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Following completion of postdoctoral fellowships at Johns Hopkins and NIH, Kelly became a Principal Investigator at NIH. After several years, he transferred to the ECU School of Medicine to have the opportunity to do both research and teaching. In 2000, he semi-retired from laboratory research to relocate to his original hometown and teach high school science, something that he had always wanted to do. He has been a science instructor at KCHS for the past 20 years. Kelly studies the Shroud as a subject important to both faith and science, with a specific interest in the properties of the bloodstains.

ABSTRACT**The Blood on the Shroud of Turin: Species Unknown**

The blood on the Shroud of Turin is widely reported as being human (primate) in origin based on certain serological experiments performed in the early 1980s. A crucial requirement in such studies is the demonstration that the antibodies used show limited cross-reactivity with the same molecules present in other species. Modern advances in the technology of genetic/protein sequencing have begun to reveal molecular relationships that were hitherto unknown and not easily predicted, particularly in unrelated species. Upon broadening the investigation of the reactivity of the reagents used in previous experiments, additional cross-reactive species have been uncovered that directly challenge prior conclusions of immunological studies on the Shroud of Turin. Here, evidence is presented to show that blood from unexamined species (for example, rat, mouse, cat, others) would also test positive in the key experiments performed some forty years ago to evaluate the blood species present on the Shroud. Thus, cross-reactivity precludes a definitive conclusion that the blood on the Shroud of Turin is of human, or even primate, origin. In addition, these studies raise the issue that no experiments have ever been done to possibility that any blood species other than human may be present on the Shroud.