The background of the slide is a microscopic image of various bacteria, including long, thin, rod-shaped organisms and shorter, thicker ones, some with visible flagella. The image is semi-transparent and serves as a backdrop for the text.

FARMAKOMIKROBIOMIKA: A BÉL MIKROBIÓTA A PRECÍZIÓS MEDICINA SZOLGÁLATÁBAN?

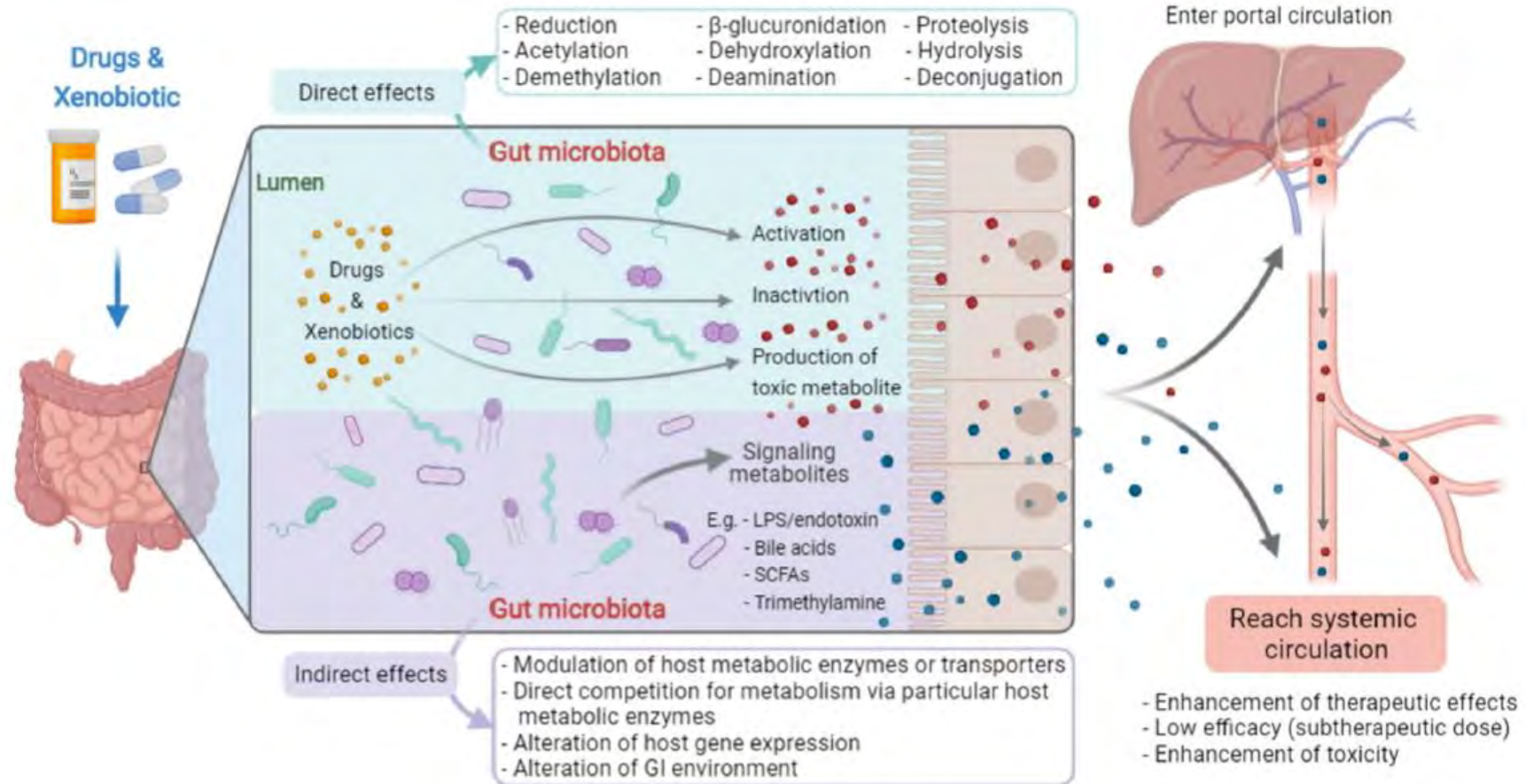
SZALAI GÁBOR

KISKUNHALASI SEMMELWEIS KÓRHÁZ

INTENZÍV OSZTÁLY

2022. OKTÓBER 22.

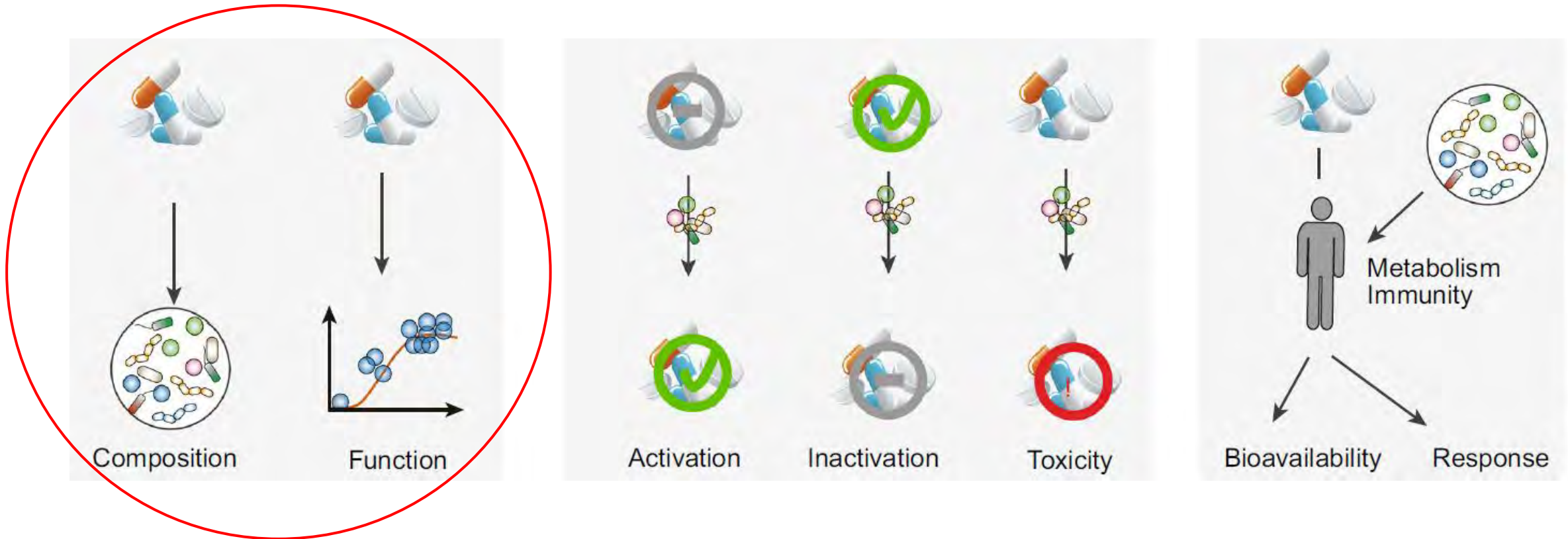
FARMAKOMIKROBIOMIKA



Dikeocha et al. Pharmacomicrobiomics: Influence of gut microbiota on drug and xenobiotic metabolism

