Department of Forensic Sciences
Science Advisory Board Draft Meeting Minutes
October 19, 2018

The Department of Forensic Sciences (DFS) Science Advisory Board meeting was called to order by board chairman Peter Marone at 9:23 a.m. Board members present included, Dr. Namandjé Bumpus, Dr. Simone N. Gittelson, Mr. John Paul Jones II, Dr. Jeanne Jordan, Ms. Danielle O'Neill and Mr. Robert Thompson. Dr. Michael Pentella participated in the meeting by way of WebEx conference. A quorum was established to conduct board business and the Minutes from the July 20 meeting were presented and read.

Motion to Approve Minutes: Board Member Jordan **Seconded**: Board Member O'Neill
Motion to Approve Minutes Passed

Statutory Functions of the SAB
Chairman Peter Marone conducted a review of the Science Advisory Board's enabling legislation, underscoring the board's responsibilities and reminding DFS of the importance to ensure that board appointments are sufficiently staggered to avoid multiple, simultaneous term expirations.

Given continuing DFS laboratory protocol development and laboratory accreditation, Chairman Marone recommended that the board, by committee, revisit review of the Forensic Chemistry Unit (FCU) drugs protocols and the Digital Evidence Unit (DEU) protocols. The committee assembled for FCU protocols review include: Dr. Namandjé Bumpus (Chair), John Paul Jones II, Danielle O'Neill and Robert Thompson. Committee appointment for DEU protocols review is postponed until December when Board member Jones may report whether there will be potential digital evidence professionals available to serve as volunteers on the DEU protocol review committee. DEU's focus, at this time, is primarily digital devices consisting of telephones and computers. Key DFS staff contacts for FCU and DEU will be identified by Mr. Paul Reedy.

As the board assembles committees for further review of lab protocols, Dr. Jenifer Smith recommended that the board also consider identification of potential candidates to serve on a committee for the review of 'Sequencing' from a public health perspective. Board members Gittelson, Jordan and Pentella agreed to review sequencing.

SAB Regulations Update
DFS General Counsel Rashee Raj reported that the public comment period for the proposed draft Board regulations has concluded and one comment concerning a citation was received. The regulations are currently before the Council of the District of Columbia with an approval resolution. Passive approval is anticipated Friday, December 7, 2018.

Quality Update
Re-accreditation assessments of the Forensic Chemistry Unit (FCU) and the Forensic Science Laboratory's Firearms Examination Unit (FEU), Forensic Biology Unit (FBU) and Latent Fingerprint Unit (LFU) were conducted during an on-site ANAB inspection August 27 through August 30. Scope expansion was added for DEU and FCU (Heroin Quant – "Seized Drug Quantitation"). The inspection yielded six minor non-conformities, from which one of two non-conformities appealed was accepted by ANAB.

Action steps to correct the four non-conformities and the one remaining appealed non-conformity not accepted by ANAB are underway and on schedule for completion by the October 30 and December 4 deadlines, respectively. For the third consecutive year, there were no findings of non-conformity for FBU by ANAB or QAS. Similarly, there were no non-conformity findings for FCU for re-accreditation of the new 'Seized Drug Quantitation' accreditation.

Public Health Update

Dr. Anthony Tran, Public Health Laboratory Director, announced that a report released by the CDC disclosed only two DSAT findings instead of six resulting from the unannounced July l0-11 DSAT verification inspection as previously reported in the July 20, 2018, SAB meeting minutes. The findings cited includes HEPA filter replacement and timely annual recertification training of select agent-approved staff. Both findings have been corrected and preventative measures taken.

PHL is entering the final budget year of the lab's Epidemiology Laboratory Capacity (ELC) 5-year cooperative agreement with CDC that was accompanied by an initial award of more than $705,000.00 to fund ELC projects. The CDC recently approved the division's application that expanded the lab's 10 focus (programmatic) lab areas to 12 and the lab may possibly receive additional ELC funding in a supplemental award of more than $100,000, prior to the expiration of the cooperative agreement. The PHL's Legionella surveillance funding opportunity facilitated 4 additional Full Time Employees (FTEs). Director Smith credited Dr. Tran for his ingenuity to vigorously pursue funding opportunities for the PHL division and she also noted the importance of demonstrating to the District's Mayor and local lawmakers DFS' efforts to identify and obtain, whenever possible, available resources via federal programs.

