gene transcription are expressed in a metabolism of histones which is independent from cell duplication and in a change of ratios of labeling of different histone fractions.

The function of different histones in the cell is not known. The independence of their metabolic patterns suggests that their functions are different. The tissues and species specificity of very lysine-rich histones (F1) as well as an increase in their content in nuclei during development[10,11] indicate that the F1 histones are involved in restricting the availability of the DNA template in the process of differentiation. Also the finding that removal of F1 histones from the chromatin will increase the extent to which RNA synthesized on this chromatin will hybridize with DNA[12] is in agreement with this suggestion. In contrast, removal of arginine-rich histones will only increase the rate of RNA synthesis but not its hybridizability[12]. Since the arginine-rich histones specifically interact with RNA polymerase[13], it is possible that this histone fraction regulates the response of the genome to environmental changes. Results reported in this communication support such a hypothesis.

The results presented have shown that the metabolism of histones, especially the arginine-rich histone fraction, can be detached from cell replication and is a part of the adaptive mechanism by which cells react to changed metabolic conditions[14].

Zusammenfassung. In Ehrlich-Aszitestellen, die ungünstigen Umweltbedingungen ausgesetzt sind, hört die Zellteilung auf. Doch auch ohne DNS-Synthese geht der Histon-Stoffwechsel noch eine Zeitlang weiter, wobei die Synthese der argininreichen Histone dreimal so gross ist wie die der anderen Typen. Diese von der Zellteilung unabhängige Histon-Synthese ist ein Teil des Mechanismus, mit welchem die Zellen versuchen, sich an die neuen ungünstigen Nahrungsbedingungen anzupassen.

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Establishment of Two Mosquito Cell Lines from Larval Tissues of *Aedes w-albus*

During the recent years several mosquito cell lines have been established from larval and adult tissues of *Aedes aegypti*[1–4], *A. albopictus*[2], *A. vexans*[5], *A. vittatus*[6], *Culiseta inornata*[5] and *Anopheles stephensi*[7]. This communication reports the establishment of two more cell lines from larval tissues of *Aedes w-albus*.

The culture medium employed for *A. w-albus* cell cultures was the same as used by SINGH[2] for *A. aegypti* and *A. albopictus* cell cultures. The techniques were also essentially the same as employed for the cultures of *A. albopictus* and *A. aegypti*, with minor modifications. Briefly, the mosquito eggs, weighing about 500 mg obtained from a laboratory-maintained colony, were surface sterilized with 70% ethanol for 2–3 min, followed by treatment with WHITE's[2] solution for 10 min. The surface sterilized eggs were further washed in sterile glass distilled water and allowed to hatch in Rinaldini's salt solution (RSS) under reduced atmospheric pressure. Within 4 h most of the eggs hatched and freshly hatched larvae were then minced in 0.1% trypsin solution in RSS and incubated at 37 °C for 10 min. The dispersed cells and tissue pieces were washed twice in RSS, suspended in 4 ml of the growth medium, and seeded into a 3 oz. prescription bottle. The culture was incubated stationary at 30 °C.

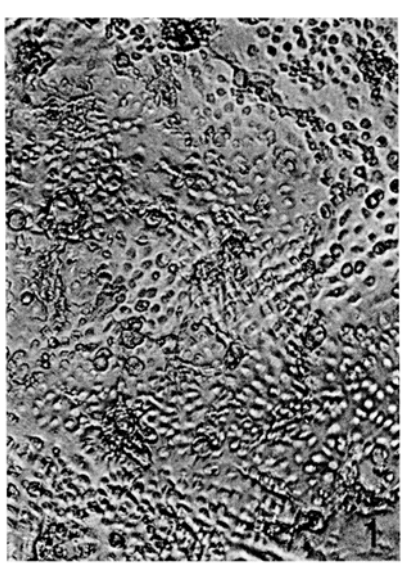

Fig. 1. *Aedes w-albus* cell line (ATC-136). Living culture, ×150.

On the 3rd or 4th day of seeding, a number of active foci of cell multiplication were observed; large patches of cells were observed by the 7th or the 8th day. A few small, bubble-like vesicles were also observed growing out from floating larval tissues, but no further growth of these vesicles was noted.