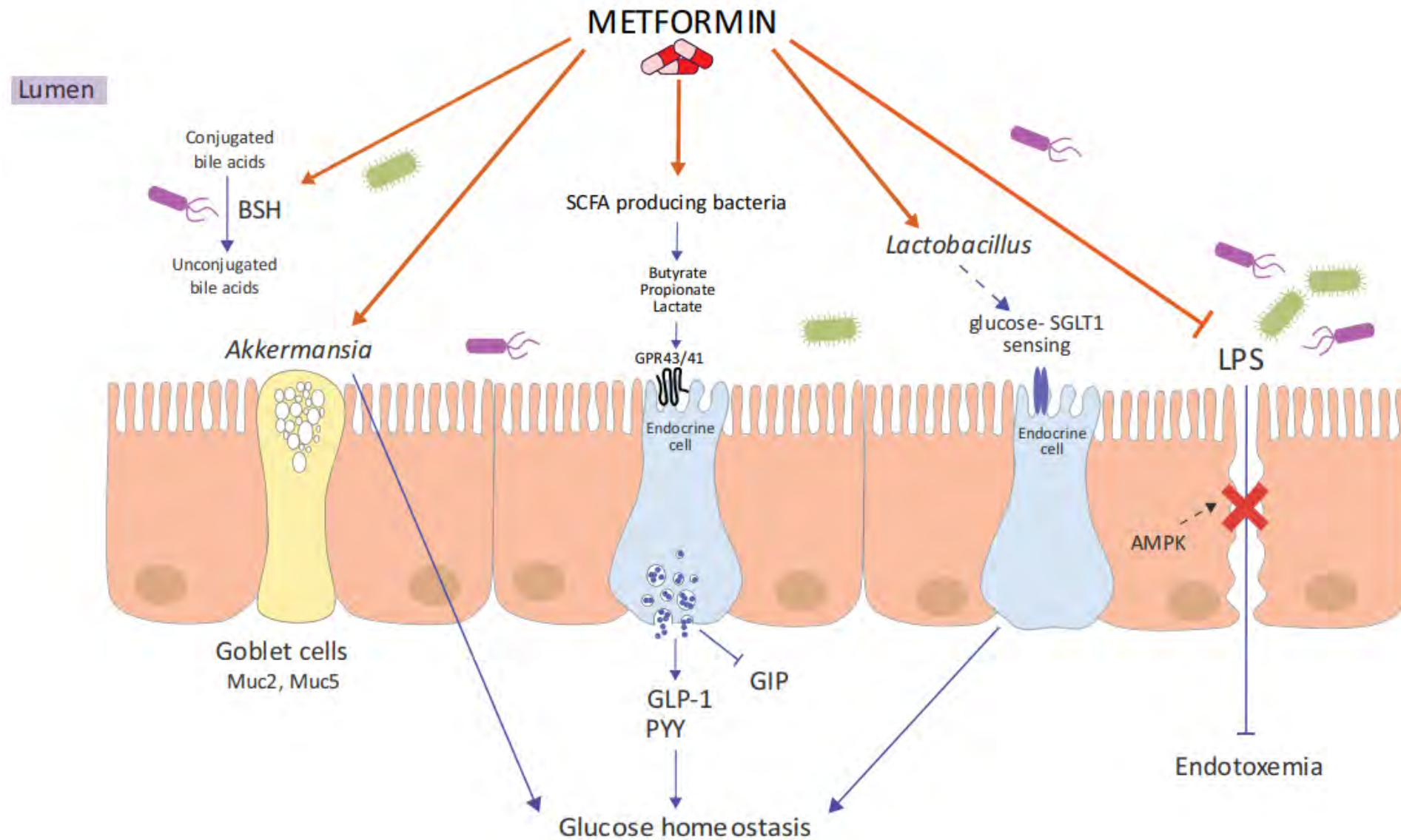
FASEB J. 2022 Jun;36(6):e22350

GYÓGYSZEREK HATÁSA A BÉL MIKROBIÓTÁRA



Doestzada et al. Pharmacomicrobiomics: a novel route towards personalized medicine?

Protein Cell 2018, 9(5):432–445



Rodriguez et al. Metformin: old friend, new ways of action-implication of the gut microbiome?

