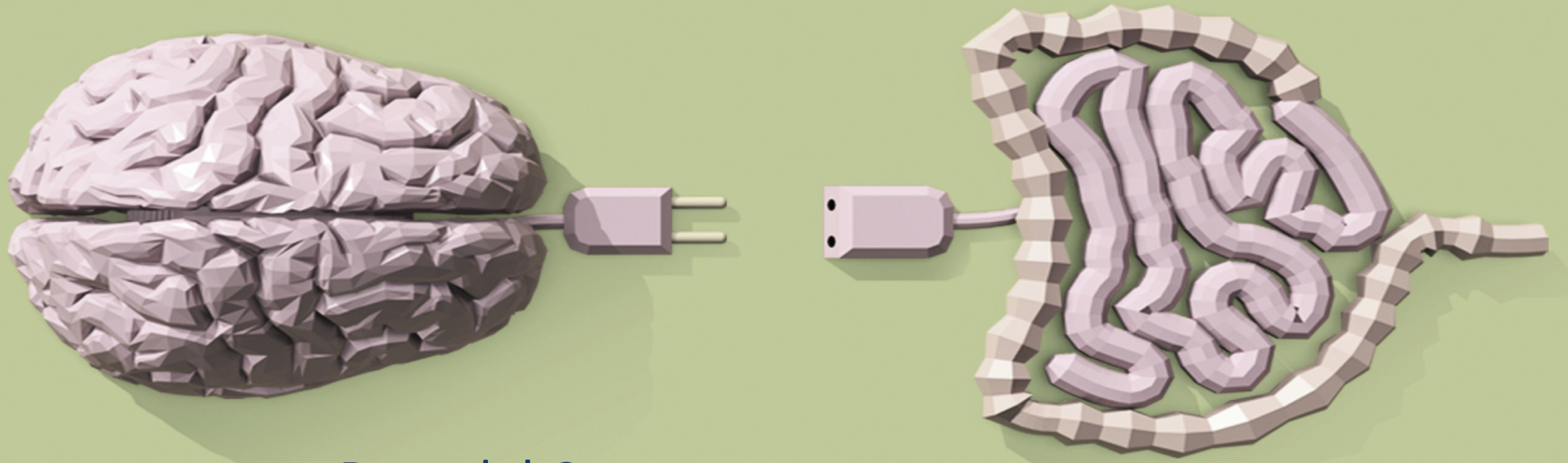
El papel de la microbiota intestinal en los trastornos del espectro autista



