

Chromosomes in Yeasts

CENTROSOMES and chromosomes were described in our control strain of yeast some four years ago¹. At that time we had to depend on camera lucida illustrations, owing to lack of facilities for photomicrography. Winge and Roberts², while agreeing with our criticisms of Lindegren's³ views on yeast cytology, comment: "The experience of the senior author in searching for the difficultly observable chromosomes in yeasts have not led to a resumption of cytological investigations". In a recent publication, they⁴ dispute our claim of induction of polyploidy and state that technical difficulties should have precluded satisfactory chromosome counts. Lindegren and Rafalko⁵, on the other hand, try to interpret the bodies identified by us as chromosomes as centrioles, but do not extend it to the bodies identified by us as the centrioles.

Yeast chromosomes are neither too small nor too difficult to identify, as is clear from the accompanying photomicrograph (cf. ref. 1, Fig. 1, p. 480) showing

an early metaphase condition. The two chromosomes are orientated on a spindle at the poles of which can be seen the centrioles with the centrospheres.

Photomicrographs illustrating induction of polyploidy and the cytological behaviour of such induced autotetraploids are awaiting publication elsewhere⁶.

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¹ Ranganathan, B., and Subramaniam, M. K., *Sci. and Cult.*, **12**, 478 (1947).

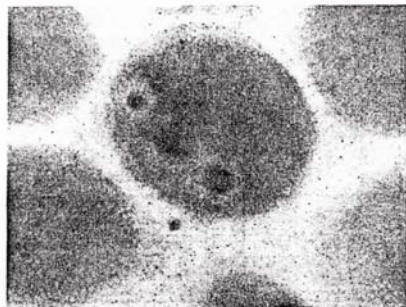
² Winge, O., and Roberts, C., *C.R. Lab. Carlsberg*, **24**, 263 (1948).

³ Lindegren, C. C., *Mycologia*, **37**, 767 (1945).

⁴ Winge, O., and Roberts, C., *C.R. Lab. Carlsberg*, **25**, 85 (1950).

⁵ Lindegren, C. C., and Rafalko, M. M., *Exp. Cell. Res.*, **1**, 169 (1950).

⁶ Subramaniam, M. K., *Cellule* (in the press).



Photograph from a smear of an aerobic liquid culture fixed in Carnoy and stained with iron hæmatoxylin. \times c. 5,750