

# ABSTRACTS BOOK

## XXXVI Scientific Meeting of the Cuyo Biology Society



Mendoza, Argentina  
6-7 December 2018

dark cycle. Disturbances of both sleep and the underlying circadian rhythms have long been associated with many neurological diseases, including Alzheimer Disease (AD). AD and circadian rhythm physiology display a dependency relationship. On the one hand, AD pathology leads to sleep and circadian disturbances, which have a negative impact on the quality of life of patients. On the other hand, sleep and circadian system may in turn have a causal role in the pathophysiology of AD. Thus the circadian clock could be a new therapeutic target for the treatment of this neurodegenerative disease

#### A7

### THINKING WITH RHYTHM ABOUT THE BENEVOLENT SIDE OF THE INNATE IMMUNITY

Muñoz EM

IHEM-UNCUYO-CONICET. Mendoza, Argentina. E-mail: munoz.estela@fcm.uncu.edu.ar

The immune system is responsible for surveillance and monitoring, and for reacting against pathogens and insults. The central nervous system (CNS) is a highly protected area that utilizes its own immune resources, due in part to anatomical barriers. These are the microglia, which are the resident phagocytes of the CNS. Microglia are highly dynamic cells in both shape and phenotype. They originate from myeloid precursors in the yolk sac that colonize the developing CNS. Beyond their defensive role, microglia participate in many processes that shape and maintain the CNS, and also implement its plasticity. One question that emerges is whether microglia adjust their functions based on their own innate temporal capacity, or whether they merely react to external temporal cues. Our group has been working with the pineal gland, as a circadian model within the CNS, in order to better understand microglia phenotypes in both ontogeny and daily cycles.

## SYMPOSIUM 3: PREBIOTICS AND PROBIOTICS AND THEIR IMPACT IN HUMAN AND ANIMAL HEALTH

#### A8

### PROBIOTICS: A CHALLENGE FOR THE FOOD MARKET

Rigalli A; Ramón SS; Casabonne C; Chulibert ME.

The Codex Alimentarius and the Argentine Food Code define probiotics as "*livemicroorganisms that, when administered in adequate amounts, confer benefits for the consumer's health*".

For a strain to be used as a probiotic ingredient for food, it must undergo an evaluation protocol, having to meet minimum requirements in order to guarantee scientific evidence of it. They are products that contain microorganisms defined and viable enough to modify the microflora of a compartment of the host, thus exerting a beneficial effect on the health of the latter. The use of ferments with beneficial properties has promoted the development of products that contain microorganisms that exert a positive effect on human health because they colonized or remain for a long time in the intestine. Among the beneficial effects we can mention the displacement or inhibition of pathogenic microorganisms, the increase of the immune response, the degradation of lactose and the decrease of mutagenic and carcinogenic compounds in the colon. The development of a non-dairy beverage based on kefir, fruit juice and egg shell has been proposed as a source of calcium and accessible to the population and can replace the intake of dairy products, which is limited for several reasons. From this development arises the study of the composition of the kefir present in the drink, whose first results found that it could be a potential probiotic product due to its composition and microbiological quantification.

#### A9

### BREAST MILK MICROBES. FUNCTIONAL ROLE AND POTENTIAL PROBIOTICS.

Vinderola G

Investigador Independiente del Conicet, Instituto de Lactología Industrial (CONICET-UNL), Profesor Adjunto Cátedra de Microbiología, Departamento de Tecnología de Alimentos y Biotecnología, Facultad de Ingeniería Química, Universidad Nacional del Litoral, Santa Fe, Argentina. Email: gvinde@fiq.unl.edu.ar

The intestinal microbiota is the set of microorganisms, mainly bacteria, that colonize the intestinal tract, with higher abundance in the colon. The gut microbiota exerts numerous vital functions for life, such as the fermentation of fibers for the production of short-chain fatty acids, the synthesis of vitamins, protection against pathogens, the development of the gut-associated immune system and the synthesis of neurotransmitters such as serotonin, with impact beyond the intestine. The establishment and development of the intestinal microbiota is a complex and dynamic process that begins before birth and extends beyond the first two years of life. This period is key to the development of the immune system and the establishment of oral tolerance. Numerous