Rosa del Campo

Servicio de Microbiología

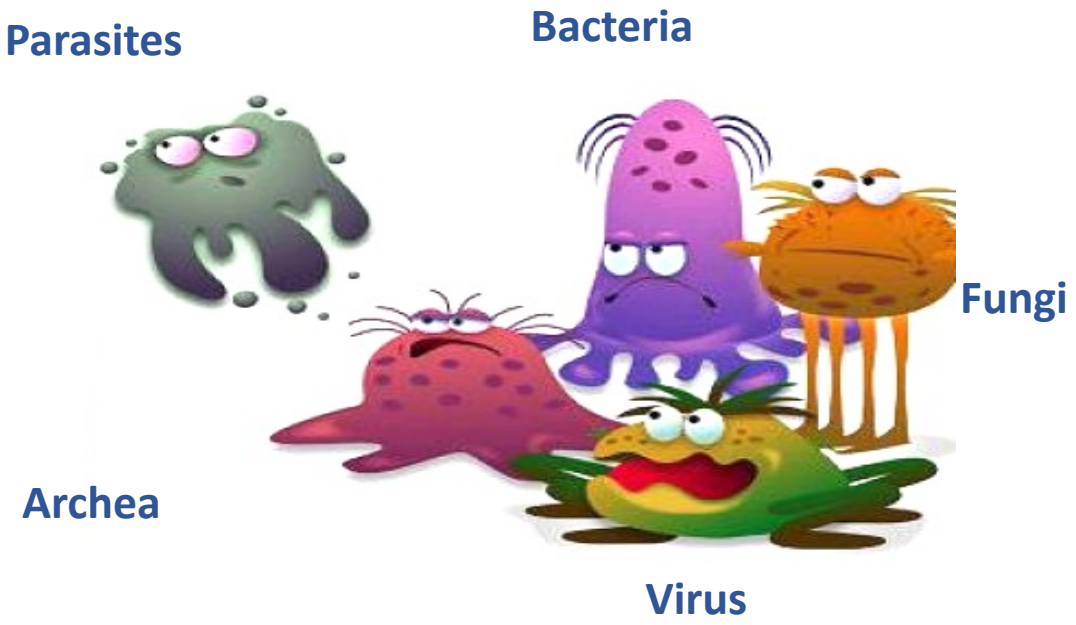
Hospital Universitario Ramón y Cajal

Instituto Ramón y Cajal de Investigación Sanitaria

MICROBIOTA

Complex community of microorganisms

living and interacting with the host



20 años hablando de microbiota

sin incorporación a la clínica

2016

The NEW ENGLAND JOURNAL of MEDICINE

REVIEW ARTICLE

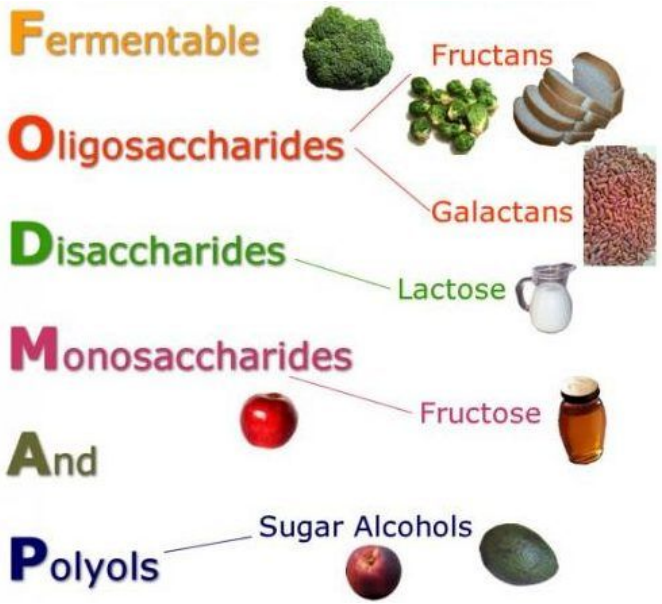
Elizabeth G. Phimister, Ph.D., *Editor*

The Human Intestinal Microbiome in Health and Disease

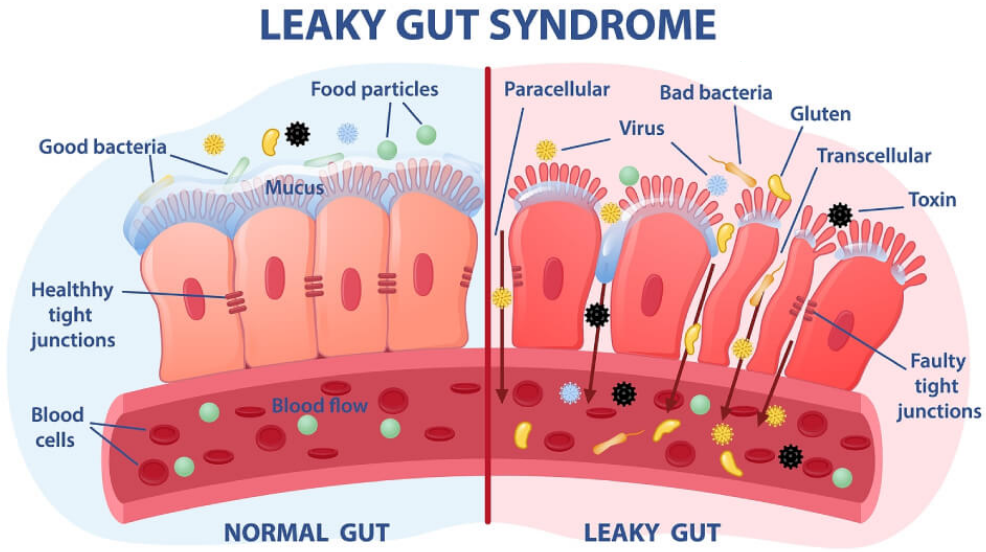
Susan V. Lynch, Ph.D., and Oluf Pedersen, M.D., D.M.Sc.

