HELLO!

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• A robust layer of mucilage formed by community of microorganisms held on to biotic or abiotic surface is called biofilm.

**Factors causing biofilm formation**

- Polarity, London-vander Waals forces, Hydrophobic interactions.

**Clinical Significance:**

- Antimicrobial endurance.
- Modulates immune response.
- Acute and chronic infections.
- Formation of stubborn and infectious matrix on medical devices like catheters, prosthesis and implants.

**Quorum sensing molecules**

- Persister cells
- Capsule
- Efflux pumps
- Extracellular by-products: Enzymes, Organic acids, Vitamins, Antibiotics, Lipopeptides etc.
- Genetic adaptations
- Membrane structures
- Physiological habitat: Mineral salts, temperature, pH, moisture, nutrients etc.
- Heterogenous growth phases, rate and metabolism.
- Stress response
- Proteins, electrolytes and some unidentified molecules
Here’s to you and to me
Raising a toast to the noisiest gathering
A party between microbial communities:
communication between is Quorum sensing
Stages of this gathering are reversible attachments, irreversible attachments
followed by a stage where there is maturation of the matrix and finally dispersal.
A cocktail of volatile and non-volatile bioactive molecules which disperse are
peptides, antibiotics, enzymes, organic acids, water, AHL’s excetra.
United the members stand up through polarity, London-vander waals forces and hydrophobic interactions,
They resist the external stress excellently.
Cheers to the party
Kudos to the luxuriant gathering.
The biofilm on human front could prove to be highly infectious
And in some instances, are beneficial (when in association with plants)
Good or bad, harmful or harmless
Biofilm are one of their kind
They could be formed by single genus and single species
Or an assemblage of many kingdoms, species and genus.
Beware: they are here to stay
Proposed strategies to handle biofilm:
Exploring synergistic action of natural antibiofilm agents with commercial / synthetic antibiofilm agents
THANKS!

Any questions?

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