



ICoSTH BALI 2018

INTERNATIONAL CONFERENCE ON SCIENCE, TECHNOLOGY AND HUMANITIES (ICoSTH)

"GLOBAL PARTNERSHIPS FOR ADVANCING INNOVATION ON SCIENCES,
TECHNOLOGY AND HUMANITY SOLUTIONS RESILIENT TO CLIMATE CHANGE"

PROGRAM BOOK

22-23 OKTOBER 2018 | THE PATRA RESORT & VILLAS



Supported by:



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NDSU

4	Ida Ayu Gede Widihati	Administration Of Salicylic Acid-Bentonite Clay Decreased The Level Of Interleukin-6, And High Sensitivity C-Reactive Protein On Carragenan-Induced Wistar Rat (<i>Rattus Norvegicus</i>)
5	Dr.Dra.Ni Made Suaniti M.Si	Components of Virgin Coconut Oil (VCO) after heating and Adding of fragrances (<i>Cymbopogon Nardus</i> (L.) As Natural Antioxidant
6	Dr.Drs.I Made Oka Adi Parwata, M.Si	The Potency of Flavonoid compounds in water Extract <i>Gyrinops versteegii</i> Leaves as Natural Antioxidants Sources
7	Dr.Dra.Wiwik Susanah Rita, M.Si	Identification Of Active Compounds And Antibacterial Activity Of Local Balinese Banana Peels (<i>Musa</i> sp.) Against <i>Escherichia coli</i> AND <i>Staphylococcus aureus</i>
8	Prof.Dr.Drs.I Made Dira Swantara, M.Si	Phytochemical Test of Anticancer Isolates of Sponge <i>Xestospongia testudinaria</i>
9	Dr. Dra. Ni Wayan Bogoriani, M.Si	Antioxidant Activity of <i>Cordyline terminalis</i> 's Leaf Extract on Obesity and The Relationship of Glucose Levels, Triglycerides and Free Fatty Acids of Obes Wistar Rats.
10	Dr.Dra.Ni Putu Adriani Astiti, M.Si	Analysis Of Phenolics And Tannin Contained In The Methanol Extract Of Leaves Of Sour And Sweet Star (<i>Averrhoa Carambola</i> L) Commonly Used As Raw Materials In Making Balinese Traditional Food (Lawar)
11	Dr. Drs. I Made Sukadana, M.Si	Expression Of Icam-1, Sod-2, Tnf-A, And Il-6 Cells Endotel Aorta Wistar Hypercolesterolemia Rats When Provided Ethanol Extract Of Seeds (<i>Inocarpus Fagiferus</i> Fosb)
12	Dra.Ida Ayu Raka Astiti Asih, M.Si	Intake flavonoid glycosides of fruit <i>solanum betaceum</i> in its activity as a Candidate of anti stress oksidative
Session 3: 16.00-17.30 Wita		
1	Drs.Yan Ramona, M.App., Ph.D	Alteration Of Human Gut Microbiota Diversity Following Administration Of <i>Lactobacillus</i> sp. F213
2	Ni Made Pitri Susanti. S.Farm., M.Si.Apt	In Silico Antihyperlipidemic Activity Of Active Compounds From Bangle Rhizome (<i>Zingiber Purpureum</i>)
3	Dr. drh. I Nyoman Suartha, M.Si.	Effectiveness of Herb Extract for Complex Dermatitis



Certificate

IS AWARDED TO

Drs. Yan Ramona, M.App.Sc., Ph.D.

HAS PARTICIPATED AS

Presenter

AT
IGOSTH
BALI 2018

INTERNATIONAL CONFERENCE ON SCIENCE, TECHNOLOGY AND HUMANITIES (IGOSTH)