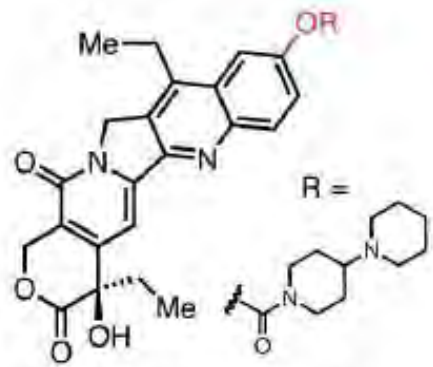
Curr Opin Clin Nutr Metab Care 2018, 21:000–000

A BÉL MIKROBIÓTA KÖZVETLEN HATÁSA A GYÓGYSZEREK HATÉKONYSÁGÁRA ÉS TOXICITÁSÁRA



Doestzada et al. Pharmacomicrobiomics: a novel route towards personalized medicine?

Protein Cell 2018, 9(5):432–445



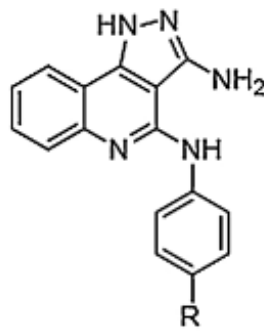
Irinotecan (CPT-11)
inactive prodrug

Pharmacological inhibition of bacterial β -glucuronidase prevents irinotecan-induced diarrhea without impairing its antitumor efficacy in vivo



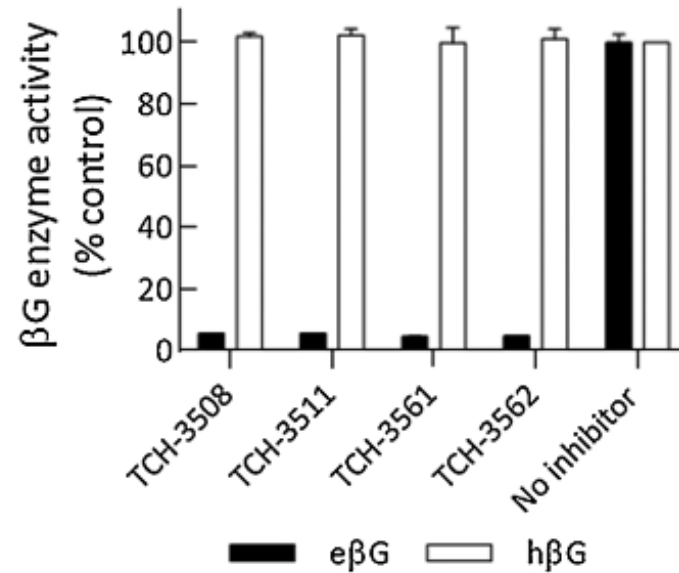
Kai-Wen Cheng^{a,1}, Chih-Hua Tseng^{b,c,d,e,1}, Cherng-Chyi Tzeng^f, Yu-Lin Leu^g, Ta-Chun Cheng^a,

