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| **Research Theme: Cell Biology; Cellular Biochemistry** |
| **PhD Research Project Title:**  **Unraveling the Role of Liquid-Liquid Phase Separation and Protein Aggregation in ALS Pathogenesis** |
| **Scholarship category (Please indicate the source of funding for this project):**  **SBS Research Student Scholarship (For SBS Faculty only)** |
| **Principal Investigator/Supervisor: Choe Young-Jun** |
| **Co-supervisor/ Collaborator(s) (if any):** |
| **Project Description**  **a) Background:**  **ALS, also known as Lou Gehrig's disease or motor neuron disease, is characterized by the aggregation of the TDP-43 protein. TDP-43, primarily a nuclear protein involved in various aspects of messenger RNA biogenesis/processing, forms toxic cytosolic aggregates in ALS patients. The mechanisms underlying TDP-43 mislocalization to the cytosol and the triggers for TDP-43 aggregation remain unclear.**  **b) Proposed work:**  **In this project, you will study the interactions of molecular chaperones with TDP-43 during its liquid-like condensation and solid-state aggregation.**  **c) Preferred skills:**  **Prior experience in a molecular biology laboratory would be advantageous.** |
| **Supervisor contact:**  **If you have questions regarding this project, please email the Principal Investigator:**  [**yjchoe@ntu.edu.sg**](mailto:yjchoe@ntu.edu.sg) |
| **SBS contact and how to apply:**  Associate Chair-Biological Sciences (Graduate Studies) : [AC-SBS-GS@ntu.edu.sg](mailto:AC-SBS-GS@ntu.edu.sg)  Please apply at the following:  **Application portal:** <https://venus.wis.ntu.edu.sg/GOAL/OnlineApplicationModule/frmOnlineApplication.ASPX> |