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Experimental Assessment of Granular Activated Carbon's Effect on Horizontal Gene Transfer

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Figure S1 illustrates the schematic protocol of this method for counting viable colonies, mentioned in section 2.4 of the main text.

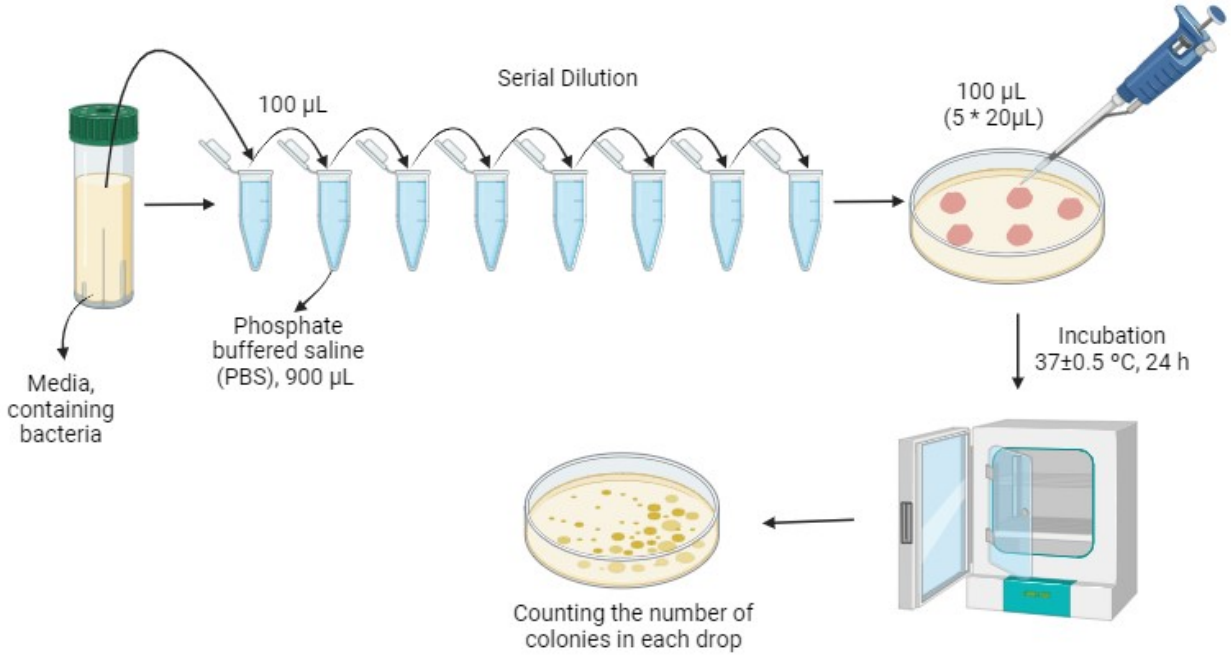

Figure S1. The schematic protocol of measuring viable bacteria concentrations by the heterotrophic plate counting (HPC) method

The schematic view of the conjugation study in solid phase, mentioned in section 2.5 of the main text, is shown in Figure S2.

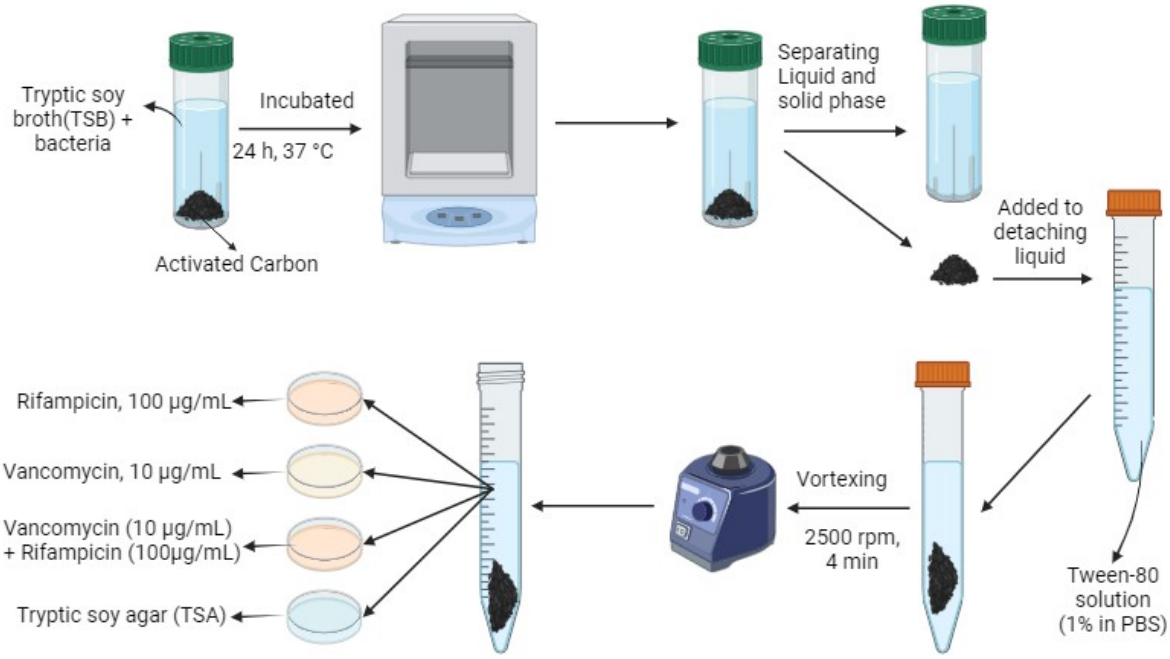

Figure S2. The schematic protocol of detaching bacteria from GAC and determining the concentration of cells on the solid phase

The schematic view of sample preparation for SEM studies (section 2.6) is shown in Figure S3.

