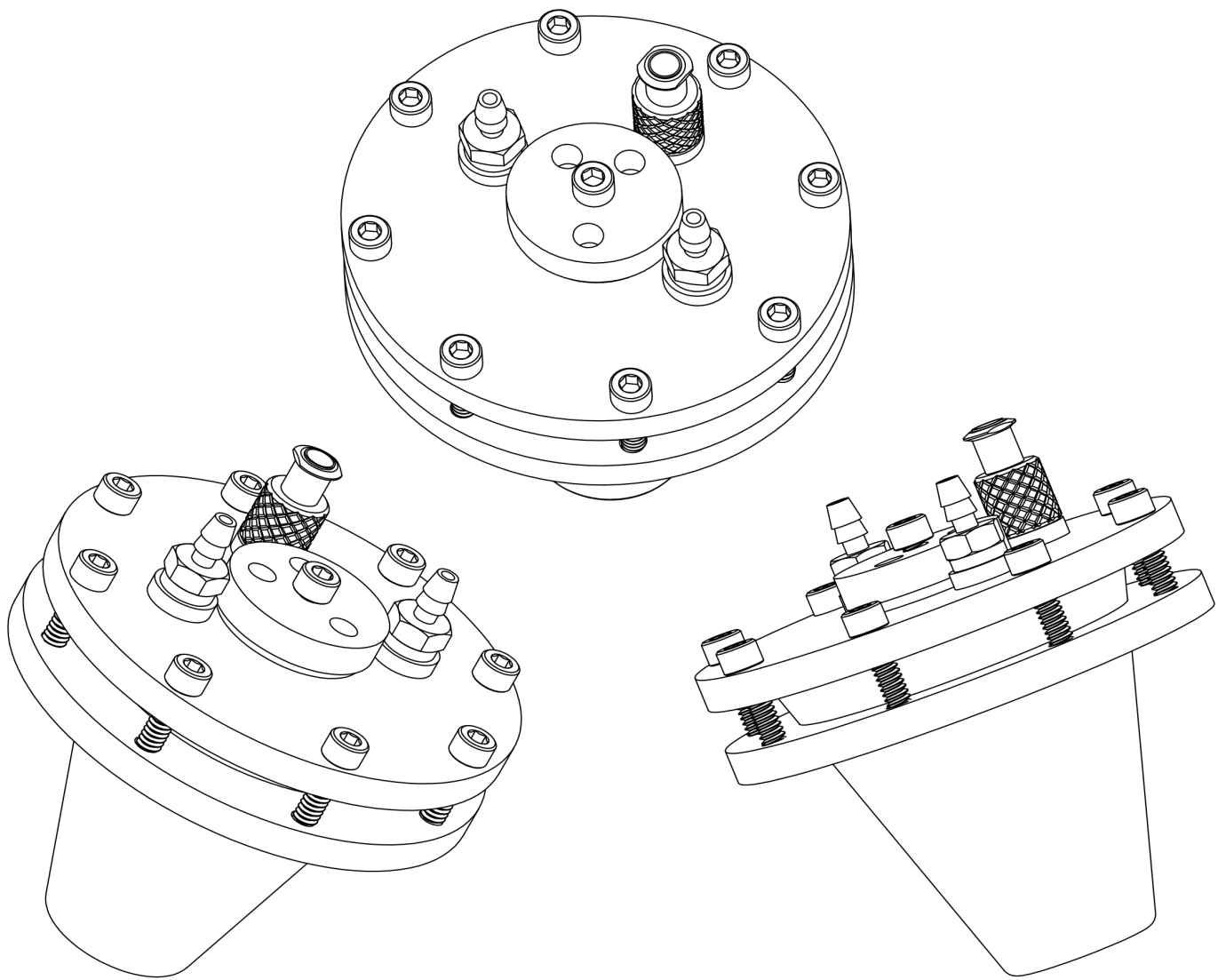
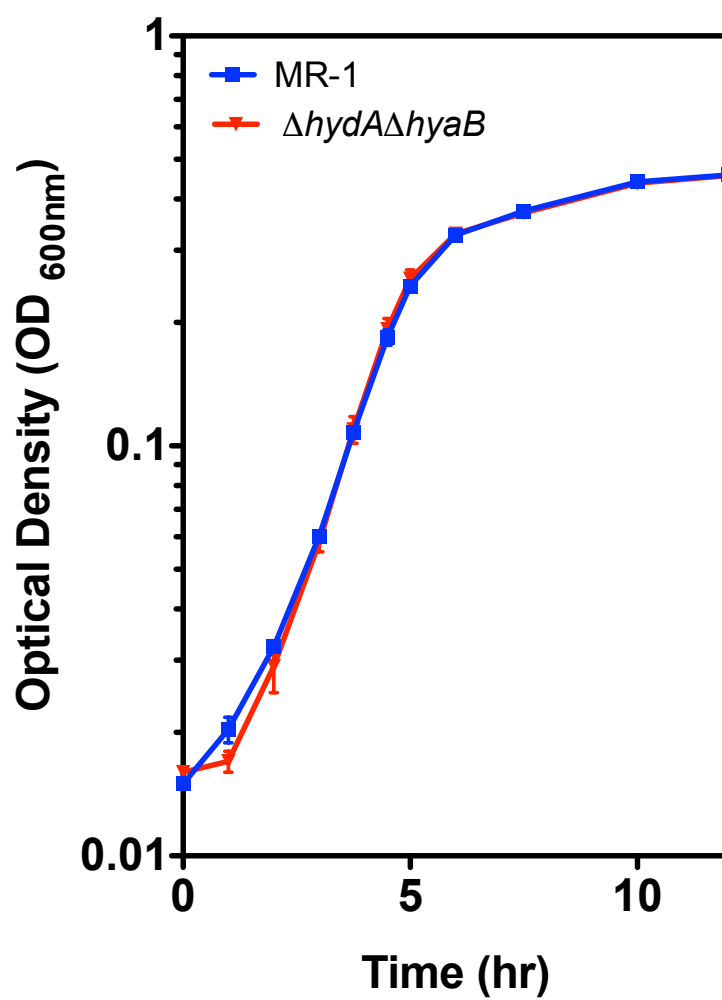


