Final Minutes
Toxicology Subcommittee of the
Scientific Advisory Committee
July 13, 2020
Department of Forensic Science, Held Electronically

Subcommittee Members Present

Maureen C. Bottrell
Leslie E. Edinboro, Ph.D., *Chair*
Barry S. Levine, Ph.D.
Richard P. Meyers
Jami St. Clair

Staff Members Present

David A. Barron, Ph.D., Deputy Director
Katya N. Herndon, Chief Deputy Director
James W. Hutchings, Ph.D., Toxicology Program Manager
Linda C. Jackson, Director
Amy M. Jenkins, Department Counsel
Alka B. Lohmann, Director of Technical Services
Jennifer L. Taylor, Procurement Specialist I, *Secretary*
Rebecca Wagner, Ph.D., Research Section Supervisor

Call to Order by Subcommittee Chair

As a result of the state of emergency declared by Governor Northam due to COVID-19, the Toxicology Subcommittee conducted the meeting by electronic communication means using the Google Meet platform. The public was permitted to attend and participate via video or audio conference. Directions for public participation were provided on the meeting agenda and posted on Virginia's Town Hall.

Dr. Edinboro called the meeting of the Toxicology Subcommittee ("Subcommittee") to order at 3:00 p.m. Dr. Edinboro requested Ms. Taylor to call the roll to ensure that a quorum was present. All Subcommittee members were in attendance, and Ms. Taylor advised that a quorum was present.

Adoption of Agenda

Dr. Edinboro advised that the first order of business was the adoption of the draft agenda for the meeting. Dr. Edinboro noted that everyone should have received a copy in advance and asked for a motion to adopt the agenda. Ms. St. Clair made a motion to adopt the agenda, which was seconded by Dr. Levine. A roll-call vote was taken, and the Subcommittee members voted as follows:

Ms. Bottrell – Yes
Dr. Edinboro – Yes
Dr. Levine – Yes
Mr. Meyers – Yes
Ms. St. Clair – Yes

Approval of Draft Minutes from May 7, 2019 Meeting

Dr. Edinboro asked if there were any proposed changes to the draft minutes from the May 7, 2019 meeting of the Toxicology Subcommittee. Being none, Mr. Meyers made a motion to adopt the minutes, which was seconded by Ms. Bottrell. A roll-call vote was taken, and the Subcommittee members voted as follows:

Ms. Bottrell – Yes
Dr. Edinboro – Yes
Dr. Levine – Yes
Mr. Meyers – Yes
Ms. St. Clair – Yes

Discussion of Method Validation/Verification Documentation

In advance of the meeting, the members of the Subcommittee were provided copies of validation/verification documentation for the following methods:

- Non-steroidal anti-inflammatory drugs (NSAIDs) by Liquid Chromatography Tandem Mass Spectrometry (LCMSMS) – The validation summary for the quantitative analysis of NSAIDs in biological specimens by LCMSMS. This validation includes the evaluation of two different working ranges.
- Gamma-hydroxybutyrate (GHB) by LCMSMS – The validation summary for the quantitative analysis of GHB, gamma-butyrolactone (GBL), and 1,4-butanediol in biological specimens by LCMSMS. This validation includes the evaluation of blood and urine matrices for the calibration curve and quality control samples.
- Automated Liquid Handling System (Hamilton) Verification Plan – The plan to verify the performance of the Hamilton STAR automated liquid handling system based on the previously validated manual solid phase extraction and quantitation of opioids and cocaine in biological matrices by tandem mass spectrometry.
- Automated Liquid Handling System (Hamilton) Verification Summary – The summary of the verification of the Hamilton STAR automated liquid handling system based on the Automated Liquid Handling System (Hamilton) Verification Plan.
- Fentanyl Derivative Quantitation by LCMSMS – The validation plan for the solid phase extraction (SPE) and quantitation of fentanyl derivatives in biological matrices by LCMSMS.
- Fentanyl Derivatives Qualitative Analysis by LCMSMS – The validation plan for the SPE and qualitative analysis of fentanyl derivatives in biological matrices by LCMSMS. The method was validated to adapt the current fentanyl derivatives qualitative analysis method to SPE for use on the Hamilton STAR system.

Dr. Wagner provided an overview of each method. The Subcommittee members provided comments and asked questions, which Dr. Wagner and Dr. Hutchings answered.

Ms. Bottrell made a motion to adopt a recommendation to have the Department experimentally determine the limit of detection of each compound present versus using an administratively determined limit of detection concentration. The motion was seconded by Mr. Myers. Dr. Levine indicated that he felt what the Department had done was acceptable and did not think it was necessary for DFS to experimentally determine the limit of detections as was being recommended. A roll-call vote on the motion was taken, and the Subcommittee members voted as follows:

Ms. Bottrell – Yes
Dr. Edinboro – Yes
Dr. Levine – No
Mr. Meyers – Yes
Ms. St. Clair – Yes

The recommendation was adopted. Dr. Levine then made a motion to close the review, which was seconded by Ms. Bottrell. A roll-call vote was taken, and the Subcommittee members voted as follows:

Ms. Bottrell – Yes
Dr. Edinboro – Yes
Dr. Levine – Yes
Mr. Meyers – Yes
Ms. St. Clair – Yes

Discussion of Methods in Development

Dr. Hutchings provided the Subcommittee with an overview of the following four methods in development:

- Barbiturates Quantitation by LCMSMS – This method would replace the current methodology that requires 1.0 mL of biological matrices and analysis using gas chromatography mass spectrometry (GC-MS).
- Cannabinoids Extraction by Automated Liquid Handling System – This method is dependent upon grant funding to explore a variety of extraction techniques and instrumental conditions to achieve the best methodology while simultaneously expanding cannabinoid testing capabilities.
- Miscellaneous Basic Drug Quantitation by LCMSMS – This method would replace current methodology using GC-MS. This method would combine several methods into one.
- Flualprazolam Quantitation by LCMSMS – This method would add flualprazolam to the currently validated benzodiazepine LCMSMS method.

The Subcommittee members provided comments and asked questions about the methods in development, which Dr. Hutchings and Dr. Wagner answered. Mr. Meyers made a motion that the review of the methods in development be closed, which was seconded by Dr. Levine. A roll-call vote was taken, and the Subcommittee members voted as follows:

Ms. Bottrell – Yes
Dr. Edinboro – Yes
Dr. Levine – Yes
Mr. Meyers – Yes
Ms. St. Clair – Yes

Public Comment

Dr. Edinboro inquired whether any member of the public would like to provide any comment. No member of the public was in attendance.

Adjournment

Ms. St. Clair moved that the meeting of the Subcommittee be adjourned, which was seconded by Mr. Meyers, and passed by unanimous vote. A roll-call vote was taken, and the Subcommittee members voted as follows:

Ms. Bottrell – Yes
Dr. Edinboro – Yes
Dr. Levine – Yes
Mr. Meyers – Yes
Ms. St. Clair – Yes

The meeting adjourned at 3:58 p.m.