Wednesday, July 15, 1981

Plenary Lectures

11:20–13:00 h

The Pathobiology of Blood Cell Membranes

R. F. A. ZWAAL
University of Limberg
Maastricht, The Netherlands

Platelet Functional Architecture

Edward Kowalski Memorial Lecture

J. G. WHITE
University of Minnesota
Minneapolis, Minn., USA

Grand Ballroom

Thursday, July 16, 1981

Oral Presentations

Fibrinogen – V

Abnormalities, Products of Proteolysis

08:00–09:30 h

Fibrinogen – VI

Degradation Products

09:45–11:00 h

Dominion Ballroom South

0558

08:00 h

BIOSYNTHESIS OF HUMAN FIBRINOGEN IN A CELL FREE SYSTEM. G. Uzan, N. Ardaillou, M.J. Larrieu, A. Kahn, G. Marguerie, Hôpital de Bicêtre, Paris, France.

In order to investigate the early events involved in the biosynthesis of human fibrinogen mRNA was isolated from human liver and translated in a rabbit reticulocyte system. The translation was carried out in the presence of ^{35}S-Methionine. Neosynthesized fibrinogen was isolated by immunoadsorption on microcolumns of anti-fibrinogen IgG coupled to ultrogel and analyzed by vertical slab polyacrylamide gel electrophoresis followed by autoradiography of the gel. Additional identification was achieved by immunological competition with non labeled plasmatic fibrinogen. The results indicated that each polypeptide chain was synthesized separately. The neosynthesized Aα chain exhibited a higher molecular weight that the plasmatic Aα chain. Based on electrophoretic mobility a difference in molecular weight of 2.000 dalton was estimated suggesting the existence of a signal sequence on the nascent Aα chain. The neosynthesized Bβ and γ chains showed lower molecular weight, when compared to the corresponding plasmatic Bβ and γ chains. Since the Bβ and the γ chains are normally glycosylated, the presence of a signal peptide on the nascent chains was not definitely established from electrophoretic mobility alone. In addition totalhuman mRNA were partially fractionated on a sucrose gradient and the different fractions were translated. The precursor of the Aα, Bβ and γ chains were synthesizedby mRNA present in the 18 S fraction. These observations established that human fibrinogen was not synthesized as a single chain large precursor and that separate mRNA exist for each polypeptidic chain.