Reply to Jouhten et al

To the Editor—We thank Jouhten et al for their interest in our work [1] and appreciate their complementary findings in the effects of fecal transplantation on antibiotic resistance genes (ABR) in recipients. Their research, using quantitative polymerase chain reaction array for 85 ABR genes in recurrent Clostridium difficile infection (RCDI) patients before and after fecal microbiota transplant (FMT) further corroborates our findings that FMTs can reduce the number of ABR genes in RCDI patients.

Their discussion focuses on the importance of donor screening and the possibility of transferring ABR genes from a donor into a recipient. We agree that donor selection and screening is critical in order to minimize any potential transmission of infectious agents, and yet there is no consensus on how this is done. There are some general recommendations when it comes to donor selection criteria. However, what is included in donor testing has been variable, although serology for viral hepatitis, human immunodeficiency virus, syphilis, stool testing for culture and sensitivity, ova and parasite and Clostridium difficile are seen as the bare minimum [2, 3]. In our FMT program, we are fortunate to have dedicated donors who are relatively young, in their 30s, who have received few courses of antibiotics throughout their lives. We follow donor testing proposed by Bakken et al [4] every 4 months and further screen for the clinically important antibiotic-resistant organism such as vancomycin-resistant Enterococci and methicillin-resistant Staphylococcus aureus.

It is not known how extensive or how frequent donor testing needs to be done, because cases linking FMT to the possible transmission of norovirus, cytomegalovirus, and Blastocystis hominis have been reported, further highlighting the importance of rigorous and thorough donor screening [5–7].

These findings by Jouhten et al that FMT can potentially introduce new ABR genes to a recipient adds further complexity to the process of donor selection and screening. Screening for ABR genes makes sense in theory; however, most clinicians treating RCDI patients will not have access to this technology because it is not part of the routine laboratory tests. Perhaps a more practical approach is to select relatively young donors who have had little antibiotic exposure in their lifetime, which may minimize the number of ABR genes in these individuals. Future studies should examine optimal donor characteristics and screening process.
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