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Fungal bacteria- biofilms (FBB) was formed by bacterial colonization on biotic fungal surfaces. Formation of fungal-bacteria biofilms (FBBs) enhanced metabolic activities of their constituent microbes. This research was aimed to obtain FBB formed by P solubilizing *Aspergillus* sp and non-symbiotic nitrogen-fixing *Azotobacter* sp in various growth medium. Variation of media was used to determine the appropriate medium for FBB formation.

Four strain of *Aspergillus niger* (i.e. *Aspergillus niger* 1.2, *Aspergillus niger* 2.2, *Aspergillus niger* 1.3, *Aspergillus niger* ogb22), one strain of *Aspergillus carbonarius* and five strain of *Azotobacter* (i.e. *Azotobacter* gma11, *Azotobacter* da22b, *Azotobacter* 28b, *Azotobacter* 414 and *Azotobacter* h7b) were used in this research. *Aspergillus* sp dan *Azotobacter* sp were grown in Ashby broth, Yeast Manitol broth, Nutrient broth and Pikovskaya broth media. FBB formation was determined by observing bacterial colonization on the surface of *Aspergillus* sp mycelia microscopically. The formed FBBs were examined for their ability to dissolve P in the Pikovskaya broth having $\text{Ca}_3(\text{PO}_4)_2$ as its P source.

FBBs were formed 4 days after co-cultivation of *Aspergillus* sp and *Azotobacter* sp. All of *Aspergillus* and *Azotobacter* strains formed FBB in Nutrient and Pikovskaya broths. The formed FBBs have two-fold higher ability to dissolve P from $\text{Ca}_3(\text{PO}_4)_2$ compared to its constituent microorganisms. Among all of the formed FBB, the one constructed from *A. carbonarius* and *Azotobacter* gma11 could produce the highest soluble phosphate (46,00 ppm) in the Pikovskaya broth while the lowest is the one constructed from *A. niger* ogb22 and *Azotobacter* da22b (32,00 ppm). The formed FBBs have also two-fold higher ability to secrete ammonium into the Pikovskaya broth compared to its constituent microorganisms. Colonization of *Aspergillus* sp mycelia by ammonium secreted *Azotobacter* sp is enhance its ability to produce acids and it increase their capability to solubilize P. FBBs formed by *Aspergillus* sp and *Azotobacter* sp have a potential to be used as a better P solubilizing agent.

Keyword : Phosphate solubilizing, fungal bacteria biofilms, FBBs, *Aspergillus niger*, *Azotobacter*