OCTOBER 22-23 2018 The PATRA BALI RESORT & VILLAS, KUTA - BALI

Head of Institute for Research and Community Service

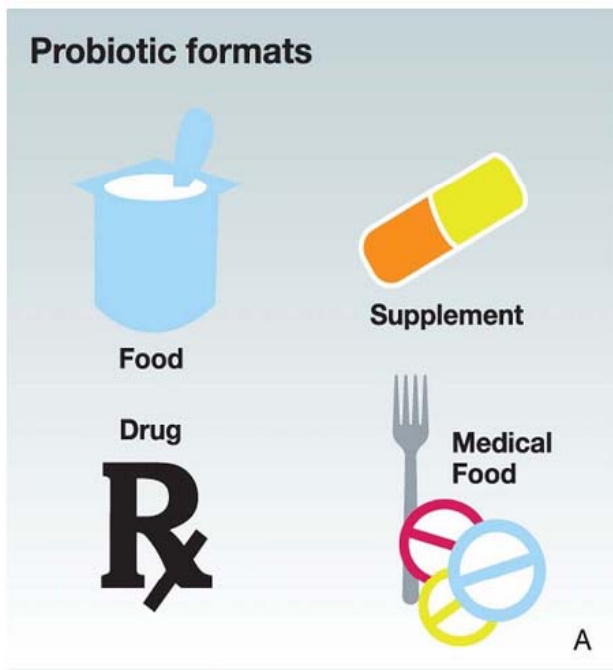
Universitas Maya

Prof. *Yan Ramona, M.App.Sc., Ph.D.*
NIP. 196210091988031002

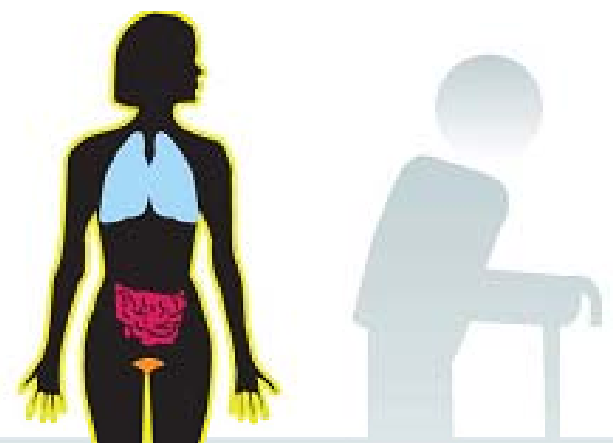


**ALTERATION OF HUMAN GUT MICROBIOTA (GM)
DIVERSITY FOLLOWING ADMINISTRATION OF
Lactobacillus sp. F213**

Yan Ramona	(PS Biologi, FMIPA)I
I Nengah Sujaya	(PSKM)
K.A. Nocianitri	(PS ITP-FTP)
N N. Dwi Fatmawati	(PSPD, FK)



Definition:
Live microorganism when administered in adequate amount confer health benefit to the host (FAO-WHO, 2002)

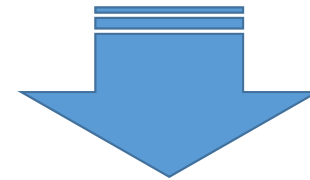


Health and clinical targets addressed by studies on orally administered probiotics conducted in human subjects of different ages

INFANT	CHILD	ADULT, INCLUDING ELDERLY
<ul style="list-style-type: none"> ■ NEC (RR) ■ Colic (T) 	<ul style="list-style-type: none"> ■ Acute infectious diarrhea (T) ■ AAD (RR) ■ Lactose maldigestion (RR) ■ IBS symptoms (T) ■ CIDs, including URTI (RR) ■ Atopic dermatitis (RR) ■ Growth parameters of undernourished children 	<ul style="list-style-type: none"> ■ AAD (RR) ■ Lactose maldigestion (RR) ■ Pouchitis (RR) ■ Ulcerative colitis (RR) ■ IBS symptoms (T) ■ Travelers' diarrhea (RR) ■ Vaginal infections (T) ■ Bowel function
<ul style="list-style-type: none"> ■ Gut ■ Lung ■ Skin ■ Vaginal ■ Overall 		



There is limited (no) numbers of probiotic products developed from Indonesian indigenous strains



