



July 1, 2021

### CERTIFICATE OF EMPLOYMENT

This is to certify that **Ms. MICHELLE E. GUMBA** was employed at the Philippine Root Crop Research and Training Center (PhilRootcrops) as a Science Research Assistant on job order status from August 2009 to June 30, 2021 under the following projects of Dr. Erlinda A. Vasquez, Dr. Anabella B. Tulin and Dr. Edgardo E. Tulin namely:

1. Cost-Effective Integrated Pest Management in the Production of Quality Root Crops Planting Materials
2. Development of Lateral Flow Immunosorbent Assay (LFIA) Detection Kit for Phytoplasma in Cassava
3. Screening & Evaluation of 48 NSIC-Registered Cassava Varieties of Resistance to Red Spider Mite, *Tetranychus Kanzawai* Kishida
4. Enhanced Cassava Production Through Distribution of Quality Planting Materials
5. Biochemical Alteration and Yield Loss in Cassava Infected with Phytoplasma
6. Evaluation of the Antidiabetic and antihypertensive Properties of PRP-1 from Purple Yam (*Dioscorea alata* L.) and of Manunggal (*Samadera indicat* Gaertn)

Her functions included the following:

1. Assist the project leader in the implementation of the project in the field
2. Supervises the selection, cutting and treatment of cassava planting materials
3. Records the distribution of pre-treated-cassava planting materials to intended-beneficiaries
4. Assists the project leader in the preparation of progress and terminal reports.
5. To conduct laboratory analysis
6. To prepare materials for the implementation of the project
7. To assist in the conduct of laboratory experiments
8. To wash and clean glass wares and other utensils
9. Prepares buffers and solutions needed for extraction of carabao mango-specific protein

10. Assists project staff in sterilizing glasswares and in washing glass plates and columns
11. Helps maintain cleanliness of the laboratory
12. Assist project leader in ordering of reagents and chemicals, and purchase of experimental animals for the project
13. Conducts/performs extraction and purification of PRP-1 including preparation of columns for chromatography
14. Performs animal experiments for anti-diabetic, anti-hypertensive and hepatotoxicity studies with close supervision by licensed veterinarian
15. Assist in the writing of reports and preparation of posters for information dissemination

This certification is issued for whatever purpose this may serve.

  
**LISA J. ARCE**  
Assistant Director