

LETTER TO EDITOR

SMART GREEN TECHNOLOGY FOR MICROBIAL GHOSTS
PREPARATION

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Dear Editor

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Recently a simple but smart tool has been introduced to control pathogens [1, 2]. This tool is concerned with evacuating the microbial cells including the viruses from their internal content and leave the cell wall or the virus envelop intact with correct 3D surface structure and surface antigens [3]. The tool has been given the name Sponge Like protocol where pore or pores were introduced in the microbial cell walls or the DNA/RNA genomic materials of the viruses are degraded [2, 4-9]. The tool is so simple but efficient. It is based on determining the minimum inhibition concentration (MIC) and the minimum growth concentration of the used chemical compounds. The chemical compounds themselves are inexpensive. The most used ones till now are H₂O₂, NaOH, CaCO₃, NaHCO₃, SDS, NaCl, ethanol and water. The serial dilution method for such compounds (each used alone) is utilized to determine their effect on a particular microbe. The correct 3D structure could be judged using the light microscope and the crystal violet staining. In advanced labs, electron microscopes could be also used. To evaluate the surface antigens, classic immunological studies could be used as well as advanced ones.

I suggest reading the original protocol and also the reduced protocol as well as the papers published in such a topic carefully. One should observe that each microbe is different from the other. Even two closed *E. coli*, the JM109 and BL21 strains show different MIC and MGC which encourage some, not to use such a method in preparing the Bacterial ghosts or the Microbial ghosts but to be used as a tool for strain differentiation.

Such a tool will help a lot in controlling pathogens, strain identification and differentiation, study the cell wall, vaccine production, immunological applications etc.

For introducing a simpler method that could be used in emergence cases, egg lysozyme was used to do the same target following the same steps. The native lysozyme was used after determining their MIC and MGC against the microbe [6; 7]. Lysozyme which existed everywhere even in our saliva could prepare vaccine!

By introducing this topic, I have the hope that such tool and such concept could be useful in tackling pathogenic bacteria. The differences between the MIC and the MGC could be smarter and can be used in killing unwanted cells by compounds that affect differently on normal and cancer cells. Or at least could cause the minimum side effect.

The scientist are invited to use such a tool or more better ones, but I have a hope that this protocol and such tools will be introduced for free to the better of the humanity.

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CONFLICT OF INTEREST

There is no conflict of interest.

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None

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