

**BRITISH PHARMACOPOEIA COMMISSION**  
**Panel of Experts DNA: Identification Techniques**  
**SUMMARY MINUTES**

A meeting of this Panel was held at 151 Buckingham Palace Road, London, on 22<sup>nd</sup> of February 2017.

**Present:** Professor A Slater (Chairman), Professor E M Williamson, Dr E Mee, Dr J Hawkins and Dr I Feavers (via telephone).

**In attendance**

**NIBSC:** Ms C Gkouva, Dr M Kalantarzadeh.

**BP Secretariat:** Dr P Holland, Mr S Young and Ms M Wall.

69      **INTRODUCTORY REMARKS**

**Welcome** The Chairman welcomed members to the meeting, in particular Dr Kalantarzadeh who was attending her first meeting. Dr Kalantarzadeh gave a brief summary of her research background as well as her work with the Forestry Commission.

**Declaration of Interests** Members were reminded of the need to declare specific interests as they arose during the meeting. No conflicts of interest were declared.

**Confidentiality** The papers, discussion and the minutes of the meeting were noted to be confidential.

I        **MINUTES**

70      The minutes of the meeting held on 8<sup>th</sup> of June 2016 were confirmed.

II       **MATTERS ARISING FROM THE MINUTES**

71      A list of matters arising from the minutes of the meeting of this Panel held in June 2016 was circulated together with the papers for this meeting. A copy is appended.

**HCM minutes of June 2016 meeting** The minutes of the meeting of the BP Commissions' Expert Advisory Group (EAG) on Herbal and Complementary Medicines (HCM) held in June 2016 had been provided for information.

**Collaboration between De Montfort University and MHRA** Agreement between the MHRA and DeMontfort University was under consideration by both parties.

III      **REPORTS AND CORRESPONDENCE**

- 72 **BP-NIBSC Herbal Laboratory** Panel DNA (17) 01

Members were updated on changes in personnel at the BP-NIBSC Herbal Laboratory.

**Work Programme** A list of upcoming projects was received and members were invited to advise on known difficulties of molecular analyses of the herbal drugs listed. The molecular work and development of the chemical test methods were on target for *Glehnia Littoralis*.

- 72 **Drimia maritima (Squill)**

Work was in progress to identify the optimal barcode region for the identification of target species.

- 73 **Molecular Characterisation Method for Detection of Pyrrolizidine Alkaloids (PA) - containing Herbal Drugs** Panel DNA (17) 02

A comprehensive literature review on PAs, encompassing details of both analytical and molecular methods for determining the levels of PA compounds was presented for consideration.

#### IV **MONOGRAPHS IN PROGRESS**

- 74 **Production of ITS2 BPNARM** Panel DNA (17) 03

A report on the fitness for purpose testing of ITS2 BPNARM was approved. The published BP Appendix XI V would be revised to include the worked example of *Anethum graveolens* Sowa at the appropriate time in the BP publication cycle.

- 75 **Stability and shelf-life testing trnH-psbA** Panel DNA (17) 04

A report on stability and shelf-life testing of the BP reference material 'trnH-psbA BPNARM' was presented. Members confirmed that the material was fit for purpose. Stability would be tested again in November 2018.

- 76 ***Galium aparine* (Clivers; Cleavers)** Panel DNA (17) 05

Work was in progress to identify the optimal barcode region for the identification of target species.

#### V **REVISION OF TEXTS/MONOGRAPHS**

- 77 **Supplementary Chapter VII D** Panel DNA (17) 06

Supplementary chapter VII D was due to be revised by means of the BP 2018 to include the reference barcode for *M. fragrans*. Publication of the monograph was deferred due to the need for further work on the HPTLC identification method. The reference barcode sequence would be placed in

alphabetical order within the trnH-psbA barcode region in the Supplementary Chapter at the time the monograph was published.

**VI ANY OTHER BUSINESS**

78 **EU referendum** A member asked if the EU referendum result would impact on the work of Panel DNA. Mr Young explained that the EDQM was part of the Council of Europe and not the European Union.

79 **Closing remarks** Members thanked Dr Holland for all her work and wished her the best for the future.

**Date of Next Meeting**

Wednesday, 19<sup>th</sup> of July 2017.

