

duration of the total generation time or  $G_T$  was 18.8 h on an average.

The findings concerning the length of  $G_2$  are confirmed by experiments of continuous labelling. In a series of cultures, labelled for 3, 4, 5, 6, 7, 8, 9 h, set up for the study of the replication patterns of the heterochromatin, the first labelled metaphases were found in the 7–8 h samples.

In a previous experiment of pulse labelling on short-term cultures of embryonic cells of *Drosophila melanogaster*, a similar duration of the  $G_2$  period of 7 h was determined (DOLFINI and TIEPOLO<sup>2</sup>). The length of S and  $G_2$  appeared to be rather constant in each of the present experiments while those of  $G_1$  showed a higher variability. This finding agrees with the general observations of DEFENDI and MANSON<sup>5</sup>, of TERASIMA and TOLMACH<sup>6</sup> and of SISKEN and MORASCA<sup>7</sup> on mammalian cells. According to these authors, not only does the average duration of  $G_1$  vary considerably from one cell type to another, but also this is the phase in which most of the variation between individual cells occurs within the same cell population and which is affected to a greater extent by physiological and/or environmental factors.

It is interesting to point out that, in spite of the very specific conditions of culture of these insect cells, particularly the relatively low temperature (26°C), the duration of the total cell cycle and of its different phases

is approximately within the same range of those obtained in mammalian cell cultures (CLEAVER<sup>8,9</sup>).

*Riassunto.* La durata media delle fasi del ciclo cellulare ( $G_1$ , S e  $G_2$ ) e del tempo di generazione totale ( $G_T$ ) in una linea stabilizzata di cellule di *Drosophila melanogaster* risulta essere rispettivamente di 1.8, 10.0, 7.2 e 18.8 ore.

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<sup>5</sup> V. DEFENDI and L. A. MANSON, *Nature* 198, 359 (1963).

<sup>6</sup> T. TERASIMA and L. J. TOLMACH, *Expl. Cell Res.* 30, 344 (1963).

<sup>7</sup> J. E. SISKEN and L. MORASCA, *J. Cell Biol.* 25, 179 (1965).

<sup>8</sup> J. E. CLEAVER, *Thymidine Metabolism and Cell Kinetics* (North Holland Research Monographs, Amsterdam 1967), vol. 6, p. 126.

<sup>9</sup> We are grateful to Profs. C. BARIGOZZI, G. ECHALIER and M. FRACCARO for helpful discussion and critical review of the manuscript.

## Some New Data on the Number of Chromosomes of Teleost Fish Obtained by Means of Tissue Culture in vitro

In a previous note in this journal<sup>1</sup> some of us referred to preliminary research made by means of tissue culture in vitro on the somatic chromosomes of some species of teleost fish. This research has recently been developed in our laboratory and the chromosome number of somatic

cells of other species of fish has been accurately determined by the same method. The species studied belong to different families and for almost all of them no cytological data were available in the literature. A list of the species studied with their chromosome number is presented here (Table). A detailed morphological description of their karyotype is in preparation and will be sent for publication shortly.

Numbers of chromosomes of some teleost fishes

Taxa	$2n$
Centrarchidae	
<i>Lepomis gibbosus</i> (Linnaeus, 1758)	46
Characidae	
<i>Hemigrammus caudovittatus</i> (E. Ahl, 1923)	50
Cyprinidae	
<i>Danio devario</i> (Hamilton-Buchanam, 1822)	50
<i>Danio malabaricus</i> (Jerdon, 1849)	50
<i>Brachydanio rerio</i> (Hamilton-Buchanam, 1822)	50
<i>Brachydanio albolineatus</i> (Blyth, 1860)	50
<i>Leuciscus souffia muticellus</i> (Bonaparte, 1837)	50
<i>Leuciscus aula</i> (Bonaparte, 1837)	50
<i>Leuciscus cephalus</i> (Linnaeus, 1758)	50
<i>Alburnus albidus alborella</i> (De Filippi, 1844)	50

*Riassunto.* In questa nota vengono riportati nuovi dati sul numero dei cromosomi di alcune specie di pesci teleostei.

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<sup>1</sup> B. CHIARELLI, O. FERRANTELLI and C. CUCCHI, *Experientia* 25, 429 (1969).

## Aneuploids in Pearl Millet

The classical work of BLAKESLEE and coworkers on *Datura*, that a change in the relative proportions of a group of genes due to variations in chromosome number had an effect on the phenotype, evoked interest of plant geneticists to build up stocks carrying an extra chro-

sosome (Trisomics). In wheat, barley, maize, rye, tomato and peas, such stocks have been developed and found useful for establishing linkage groups<sup>1</sup>. Pearl millet, *Pennisetum typhoides* (Burm.) S. & H. ( $2n = 14$ ), an important grain and forage crop in Asia and Africa and