A

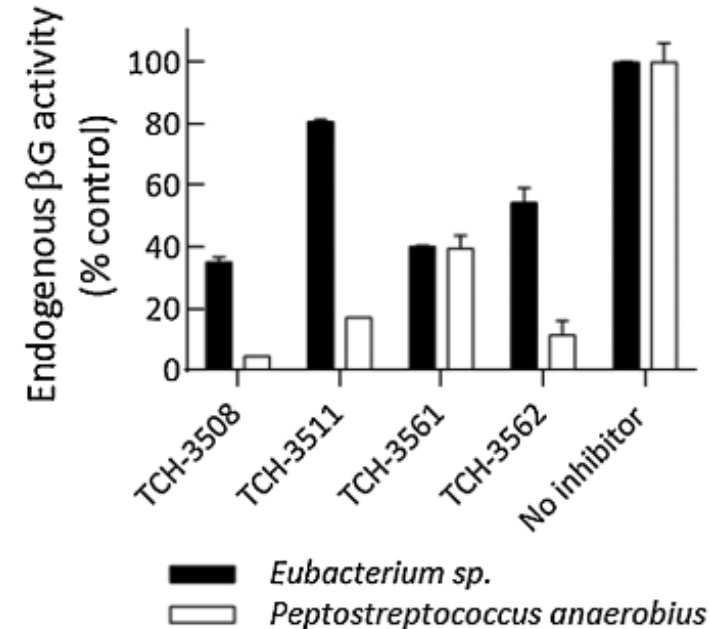


TCH-3508 R = CF₃
TCH-3511 R = F
TCH-3561 R = Cl
TCH-3562 R = CH₃

B



C

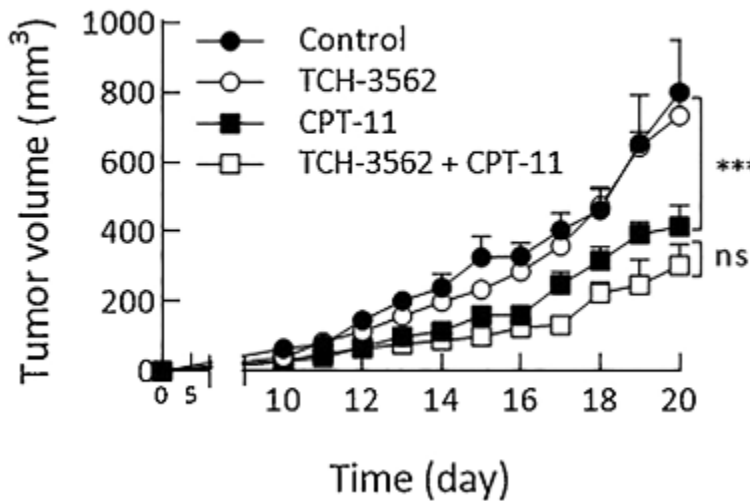


Pharmacological inhibition of bacterial β -glucuronidase prevents irinotecan-induced diarrhea without impairing its antitumor efficacy in vivo

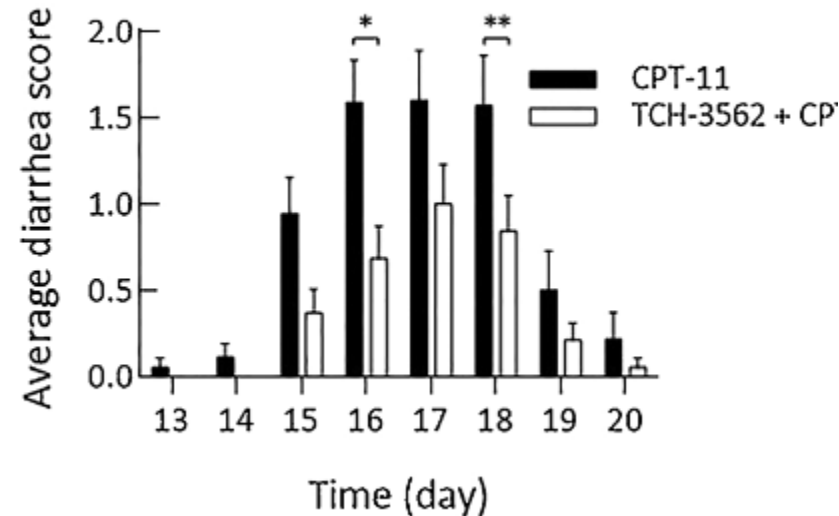


Kai-Wen Cheng^{a,1}, Chih-Hua Tseng^{b,c,d,e,1}, Cherng-Chyi Tzeng^f, Yu-Lin Leu^g, Ta-Chun Cheng^a,

