chromogranin of the Adrenal Medulla: a High-Density Lipoprotein

By KAREN B. HELLE (Department of Biochemistry, University of Bergen, Norway)

Gel chromatography of crude lysate of the chromaffin granules has shown that a phospholipid fraction, free of protein, precedes the main protein peak in the eluate when a tris-sodium succinate buffer of low ionic strength is employed. At higher ionic strength the phospholipid could not be separated from the protein moiety (Smith & Winkler, 1967).