

Resource Recovery From Food Waste For The Generation Of Valuable Biochemicals Through Chain Elongation Platform



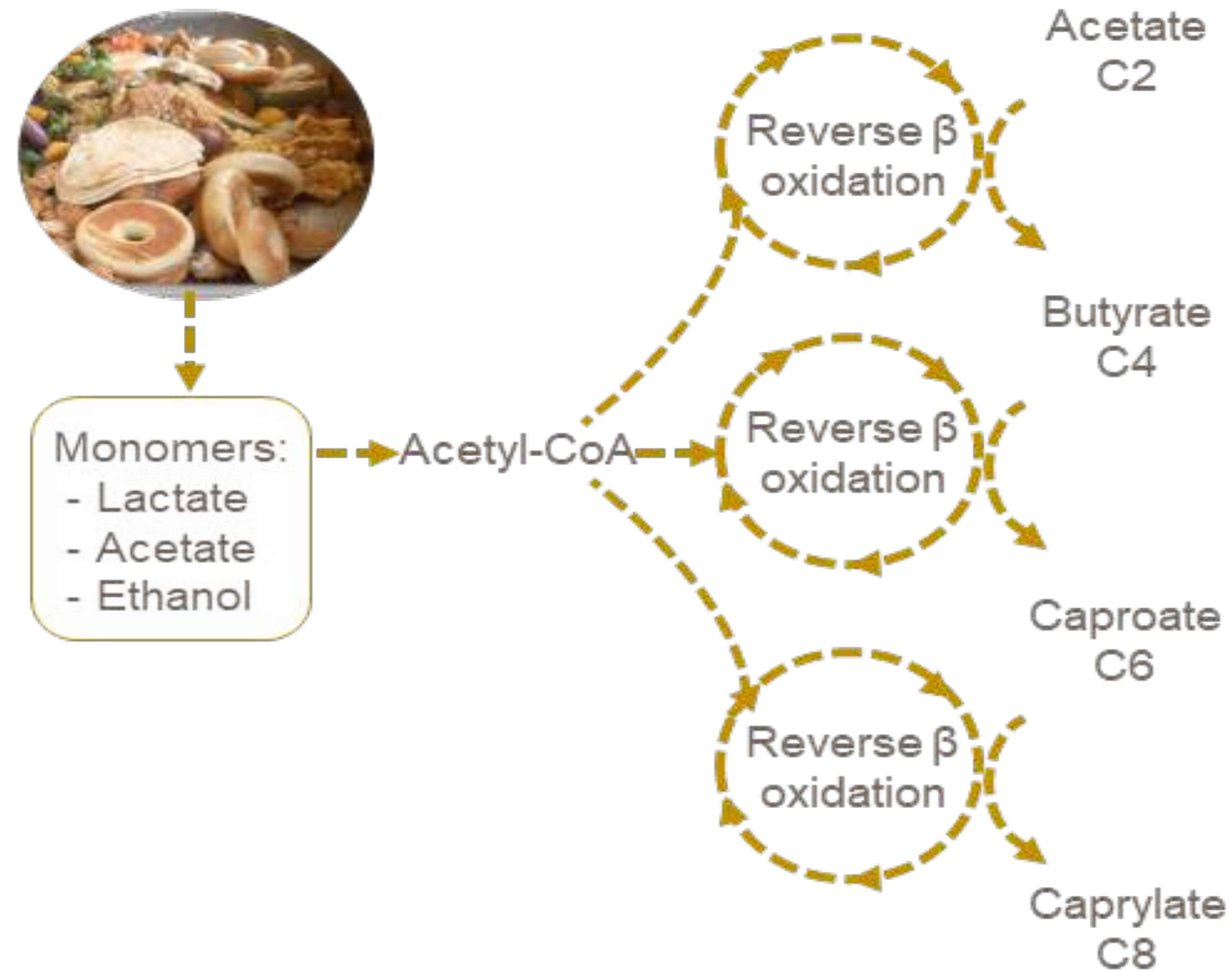
Bin Bian, Jiajie Xu, Pascal E. Saikaly

BACKGROUND

