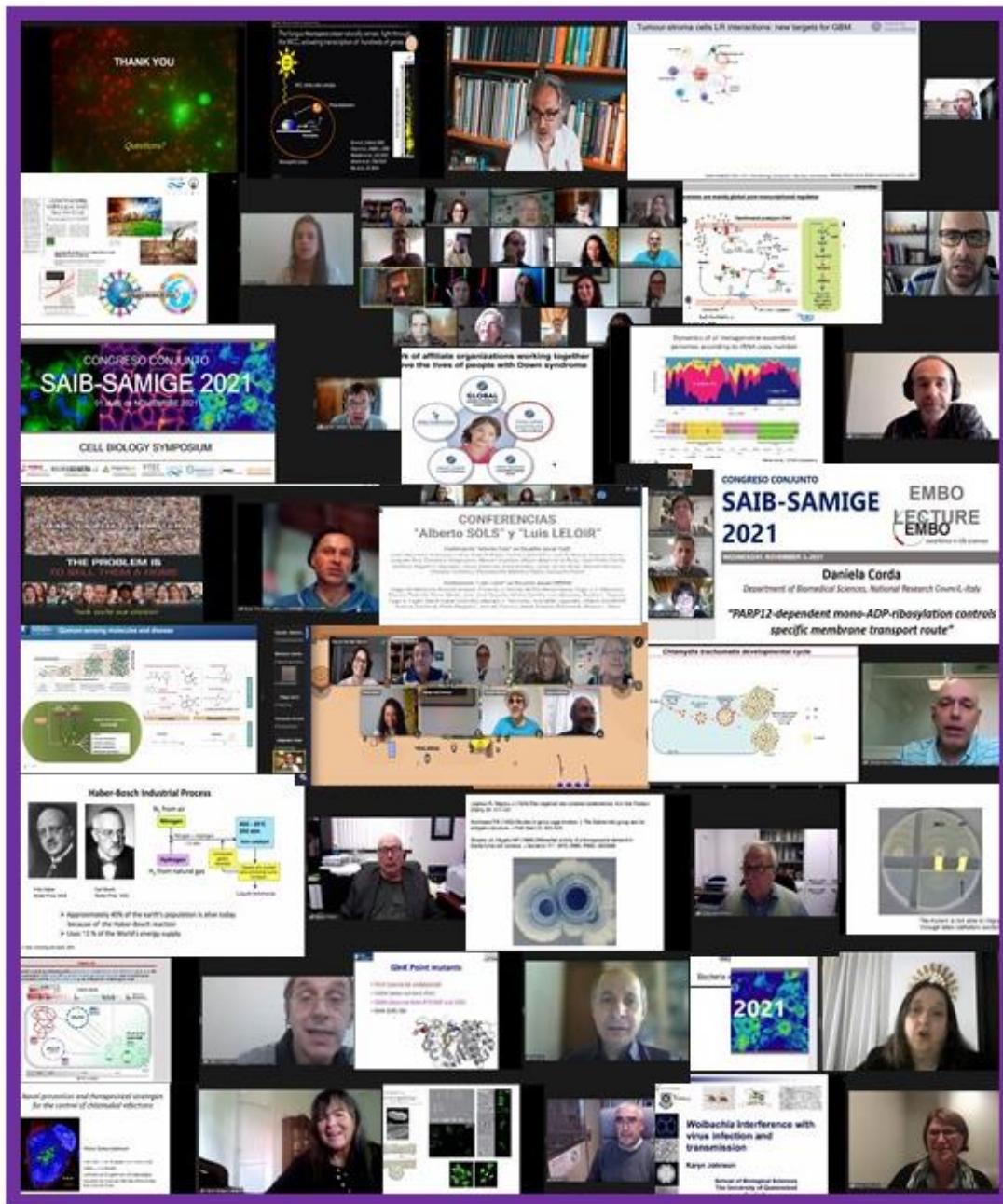


SAIB - SAMIGE Joint meeting 2021 on line



November 1-5, 2021



*LVII Annual Meeting of the
Argentine Society for Biochemistry
and Molecular Biology Research
(SAIB)*

*XVI Annual Meeting of the
Argentinean Society for
General Microbiology (SAMIGE)*