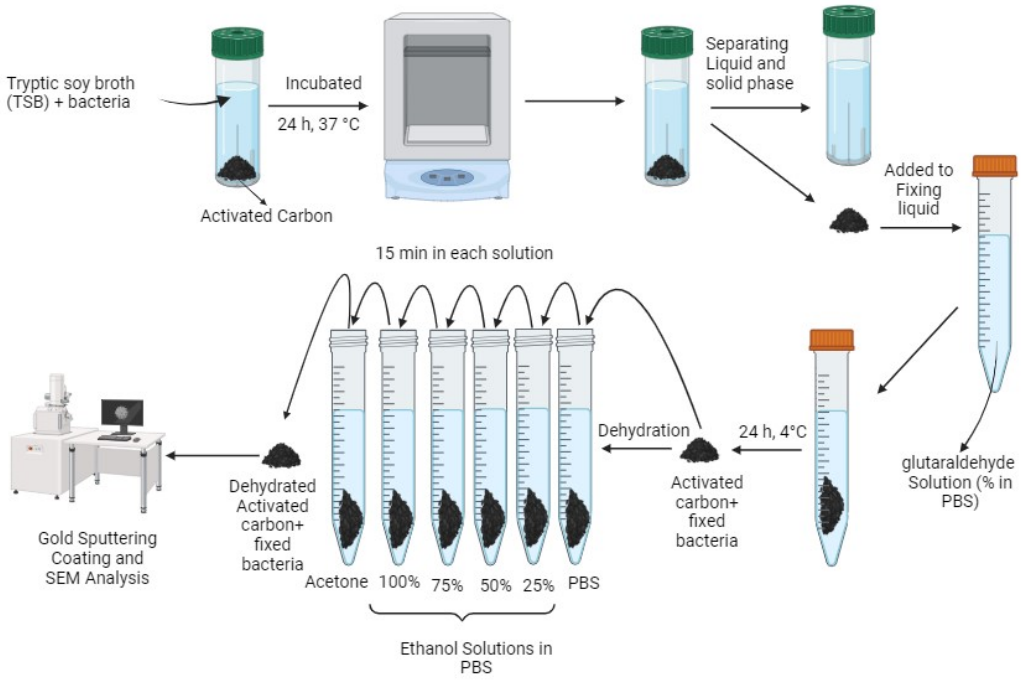

Figure S3. The schematic protocol of sample preparation, fixation, and dehydration for SEM studies

Figure S4, shows examples of counting the number of bacteria and the number of contacts between them in a SEM micrograph for quantitative assessment. The cell-to-cell contacts due to ongoing cell division have not been considered, because they do not lead to conjugation. As a limitation, the donor, recipient, and trans-conjugant cells look identical in SEM micrographs. However, since this lack of visual differentiation imposes a similar level of inaccuracy on all samples, it is unlikely to introduce a substantial bias to the comparison.

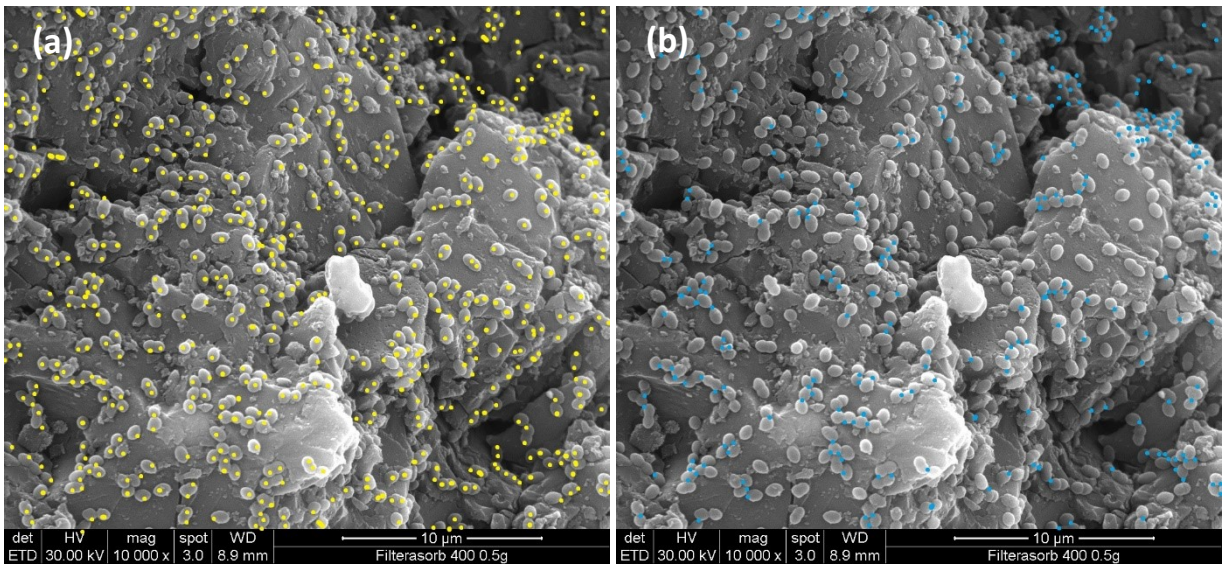

Figure S4. Examples of counting the number of bacteria (a) and the number of contacts between them (b) in a SEM micrograph for quantitative assessment