DATE: November 30, 1973

TO : Joshua Lederberg

FROM : I. Rabinowitz, Ph.D.
D.I. Wilkinson, Ph.D.

SUBJECT: RE: NIH GC/HRMS Proposal

Research carried out in this department has strongly implicated a role for the prostaglandins in the etiology of psoriasis (E. M. Farber, K. Aso, 32nd Annual Meeting, American Academy Dermatology, Chicago, Ill., Dec. 1973; E. M. Farber et al, J. Invest. Derm., in preparation; E. M. Farber et al, Nature New Biology, in preparation). The prostaglandins are a class of C_{20} fatty acids, having molecular weights near 350 and basal tissue concentrations in the nanogram and picogram per gram range. The prostaglandins are presently detected by radioimmunoassay, bioassay and mass spectrometric techniques, among others. There is considerable controversy concerning the method of choice for measurement of absolute amounts of prostaglandin in various tissues. In particular, it has been suggested that mass spectrometric techniques yield more accurate quantitative assays than radioimmunoassay techniques (Adv. Biosciences, 9, 71-123, 1973, Ed. G. Raspé, S. Bernhard, Pergamon Press, N.Y.). Radioimmunoassay techniques are currently in use in our laboratories, and the addition of mass spectrometry capability would greatly increase the definitiveness of our studies, as well as make available to us a powerful tool for the study of prostaglandin precursors and metabolites. Work to date has been supported in part by NIH Grant No. AM 15107.

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