Chair: Ronda GREAVES
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Paediatric Clinical Biochemistry - Mass Spectrometry Harmonisation Working Group

Background:
The original “mass spectrometry harmonisation working group” (MSHWG) was formed on 16th January 2010 during The Asian Pacific Conference of Chromatography and Mass Spectrometry in Hong Kong. As participants of this first MSHWG meeting included members from the Australasian Association of Clinical Biochemists, Hong Kong Society of Clinical Chemistry and industry, it was proposed that the group would be formed under the Asian and Pacific Federation of Clinical Biochemistry (APFCB) umbrella. The standardisation of methods and reference intervals is of high importance for the future development of mass spectrometry assays in routine clinical laboratories. There are many discrete areas to also consider for harmonisation that support the robustness of mass spectrometry methods. As such the working group has looked to ascertain the critical aspects of methods, investigated measurands offered, and initiated the development of EQA programs for emerging analytes. Central to this work has been the common participation in an external quality assurance program for comparability. This working group has developed projects consistently over the last decade with paediatric relevance, in particular, the analysis of steroids by mass spectrometry in paediatric populations; hence the proposed update to the name.

Key outputs include:
1. Greaves RF, Ho CS, Hoad KE, Joseph J, McWhinney B, Gill JP, et al. Achievements and Future Directions of the APFCB Mass Spectrometry Harmonisation Project on Serum Testosterone. The Clinical Biochemist Reviews. 2016;37(2):63-84.
2. Greaves RF, Jolly L, Hartmann MF, Ho CS, Kam RK, Joseph J, et al. Harmonisation of serum dihydrotestosterone analysis: establishment of an external quality assurance program. Clinical Chemistry Laboratory Medicine. 2017;55(4):522-9.
3. Greaves RF, Ho Chung S, Loh Tze P, Chai Jia H, Jolly L, Graham P, et al. Current state and recommendations for harmonization of serum/plasma 17-hydroxyprogesterone mass spectrometry methods. Clinical Chemistry and Laboratory Medicine (CCLM). 2018;56(10):1685–97.
4. Loh TP, Ho CS, Hartmann MF, Zakaria R, Lo CWS, van den Berg S, et al. Influence of isotopically labeled internal standards on quantification of serum/plasma 17α-hydroxyprogesterone (17OHP) by liquid chromatography mass spectrometry. Clinical Chemistry and Laboratory Medicine (CCLM). 2020;58(10):1731-9.
5. Lo CWS, Hoad K, Loh TP, van den Berg S, Cooke BR, Greaves RF, et al. Endogenous isobaric interference on serum 17 hydroxyprogesterone by liquid chromatography-tandem mass spectrometry methods. Clin Chem Lab Med. 2022. This working group also links into the IFCC C-ETPLM and RCPAQAP/SKML Endocrine programs.

Objectives:
To collaborate with experts in pediatric clinical mass spectrometry analysis to develop projects, disseminate information, and provide guidance to support the quality of results generated for patient care.

Core member

1. Ronda Greaves (Chair), AU
2. Trisha Andersen, AU
3. Brian Cooke , AU
4. Chung Shun Ho, Hong Kong, CN
5. Kirsten Hoad, AU
6. Wai-shan Lo, Hong Kong, CN
7. Tze Ping Loh, SG
8. Mai Thi Chi Tran, VN
9. Rosita Zakaria, AU
10. Peter Graham, AU
11. Jonathan Bush, AU

Consultants

1. Sjeord van den Berg, NL
2. Hartmann, Michaela, DE
3. Yolanda de Rijke, NL
4. Stefan Wudy, DE ·
5. Bertrand van Zelst, NL