EDUCATION VERSUS TRAINING IN THE BIO-MOLECULAR FORENSIC LABORATORY

Jack Ballantyne, Ph.D.

Department of Chemistry, University of Central Florida

Although education and training are inherently distinct processes, the blurring of this distinction in some bio-molecular forensic laboratories has resulted in unnecessary duplication of effort and inefficient use of scarce resources. Traditionally the education of scientists, including forensic scientists, refers to the process by which individuals receive indoctrination in the scientific method. This is a prolonged process that takes several years and involves study of the basic sciences such as chemistry, physics, mathematics and the biological sciences. Training refers to the relatively short-term process by which individuals attain a necessary skill level in order to be able to successfully accomplish a specific task or job function. Traditionally education has been delivered by academic institutions whereas the crime laboratory has provided the necessary training on-the -job. However with the increasingly rapid advances in molecular genetics practicing professionals not only need to continuously upgrade their skills (by receiving appropriate 'training') but also need to increase their knowledge base (receive the necessary 'education'). This presentation compares and contrasts the education and training needs of individuals within bio-molecular forensic laboratories and describes the options available for delivering them. It is argued that the forensic community needs a 'career university sector' which would be able to deliver effective education and training programs to working professionals. The principal method of delivery would be by distributed learning via the web supplemented wherever necessary by shortened in-service practical courses. The current paradigm for web-based delivery is based upon the establishment of asynchronous learning networks (ALN). To illustrate how ALNs function in practice illustrative materials from a recently developed web-based MS program in forensic biochemistry will be presented.