

Planetary Protection requirements for future exploration missions: Assessing metagenomic methods for their inclusion in ESA standards

3rd – 4th October 2023
ESA/ESTEC, Noordwijk,
The Netherlands



TUESDAY 3rd OCTOBER 2023 (09:00 – 19:00) – LOCATION: NEWTON 2

SESSION 1: WELCOME FROM ESA

09:00-09:10	Opening	Dietmar Pilz (ESA)
09:10-09:20	Introduction to workshop context, objectives, agenda, and logistics	Robert Lindner (ESA) Silvio Sinibaldi (ESA) Sandra Ortega (ESA)

SESSION 2: PLENARY PRESENTATIONS

09:20-09:50	Planetary Protection at ESA: international framework and COSPAR role	Silvio Sinibaldi (ESA)
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COFFEE BREAK

10:00-10:45	Metagenomic methods of past, present, and future ESA planetary protection activities	Alexander Mahner (Medical University of Graz)
11:00-12:00	Metagenomic within a risk informed decision framework	Karen Olsson Francis (Open University)

LUNCH BREAK

13:00-13:50	Metagenomic of extreme environments	Michael Macey (Open University)
13:50-14:30	Sterility testing of blood bank products using molecular biology techniques	Laia Closa Gil (Blood and Tissue Bank)

COFFEE BREAK

14:45-15:15	Latest tools for functional and taxonomic annotations of metagenomics data	Silas Kieser (Kieser Metageomics)
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SESSION 3: VISIT TO TEC LABORATORIES AND TESTING FACILITIES

15:30-17:00	Life Support and Physical Sciences Instrumentation Lab ISRU Research Facility Automation and Robotics Lab	Location: Ej04 Location: Ej04 Location: Erasmus Building
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SESSION 4: WELCOME RECEPTION

17:00-19:00	Welcome reception	Main Canteen
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WEDNESDAY 4th OCTOBER 2023 (09:00 – 17:00) – LOCATION: NEWTON 2

SESSION 1: PLENARY PRESENTATIONS

09:00-10:00	Advances in genomic characterization techniques of terrestrial organisms: Focus on human microbiome	Joel Doré (INRAE/ MetaGenoPolis)
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COFFEE BREAK

10:10-11:00	The role of Metagenomic methods in closing knowledge gaps for crewed mission	Nick Bernardini (NASA)
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SESSION 2: WORK CASES

11:00-12:00	Group discussion on given work cases
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LUNCH BREAK

13:00-14:45	Continuation of Group discussion on given work cases
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COFFEE BREAK

15:00-15:55	Presentation of work cases
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SESSION 3: COLLOQUIUM AND WRAP-UP

16:00-16:45	Colloquium, discussion, open Q&A session	
16:45-17:00	Closure	Britta Schade (ESA)