***SAIB - SAMIGE Joint meeting
2021 on line***

MEMBERS OF THE SAIB BOARD

María Isabel Colombo

President

IHEM CONICET

Facultad de Ciencias Médicas

Universidad Nacional de Cuyo – Mendoza

Eduardo Ceccarelli

Vicepresident

IBR CONICET

Facultad de Ciencias Bioquímicas y Farmacéuticas

Universidad Nacional de Rosario

Silvia Moreno

Past-President

IQUIBICEN CONICET

Facultad de Cs Exactas y Naturales

Universidad de Buenos Aires

Gabriela Salvador

Secretary

INIBIBB CONICET

Dept. de Biología, Bioquímica y Farmacia

Universidad Nacional del Sur

Eleonora García Véscovi

Treasurer

IBR CONICET

Facultad de Ciencias Bioquímicas y Farmacéuticas

Universidad Nacional de Rosario

Federico Sisti

Prosecretary

IBBM CONICET

Facultad de Ciencias Exactas

Universidad Nacional de la Plata

Germán Rosano

Protreasurer

IBR CONICET

Facultad de Ciencias Bioquímicas y Farmacéuticas

Universidad Nacional de Rosario

Eleonora Campos
Auditor
IABIMO CONICET.
Universidad Nacional de San Martín

Claudia Studdert
Auditor
IAL CONICET
Facultad de Bioquímica y Ciencias Biológicas
Universidad Nacional del Litoral

DELEGATES OF SCIENTIFIC SECTIONS

Cell Biology
Javier Valdez Taubas
CIQUIBIC CONICET
Facultad de Ciencias Químicas
Universidad Nacional de Córdoba

Lipids
Nicolás Favale
IQUIFIB
Facultad de Farmacia y Bioquímica
Universidad de Buenos Aires

Plants
José M Estevez
FIL-IIBBA CONICET

Microbiology
Augusto Bellomio
INSIBIO-CONICET
Facultad de Bioquímica, Química y Farmacia.
Universidad Nacional de Tucumán

Signal Transduction
Vanesa Gottifredi
FIL-IIBBA CONICET

MEMBERS OF THE SAMIGE BOARD

Eleonora García Véscovi

President

Instituto de Biología Molecular y Celular de Rosario
(IBR-CONICET)
Facultad de Ciencias Bioquímicas y Farmacéuticas
Universidad Nacional de Rosario

Andrea Smania

Vicepresident

Centro de Investigaciones en Química Biológica de Córdoba
(CIQUIBIC-CONICET)
Universidad Nacional de Córdoba

Osvaldo Yantorno

Past-President

Centro de Investigación y Desarrollo en Fermentaciones
Industriales
(CINDEFI-CONICET)
Universidad Nacional de La Plata

Claudio Valverde

Secretary

Departamento de Ciencia y Tecnología
Universidad Nacional de Quilmes

Leonardo Curatti

Treasurer

Instituto de Investigaciones en Biodiversidad y Biotecnología
(INBIOTEC-CONICET)
Universidad Nacional de Mar del Plata

Laura Raiger Iustman

Prosecretary

Instituto de Química Biológica de la Facultad de Ciencias Exactas y Naturales
(IQUIBICEN-CONICET)
Universidad de Buenos Aires

Rosana De Castro

Protreasurer

Instituto de Investigaciones Biológicas
(IIB-CONICET)
Universidad Nacional de Mar del Plata.

Estela Galván

Auditor

Centro de Estudios Biomédicos, Básicos, Aplicados y Desarrollo
(CEBBAD-CONICET)
Universidad Maimónides

María Julia Pettinari

Auditor

Instituto de Química Biológica de la Facultad de Ciencias Exactas y Naturales
(IQUIBICEN-CONICET)
Universidad de Buenos Aires