NUEVOS CONCEPTOS EN SALUD

Disbiosis / SIBO

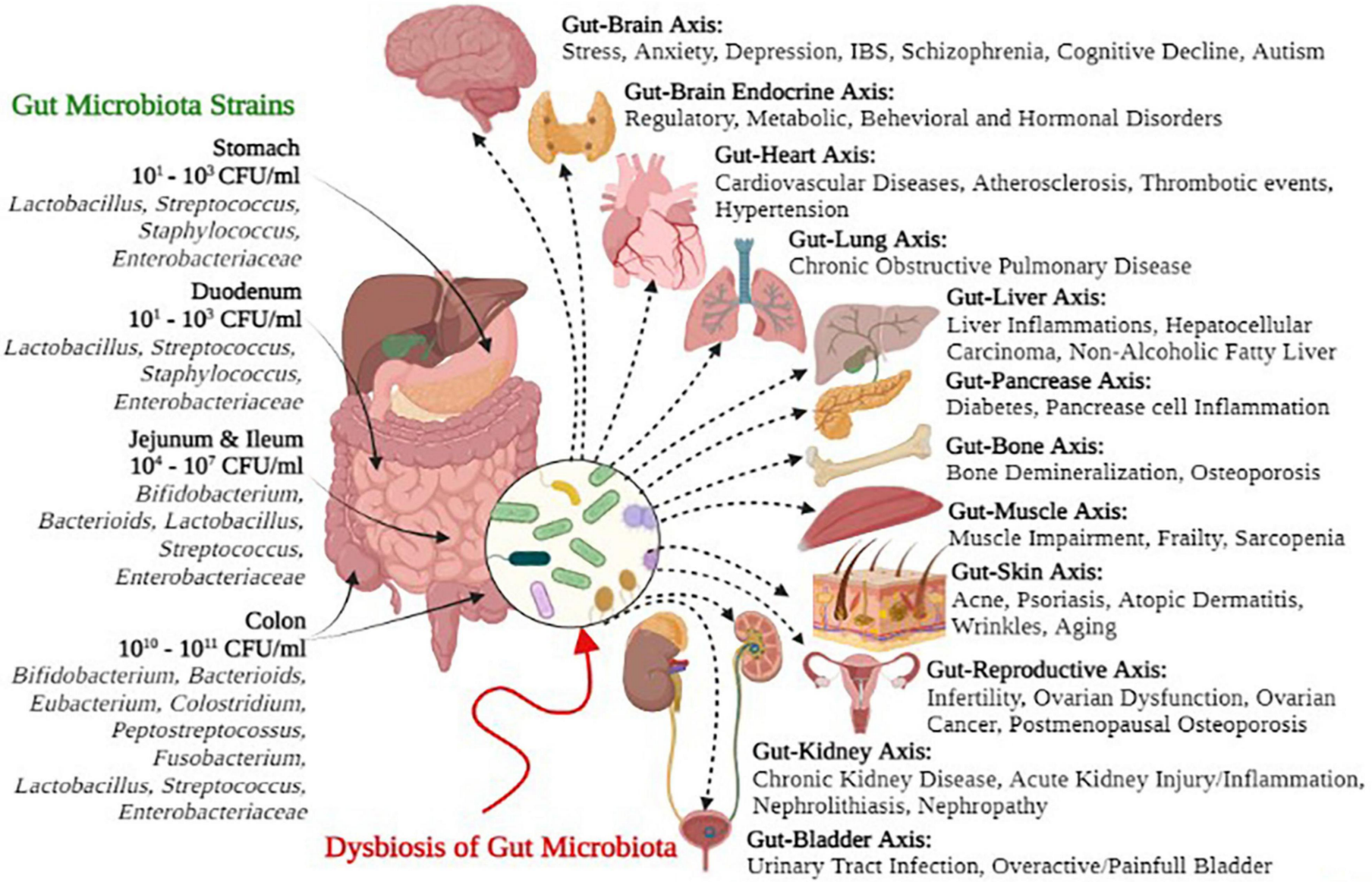


Dietas restrictivas

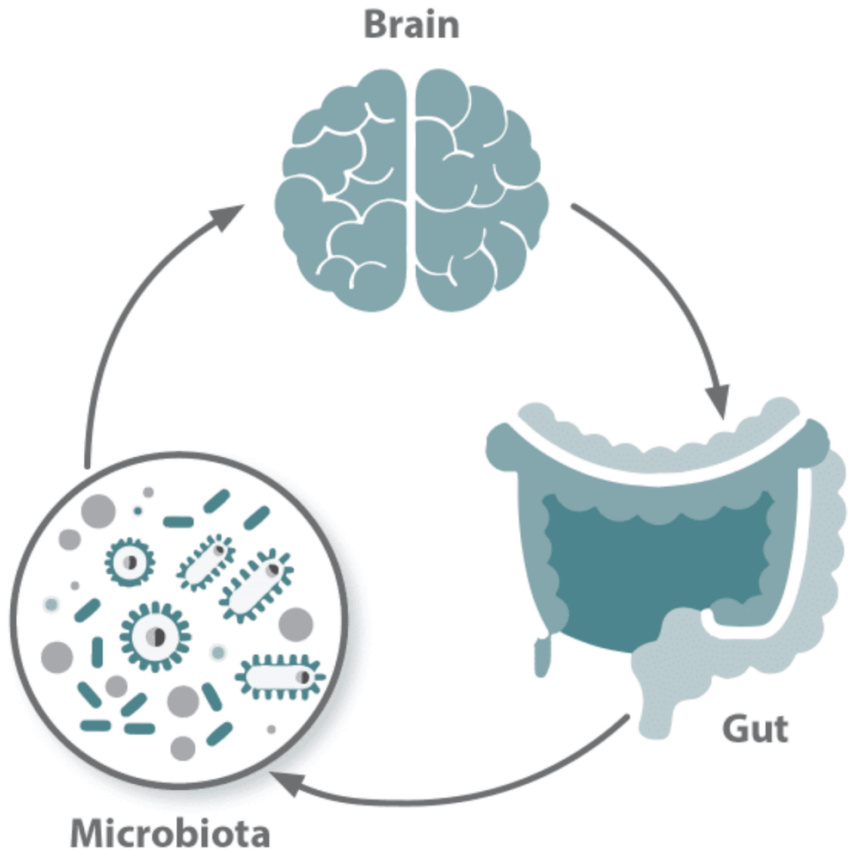


Permeabilidad intestinal

MICROBIOTA y SALUD

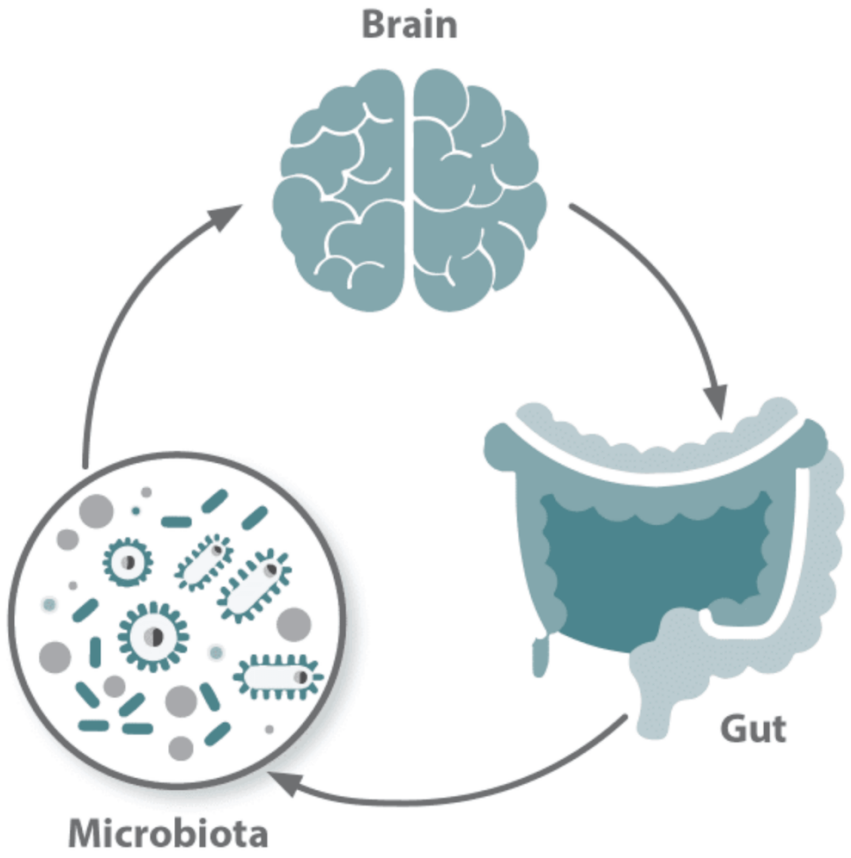


MICROBIOTA y AUTISMO



Eje cerebro Intestino
- Neuronal
- Inmune
- Metabólico

MICROBIOTA y AUTISMO

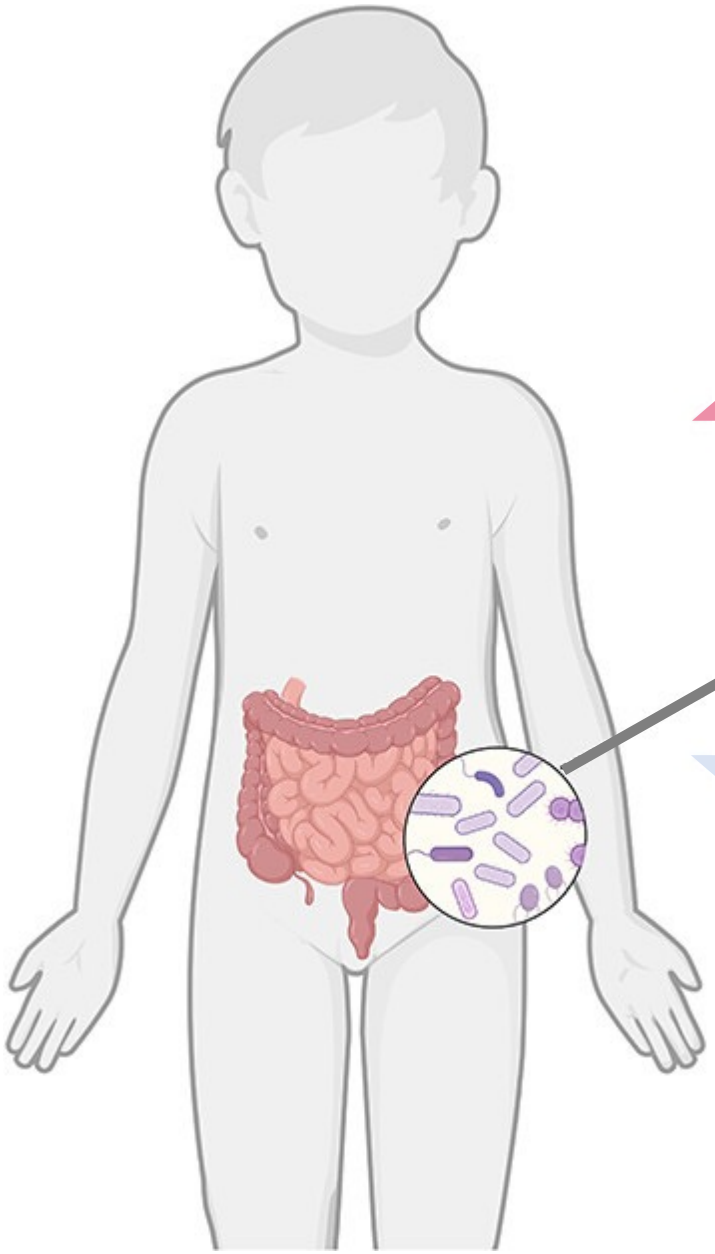


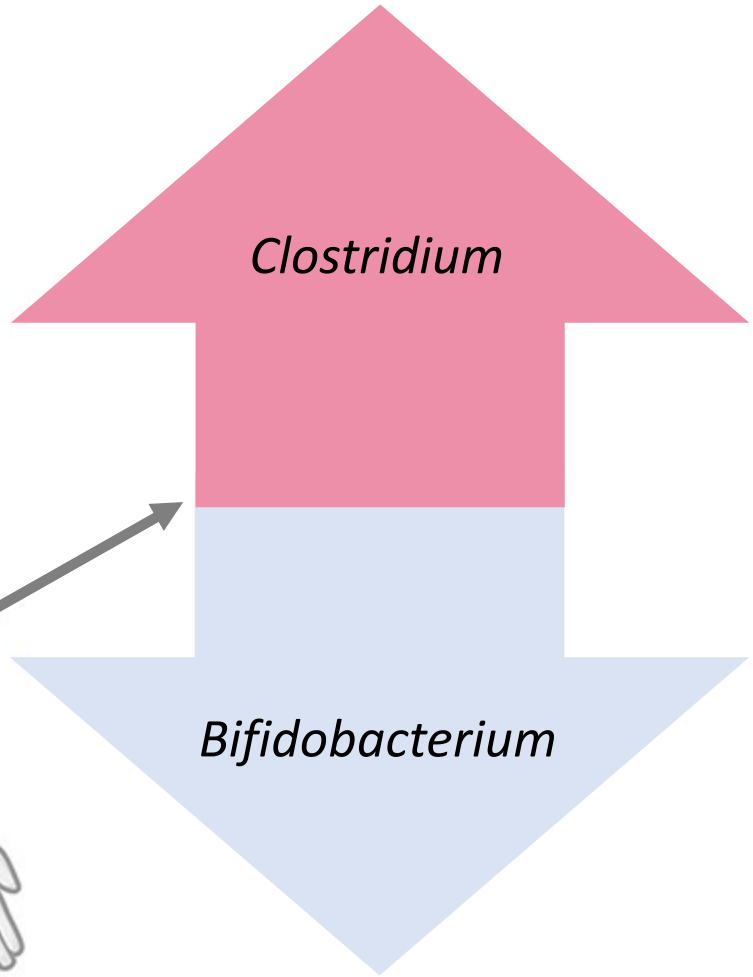
Eje cerebro Intestino
- Neuronal
- Inmune
- Metabólico

Autismo

Sintomatología Intestinal: estreñimiento

MICROBIOTA y AUTISMO





Aumento de prevalencia sin causa genética

Sintomatología digestiva: Estreñimiento

Mejoría con vancomicina

Mejoría con trasplante fecal

Youran (2022) Fecal Microbiota Transplantation in Autism Spectrum Disorder, Neuropsychiatric Disease and Treatment, 18:, 2905-2915, DOI: 10.2147/NDT.S382571

MICROBIOTA y AUTISMO

Received: 22 December 2020 | Accepted: 5 June 2021
DOI: 10.1002/aur.2560

REVIEW ARTICLE

Probiotics, prebiotics, synbiotics, and fecal microbiota transplantation in the treatment of behavioral symptoms of autism spectrum disorder: A systematic review