GOAL

To develop a novel-probiotic from Indonesian microbial biodiversities



IMPROVE HEALTH

COMMERCIAL PROBIOTIC PRODUCTS



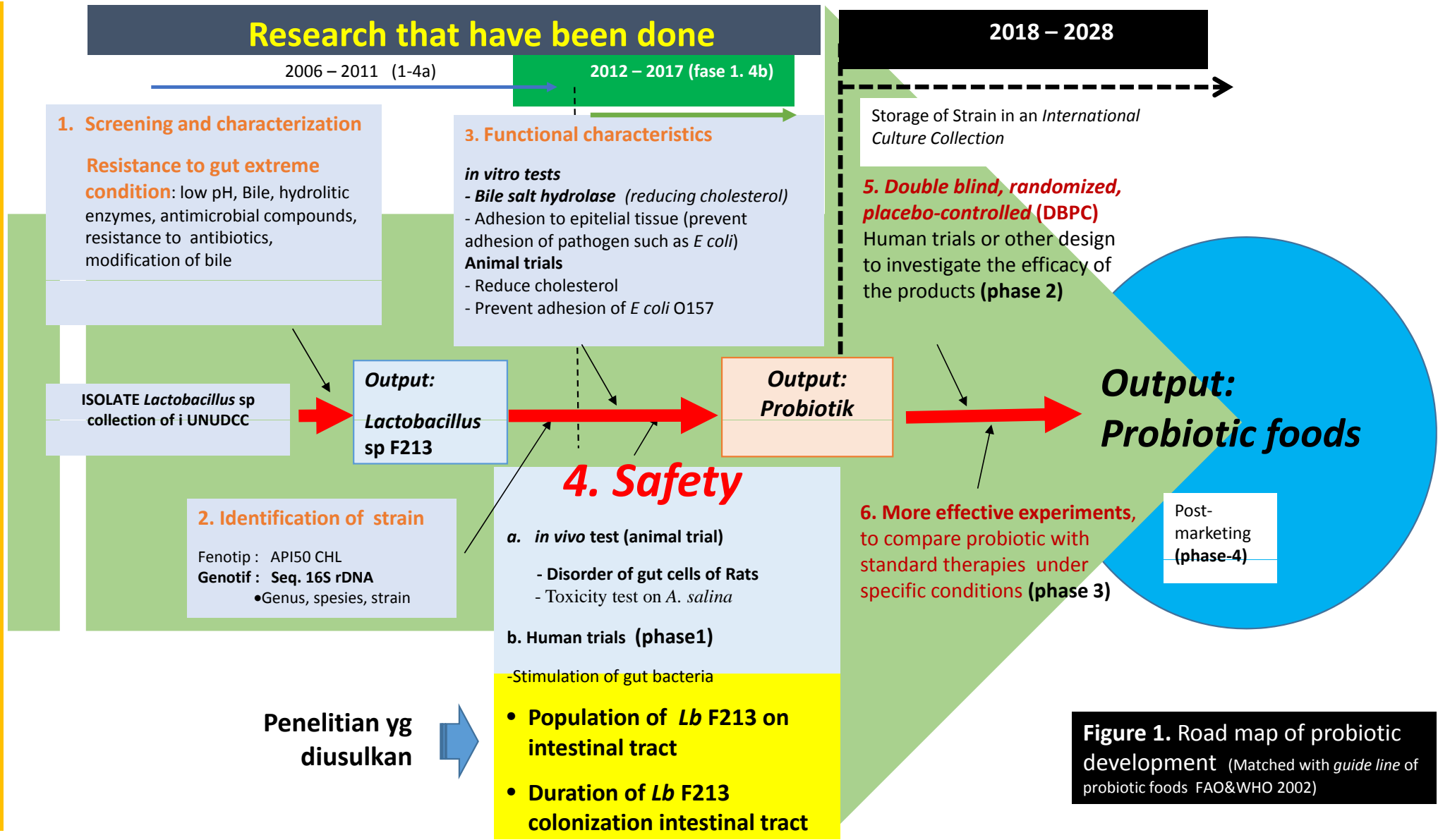



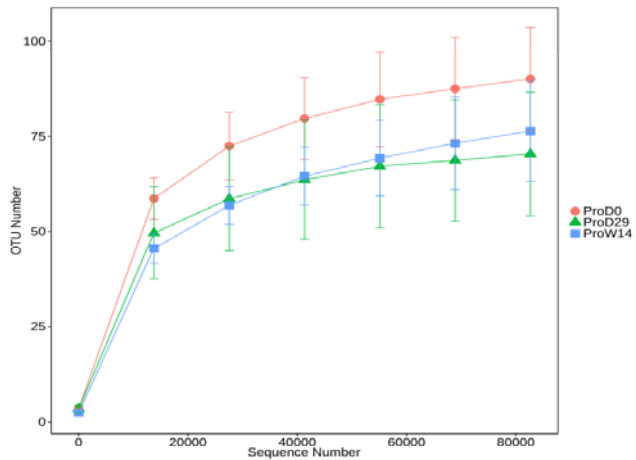
Figure 1. Road map of probiotic development (Matched with guide line of probiotic foods FAO&WHO 2002)

