September 4, 1969

Mr. Charles Kingston
Division of Identification and INtelligence
New York State Department of Correction
Albany, New York

Dear Mr. Kingston:

I am writing to you for back-up information on the technology of fingerprint classification. As you know, dermatoglyphs have begun to assume a certain importance in medical characterization of certain diseases, but my own quick scan through the field leaves me the impression that we are not yet using a classification whcih is oriented as well as it should be to the biological, developmental basis ofrridge patterns. I believe that you are involved in further investigations of this problem as summarized in the appendix article by T. C. Bartee in the task force report "Science and Technology" to the President's Commission on Law Enforcement and Administration of Justice. I would be very grateful to you for references to the literature or for reports bearing on more recent attempts to classify fingerprints that might be of use for an initial orientation to a biomedical research investigator entering into the field from a somewhat different point of view than your own. I am particularly interested in the pattern analysis of fingerprints by computer. In ohter applications we have acquired fairly substantial experience here at Stanford.

One point that struck me immediately was that the definition of pattern intensity by ridge counts, which leaves a count of zero even for a highly tented arch probably overlooks important biological differences between simple and more complex arches. I realize that the exigencies of practical classification must lead you in somewhat different directions, but I would be particularly interested in whatever art has been developed that looks at fingerprint patterns in somewhat different ways than established by the Henry and similar systems.

Sincerely yours,

Joshua Lederberg
Professor of Genetics