

*Objectives*

## 2. Objectives

- Isolation and separation of the electrically conductive bacterial nanowires from *Pseudomonas aeruginosa*.
- Characterization of the separated bacterial nanowires using atomic force microscope (AFM) and high resolution transmission electron microscope (HR-TEM); and their electrochemical conductivity measurements
- Synthesis of metal oxide nanoparticles (CuO, NiO and ZnO) and their effective coating with bacterial nanowires; physiochemical and electrochemical characterization of metal oxide nanoparticles (CuO, NiO and ZnO) and their nanocomposite with bacterial nanowires.
- Potential electrochemical impedance measurement of the metal oxide nanoparticles (CuO, NiO and ZnO) and their nanocomposite with bacterial nanowires.