

NOV 30 1973

DATE: November 28, 1973

To : Joshua Lederberg, Ph.D.
S331

FROM : William R. Fair, M.D.
S287

SUBJECT: Use of facilities for high resolution mass spectral analysis with gas chromatography.

As your memo of November 1973 requested, we have answered the questions concerning our interest in GC/HRMS.

1. This service would be of definite value to us in two projects currently being investigated in our laboratories. a) The identification, distribution, and biological significance of the prostatic antibacterial factor (PAF). Our preliminary experiments indicate that this is a basic polypeptide, perhaps attached to a divalent metal such as zinc. b) This service would also be of value in the determination of the urinary polyamine levels in patients with various genitourinary tract malignancies. Our initial experiments along this line indicate that there is significant elevation of polyamines in patients with prostatic carcinoma. The use of GC/HRMS would enable a more precise quantitation of these differences and enable us to expand our research into other areas concerning the biochemical significance of the polyamines.
2. I would estimate that on the PAF project we would use approximately 2-4 samples per month and perhaps 10-12 samples per month on the polyamine projects. Both of these projects would require the use of GC/HRMS.
3. A portion of our research on the PAF is currently supported by a grant from the NIH. The amount of this grant is \$36,698, and this grant will terminate on December 31, 1974.