## Supplementary Figure 1



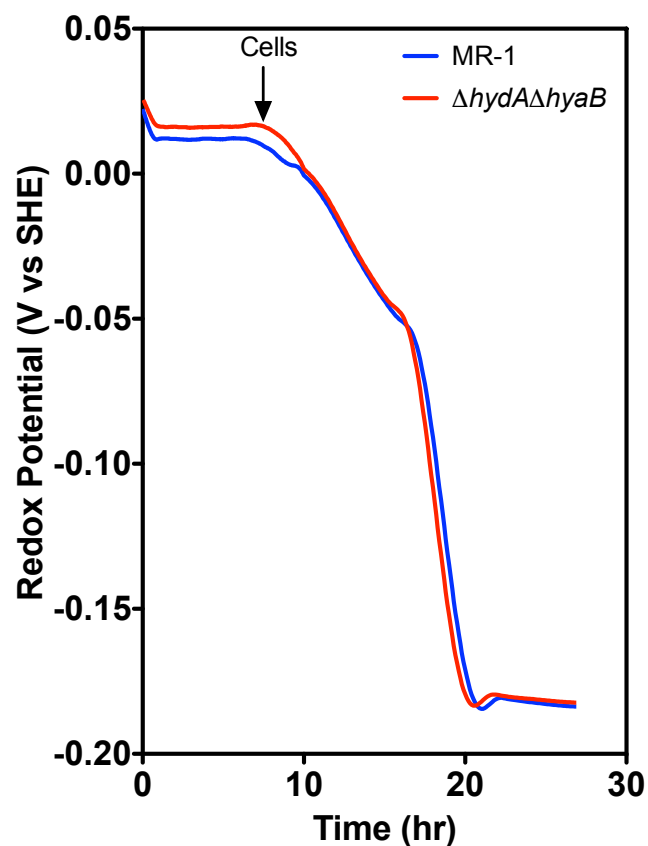
**Supplementary Figure 1. Bond Lab Bioreactor design.** Link to CAD files and material lists here: [https://github.com/komaljoshi-umn/Bond\\_lab\\_reactors](https://github.com/komaljoshi-umn/Bond_lab_reactors)

## Supplementary Figure 2



**Supplementary Figure 2.** Growth rates are similar for MR-1 (blue) and  $\Delta hydA\Delta hyaB$  (red) in medium containing 20 mM lactate and 40 mM fumarate. Data represents three independent cultures with error reported as SEM.

## Supplementary Figure 3



**Supplementary Figure 3. Changes in redox potential are similar for MR-1 (blue) and  $\Delta hydA\Delta hyaB$  (red) in medium containing Fe(III) citrate.** When MR-1 and  $\Delta hydA\Delta hyaB$  are inoculated in Fe(III) citrate medium, cells reduced Fe(III) citrate to the same extent as measured by change in redox potential over time using a redox probe. There is no evidence for hydrogen disposal as measured by the redox probe when cells are inoculated into medium containing soluble electron acceptors. Data representative of three independent experiments.