The PHL is named among the newly established Mid-Atlantic Consortium of Laboratories, whose member states include Maryland, Virginia, West Virginia, Pennsylvania, Ohio, Delaware and state jurisdiction municipalities. The division is slated to host at least one 2019 in-person meeting at the Consolidated Forensic Laboratory.

Dr. Pushker Raj, Immunology and Biology Unit Manager, and Dr. Tran conducted a comprehensive review of the Lab's STD testing activities and led a discussion of PHL's Gonococcal Isolate Surveillance Project, a $16,000 ELC-funded project.

Dr. Colleen Courtney, Chief of Molecular Diagnostics, briefed the board on the unit's outbreak testing for Norovirus, measles and mumps outbreaks, new molecular testing and the acquisition of a new extraction instrument used last summer in Arboviral testing of more than 500 mosquito pools, of which there was 10% positivity for West Nile in the District. Most recently, the lab was instructed by CDC to discontinue all pulsing by January 15, 2019, and that transition from Pulsed-field Gel Electrophoresis (PFGE) to Whole Genome Sequencing (WGS) would be necessary. Advance validation, current funding and staff training should ensure the lab's successful transition.

Dr. Luke Short, Chief, Forensic Chemistry Unit (FCU), reported that the SAFE DC legislation, supported by DFS through the Office of the Attorney General, was signed into law October 5, 2018, as an Emergency Act

for 90 days. Two additional similar versions are scheduled to cover the gap before the permanent legislation is signed into law. According to Dr. Short, a surge in FCU's caseload is predicted, given the classification of many synthetic cannabinoids under the new law.

For the period covering March 26th 2018 to October 19th 2018, FCU received 475 cases, bringing the total number of items processed to 7835, of which 1069 were tested. The four most common substance categories detected were 31% Cannabinoids (including marijuana), 24% Cocaine, 18% Opioids (including synthetic) and 10% PCP. From 2016 through September 2018, FCU detected the presence of Opioids in 197 submissions; the most commonly detected Opioid is Heroin and the most commonly detected Synthetic Opioid is Fentanyl. By way of a one million dollar CDC grant, the FCU will be augmented by the building of a new opioid surveillance lab. Construction is underway, instrument install is pending and new hires and staff training are planned. According to Dr. Short, FCU activities and post analysis metric reports suggests that surveillance has a significant impact on public health.

Ms. Susan Welti, Forensic Biology Unit (FBU) DNA Technical Leader, conducted a road map briefing of the unit's next generation sequencing (NGS) implementation project that builds on a 2016-2017 collaborative validation project of which FBU partnered with the Armed Forces DNA Identification Laboratory (AFDIL) and the University of North Texas Health Science Center, Center for Human Identification (UNTHSC), using the Illumina MiSeq FGx instrument and ForenSeq DNA Signature Prep Kit.

Ms. Welti reviewed the DNA process and the benefits that accompany the new technology in relation to DNA amplification, detection and improved analysis with the use of one kit rather than multiple kits. At present, the existing amplification kit types 24 locations (21 autosomal, AMEL, 2 Y-Short Tandem Repeats (STRs) on the DNA, while the Signature Prep Kit types, in addition to autosomal DNA, 58 STRs (X-STR, Y-STR) and 172 Single Nucleotide Polymorphisms (SNPs) (identity, biographical ancestry and phenotypic).

Included among other steps taken inside and outside the lab by FBU to further advance the NGS validation project is: 1) Presenting to the National DNA Index System (NDIS) for approval the DNA Signature Prep Kit as an accepted kit; 2) Data interpretation; 3) Maintaining updates to validation guidelines, published by Scientific Working Group on DNA Analysis Methods (SWGDAM); 4) Ensuring that the entire validation process follows current DNA standards within the FBI quality assurance standards (*Internal Developmental Validation*) and the FBI's notification to Congress for potential new kits considered by laboratories.

Mr. Reza Safarnejad, DFS Information Technology Contractor, presented a demonstration of a 2-year tech application project designed to produce customized visualization reporting of the department's performance metrics and trends by way of LIMS data extraction.

The meeting adjourned at 1:37 p.m.

An audio recording of the meeting is available upon request.