Supplementary Table S1 — Inclusion and Exclusion Criteria

Inclusion Criteria—HIV Group

- Positive HIV antibody test and HIV infection confirmed by standard diagnostic tests
- Aged 18–65 years, with a normal body mass index (BMI)
- No symptoms of chronic infection during the previous month
- No significant weight changes during the previous month
- No use of antibiotics, probiotics, or other microbiota-modifying agents during the previous month
- Willingness to participate voluntarily in the study and provide written informed consent
- No previous receipt of HAART
- No co-infection with other sexually transmitted diseases (STDs)

Inclusion Criteria—Healthy Control Group

- Negative HIV antibody test and no history of HIV infection
- Aged 18–65 years, with a normal body mass index (BMI)
- No symptoms of chronic infection during the previous month
- No significant weight changes during the previous month
- No use of antibiotics, probiotics, or other microbiota-modifying agents during the previous month
- Willingness to participate voluntarily in the study and provide written informed consent
- No diagnosis of STDs or other chronic conditions that could affect the gut microbiota

Exclusion Criteria—HIV Group

- Lack of confirmed HIV infection based on standard diagnostic testing
- Unwillingness or inability to provide informed consent
- Use of antibiotics, probiotics, or irregular dietary habits during the previous month
- Presence of significant comorbidities that could affect the intestinal microbiota
- Co-infection with hepatitis B, hepatitis C, or other STDs
- Pregnancy or breastfeeding

Exclusion Criteria—Healthy Control Group

- Positive HIV antibody test or suspected HIV infection
- Unwillingness or inability to provide informed consent
- Use of antibiotics, probiotics, or irregular dietary habits during the previous month
- Presence of significant comorbidities that could affect the intestinal microbiota
- **History of STDs, hepatitis B, or hepatitis C**
- Pregnancy or breastfeeding