Objectives and Output

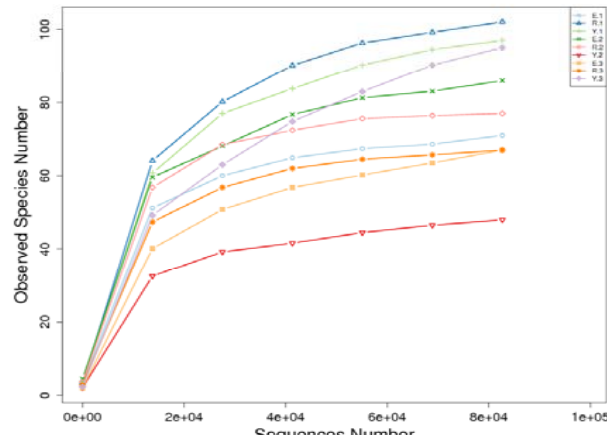
	Objectives	Output
Year 1		
	To investigate the effect of LbF213 administration on gut microbiota (global konsorsium approach)	International publication
	To investigate the population of lactic acid bacteria	International conference
	Functional effects on lipid profile	
Year 2	To study the existence of LbF213 within feces (animal and human trials)	International Publikasi and conference
	Aspek keamanan (safety) untuk mendukung Pengembangan formulasi produk mengandung F213	LbF213 containing Capsules.
Year 3	Development of LB F213 containing foods (functional foods)	Models of products containing LbF213

		PARAMETER		HASIL		OUTPUT
LbF213						
Human trial	Blood samples Blood lipid profile	Feces Profile of gut microbiota (NGS)		LbF213 increased diversity GM		<ul style="list-style-type: none"> National Seminar / International Invited lecture (Obihiro U) Invited speaker (Wuxii, china)
2017		Analysis of 3 samples (NGS) Pro0, Pr029, WO14 (V3-4)		LbF213 were not detected in 3 samples		
	Cholesterol, LDL, HDL, TG, Uric acid, blood sugar			LbF213 reduced cholesterol, TG, lipid content of blood		<ul style="list-style-type: none"> Draft articles for International journals
	Immunology cytokin pro and anti inflammation			LbF213 induced immune system		<ul style="list-style-type: none"> National Seminar/ International
2018		<ul style="list-style-type: none"> Analysis 3 samples (NGS) (V3-4) Analysis 3 (V1-3) 		Diversity of GM Detection LbF213 Diversity of GM Detection of LbF213		<ul style="list-style-type: none"> Draft article International International Seminar Draft article for International publication
LbF213						
Rats (BalbC)	Blood samples	Liver		Kidney		International Seminar International Publication
		LAB culture BAL from organs and blood		Translocation		<div style="background-color: green; color: white; padding: 5px; display: inline-block;">Safe probiotic CAPSULES</div> 
		Detection of LbF213 (RAPD)				

