

1. To study the effect of *AIF* downregulation (constitutive & pre-stalk specific) on growth and development of *D. discoideum*.
2. To study the effect of constitutive *AIF* downregulation on oxidative stress mediated cell death of *D. discoideum*.
3. Oxidative phosphorylation studies in constitutive *AIF* downregulated *D. discoideum* cells.
4. To study the effect of constitutive *AIF* downregulation on mitochondrial fission-fusion mechanism of *D. discoideum*.
5. To study the effect of constitutive *AIF* overexpression on mitochondrial parameters (Total cellular ROS levels, fission-fusion mechanism and mtDNA content) of *D. discoideum*.