**SUPPLEMENTAL MATERIALS**

**Supplement 1. Search string using the Medical Subject Headings (MeSH) and keyword terms for systematic literature review**

|  |  |
| --- | --- |
| **Group** | **Search terms** |
| **#1** | Drug Resistance, Multiple, Bacterial[mh] OR multi-drug[ti] OR multidrug[ti] OR MDR[ti] OR MDX[ti] OR beta-Lactamases[mh] OR beta-lactamase\*[ti] OR Methicillin Resistance[mh] OR Methicillin Resistan\*[ti] OR methicillin resistan\*[ti] OR MET resistan\*[ti] OR extended-spectrum beta-lactamase\*[ti] OR ESBL[ti] |
| **#2** | *Klebsiella pneumoniae*[mh] OR *Klebsiella pneumonia*\*[ti] OR *Klebsiella rhinoscleromatis*[ti] OR *Enterococcus faecium*[mh] OR *Enterococcus faecium*[ti] OR *Streptococcus faecium*[ti] OR *Escherichia coli*[mh] OR *Escherichia coli*[ti] OR *E. coli*[ti] OR *Pseudomonas aeruginosa*[mh] OR *Pseudomonas aeruginosa*[ti] OR *Pseudomonas pyocyanea*[ti] OR *Acinetobacter baumannii*[mh] OR *Acinetobacter baumannii*[ti] OR *Acinetobacter calcoaceticus*[mh] OR *Acinetobacter calcoaceticus*[ti] OR *Staphylococcus aureus*[mh] OR *Staphylococcus aureus*[ti] OR Proteus[mh] OR Proteus[ti] OR Enterobacter[mh] OR Serratia[mh] OR Serratia[ti] OR Citrobacter[mh] OR Enterobacter\*[ti] OR Citrobacter\*[ti] |
| **#3** | Vancomycin-resistant Enterococci[mh] OR Vancomycin-resistant Enterococc\*[ti] OR Carbapenem-resistant Enterobacteriaceae[mh] OR Carbapenem-resistant Enterobacteriaceae[ti] OR Methicillin-resistant *Staphylococcus aureus*[mh] OR Methicillin-resistant *Staphylococcus aureus*[ti] OR VRE[ti] OR MRSA[ti] OR CRE[ti] OR Carbapenemase Producing Enterobacteri\*[ti] OR CPE[ti] |
| **#4** | Fecal Microbiota Transplantation[mh] OR Fecal Microbiota Transplantation\*[tw] OR Faecal Microbiota Transplantation\*[tw] OR Intestinal Microbiota Transfer\*[tw] OR Donor Feces Infusion\*[tw] OR ((fecal[tw] OR faecal[tw] OR feces[tw] OR faeces[tw] OR stool[tw]) AND (transplant\*[tw] OR transfer\*[tw] OR infusion\*[tw] OR bacteriotherap\*[tw])) |
| **#5** | Gastrointestinal Microbiome[mh] |
| **#6** | (gastrointestin\*[tw] OR intestin\*[tw] OR gut[tw] OR gastric[tw] OR enteric[tw] OR colon[tw] OR clonic[tw] OR “alimentary canal”[tw] OR “alimentary tract”[tw] OR bowel[tw] OR “digestive canal”[tw] OR “digestive tract”[tw]) AND (microbiom\*[tw] OR microbiota\*[tw] OR flora[tw] OR microflora[tw] OR bacteria[tw] OR bacterium[tw] OR microorganism\*[tw] OR microbe\*[tw]) |
| **#7** | (animal NOT (human AND animal)) OR (animal[mh] NOT (human[mh] AND animal[mh])) |
| **Search formula** | **(#1 AND #2 OR #3) AND (#4 OR #5 OR #6) NOT #7** |

**Supplement 2. Cochrane collaboration tool to assess the risk of bias in a randomized controlled trial**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Author, Year [Reference no.]** | **Random sequence** | **Allocation concealment** | **Blinding of participants and****personnel** | **Blinding of outcome****assessment** | **Incomplete****outcome data** | **Reporting bias** |
| Huttner et al. 2019 [44] | + | - | - | - | + | ? |

**Notes:** +, low risk of bias; ?, unclear risk of bias; -, high risk of bias

**Supplement 3. Newcastle−Ottawa scale to assess the risk of bias in observational studies**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Selection** | **Comparability** | **Outcome** | **Total\*** |
| **Author, Year [Reference no.]** | **Representativeness of the exposed cohort** | **Selection of the non-exposed cohort** | **Ascertainment of FMT exposure** | **Demonstration that outcome of interest was not present at the start of the study** | **Comparability of cohorts on the basis of the design or analysis** | **Assessment of outcome** | **Follow-up enough for outcome to occur** | **Adequacy of follow-up of cohorts** | **Total quality score** |
| **Accepted criteria** | **Representation of MDRO carriers with sex, age, and disease severity** | **Selected from the same source population** | **Record of procedure** | **Assessment of the presence or absence of disease by objective examination before FMT** | **Study controls for previous injury or age** | **Record of MDRO eradication using objective examination** | **At least 6 weeks** | **Follow-up of complete cohort** |  |
| Dubberke et al. 2016 [38] | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 5 |
| Davido et al. 2017 [39] | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 4 |
| Bilinski et al. 2017 [40] | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 5 |
| Dinh et al. 2018 [41] | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 5 |
| Singh et al. 2018 [42] | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 5 |
| Davido et al. 2018 [43] | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 5 |

\*Study quality was assessed by using the Newcastle-Ottawa Scale for assessing cohort studies. A study can be awarded a maximum of 9 points.