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Article 7. Assimilation of The Cells' 'Memory' Between Different Phenotypes and Its Implication on Canceration/ 不同表现型细胞间在'思维'上的的同化机制及在癌变过程的指示意义

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Methods:

Step 1. There are two kinds of cultivation conditions simulated in Lab for microbe reproduction process: one is the 'comfortable' condition (Sample 1); the other is under UV-B radiation for cultivation (Sample 2). The microbe samples are collected after sufficient reproduction process (At least ten generations). After this both sample 1 and sample 2 of the same genetic strain are transferred into moisture simulation process.

Step 2. Both sample 1 and sample 2 are cultivated separately and individually in each moisture conditions (T1, T2, ..., Tn);

Step 3. The samples of even mixture between sample 1 and sample 2 (50% for each sample) are cultivated individually in each moisture conditions (T1, T2, ..., Tn) as well; The cultivation condition is the same between step 2 and step 3; step 2 and step 3 is conducted independently;

Step 4. The reproduction rate (or cell division rate) is observed, and the comparison of cell division rates between step 2 and step 3 under the same cultivation condition is conducted: in step 2, the cell division rate of sample 1 and sample 2 is R1 (cell

quantity/time) and R2, respectively; if assimilation of the cells' 'memory' does NOT occur, then the cell division rate of mixture sample is 0.5*(R1+R2); however, if assimilation of the cells' 'memory' does occur, then the cell division rate of mixture sample is not equivalent to 0.5*(R1+R2); if the cell division rate of mixture sample is closer to R1, the sample 1 becomes dominant; if the cell division rate of mixture sample is closer to R2, the sample 2 becomes dominant.

Discussion:

Within the cells of the same genetic strain, cells apparently assimilate each other between different phenotypes. It is expected that sample 1 tends to be dominant during comfortable condition, whereas sample 2 tends to be dominant during adverse conditions. This theory is applicable on the cancerous tissue: when cancerous cell without immunology becomes dominant in cell assimilation process, the whole tissue (or organ) starts to be canceration, so the prevention of cancerous cell assimilation is the key in pathological study. Appendix of this chapter lists the experiment procedure for blood cell cultivation, further support the discussion of this chapter.

Appendix. The simulation methods for blood cell cultivation

Step 1. There are two kinds of cultivation conditions simulated in Lab for blood cell reproduction of a rat (or the same genetic strain): one is the 'comfortable' condition (Sample 1); the other is under UV-B radiation for cultivation (Sample 2). The cell samples are collected after sufficient reproduction process (At least ten generations). After this both blood sample 1 and sample 2 are transferred into simulation process of physiological saline:

Step 2. Simulation process of physiological saline: cells are cultivated individually in different concentrations of physiological saline in Lab, and different cell environment (salinity stress of cell environment or 'thirsty' simulation) are labeled as T1, T2, ..., Tn.

Step 3. The samples of even mixture between sample 1 and sample 2 are cultivated individually in each different concentrations of physiological saline (T1, T2, ..., Tn) as well; The cultivation condition for blood cell is the same between step 1 and step 2, and step 1 and step 2 is conducted independently.

Step 4. The cell division rate in each blood cell type is observed, and the comparison of cell division rates between step 2 and step 3 under the same cultivation condition is conducted: in step 2, the cell division rate of sample 1 and sample 2 is R1 (cell quantity/time) and R2, respectively; if assimilation of the cells' 'memory' does NOT occur, then the cell division rate of mixture sample is 0.5*(R1+R2); however, if assimilation of the cells' 'memory' does occur, then the cell division rate of mixture sample is not equivalent to 0.5*(R1+R2); if the cell division rate of mixture sample is closer to R1, the sample 1 becomes dominant; if the cell division rate of mixture sample is closer to R2, the sample 2 becomes dominant.

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References:

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