## INDUSTRIAL TECHNOLOGY DEVELOPMENT INSTITUTE Completed Projects for Q1 2021

No./Project Title		Date Started	Completion Date		Project Leader			
	•		Original	Revised	<u>-</u>			
CHEMICALS AND ENERGY DIVISION								
1	RDR-CED-2019-01 Natural Hydrocolloid as Alternative Emulsifier and Stabilizing Agent from Okra (Hibiscus esculentus) Pods	01-Jan-20	31-Dec-20	31-Mar-21	OC Evangelista			
	RDR-CED-2020-02 Processing of Anti-freezing Agent for Biodiesel	17-Feb-20	31-Dec-20	31-Mar-21	CA Bulan			
3	RDR-CED-2020-03 Development of Uninterruptible Power Back-Up System Using Motor Control for Lighting Applications as Sample Electrical Load	17-Feb-20	01-Jan-21	31-Mar-21	FE Del Pozo Jr.			
4	RDR-CED-2020-04 Catalytic Hydrogenation and Transesterification of Highly Unsaturated Fatty Acids from Rubber Seed Oil	17-Feb-20	31-Dec-20	31-Mar-21	VFR Ablang			
5	RDR-CED-2020-05 Bench-scale Production of Curcumin from Philippine Turmeric using Different Extraction Methods	01-Jan-20	31-Dec-20	31-Mar-21	EA Ongo			
ΕN	ENVIRONMENT AND BIOTECHNOLOGY DIVISION							
6	RDR-EBD-2020-01 Development of a Fermentation Product (Kimchi-Filipino adaptation) from locally-grown vegetables using indigenous LAB isolates as starter culture	1-Jan-2020	31-Dec-2020	31-Mar-21	EG Panerio			
FO	OD PROCESSING DIVISION							
7	RDA-FPD-2018-03 Establishment of Halal Assurance System for Processing Selected Banana Products (Banana Chips, Banana Catsup, and Frozen Banana)	1-Aug-2018	31-Jan-2021		MEM Falco			
PA	PACKAGING TECHNOLOGY DIVISION							
8	RDR-PTD-2020-02 Establishment of Shelf Life and Safety of Chilled Ready to Heat and Freshly Cooked Ready to Eat Foods Sold in Convenience Stores and Delivery Service	1-Jan-2020	31-Dec-2020	31-Mar-2021	C Bihis			

## INDUSTRIAL TECHNOLOGY DEVELOPMENT INSTITUTE Completed Projects for Q2 2021

No.	Code/Title	Date started	Oate started Completion Date Original Revised		Project Leader					
FOO	D PROCESSING DIVISION									
1	RDR-FPD-2020-01 Development of Alternative Techniques for Okra Flakes/Sheets Processing	1-Apr-2020	31-Dec-2020	30-Jun-2021	MEM Falco					
2	RDR-FPD-2020-03 Establishment of Food Safety System for High Risk Bakery Products for Public Consumption	1-Jan-2020	31-Dec-2020	30-Jun-2021	LS Montevirgen					
3	RDR-FPD-2020-05 Improving the Quality of Deep-Fat Fried Cassava Chips	1-Sept-2020	30-May-2021	-	JC Ocsala					
4	RDR-FPD-2020-06 Natural Flavorings from Local Sources as Food Additive Study 1: Optimization of Spray Drying of Flavors from Fermented Fish and Shrimps	1-Apr-2020	31-Dec-2020	30-Jun-2021	MDL Villasenor					
MATERIALS SCIENCE DIVISION										
5	RDA-MSD-2018-02 Environment, Health and Safety Research on the Risk Assessment of Nanomaterials	1-Jun-2018	31-Mar-2021	31-May-2021	BA Basilia					
PAC	PACKAGING TECHNOLOGY DIVISION									
6	RDR-PTD-2019-06 Development of Intelligent Packaging Colorimetric	1-Jun-2019	31-Dec-2019	31-Mar-2021	RAG Garalde					
	Sensor as Total Volatile Base Nitrogen (TVBN) Indicator	1-Jan-2020	31-Dec-2020	30-Jun-2021						
TECI	TECHNOLOGICAL SERVICES DIVISION									
7	RDR-TSD-2020-01 Market Testing of FIC Technologies/Products through collaboration with existing adopters	1-Jan-2020	31-Dec-2020	30-Jun-2021	CL Moico					