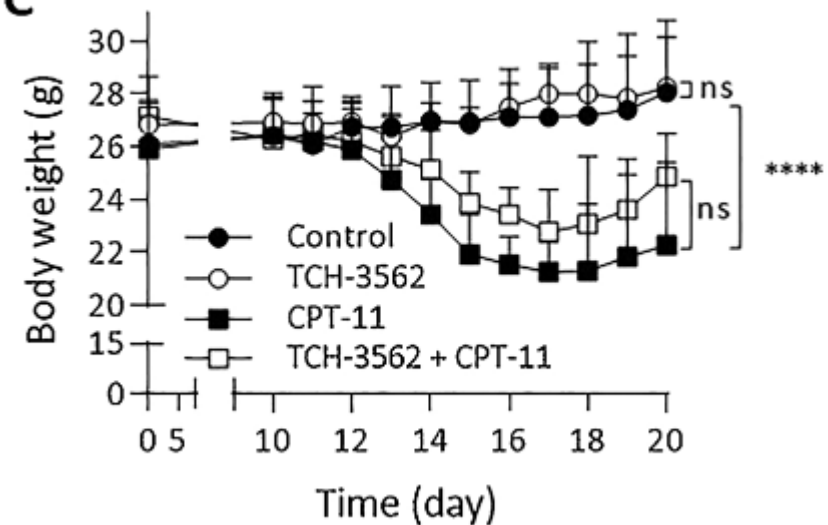
A



B



C



„we established that TCH-3562 as an adjuvant treatment showed protective effects on CPT-11-induced diarrhea and had no negative effects on the therapeutic efficacy of CPT-11 in tumor-bearing mice.

... TCH-3562, is promising to prevent CPT-11-induced diarrhea while maintaining its anti-tumor efficacy that may have clinical potentials for the treatment with CPT-11.”