Qiming Tan[1] | Camila E. Orsso[2] | Edward C. Deehan[1,3] | Janice Y. Kung[4] | Hein M. Tun[5] | Eytan Wine[1,6] | Karen L. Madsen[3] | Lonnie Zwaigenbaum[1] | Andrea M. Haqq[1,2]

frontiers | Frontiers in Microbiomes

Fecal microbial transplantation as a novel therapeutic for autism spectrum disorders: a review of the current literature

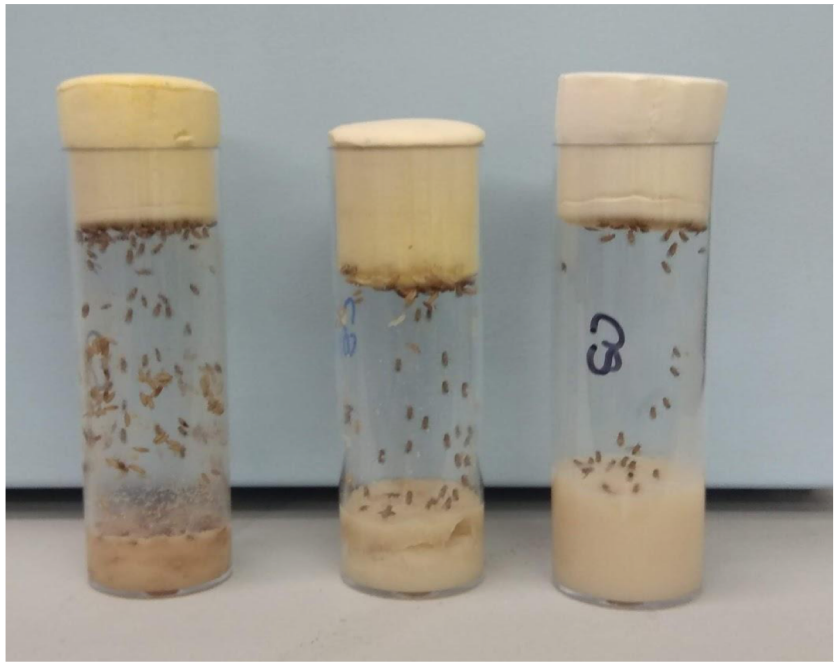
Rebecca Gudka[1] and Iveren Winifred Nyinoh[1,2*]

