

DEUTSCHE AKADEMIE DER WISSENSCHAFTEN ZU BERLIN

FORSCHUNGSGEMEINSCHAFT DER NATURWISSENSCHAFTLICHEN, TECHNISCHEN UND MEDIZINISCHEN INSTITUTE

INSTITUT FÜR MIKROBIOLOGIE UND EXPERIMENTELLE THERAPIE · JENA

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D. J. Gumpert

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A l l a h a b a d / India

Jena, March 3, 1966
G/Gü

Dear Doctor Bahadur,

I am now able to send the manuscript which I promised you some time ago. Many thanks for your seasons greetings, your two letters and the reprints I received recently. Please excuse me for not having written earlier but there have been many circumstances which prevented me from doing so. I hope you will not be disappointed by our results which do not confirm some of our earlier suggestions. In the first line, we are microbiologists and we have looked at the appearance of such spherical elements in sterile media as a microbiological phenomenon. Our main problem is the danger of mistaking these spheres with real forms of microbes and consequently a wrong interpretation of these structures. In the course of the study of the literature and especially after reading your papers it became clear to me, that the formation of these elements is a very important problem not only for microbiology and ultrastructure research but also for biochemistry and exobiology. One ought to work much more about these problems but we are not able to do so and had to limit our work on the importance of these forms for microbiology.

The question whether these elements propagate actively could not be clarified definitely. In such forms as are marked with arrows in figure 3 the microbiologist sees typical division- and budding forms known from bacteria and yeasts. On the other hand, we could not follow such a multiplication microscopically in microcultures. There is the possibility of fusion of two elements. In serum media there is without any doubt a multiplication, but it is probable that all elements are formed de novo and do not arise from each other by means of division or bud-

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ding. The further question, namely whether these elements pass metabolic activities, we must deny (at least in my opinion). I am sure, there is a brisk exchange of substances between the elements and the surrounding medium. Without such processes these very complex systems could not be stable. Nelson 1958 showed in his experiments with similar elements an incorporation of ^{131}I serum albumin. On the other hand, the lacking O_2 consumption and the negative TTC reduction point to the absence of any metabolic activity.

The manuscript is for you. It will be published soon in the Zentralblatt f. Bakteriologie I. Abt. Originale. Please tell me if you have difficulties with the German language. In this case, I will give you a translation of the most important parts.

Mister Kumar asked me for a list of professors he could visit during his post doctoral assignment. I had to write him that nobody in our research institute (which belongs to the German Academy of Sciences at Berlin) and at the Jena University is dealing with problems of exobiology or pre-biological systems respectively I know no scientists at all in the GDR who are working on this or related problems.

With kindest regards

yours sincerely,

(Dr. J. Gumpert)