

We wish to thank Dr. DANIEL MAZIA for his encouragement and direction.

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Zusammenfassung

Man findet in den elektronenmikroskopischen Bildern dünner Schnitte der Kernmembran von *Amoeba proteus* eine charakteristische Porenstruktur, wie sie BAIRATI und LEHMANN (1952) mit einer andern Technik gezeigt haben. Querschnitte und semitangentielle Schnitte durch die Kernmembran zeigen eine äussere kontinuierliche und darunter eine innere Porenschicht. Bestandteile des Kerninhaltes können unterschieden werden.

DISPUTANDA

Contamination of Electron Microscope Preparations

Some Remarks to the Brief Report on *Metabolic Chromosomes Isolated from Blood Cell Nuclei of Various Animals* by G. YASUZUMI *et al.*¹

In a recent paper by YASUZUMI *et al.*¹ some electron micrographs are included which supposedly represent chromosomes of various vertebrate animals. The fourth one of these micrographs looks very familiar to me since the "chromosome" closely resembles a bacterium I have been cultivating in pure culture for some years: a stalked bacterium, *Caulobacter spec.* Up to the present this genus has received little attention, though one species had been isolated as early as 1905 by JONES². The genus was described by HENRICI and JOHNSON³. Electron micrographs and a short description of this bacterium have been given by HOUWINK and VAN ITERSOM⁴ and, with more particulars, by HOUWINK⁵. Figure 1 shows that the stalk may bear a number of cross-bars the nature of which I have not been able to elucidate. The fact that the latter are similar to the two cross-bars shown on YASUZUMI's micrograph adds to the degree of certainty with which the organism may be identified.

The genus is probably common in fresh-water. My first strain, however, was isolated from distilled water. As every electron microscopist uses distilled water in the preparation of his specimens, I am not surprised at *Caulobacter* turning up in an E. M. study on a subject not in the least related to bacteriology.

Only rarely, however, does *Caulobacter* occur in E. M. preparations. Another contamination of organic origin is found much more frequently. On electron micrographs of shadowed specimens it looks a double-stranded spiral (Fig. 3). Usually one of the ends is rounded and here one or a few "flagella" seem to be inserted. With many specimens, the square cut appearance of the other end suggests that they have been broken in two parts. The

diameter is 5000–7000 Å. A description and some micrographs of these as yet unidentified "organisms" have

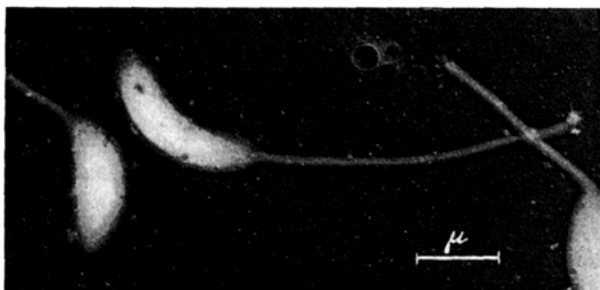


Fig. 1 and 2.—*Caulobacter spec.*



Fig. 3.—Unidentified "micro-organism".

been published by WIGAND and PETERS¹. For further particulars I refer to their paper. Electron microscopists would be well advised to make themselves acquainted with the appearance of this common contamination.

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Zusammenfassung

In dieser Zeitschrift wurden vor kurzem von YASUZUMI *et al.* elektronenmikroskopische Aufnahmen von Chromosomen veröffentlicht. Auf den Bildern sind gewisse merkwürdige Teilchen zu sehen. In der vorliegenden Notiz macht der Verfasser darauf aufmerksam, dass Mikroorganismen gelegentlich Präparate für elektronenmikroskopische Untersuchungen verunreinigen können.

¹ R. WIGAND und D. PETERS, *Z. wiss. Mikrosk.* 60, 405 (1952).

¹ G. YASUZUMI, T. YAMANAKA, S. MORITA, Y. YAMAMOTO, and J. YOKOYAMA, *Experientia* 8, 218 (1952).

² M. JONES, *Centr. Bakt. Parasitenk.* Abt. II, 14, 459 (1905).

³ A. T. HENRICI and D. E. JOHNSON, *J. Bact.* 30, 61 (1935).

⁴ A. L. HOUWINK and W. VAN ITERSOM, *Biochim. biophys. Acta* 5, 10 (1950).

⁵ A. L. HOUWINK, *Nature* 168, 654 (1951).