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Final Report - Evaluation of John F. Kennedy Assassination Evidence

Gross Examination: The specimens consist of 4 roughly triangular fragments of dark brown material, each measuring approximately 3 mm in greatest dimension and 1-2 mm in thickness, said to have become detached from a bullet sometime in the past. The surfaces are irregular and slightly reflective in incident light. The specimens are bisected under sterile conditions and one half of each is submitted, labeled 01, 02, 03, and 04 for rehydration and microscopic examination. A core is taken from each of the other halves for DNA analysis. The remaining portions are preserved for possible future study.

Microscopic examination:
01: The sections show small fragments of flattened eosinophilic material resembling superficial epithelium. No nuclei are seen. There are small intracytoplasmic PAS granules suggestive of glycogen. Other stains are noncontributory.
Impression: human superficial skin.

02: The sections show eosinophilic material containing several parallel slender fragments of PAS positive material in a thick walled cellular configuration that is not of human origin. These appear to be the legs of a insect (or possibly a saprophytic fungus) that invaded the tissue post-mortem. The intervening material contains small aggregates of orange material appearing to be blood. Other stains are noncontributory.
Impression: human tissue and blood with post-mortem insect invasion.

03: The sections show flattened superficial epithelium with well preserved nuclei. The PAS stain shows glycogen granules and the trichrome shows a thin layer of positive material, possibly underlying muscle. Other stains are noncontributory.
Impression: human skin.

04: The sections show fragments of amorphous unidentifiable eosinophilic tissue with a few small aggregates of black pigment. No nuclei are seen. An immunohistochemical stain for keratin is positive. Other stains are noncontributory.
Impression: poorly preserved human skin and black pigment.

Unlabeled: An additional small fragment of material (initially believed to be fiber or textile but identified as proteinaceous by chemical analysis) was also examined, in an unstained preparation. There are no distinguishing tissue features and the material is slightly birefringent.

Impression: unidentifiable proteinaceous material.

Comment: This material consists of human tissue in varying states of preservation. The skin in specimen 03 is extraordinarily well preserved, and in 01 somewhat less so. The tissue in specimens 02 and 04 cannot be specifically identified and may be muscle or brain. 02 shows invasion by foreign material, probably an insect. Examination by an entomologist or mycologist at the AFIP or Smithsonian Institution might provide further identification, but would probably not be germane to this study.

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