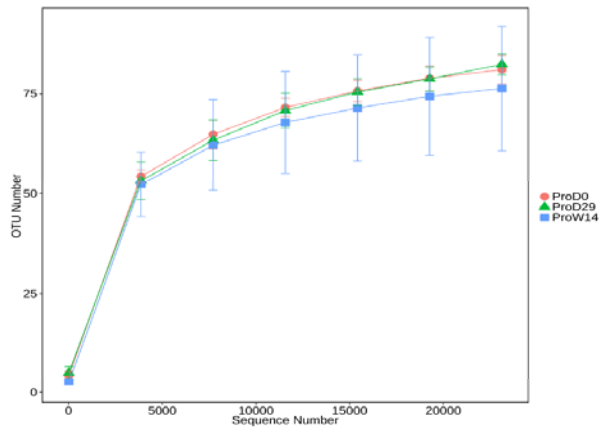
OTUS vs Seq V3-V4



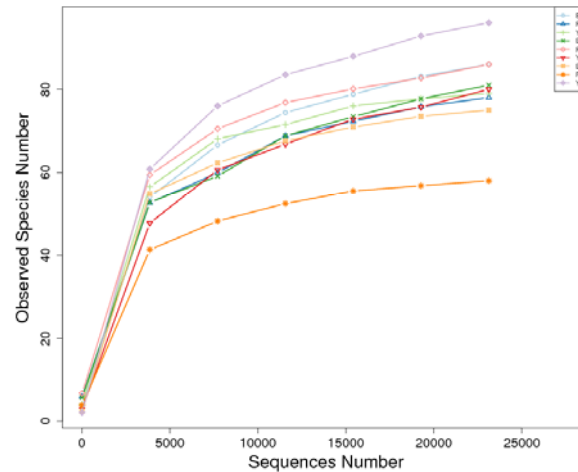
Species vs Seq V3-V4



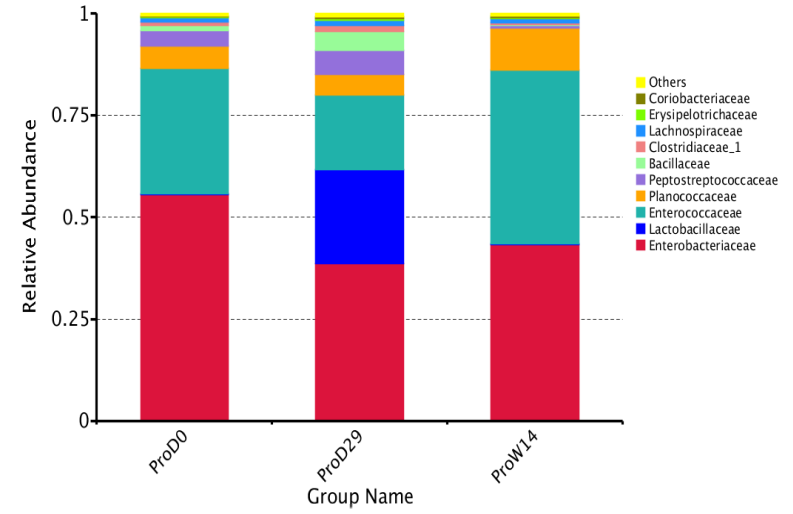
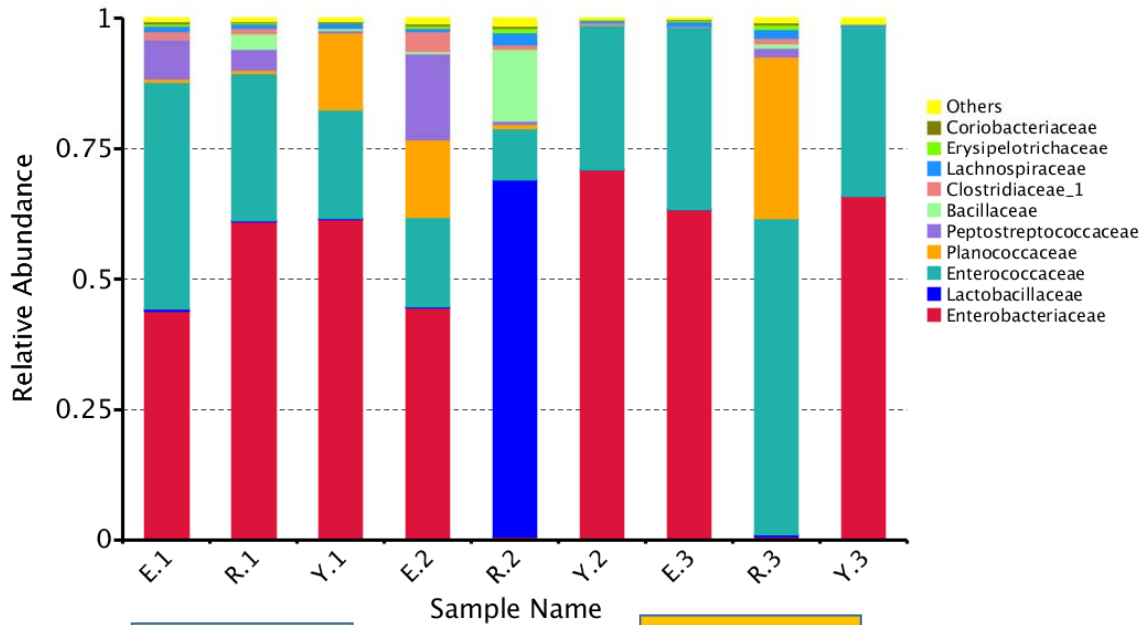
Species, OTUS (Operational Taxonomic Units): By applying the same primers, species detected were more varied and higher on 16S rDNA variable region targets of V3-V4 than V1-V3