Gather Town Team

Eleonora Campos
Estela Galván
Laura Raiger Iustman
Federico Sisti

Sponsors Team

Nicolás Favale
Julia Pettinari

SAIB-SAMIGE Joint meeting 2021 - Program at a glance

	Monday, Nov 1 st	Tuesday, Nov 2 nd	Wednesday, Nov 3 rd	Thursday, Nov 4 th	Friday, Nov 5 th
9:00-9:15	Opening ceremony				
9:15-11:15	PARALLEL SYMPOSIA <i>Cell Biology</i> <i>Microbiology I: Host-pathogen Interactions</i>	PARALLEL SYMPOSIA <i>Plants</i> <i>Microbiology II: Biotechnology & Environmental Microbiology</i>	PARALLEL SYMPOSIA <i>Lipids</i> <i>Microbiology III: Molecular Microbiology</i> <i>Signal transduction</i>	PARALLEL SYMPOSIA <i>Glycobiology (Tribute to Dr. J.L. Daniotti)</i> <i>Microbiology IV: Microbial Ecology & Physiology</i>	SYMPOSIUM <i>Young investigators</i>
11:15	Break	Break	Break	Break	Break
11:30-12:30	SAIB Plenary lecture "A. Sols" Consuelo Guerri	SAMIGE Plenary lecture <i>Francisco García del Portillo</i>	SAIB Plenary lecture EMBO Daniela Corda	SAMIGE Plenary lecture <i>Dennis Dean</i>	Closing ceremony
12:30	Break	Break	Break	Break	
13:30-13:50		<i>Tribute to Dr. Israel Algranati</i>		<i>Tribute to Dr. Juan Dellacha</i>	
14:00-15:00	SAMIGE Plenary lecture <i>Luis Larondo</i>	SAIB Plenary lecture "Héctor Torres" Joaquín Espinosa	SAMIGE Plenary lecture <i>Josep Casadesus</i>	SAIB Plenary lecture "Ranwel Caputto" Beatriz Caputto	
15:00-15:15	Break	Break	Break	Break	
15:15-17:15	Poster session	Poster session	Poster session	Oral communications	
17:15-17:30	Break	Break	Break	Break	
17:30-19:30	Oral communications	Oral communications	Break	Break	
			19:00 SAIB Assembly	19:00 SAMIGE Assembly	

This meeting was supported by:



VIDEO CONFERENCE ROOM SUPPORT

CONICET-CCT-Bahía Blanca
CONICET-CCT-Córdoba
CONICET-CCT-Rosario
CONICET-CCT-Tucumán
INBIOTEC-CONICET-Mar del Plata
IIB-CONICET-Mar del Plata
Fundación Instituto LELoir

postulate that the proper folding of LysM:O2P2 protects it from digestion. Some authors reported that native O2P2 dimerization protects it against trypsin digestion. The next step will be to study oral immunization protocols with the prototype vaccine LysM:O2P2-BLP.

BT-P19-281
**AN IMPROVED CUSTOMIZED DESTINATION VECTOR FOR HETEROLOGOUS
EXPRESSION OF LYSM FUSION PROTEINS AND ANTIGEN DISPLAY ON BACTERIUM
LIKE PARTICLES**

Sacur J^{1,2}, Matias-Brancher J^{1,2}, Raya-Tonetti MF^{1,2}, Villena J³, Vizoso-Pinto MG^{1,2}

1-Laboratorio de Biología de las Infecciones, INSIBIO (CONICET - UNIVERSIDAD NACIONAL DE TUCUMÁN), 2-Laboratorio Central de Cs. Básicas, Facultad de Medicina-UNT, 3-Laboratorio de Inmunobiología, CERELA-CONICET. E-mail: jacintosacur@fm.unt.edu.ar

