

原著

Pleodorina Californicaにおける細胞分化

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Cell Differentiation in Pledorina Californica

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Abstract

We could obtain colonies of different cell numbers such as 2 (21), 4 (22), 8 (23), 16 (24), 32 (25), 64 (26), and 128 (27) by isolation and cultivation of reproductive cells in different maturation stages from their mother colonies. Colonies with small cell numbers, such as 2, 4, 8, and 16 are rarely seen in natural but were brought about by this treatment for the first time. Cells in the colonies of small constituting cell numbers differentiated clearly into somatic cells and reproductive cells as well as in the colonies of large cell numbers. Ratios of somatic cells and reproductive cells in these colonies of 7 different constituting cell numbers were calculated and compared. It was clearly shown that the differentiation rate was not fixed but varied even in colonies with same cell numbers. And the rates were distributed differentially depending on the composing cell number of the colonies into somatic cells and reproductive cells as well as in the colonies of large cell numbers. Ratios of somatic cells and reproductive cells in these colonies of 7 different constituting cell numbers were calculated and compared. It was clearly shown that the differentiation rate was not fixed but varied even in colonies with same cell numbers. And the rates were distributed differentially depending on the composing cell number of the colonies.

要約

Pleodorina californicaの様々な成熟段階にあるcolonyからreproductive cellを取り出して培養することにより、2(21)、4(22)、8(23)、16(24)、32(25)、64(26)、128(27)の7種類の構成細胞数からなる娘colonyを得ることができた。2、4、8、および16細胞からなるcolonyは自然にはほとんどみられず、今回の処置によりはじめてつくり出せた。colony中の細胞のsomatic cellとreproductive cellへの細胞分化は少数の細胞数からなるColonyにおいても多数の細胞数からなるColonyにおけるのと同様に明瞭であった。7種類の構成細胞数からなるcolonyにおけるsomatic cellとreproductive cellの比率を調べて比較した。両者の比率は固定したものではなく、同一の構成細胞数からなるcolonyにおいても

様々な値をとり、構成細胞数の違いに依存して異なる分布を示した.
