jedoch nicht mit der gleichen Intensität. In 1:2 Verdünnung des Rinder-Serums (in physiologischem NaCl) blieb die Rouleau-Bildung noch unverändert; in einer Verdünnung von 1:4 wurde sie bereits merklich abgeschwächt.

Die Zugabe von Rinderalbuminfraktion V (Endkonzentration 5%) zu frischem Serum verstärkte kaum die Rouleau-Bildung. Die Rolle des Albumins in der Rouleau-Bildung konnte jedoch unter den gleichen Bedingungen nachgewiesen werden, wie TOMCSIK und LITSCHEL[2] unlängst mit Pferdeerythrocyten und mit Pferdeserum beobachteten. Die Zugabe von Lysolecithin Mann (Endkonzentration 1:32000) hat auch die Rindererythrocyten-Rouleaus sofort desintegriert. Es entstanden isolierte, kugelförmige Zellen mit gezacktem Rand. Das Zufügen von Albumin restituierte die Scheibenform der Zellen und die Rouleaus. Die Bildung von Rinder-Rouleaus hört gleich derjenigen der Pferde-Rouleaus auf, wenn das frische Serum auf 37° erwärmt wird. Die Inaktivierung des Pferdeserums vollzieht sich aber dreimal schneller als diejenige des Rinderserums. In beiden Fällen wird die Scheibenform der Erythrocyten und die Rouleau-Bildung nach Zugabe von Rinder-Albumin Fraktion V (Gesamtkonzentration 5%) zurückerstattet. Rouleaus entstanden bei den Rindererythrocyten – im Gegensatz zu Pferdeerythrocyten – nicht, wenn Albumin allein (ohne homologes Serum) zugegeben wurde.

Summary. Not a trace of rouleau formation could be observed with native beef erythrocytes under varying conditions. A typical rouleau formation and a markedly increased sedimentation rate could, however, be elicited when the surface layer of the beef erythrocytes was carefully removed with proteolytic enzymes. This is an additional evidence that the beef erythrocytes are enveloped in a surface sheet, which inhibits their hemagglutination and their rouleau formation. Papain is a proteolytic enzyme, which is inactive regarding rouleau formation. Lysolecithin disintegrates the rouleaus, albumin restores them.

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The Isolation and Characterization of Cholesterol in Portuguese Men-of-War *(Physalia)*

The diversity of sterols, which are present in marine organisms, has been amply demonstrated by BERGMANN[1] and he has shown that a number of coelenterates contain cholesterol. We should like to report the occurrence of cholesterol in Portuguese Men-of-War (*Physalia*).

The sails of Portuguese Men-of-War, collected from the Gulf of Mexico, were homogenized for 2–3 min in chloroform:methanol (2:1). This homogenate was filtered to remove the sails and the solvents were removed to give the lipid extract which was then chromatographed on silica by thin layer chromatography with chloroform:benzene (50:50)[2].

Relative retention times of sterol extract

Column	Column temperature °C	Free alcohol	TMSi[a]	TFA[b]	Acetate
A	220	2.00 (2.01)	2.43 (2.41)		
B	220	8.53 (8.45)			
C	222	7.29 (7.28)		2.08 (2.08)	5.62 (5.60)
D	222	2.88 (2.90)		2.62 (2.60)	6.88 (7.00)

[a] Trimethyl silyl ether derivatives. [b] Trifluoracetate derivatives.

Retention times are relative to cholestane (figures in brackets are relative retention times for a known sample of cholesterol). Columns were prepared on acid washed Gas Chrom P (100–120 mesh). Columns A, C and D were coated with 1% F60 + 0.5% cyclohexanediol succinate, 1% neopentylglycol succinate, and 2% QF 1 (a fluoroalkyl silicone polymer) respectively. Column B was coated with 1% neopentylglycol succinate on Gas Chrom P which had first been coated with polyvinyl pyrollidone[7].

The sterol fraction, one of the major fractions of the separated lipids, was shown to have one major sterol by gas liquid chromatography. Derivatives of the sterol were prepared by the method of VAN DEN HEUVEL, SJOVALL and HORNING[3], trimethyl silyl ethers by the procedure of LUUKKAINEN, VAN DEN HEUVEL, HAAHTI and HORNING[4].

The gas liquid chromatography data for these derivatives are summarized in the Table and confirm the characterization of the sterol as cholesterol.

Cholesterol has recently been isolated from higher plants, *Solanum tuberosum* and *Dioscorea spiculiflora*[5] and a species of *Penicillium*[6].

Résumé. Les auteurs ont extrait un stérol d'une méduse des eaux portugaises (*Physalia physalis*) et l'ont identifié par chromatographie en phase gazeuse comme étant du cholestérol.

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