reproduction as have appeared being either normal rhythms or the effects of environmental changes of temperature and culture medium. The organisms of the present generation are in as normal morphological and physiological condition as the original "wild" individual isolated to initiate the culture.

This study has demonstrated that, under favorable environmental conditions, the protoplasm of the cell originally isolated possessed (at least) the potentiality to produce similar cells to the number represented by 2 raised to the 3,029th power, or a volume of protoplasm approximately equal to 10^{1000} times the volume of the Earth. I believe this result proves beyond question that the protoplasm of a single cell may be self-sufficient to reproduce itself indefinitely, under favorable environmental conditions, without recourse to conjugation and clearly indicates that senescence and the need of fertilization are not primary attributes of living matter.

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The influence of tartrates upon phlorhizin diabetes.

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A recent communication of Baer and Blum (*Archiv für Experimentelle Pathologie und Pharmakologie*, 1911, 65, p. 1) shows that the subcutaneous administration of a number of organic compounds, containing two carboxyl groups, exercises a remarkable inhibitory influence upon the elimination of urinary nitrogen and dextrose in dogs with phlorhizin diabetes. Among the substances possessing this property may be mentioned glutaric and tartaric acids.

In an endeavor to explain the mechanism of the unique influence exerted by these compounds investigations have been carried out with tartrates upon both dogs and rabbits under conditions similar to those established by Baer and Blum. We have been able to corroborate the findings of Baer and Blum with respect to the action of tartrates although Ringer (PROC. SOC. EXP. BIOL.

AND MED., 1912, 9, p. 54) failed to obtain the reported results with glutaric acid.

Our interpretation of the diminution of the urinary constituents is, however, entirely different from that offered by Baer and Blum. Tartrates subcutaneously injected cause a prompt disintegration of the cellular elements of the kidney tubules, leading to partial or complete loss of secretory activity, and in many cases to anuria. Hence, in phlorhizin diabetes urinary nitrogen and sugar are not eliminated to an appreciable extent.