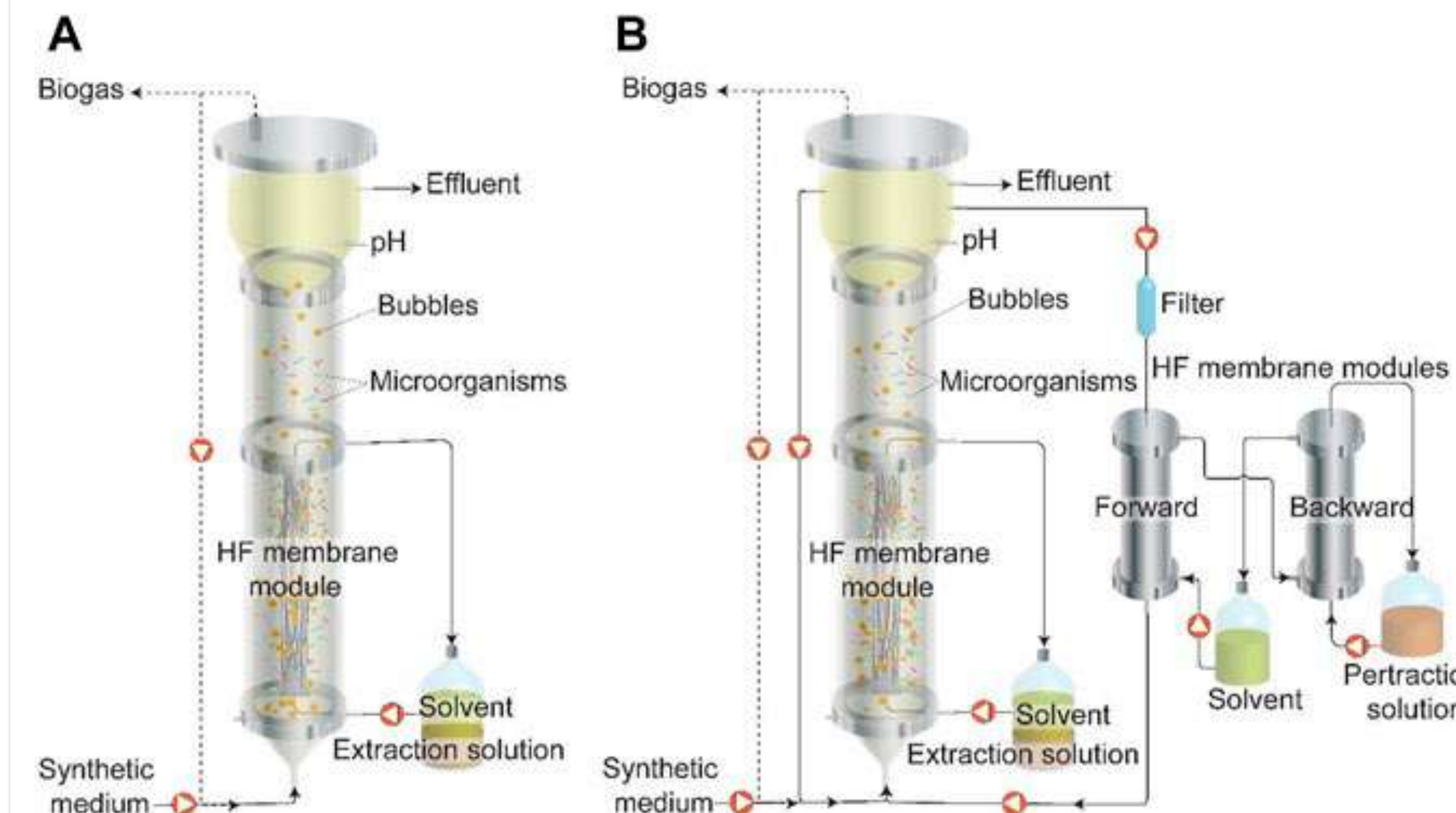
- **184 kg** food waste per capita/year in KSA
- **90%** open dumped or landfilled
- **Leachate & odor** soil, water & air pollution
- **Circular carbon initiative**