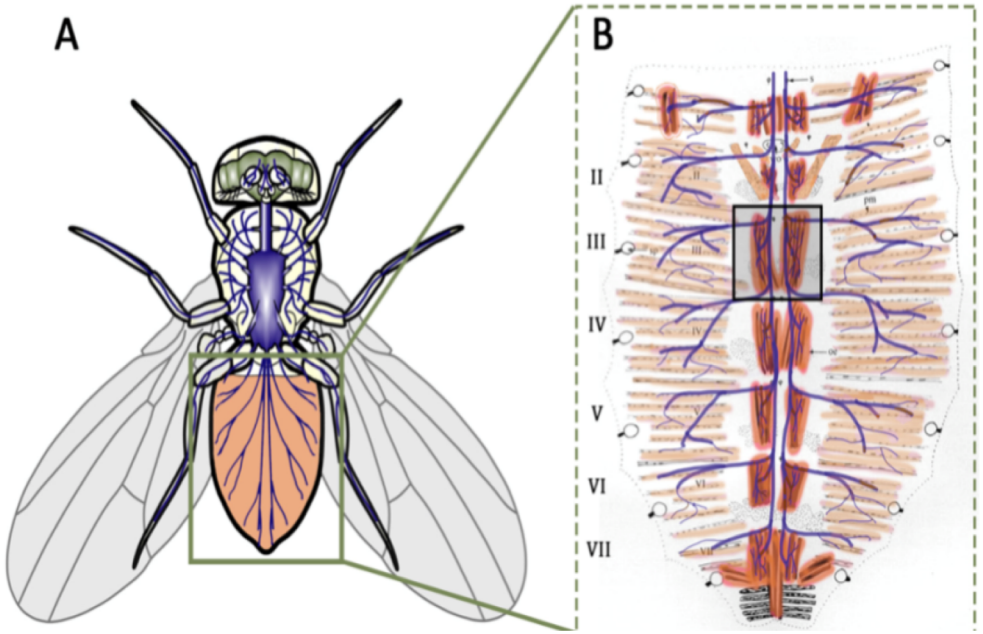
ESCASAS EVIDENCIAS CIENTÍFICAS

Efectos limitados con falta de conclusiones sólidas

MICROBIOTA y AUTISMO

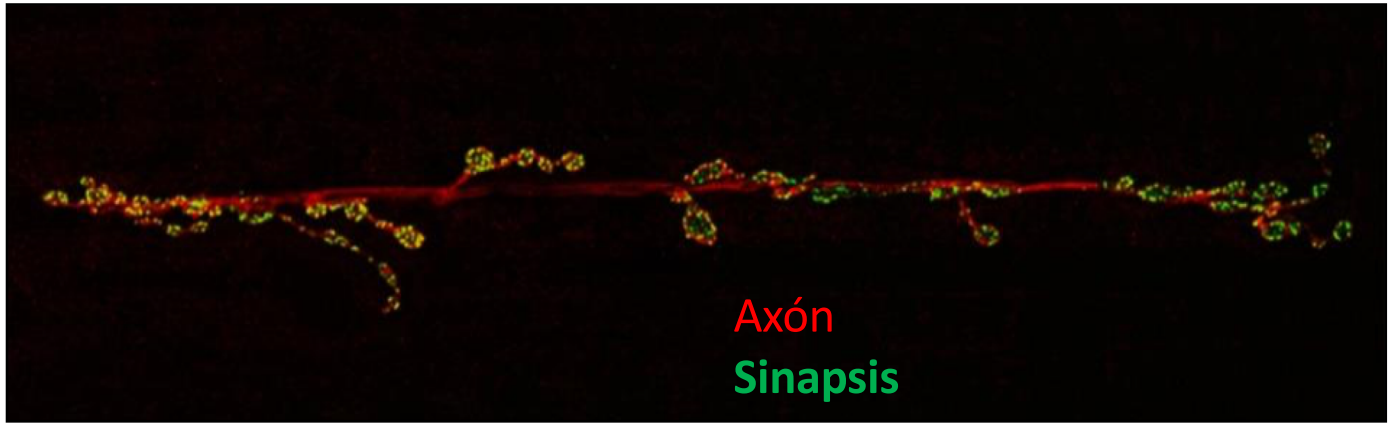
Alicia Mansilla

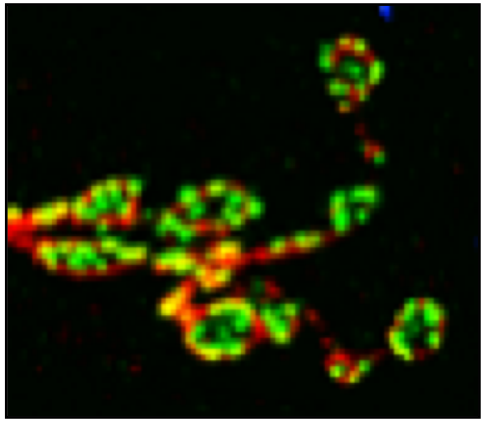




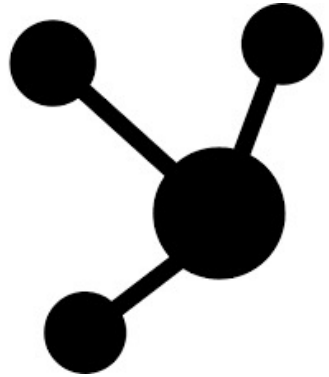
Sergio Casas

Maribel Serrano
Yaiza Aguerri
Cristina Pedrera



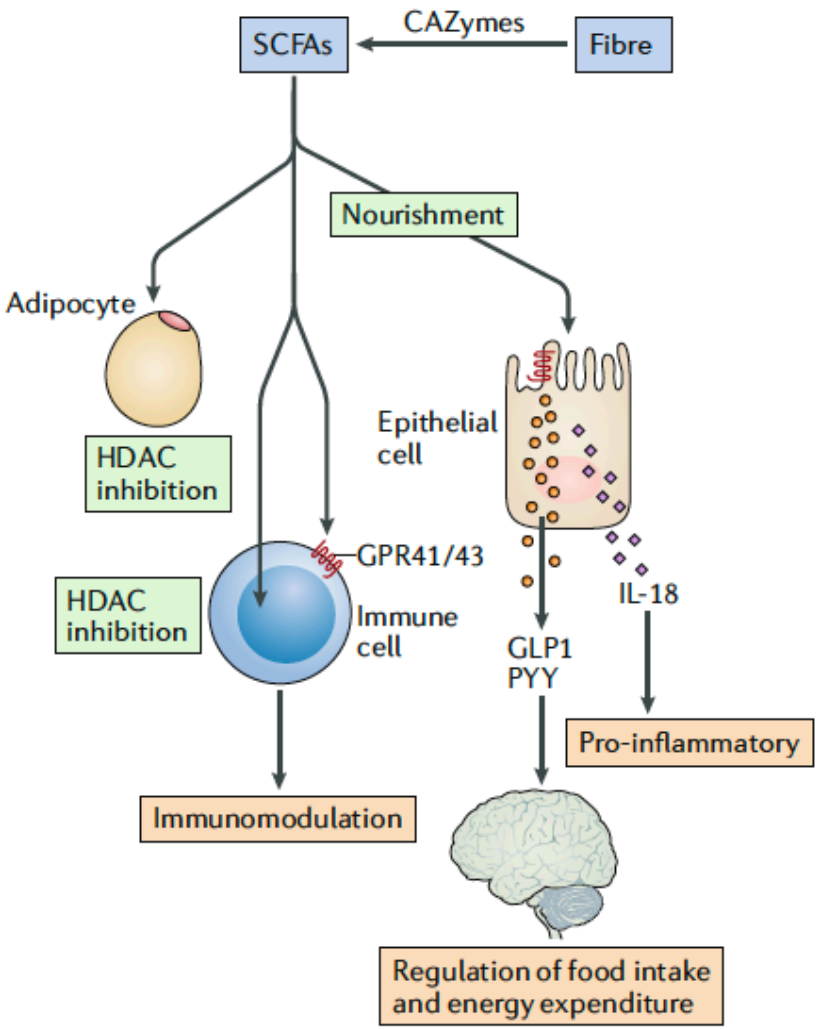


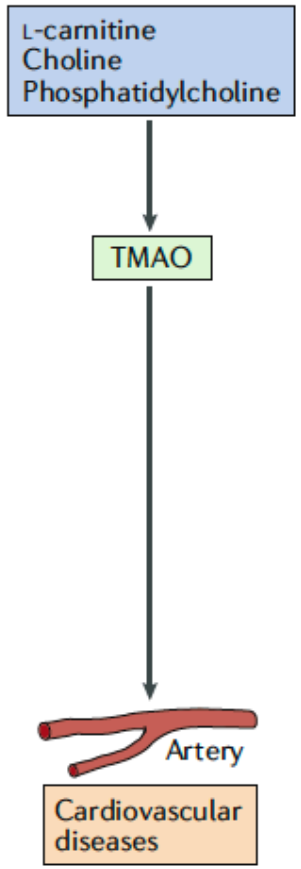