OTUS vs Seq V1-V3



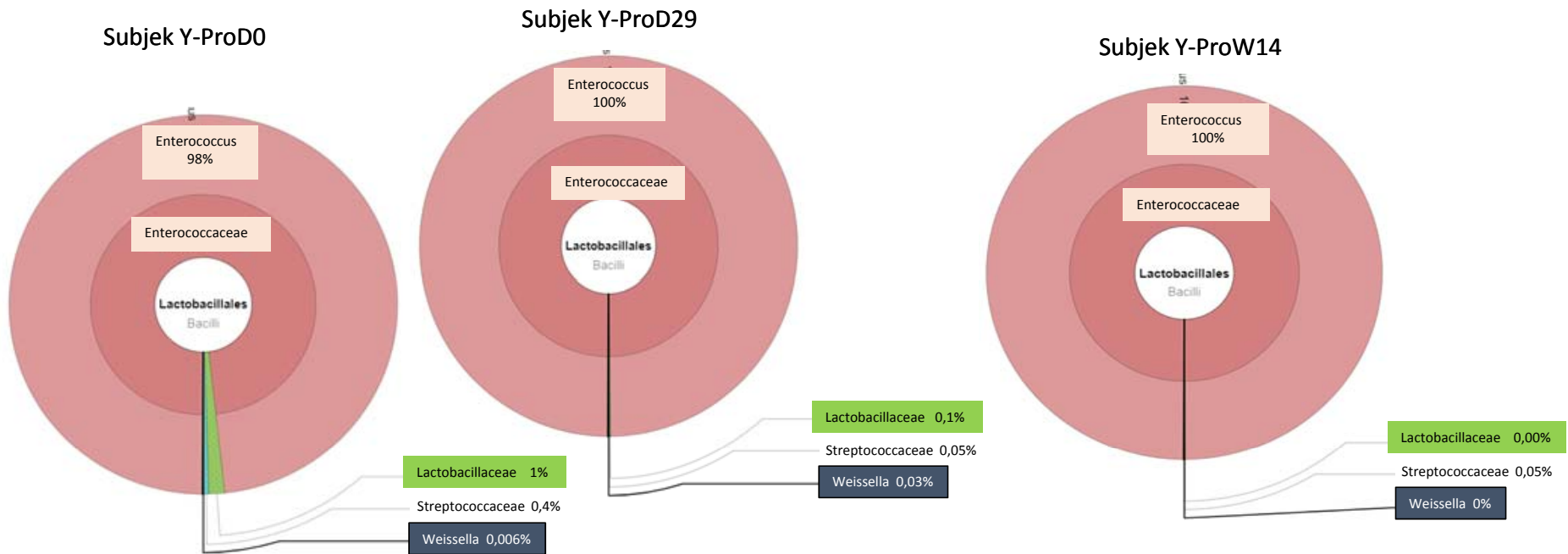
Species vs Seq V1-V3



Composition of Gut Microbiota (GM)

Administration of F213 causing alteration on GM and these changes were individual specific.

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LbF213 (*Weissella confusa* F213) was detected in the feces sample, and its proportion increased during administration of this species

Groups of UPGMA on the main phylla of gut microbiota (GM)