The first sub-culture of the attached cells was made on the 15th day after seeding, when almost a complete

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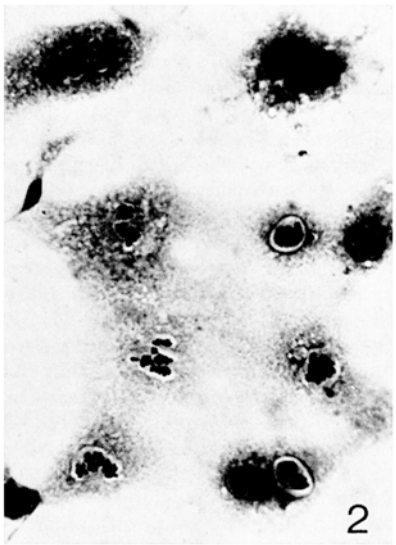

Fig. 2. *Aedes w-albus* cell line (ATC-136). Cells showing mitosis, ×450 (Wright's and Giemsa stained).

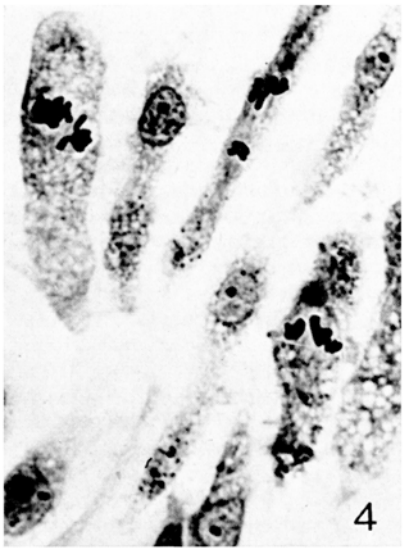

Fig. 4. *Aedes w-albus* cell line (ATC-137). Cells showing mitosis, ×650 (Wright's and Giemsa stained).

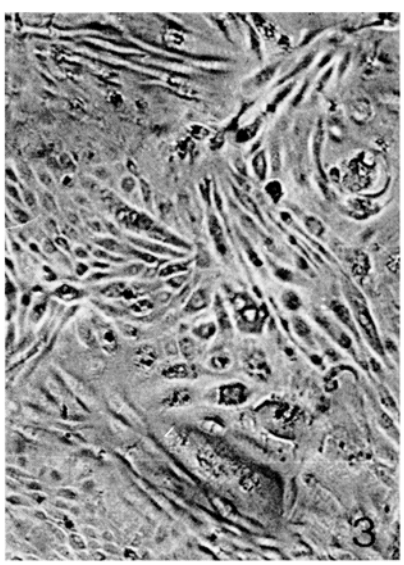

Fig. 3. *Aedes w-albus* cell line (ATC-137). Living culture, ×150.

monolayer had formed. During the first 5 passages the split rate was maintained at 1:2, which was gradually raised to 1:6 by the 10th passage.

The first cell line (ATC-136) was started on 14th July 1969 and the second (ATC-137) on 13th August 1969. So far (June 1970) they have been subcultured 37 and 27 times respectively.

In earlier passages, the cell population in both the lines consisted of multiple cell types similar to those described for *A. albopictus* cell culture[8]. One of the cell line (ATC-136) has a cell population consisting mostly of epithelial-like cells and few fibroblast-like cells (Figures 1 and 2). The other cell line (ATC-137) has a population consisting mostly of fibroblast-like cells and a few epithelial-like cells (Figures 3 and 4). The giant cell population in both the cell lines is almost similar. During the few early passages the cell population in both the cell lines consisted mostly of diploid cells ($2n = 6$). After about ten passages the number of polyploid cells increased noticeably.

The cells from both the lines were stored in liquid nitrogen in the growth medium containing 20% fetal bovine serum and 10% glycerol, and successfully regenerated after 45 days.

Studies on the susceptibility of these cell lines to arboviruses are in progress.

Zusammenfassung. Zwei neue Zellinien von *Aedes w-albus*, die seit der Isolation schon 27 bzw. 37mal kultiviert wurden, sind isoliert worden. Die Zellen konnten 45 Tage in flüssigem Stickstoff aufbewahrt werden, ohne ihre Vermehrungsfähigkeit einzubüssen.

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A Thiamine (Vitamin B_1 or Aneurin) Antimetabolite as a Potent Schistosomicidal Agent

Schistosomiasis is a parasitic disease that infects millions of people in the tropical and subtropical regions. There is no ideal treatment for the disease. Till now, there are 2 classes of compounds that are in classical use, compounds of trivalent antimony[1] and those of thiaxanthone derivatives[2]. Recently, the compound, 1-(5′-nitro-2′-thiazolyl)-2-imidazolidinone (Ambilhar), was found to possess potent schistosomicidal activity[3]. But