MECHANISM

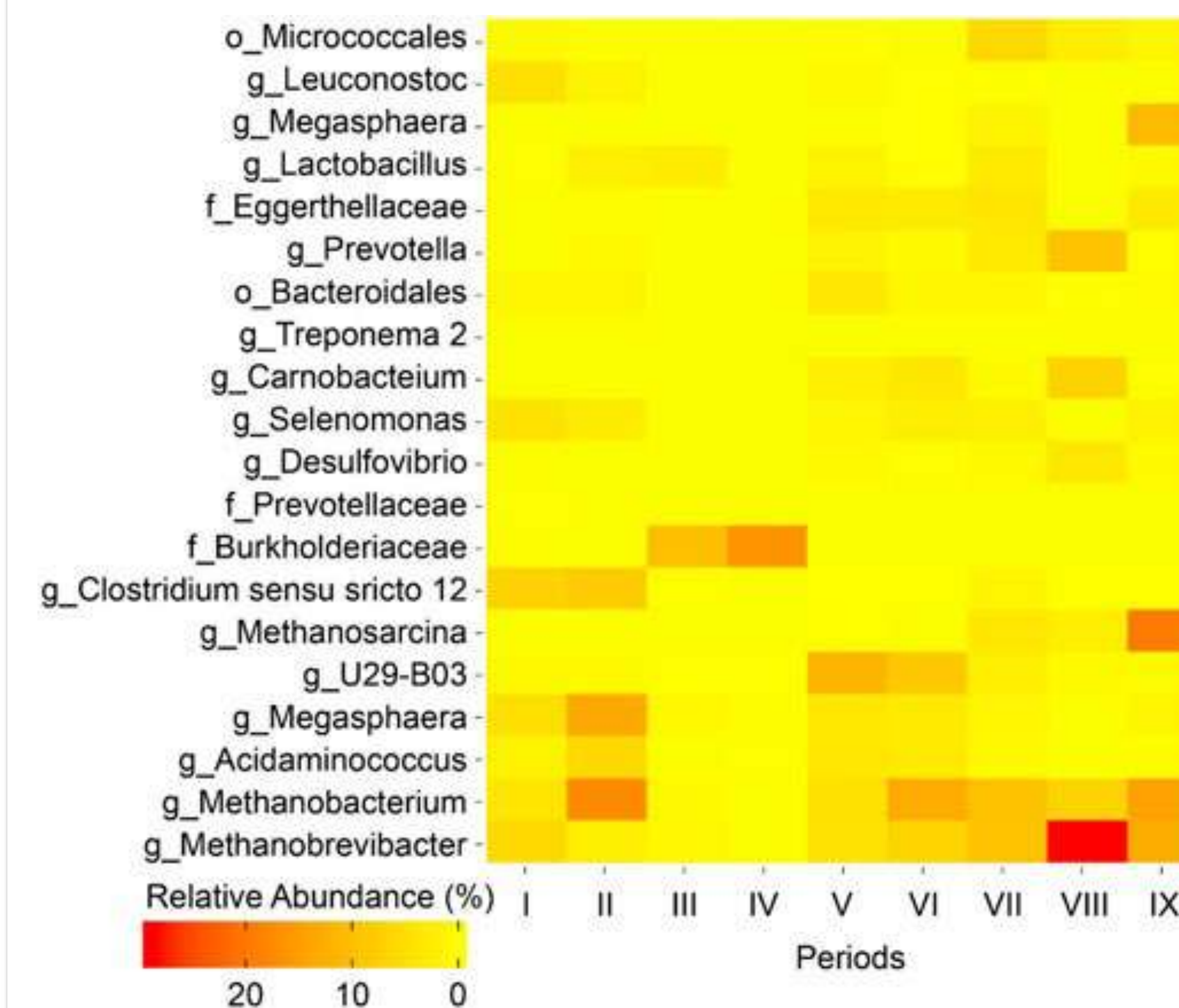
Chain elongation platform



EXPERIMENTAL DESIGN & RESULTS



Extraction system using (A) only internal hollow-fiber membranes, (B) internal and external hollow-fiber membranes simultaneously



Heatmap of the top 20 OTUs with relative abundance $\geq 1\%$ for one or more of the microbiome samples



MCCAs as animal feed additives