The LysM (lysin motif) domain is a small globular domain of 42-65 amino acids long that is widely distributed in nature, it can be found in prokaryotes and eukaryotes in more than 4000 proteins. One to 12 LysM domains bind to N-acetylglucosamine residues of bacterial peptidoglycan (PG) in a non-covalently way. The binding between proteins with LysM domains and PG is strong and stable; it can only be separated under harsh reducing conditions. This can be useful for antigen display on the surface of bacterial PG for immunization purposes. It has been reported that the number of LysM motifs in proteins affects the efficiency of the binding of foreign proteins to the PG. Proteins with LysM domains can be difficult to express in a heterologous system like *E. coli* because of their size. It is known that proteins with LysM domains tend to aggregate and form inclusion bodies (IB). Previously our laboratory constructed a customized expression vector with 5 LysM domains from a protein (Acglu) of *Limosilactobacillus fermentum*, which has not been described before. We cloned ORF68, the main antigenic glycoprotein from the Varicella-Zoster Virus (VZV) without the transmembrane domain, into this vector but the fusion protein did not express in *E. coli*, possibly because of its size (94kDa) or its insoluble nature. Therefore, we decided to construct a new vector with only 2 of the 5 LysM domains from Acglu of *L. fermentum*. We constructed the expression vector pET-N-His-LysM2 [rfB] and checked it by Next Generation Sequencing. The vector has 2 LysM domains as a N-terminal tag for binding to bacterial PG and is a so-called destination vector compatible with Gateway® cloning technology. It also has the tag RGS-His, which allows protein purification. We cloned VZV ORF68 into this new vector using the Gateway® LR reaction. The fusion protein LysM2-ORF68 was expressed in soluble form, although most of the protein aggregates and forms IB. We optimized the protein expression trying different conditions, even though it always formed IB. Using chaotropic agents, like urea, we could solubilize the aggregated protein and purify it in successive steps. The LysM2-VZVORF68 protein both soluble and recovered from IB, binds to the PG of Gram-positive bacteria. To enhance binding, we exposed the PG shield by treating lactobacilli with acid and heat. The structure of a LysM domain consists of a pair of antiparallel beta strands separated by a pair of short alpha helices. Considering that the binding of LysM domains to PG depends on the native folding of the protein, we can infer that the fusion protein retains its normal folding even after the treatment with chaotropic agents. Further studies are necessary regarding stability of the binding, but we can speculate this new expression vector is promising for the heterologous expression and purification of viral proteins as well as for antigen display on immunomodulatory lactobacilli without generating genetically modified organisms.

BT-P20-293
NEW FUNCTIONAL CHEESES WITH ANTIOXIDANT ACTIVITY

Díaz Miranda EN¹, Fabersani E², Grande, MV¹, Sánchez SS¹, Grau A^{3,4}, Oliszewski R², Honoré SM¹.

¹INSIBIO (CONICET-UNT). ²Fac. de Agronomía y Zootecnia, UNT. ³Fac. Cs. Naturales-Instituto Miguel Lillo, UNT. ⁴IER (CONICET-UNT). E-mail: smhonore@gmail.com; rubenoliszewski311@yahoo.com

The growing impact of obesity and metabolic diseases is stimulating the innovative development of new functional foods. The high nutritional value of goat milk, together with the probiotic activity expressed by some *Lactobacillus* strains and/or the prebiotic properties of yacon roots (rich in fructooligosaccharides and phenolic compounds), are suitable to be combined in a product to benefit the consumer's health. The aim of our study was to develop original semisoft functional cheeses and to test their possible metabolic effects on rodents with HFD-induced obesity. Products were made using *Lactobacillus fermentum* LCLC1 and *Lactobacillus bulgaricus* LCLC2, strains as cheese starters, in combination with the probiotic *Lactobacillus plantarum* LCLC3 and *Lactobacillus plantarum* LCLC4 strains. The probiotic *Lactobacillus* were added into milk simultaneously with starter cultures (PC cheese), while yacon flour was incorporated to drained curd (PCY cheese) in a concentration of 20% (w/v). Elaborated cheeses had good sensory properties, contained approximately 10⁸ cfu/g viable cells, and exhibit high ($p<0.05$) antioxidant activity determined by FRAP and DPPH assays. For biological studies, Wistar male rats ($n=30$) were fed a standard diet (CD) or high-fat diet (HFD) for 12 wk. Then HFD was divided into four groups: HFD; HFD plus goat cheese (HFD-C); HFD plus prebiotic cheese (HFD-PC); HFD plus prebiotic cheese + yacon (HFD-PCY). After 8 weeks, both PC and PCY consumption lowered postprandial triglycerides and cholesterol levels, improved the lipid profile, and depleted serum lipid peroxidation in HFD-fed rats ($p<0.05$). PC and PCY also reduced liver steatosis and attenuated the tissue damage caused by reactive oxygen species. Interestingly, an improvement in insulin sensitivity was detected in PCY-