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The Kernplasmarelation during the life of a pedigreed race of Oxytricha fallax.

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The following conclusions were reached from a study of cells during periods of characteristically different reproductive activity of an 860 generation pedigreed race of *Oxytricha fallax:*

1. A wide variation in the size of the cells and of the nuclei occurs at all periods of the life of the race.

2. The mean size of the cell is smallest at periods of high reproductive activity and becomes progressively larger as the division rate falls.

3. The mean size of the nucleus is smallest at periods of high reproductive activity and becomes progressively larger as the division rate falls.

4. The Kernplasmarelation of individual cells shows a wide variation at all periods of the life of the race.

5. The mean proportion of nuclear to cytoplasmic material is highest during the period of greatest reproductive activity.

6. The size of the cell and the size of the nucleus as well as the Kernplasmarelation are interpreted as an incidental result rather than as a cause of the rate of cell division.

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The reaction between oxygen and hemoglobin.

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There are at present four different views as to the nature of the absorption of oxygen by blood.

The first and oldest view is expressed by the reation,

1 mol. hemoglobin + 1 mol. oxygen $\rightleftharpoons$ 1 mol. oxyhemoglobin.

According to the law of mass action one would have

$$ab = kc, \qquad (1)$$