

February 2, 1968

Dr. Gabe J. Maletta
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National Institute of Child Health
and Human Development
Department of Health Education and Welfare
National Institutes of Health
Bethesda, Maryland 20014

Dear Dr. Maletta:

Thank you for your letter of January 29.

I really was not acting as proponent of any particular theory of cellular aging in my remark relating this to studies on DNA. In fact at the moment I am rather skeptical about any unitary theory to account for aging in every aspect. I have no doubt that genetic and chromosomal lesions play some part in some circumstances but feel that it is much too soon to exclude the simultaneous action of many other mechanisms.

The point that underlies my remark is that whatever the fundamental mechanisms a knowledge of DNA replication and its controls will surely be highly instrumental both in diagnosing the fundamental difficulties and in proposing ways of meeting them. Whatever else it is aging is certainly a developmental phenomenon and an indispensable part of our understanding of it will concern the factors that control the integrity, replication and expression of the genetic mechanism. We certainly do need to find out all we can about the status of the DNA and of the DNA-replicating enzymes in aging tissues; this is by no means in contradiction to theories that would put a larger emphasis on chemical modifications of connective tissue proteins or on disorganization at much higher levels - cells and tissues - than on the DNA.

These remarks should however not be taken as any lack of interest in meeting you and please do let me know when you may happen to be in this vicinity.

Sincerely,

Joshua Lederberg,
Professor of Genetics

JL/gem

MALETTA