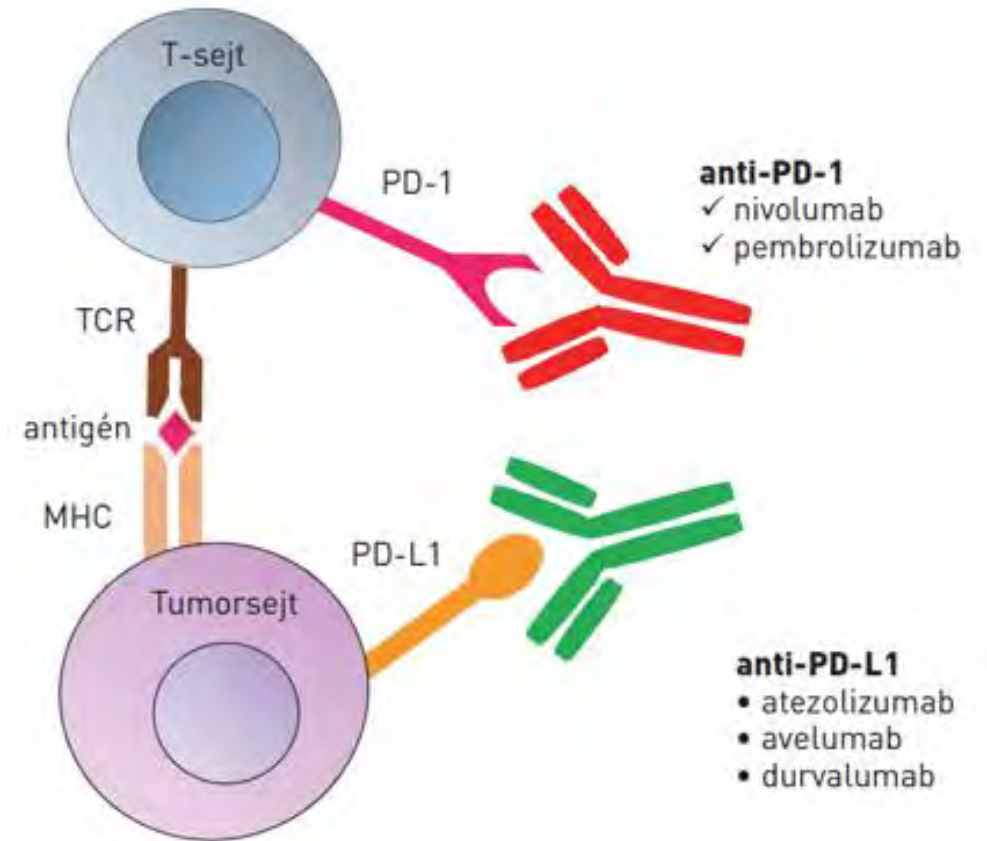
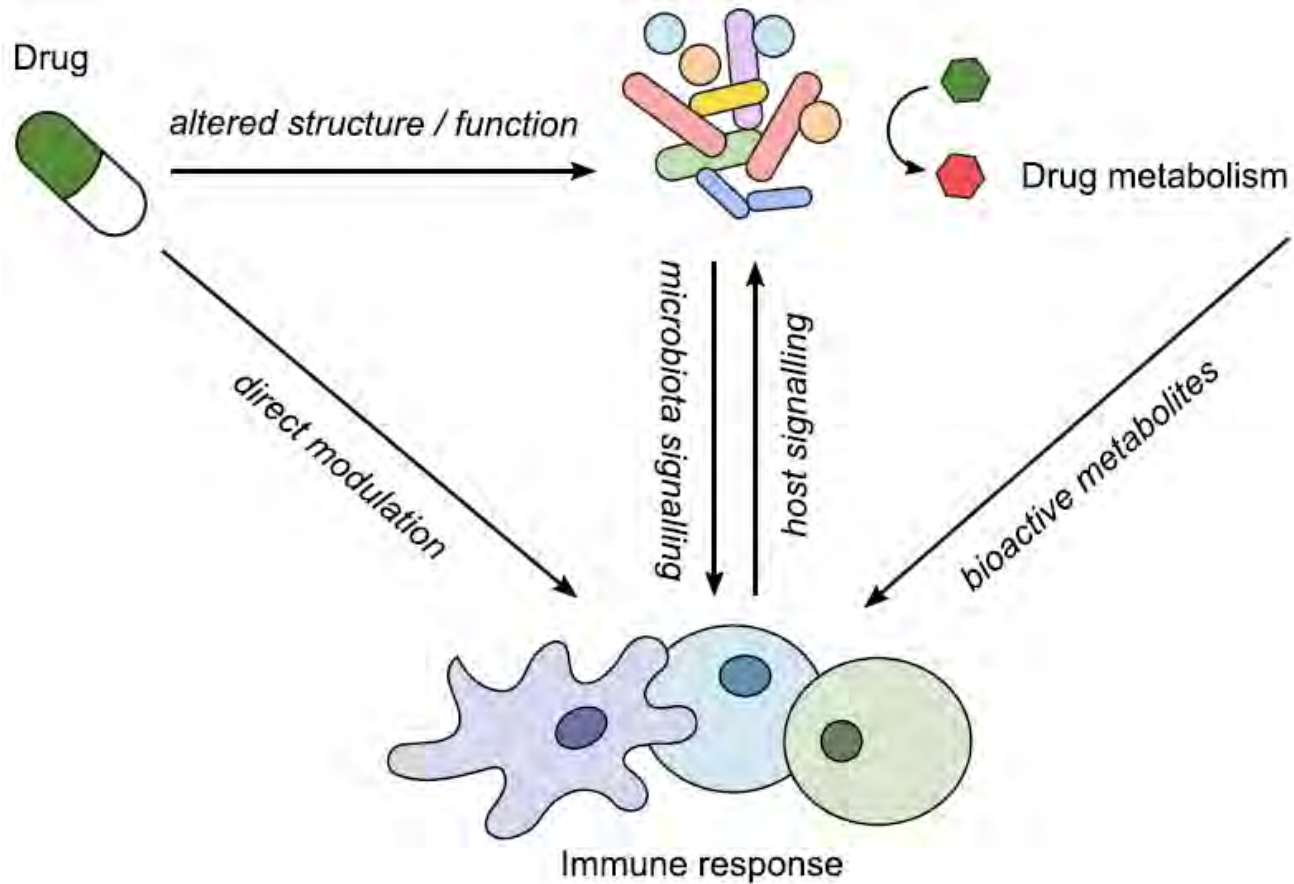
A BÉL MIKROBIÓTA KÖZVETETT HATÁSA A GYÓGYSZERVÁLASZRA



