Rz. Yusup

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Voorschoten, Netherlands

Profile

Molecular Biologist with over 10 years of experience in RNA splicing mechanisms, proteomics, and mitophagy research. Expertise in genetic experiments, computational modeling, and bioinformatics tools for biological data analysis. Proficient in Python for molecular dynamics simulations and machine learning applications in genomics. Developed custom tools like TriplexDynamiX for RNA structure analysis and FastYeast for yeast growth pipelines. Passionate about interdisciplinary approaches combining wet-lab techniques with computational biology to advance research in neurodegenerative diseases and splicing dynamics. Fluent in English and Chinese, with strong problem-solving and collaborative skills.

Skills

Laboratory Techniques: Genetic engineering (plasmid construction, mutations), fluorescence microscopy, 2D electrophoresis, mass spectrometry

Computational Biology: Python (6+ years), PyMOL, SnapGene, MDtraj, OpenMM

Data Analysis & AI: Pandas, Matplotlib, TensorFlow, Keras, scikit-learn, machine learning for biological modeling

Tools: Git, GitHub, Anaconda, Google Colab, VS Code

Soft Skills: Problem-solving, teamwork, scientific communication, time management

Languages

Spoken Languages: Uyghur (Native), Chinese (Fluent), English (Professional), Dutch (A2-B1)

Professional Experience

- **PhD Candidate** — **IIMCB, Poland** • Jul 2021 - Oct 2023
  Investigated catalytic triplex rearrangements in RNA splicing using genetic mutations, 3D modeling, and computational simulations (Amber14/RNA.OL3); developed mechanistic models of energy barriers and triple stability.
- **Research Intern** — **Hebrew University, Israel** • Oct 2019 - Jul 2020
  Analyzed mitophagic degradation signals in yeast via fluorescence microscopy, genetic manipulations, and data interpretation for mitochondrial dynamics.
- **Master's Thesis Researcher** — **UNICAM, Italy** • Oct 2017 - Oct 2019
  Conducted proteomic studies on olive oil polyphenols' effects on yeast aging using 2D electrophoresis and mass spectrometry to model neurodegenerative diseases.

Key Projects

- **TriplexDynamiX** — **Python-based RNA Dynamics Tool**
  Simulated molecular dynamics of RNA structures with parallel processing and ML integration (OpenMM, MDtraj).
- **FastYeast** — **Yeast Growth Analysis Pipeline**
  Automated data processing and predictive modeling for yeast experiments using Pandas, Matplotlib, and TensorFlow.

Education

- **MSc Molecular Diagnostics** — **UNICAM, Italy** • Oct 2019
- **BSc Biotechnology** — **Xinjiang University, China** • Jun 2013

Publication

NAD Metabolism and Proteomic Profile in a Yeast Model: Effect of Phenols from Extra Virgin Olive Oil **Preprints & MaxQuant Summer School, 2024**

Vincenzetti, S., Rozimemet, Y., et al. DOI