

M E M O R A N D U M

RE: DR. KENNETH M. MOSER

For the past five years, Dr. Kenneth M. Moser has conducted a study of pulmonary disease among some 2,000 subjects in the San Diego area. In this study Dr. Moser has sought to correlate clinical evidence of lung disease--particularly emphysema--with alpha-1-antitrypsin levels.

Persons with alpha-1-antitrypsin deficiencies were found to have a higher incidence of emphysema than persons with normal levels. Dr. Moser recognizes that only a small percentage of the population has this deficiency but it is his idea that this study could shed light on the basic mechanism or mechanisms of emphysema pathogenesis.

Dr. Moser's population includes some 30 totally deficient subjects and some 350 subjects with intermediate deficiencies. The rest of his subjects have normal alpha-1-antitrypsin levels. About 200 subjects--mostly those with deficiencies--have been examined for clinical evidence of lung disease.

Dr. Moser has found that not all of his subjects with alpha-1-antitrypsin deficiencies have clinical evidence of emphysema nor does the absence or presence of clinical symptoms in this group correlate well with age, smoking or history of pulmonary infection.

Dr. Moser has recently discovered that a better correlation exists between clinical evidence of lung disease and serum elastase levels and this correlation is independent of smoking. However, his assay for serum elastase is long and cumbersome and therefore Dr. Moser has been able to study only 11 of his totally deficient subjects to date.

Dr. Moser believes that his elastase assay can be improved and is seeking funds for this research. Once the assay is improved he would like to use it on the rest of his totally deficient subjects to see if the correlation between clinical evidence of emphysema and serum elastase holds. If it does, he would like to see whether this correlation also exists in subjects with intermediate deficiencies and with normal alpha-1-antitrypsin levels.

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Dr. Moser expects the research to take approximately three years at a total cost of between \$198,000 to \$212,000. He hopes that the results of this research will help explain the mechanism or mechanisms of emphysema pathogenesis--particularly the role, if any, of elastase.

Dr. Moser has applied to CTR for support of this research and a site visit was made in connection with his application. Although CTR found this project to be of scientific merit, it was not approved for funding because it did not fit within CTR's current scheme of priorities nor is it likely that CTR will fund this project in the future.

Ed Jacob and I believe that Dr. Moser is an articulate and forthright scientist who will not hesitate to express his views on scientific matters. We urge the approval of his request for research support.

Tim Finnegan

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