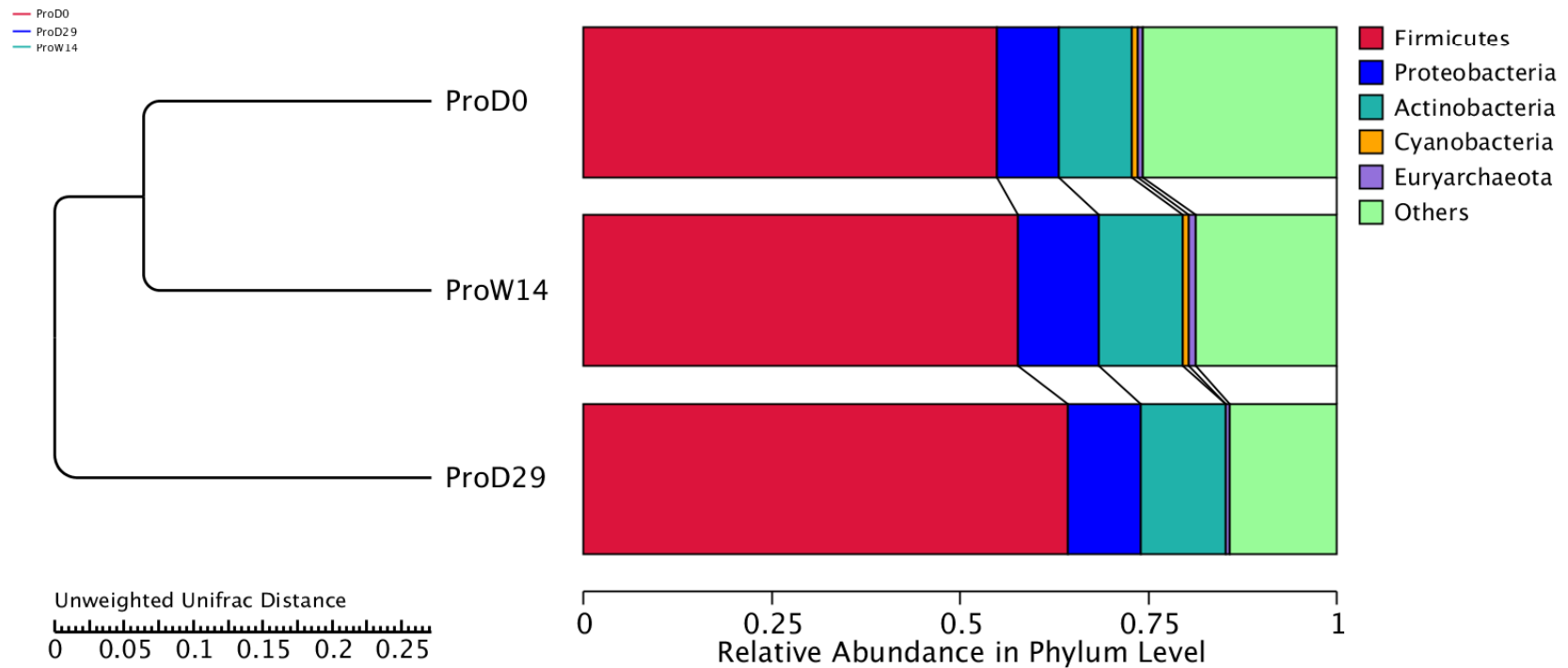
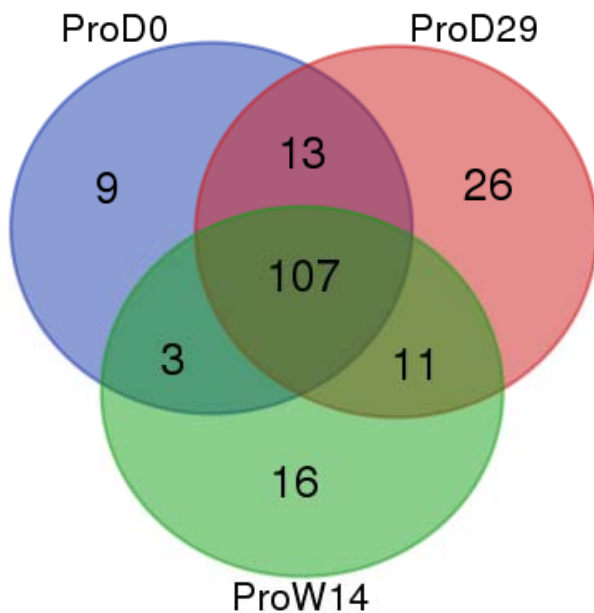


Diagram of the 6 analyzed samples



Changes in Diversity of gut Microbiota

Do	D₂₉	W₁₄
9	26	16
13	13	3
3	11	11
107	107	107
132	157	137
	25+	20-

Conclusion

- By applying NGS, LbF213 was detected in 3 subjects
- LbF213 increased the diversity of gut microbiota (GM)

Output



- Probiotic LbF213 dry cell formula (ProWEISS), containing 10^9 cfu/g active cells of LbF213

Thank You