



# **PROJECT C - DEVELOPMENT OF *PEPPEROMIA PELLUCIDA* TEA**

Date Submitted: September 10, 2022	Semester: First	Duration of the Project: January 2023-January 2024
Team Leader: Lena Canet		
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College/Campus: Hagonoy	Department: Hospitality and Tourism	Program: Hospitality
Project Title: Food Advancement and Technology (FAT)		
Funding Source: Bulacan State University	Total Project Amount: Php 116,346.00	
Members: College/Department/Agency: Hagonoy Campus Member 1: Rochelle Valdizno		
<b>Research Agenda:</b>		
<input type="checkbox"/> Climate Change and Adaptation	<input type="checkbox"/> Diagnosis and Prevention of Human Diseases and Health Status of Vulnerable Groups	<input type="checkbox"/> Restructuring Society and understanding of Culture towards Inclusive Nation Building
<input type="checkbox"/> Biodiversity and the Management of the Natural Environment	<input type="checkbox"/> Industry assistance Towards Efficient production and Achieving Global Standards	<input checked="" type="checkbox"/> Emerging Technology and Applications to Inclusive nation Building
<input checked="" type="checkbox"/> Food Safety and Security	<input type="checkbox"/> Cultural Heritage and Conservation	<input type="checkbox"/> Education and the Pedagogy for the Filipino Learners
<b>United Nations Sustainable Development Goals</b>		
<input type="checkbox"/> 1 No Poverty	<input checked="" type="checkbox"/> 2 Zero Hunger	<input checked="" type="checkbox"/> 3 Good Health and
		<input type="checkbox"/> 4 Quality

		Well-Being	Education
<input type="checkbox"/> 5 Gender Equality	<input type="checkbox"/> 6 Clean water and sanitation	<input type="checkbox"/> 7 Affordable and Clean Energy	<input type="checkbox"/> 8 Decent work and Economic Growth
<input type="checkbox"/> 9 Industry, Innovation, and Infrastructure	<input type="checkbox"/> 10 Reduced Inequalities	<input type="checkbox"/> 11 Sustainable Cities and Communities	<input checked="" type="checkbox"/> 12 Responsible Consumption and Production
<input type="checkbox"/> 13 Climate Action	<input type="checkbox"/> 14 Life Below Water	<input type="checkbox"/> 15 Life on Land	<input type="checkbox"/> 16 Peace, Justice, and Strong Institutions
<input type="checkbox"/> 17 Partnerships for the Goals			

**Program Component:**

<input checked="" type="checkbox"/> ANIB DAMPI	<input type="checkbox"/> YAMAN	<input type="checkbox"/> KAGYAT
<input type="checkbox"/> BALAT	<input type="checkbox"/> UGNAY	

**Subprogram/s (Pls. Specify)** \_\_\_\_\_

**Projected Output**

<input checked="" type="checkbox"/> Publication	<input checked="" type="checkbox"/> Partnership and Places	<input checked="" type="checkbox"/> Policies
<input checked="" type="checkbox"/> Patent/IPs	<input checked="" type="checkbox"/> Profit	<input type="checkbox"/> People Services: Specify _____
<input checked="" type="checkbox"/> Product/Process		

**Rationale:**

Tea is a beverage or a drink prepared by pouring hot water commonly from dried ingredient and it's the cheapest drink of human next to water (Khan, et al. 2013). By moderately drinking of tea, it has a lot of health benefits. several studies have shown that a tea may boost

someone's immune system, fight off inflammations and even ward off cancer and heart disease (Hayat, et al. 2015). An innovative tea like *Peperomia pellucida* has also a lot of benefits. It has antihypertensive, anti-inflammatory, antioxidant, antihyperglycemic and anti-angiogenic (Ng et al., 2020).

*Peperomia pellucida* locally known as "pansit-pansitan" is abundant in Hagonoy, Bulacan. However, it is only being use for external medicinal purposes. Thus, this study will seek to produce a healthy tea drink in pouch made from *Peperomia pellucida*.

**Objectives:**

- To conduct a market research
- To identify the product details of making Pepperomia Pellucida Tea.
- To verify the appropriate product development method.
- To develop a healthy dessert out of the Pepperomia Pellucida Tea.
- To consider physical structure, health benefits where required, stability, shelf life, and all sensory attributes.
- To contribute to the existing body of literature in food product development.

Earlier results within the research area by applicants; related works already in progress

**Methodology:**

The proponents will do market research to see whether there is a market for the proposed product. The following phase will be the identification of product details, in which the proponents will identify which ingredients that will be used in the development of the proposed product. Following that, the proponents will verify the appropriate product development method. To ensure the product's accuracy, a number of trials and errors will be carried out. The finished product will then be submitted to the Department of Science and Technology (DOST) for microbiological analysis and sensory evaluation. After passing the tests, the proponents will conduct a survey utilizing the Hedonic Scale and a random sample approach.

**Ethical Considerations:**

According to Bhandari, P. (2022), ethical concerns in research are a collection of principles that influence your study designs and methods. When gathering data from individuals, scientists and researchers must always follow a set of rules.

The researchers will ensure that potential volunteers get and comprehend all of the information they require to determine whether or not to join. The researchers will also ensure participant anonymity and take into account all potential sources of damage. Finally, it will be ensured that the researchers do not engage in any scientific misconduct.

**Specific Expected Output of Research Project:**

Journal Publication and Patent

**Summary of Budgetary Requirements**

Personal Services  
Details:

<b>Estimated Cost: Php 81, 600.00</b>
Maintenance and Other Operating Expenses Details: <b>Estimated Cost: Php 34,746.00</b>
Grand Total:  Php 116,346.00

## References:

Bhandari, P. (2022). Ethical Considerations in Research | Types & Examples.  
<https://www.scribbr.com/methodology/research-ethics/>

Hayat, K., Iqbal, H., Malik, U., Bilal, U., & Mushtaq, S. (2013). Tea and Its Consumption: Benefits and Risks. *Critical Reviews in Food Science and Nutrition*. 55:7. 939-954. <https://doi.org/10.1080/10408398.2012.678949>

Khan N, Mukhtar H. Tea and health: *studies in humans*. Curr Pharm Des. 2013;19(34):6141-7. doi: 10.2174/1381612811319340008. PMID: 23448443; PMCID: PMC4055352.

Ng ZX, Than MJY, Yong PH. Peperomia pellucida (L.) Kunth herbal tea: Effect of fermentation and drying methods on the consumer acceptance, antioxidant and anti-inflammatory activities. Food Chem. 2021 May 15;344:128738. doi: 10.1016/j.foodchem.2020.128738. Epub 2020 Nov 27. PMID: 33280962.

**Note: Please use the Sample Budgetary Requirements in Excel**

Work Plan / Gantt Chart													
Objectives	Expected Output	Activities / Work plan	MONTH										
			1	2	3	4	5	6	7	8	9	10	11
<ul style="list-style-type: none"> <li>To conduct a market research</li> </ul>	<ul style="list-style-type: none"> <li>Market research</li> </ul>	<ul style="list-style-type: none"> <li>conduct interviews and surveys</li> <li>data formatting and analysis of report</li> </ul>											
<ul style="list-style-type: none"> <li>To identify the product details of <i>Peperomia pelucida</i> Tea</li> </ul>	<ul style="list-style-type: none"> <li><i>Peperomia pelucida</i> Tea Ingredients</li> </ul>	<ul style="list-style-type: none"> <li>employ trial and error experiment</li> </ul>											