ESTUDIO DE LA MICROBIOTA

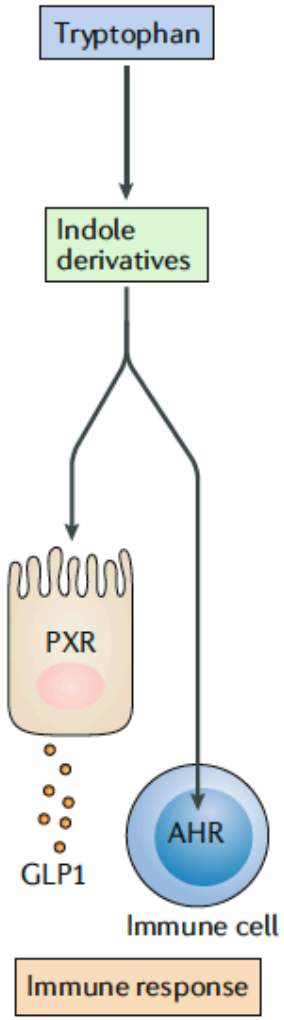
ADN	ARN	Proteína	Metabolito
			
Genómica	Transcriptómica	Proteómica	Metabolómica

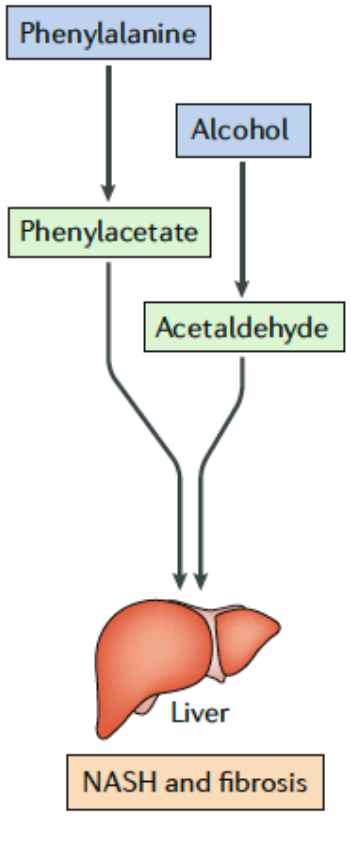
METABOLÓMICA

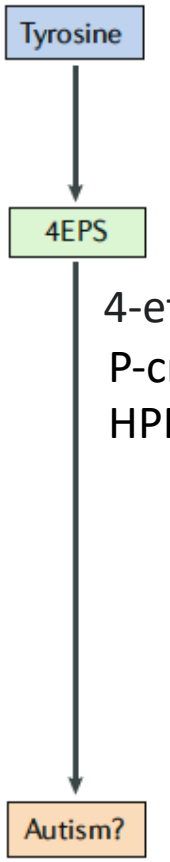
Ácidos biliares y vitaminas











4-ethylphenyl sulfate
P-cresol
HPPA

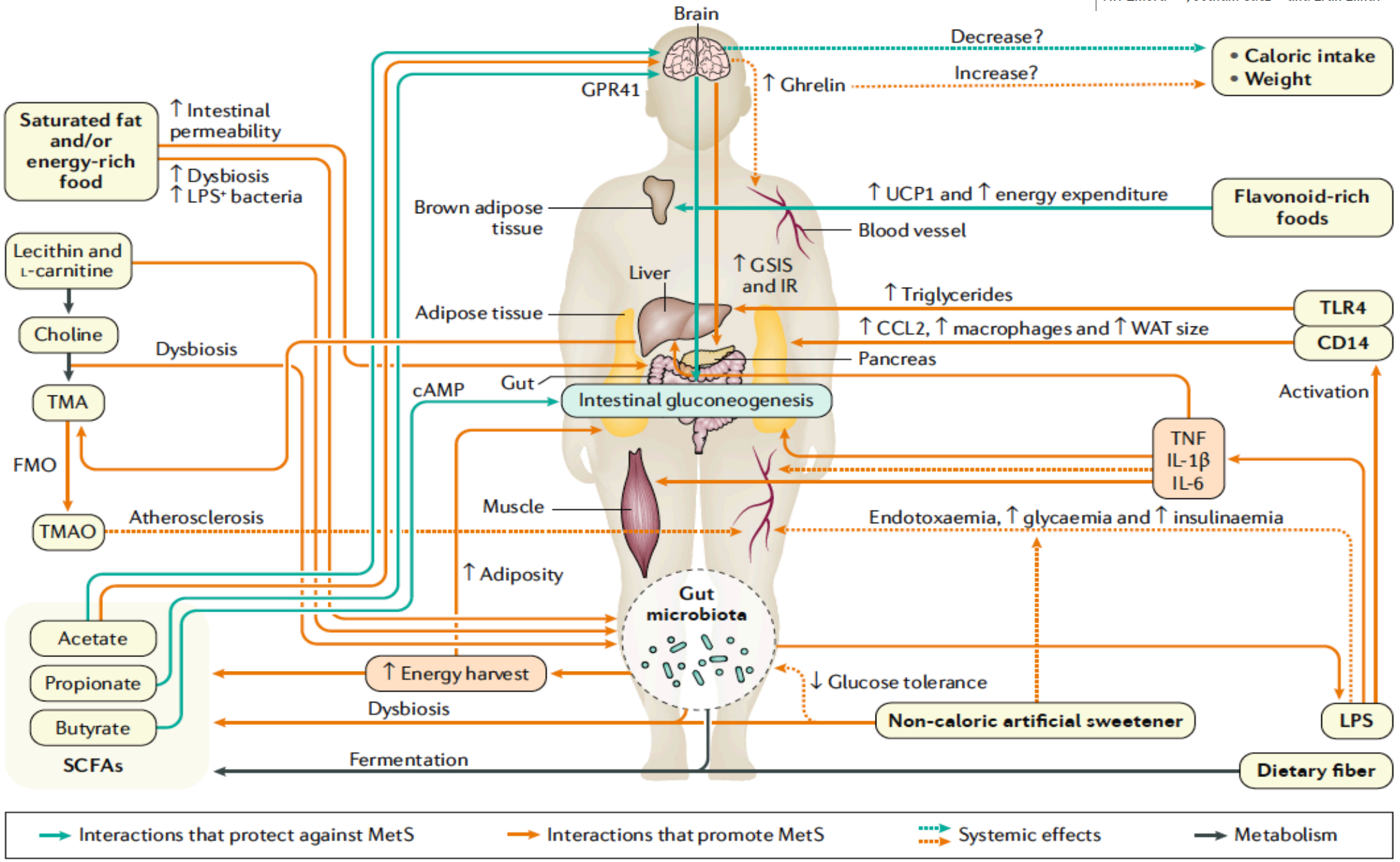
Diet–microbiota interactions and personalized nutrition