## II MATTERS ARISING FROM THE MINUTES *(not on the agenda)*

<p><b>Minute 30</b> Deoxyribonucleic Acid (DNA)-Based Identification Techniques for Herbal Drug Preparations and Herbal Medicinal Products.</p>	<p>This will be progressed at the earliest opportunity, pending available resource.</p>
<p><b>Minute 31</b> Operational and Strategic Plans</p>	<p>The investigation into applicability of qPCR will be initiated at the earliest opportunity, pending available resource.</p>
<p><b>Minute 34</b> <i>Ocimum gratissimum</i> and <i>Ocimum tenuiflorum</i></p>	<p>The BP herbal team is continuing to identify a credible source for <i>O.gratissimum</i>. The work would be progressed at the earliest opportunity.</p>
<p><b>Minute 38, Minute 66</b> Sanger vs NGS – <i>Phyllanthus amarus</i></p>	<p>Progression of work toward a widely applicable NGS data analysis system will start in earnest at the appropriate time, subject to available resource.</p> <p>Further analysis of <i>Phyllanthus amarus</i> would be performed by both Sanger and NGS methods when further samples have been acquired by the team.</p>
<p><b>Minute 59</b> Membership</p>	<p>The Secretariat in consultation with the Chair will approach appropriate experts in the field to gauge their interest in joining Panel DNA: Identification Techniques.</p>
<p><b>Minute 64</b> <i>Galium aparine</i></p>	<p>The identity of the contaminants referred to in the full molecular analysis report presented at the June 2016 meeting would be confirmed using the HPTLC identification method for <i>G.aparine</i> at the appropriate time.</p>

<b>Acronym/Synonym</b>	<b>Name</b>
APhI	Ayurvedic Pharmacopoeia of India
ATA	Ayurvedic Trade Association
BHomP	British Homoeopathic Pharmacopoeia
BP	British Pharmacopoeia
BP (Vet)	British Pharmacopoeia (Veterinary)
BP Commission	British Pharmacopoeia Commission
BPCx	British Pharmaceutical Codex
BPCRS	British Pharmacopoeia Chemical Reference Substance
BS	British Standard
BHMA	British Herbal Medicine Association
BLAST	Basic Local Alignment Search Tool (an NCBI database-GenBank)
BOLD	Barcode of Life Database
CMPACC	Chinese Medicinal Plants Authentication and Conservation Centre (Kew)
CEP	Certification Procedure for the European Directorate for the Quality of Medicines
CHM	Commission on Human Medicines
CP	Pharmacopoeia of the People's Republic of China
CRS	Chemical Reference Substance
DNA	Deoxyribonucleic Acid
EAG	Expert Advisory Group
EDQM	European Directorate for the Quality of Medicines
EPC	European Pharmacopoeia Commission
EPCRS	European Pharmacopoeia Chemical Reference Substance
EU	European Union
FDA	Food and Drug Administration
FIP	International Pharmaceutical Federation
FoI	Freedom of Information
FSA	Food Standards Agency
GC	Gas chromatography
HAB	German Homoeopathic Pharmacopoeia
HCM	Herbal and Complementary Medicines
HKCMMS	Hong Kong Chinese Materia Medica Standards
HMPC	Herbal Medicinal Products Committee
HPTLC	High Performance Thin Layer Chromatography

ICH	International Conference on Harmonisation
ICMM (China)	Institute of Chinese Materia Medica
IR	Infrared
ISO	International Organisation for Standardisation
JP	Japanese Pharmacopoeia
LC	Liquid chromatography
LD	Licensing Division
LGC	Laboratory of the Government Chemist, Teddington
LIMS	Laboratory Information Management System
LR	BP Laboratory Report
MAIL	Medicines Act Information Leaflet
MEGAN	MEtaGenome ANalyzer
MHRA	Medicines and Healthcare products Regulatory Agency
MPNS	Medicinal Plant Names Services - Royal Botanic Gardens, Kew
NGS	Next Generation Sequencing
NIBSC	National Institute for Biological Standards and Control
NPA	National Pharmacopoeial Authority
OMCL	Official Medicines Control Laboratory
qPCR	Quantitative Polymerase Chain Reaction
Ph Eur	European Pharmacopoeia
PMU	Pharmacy Medicines Unit – to be confirmed
PVPP	Polyvinylpyrrolidone
QSIMP	Quality Standards of Indian Medicinal Plants
SOP	Standard Operating Procedure
SPC	Special Product Characteristics
TCM	Traditional Chinese Medicine
TGA	Therapeutic Goods Administration, Australia
THMPD	Traditional Herbal Medicinal Products Directive
TLC	Thin layer chromatography
UK	United Kingdom
UKD	United Kingdom Delegation [to the European Pharmacopoeia]
USP	United States Pharmacopeia
UV	Ultraviolet
WHO	World Health Organization