CHALLENGES AND REWARDS OF NEW FORENSIC DNA LABORATORY DEVELOPMENT AROUND THE WORLD

Craig Nolde[1], Benedict Agbo[2], Laura Silva[3], Timothy Kupferschmid[1]
[1]Sorenson Forensics
[2]Nigerian Police Forces
[3]Oakland Police Department

As the world economy continues to grow through innovative technological advances, the value of using DNA as an investigative tool in assisting with solving crimes has not been overlooked. The recent economic growth and social advancements in many African countries is very exciting. With this change comes a strong desire for civil order through improved law enforcement. Government agencies of developing countries worldwide seek to develop forensic DNA laboratories to fight the criminal activity that every society suffers. Over the past several years, Sorenson Forensics' team has assist with new forensic DNA laboratory development in regions of Africa. Specifically, Timothy Kupferschmid and Craig Nolde have overseen the successful completion of a private forensic DNA laboratory in Dakar, Senegal and are currently progressing toward the successful completion of government laboratories in Lagos, Nigeria and Lusaka, Zambia. Each of these projects has several unique hurdles to overcome, but common to all international laboratory development projects are underlying challenges, such as logistics/transport of materials, financial constraints, reliable and steady electrical power, limited laboratory space, instrument service and maintenance, and training of new staff. Some of these impediments were identified prior to traveling on-site, which allowed us an opportunity to assist the laboratory with favorable decisions. For example, providing details regarding how the use of a small closed-box automated solution, such as a Maxwell 16, can be more advantageous than traditional organic or other types of manual extraction in these unique locations. Fortunately, despite the fact that some hurdles could not be identified until laboratory work was commenced on-site; we creatively and successfully addressed these unique situations. We will discuss the hurdles we experienced, the lessons learned, and how we plan to adapt for future projects.

The goal of this presentation is to demonstrate that, although our forensic biology community is a small, we represent a growing desire to use our skills/ experiences to provide global support to make the world a safer place to live and travel. Everyone can learn from the experiences and challenges Timothy and Craig faced abroad since similar situations of a smaller scale are often encountered in U.S. laboratories. Especially when undertaking new construction and/or upgraded facility projects. Lastly, we will present the future of each of these newly-developed labs and the respective plans to help their communities.