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Prose Ivy G. Yepes, PhD
University President
Visayas State University
Baybay City, Leyte

Dear President Yepes,

I am writing to formally express my interest in the Associate Professor V position in the Department of Biotechnology, Faculty of Natural and Mathematical Sciences at Visayas State University. With a strong foundation in both research and instruction, I am eager to contribute to VSU's commitment to high quality instruction, innovative research, and impactful community engagements.

My master's research focused on advancing genetic engineering and tissue culture technologies for bioenergy crops. I developed sterile lines of *Triplidium* spp., a potential bioenergy crop by knocking out key meiotic recombination genes using the CRISPR/Cas9 system. This work addresses concerns on the potential invasiveness of bioenergy grasses to improve the sustainability of cellulosic ethanol production. I established an efficient tissue culture protocol for regeneration and optimized an *Agrobacterium*-mediated transformation protocol. I also designed and tested guide RNAs (gRNA) targeting these meiotic recombination genes. Moreover, I successfully constructed CRISPR/Cas9 binary vectors with multiple gRNAs through restriction enzyme cloning.

In addition to research, I have acquired relevant teaching experience having served as a teaching assistant for an undergraduate Plant Propagation course. This role helped support student learning in both laboratory and field settings. As part of my graduate minor coursework in biotechnology, I took specialized courses in RNA interference, CRISPR technologies, and portable genome sequencing using Oxford Nanopore technologies.

I am enthusiastic about the opportunity to teach, mentor, and conduct research at VSU. Thank you for considering my application. I welcome the opportunity to discuss how my background and goals align with the university and institute's vision.

Sincerely,


Justine Christian H. Mulig