Aleksandra A. Kolodziejczyk[1,4], Danping Zheng[1,2,4] and Eran Elinav[1,3]*

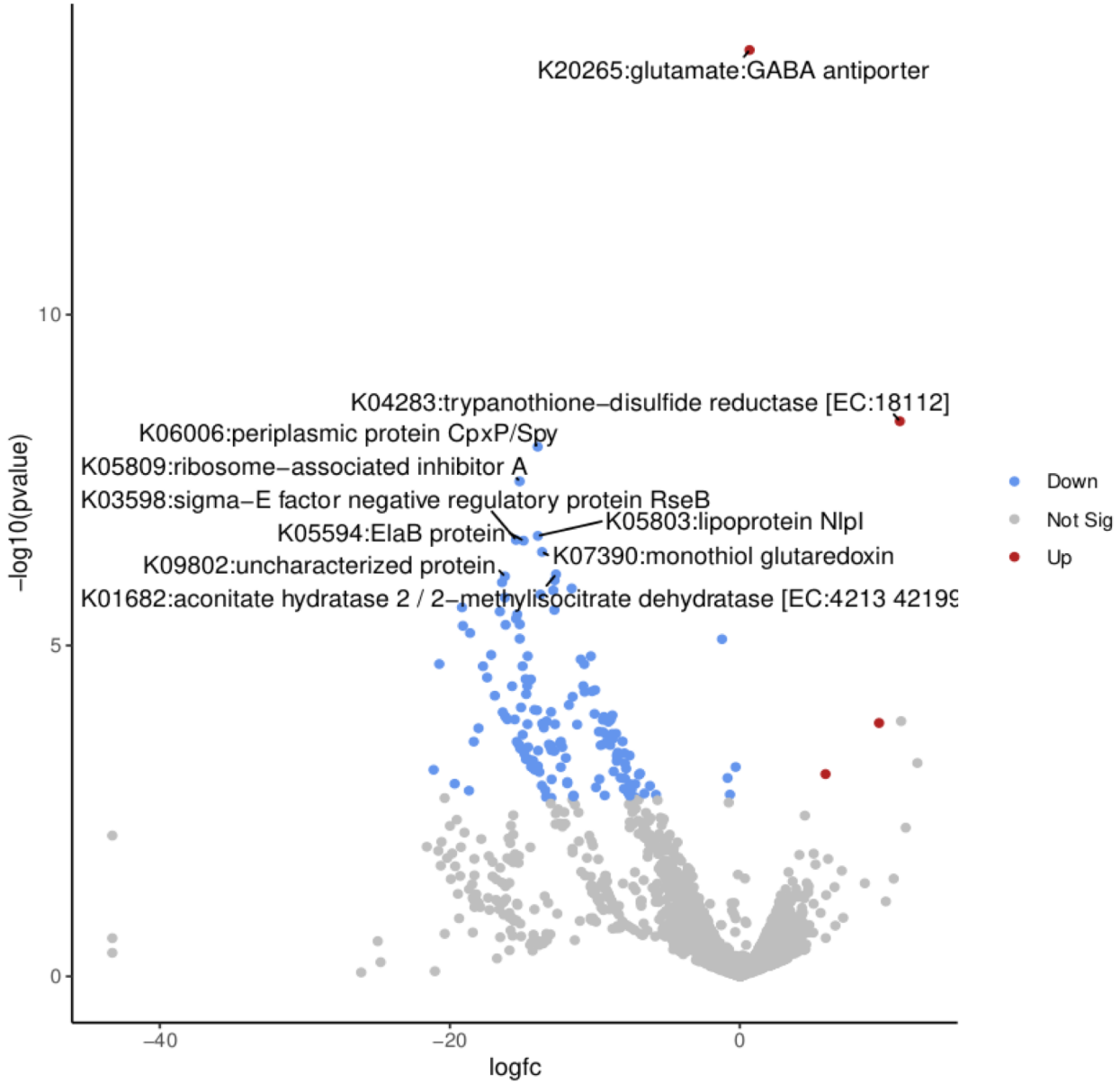
METABOLÓMICA

You are what you eat: diet, health and the gut microbiota

*Niv Zmora[1,2,3], Jotham Suez[1,3] and Eran Elinav[1]**



TRANSCRIPTÓMICA

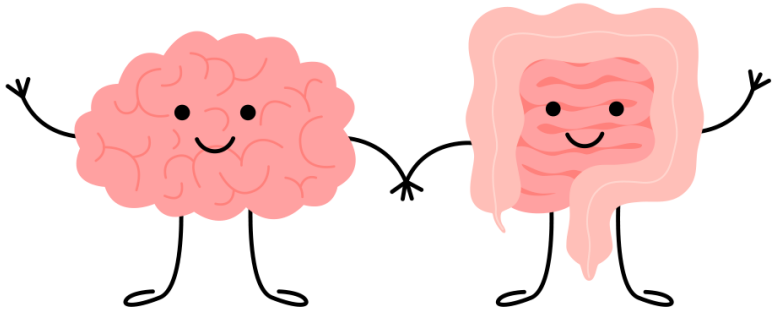


- Proteoma en marcha!!
- Producción de degradación de NT por bacterias aisladas

Antes y después del tratamiento con psicobióticos (*Bifidobacterium*)

Mejoría clínica y cambios en las proteínas expresadas

CONCLUSIONES



- La microbiota contribuye al autismo y a la salud gastrointestinal, pero aún no sabemos como
- La composición no es relevante, la funcionalidad sí
- Debemos estandarizar los métodos de estudio y establecer criterios de normalidad
- Modificar la microbiota no es tarea fácil, no conocemos la ecología

Servicio Microbiología, Hospital U. Ramón y Cajal e IRYCIS

¡Gracias!

rosacampo@yahoo.com

@rosacampo