

January 27, 1956

Deutsche Forschungsgemeinschaft
Bad Godesberg b. Bonn
Frankengraben 40
GERMANY

In Re: Dr. W. HEUMANN

Gentlemen:

Dr. Heumann has asked me to endorse his application for financial support for a visit to this laboratory. I am very happy to recommend his appointment in the strongest terms.

For some time, we have been deeply concerned with the genetic investigation of sexual processes in bacteria, particularly *Escherichia coli*. Until very recently, we have made no progress in the cytological confirmation of the genetic data. Dr. Heumann, on the other hand, has been able to achieve a most impressive description of the sequences involved in the star-forms (Sternbildung) of rhizobia. Although these have been studied for many years, Dr. Heumann's account is the first which gives a rationalization of the star-forms as elements of a credible sexual process. It was difficult to see how an indefinite number of parental cells could participate in the formation of one zygote; his work now points to a further stage in which there is a two-by-two pairing of the elements of each star-form. We are thus faced with the propitious situation where we have abundant genetic evidence for sexuality in some bacteria, and cytological indications in others. From Heumann's work, the rhizobia should make excellent material for a convergence of these lines of work. He proposes to do just this, a genetical verification of the sexual cycle which he has so far studied by cytological measures.

I am, therefore, very happy to welcome him to our laboratory. The one year's time which he proposes should be just right for the problem. I regret that the University does not have the resources to pay its own fellowship stipends to visiting scientists, but it will be happy to assume the running costs of his research here.

Yours sincerely,

Joshua Lederberg
Professor of Genetics