## INDUSTRIAL TECHNOLOGY DEVELOPMENT INSTITUTE Completed Projects for Q4 2021

	PROJECT	PROJECT TITLE	Date Started	Date End	End Revised	DATE COMPLETED	Project Leader
1	RDR-CED-2021- 01	Isolation, characterization and utilization of waste lignin in biobased adhesives.	Jan. 1, 2021	Dec. 31, 2021		Dec. 31, 2021	C.A.G. Bilbao
2	RDR-CED-2021- 02	Scale-up of P{ower Back-up Systemfor Large Equipment.	Jan. 1, 2021	Dec. 31, 2021		Dec. 31, 2021	F.E. Del Pozo Jr.
3	RDR-EBD-2020- 06	Dissolved Copper Removal from Semiconductor Wastewater Effluent by Electrowinning Process	Feb. 17, 2020	Dec. 31, 2021		Dec. 31, 2021	J.C. Tejano
4	RDR-FPD-2021- 05	Ultrasonic Assisted Extraction (UAE) and Microencapsulation of Virgin Coconut Oil (VCO)  Phase 1: Development of UAE and Microencapsulation Processes	Mar. 1, 2021	Dec. 31, 2021		Dec. 31, 2021	MDL. Villasenor
5	RDR-FPD-2021- 06	Development of New Shelf Stable Food Products from Fruits, Grains and Vegetables (GAD project)	Jan. 1, 2021	Dec. 31, 2021		Dec. 31, 2021	MBA. Macaraeg
6	RDR-MSD-2021- 01	3D-Printed Carbon-based Flexible Piezoresistive Wearable Sensor for Smart Device Gesture to Speech Applications - Year 1	Jan. 1, 2021	Dec. 31, 2021		Dec. 31, 2021	MCO Que / JR Celorico
7	, RDR-MSD-2021- 02	Porous Nanocarriers for Drug Delivery Applications - Year 2	Jan. 1, 2021	Dec. 31, 2021		Dec. 31, 2021	JR Celorico / AK Collera
8	RDR-MSD-2021- 03	Superparamagnetic Iron Oxide Nanoparticles (SPIONS) from Natural Mineral Deposits for Industrial and Biomedical Applications - Phase 2	Jan. 1, 2021	Dec. 31, 2021		Dec. 31, 2021	PAN de Yro
g	04	Development of an Antimicrobial Wound Dressing from Bacterial Cellulose- Nanoclay composite - Phase 1	Jan. 1, 2021	Dec. 31, 2021		Dec. 31, 2021	CS Emolaga
10	05	Advanced Rechargeable Lithium-ion Batteries - Phase 1: Fabrication of	Jan. 1, 2021	Dec. 31, 2021		Dec. 31, 2021	MT Margarito
11	RDR-PTD-2020- 04	Development of Anti-oxidant film based on chitosan containing spent ground coffee extract	Jan. 1, 2020	June 30, 2021	Oct. 31, 2021	Oct. 31, 2021	M.J.P. Paico
12	RDR-PTD-2020- 05	Exposure assessment of Filipino Consumers to benzophenone migrated from paper and paperboard used as packaging for food and beverages	June 1, 2020	Nov. 30, 2021		Nov. 30, 2021	D.J. Alcarde, Jr.
13	RDR-PTD-2020- 03	Shelf life extension of fresh-cut pineapple by application of alginate based- edible coating with lemongrass essential oil	Jan. 16, 2020	Jan. 15, 2021	Dec. 17, 2021	Dec. 17, 2021	D.J.I. Ortiz
14	RDR-PTD-2020- 01	Development and Assessment of Bacterial cellulose derived from fruit waste as a bio-based plastic film	Jan. 1, 2020	Dec. 31, 2020	Dec. 31, 2021	Dec. 31, 2021	C.T. Saldaña
15	RDR-STD-2021- 03	Bench-Scale Production, Verification of Optimized Parameters and Sensory Evaluation for the Market Research of Halal Cosmetics and	May 17, 2021	Oct. 31, 2021		Oct. 31, 2021	R.C. Torres/ M.R.V. Parcon
	RDA-EBD-2019-	Development of a Compact Wastewater Treatment System (CWTS) for					
1	05	Restaurants in Boracay, Island	July 15, 2019	July 15, 2020	Nov. 30, 2021	Nov. 30, 2021	R.L. Retamar
2	RDA-EBD-2020- 01	Management of Dredged Material: Characterization, Treatment and Disposal (CharTeD DreaM)	July 1, 2020	Jan. 31, 2021	Dec. 31, 2021	Dec. 31, 2021	R.L. Esguerra / D.C. Pangayao
3	RDA-FPD-2018- 06	Development of Emulsified Meat Products (Sausage, Nuggets and Burgers) for Halal Market	Aug. 1, 2018	Jul. 31, 2020	June 30, 2021	June 30, 2021	ME Evaristo

PROJECT	PROJECT TITLE	Date Started	Date End	End Revised	DATE COMPLETED	Project Leader
RDA-PTD-2016- 04	Upgrading and Enhancing the Capacity of the Packaging Technology Division in Packaging Research and Innovation	Dec. 1, 2016	Nov. 30, 2018	Nov. 30, 2021	Nov. 30, 2021	DE Tañafranca
RDA-STD-2021- 03	Scale-up Production, Stability, and Application of Natural Colorants for Cosmetics (Year 1)	Jan. 1, 2021	Dec. 31, 2021		Dec. 31, 2021	RC Torres/ MRV Parcon

Prepared by: MAIdAOfina 1/18/2022