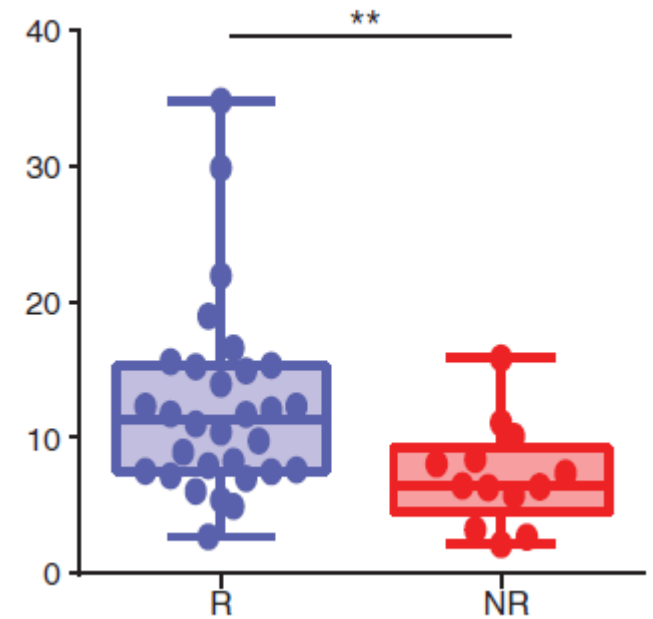
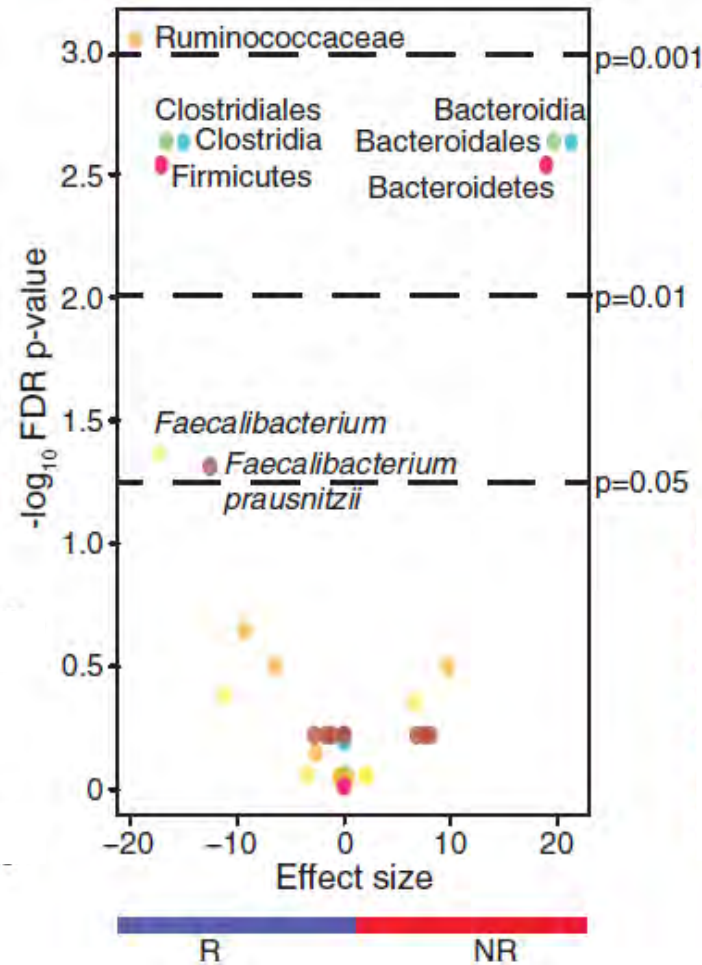
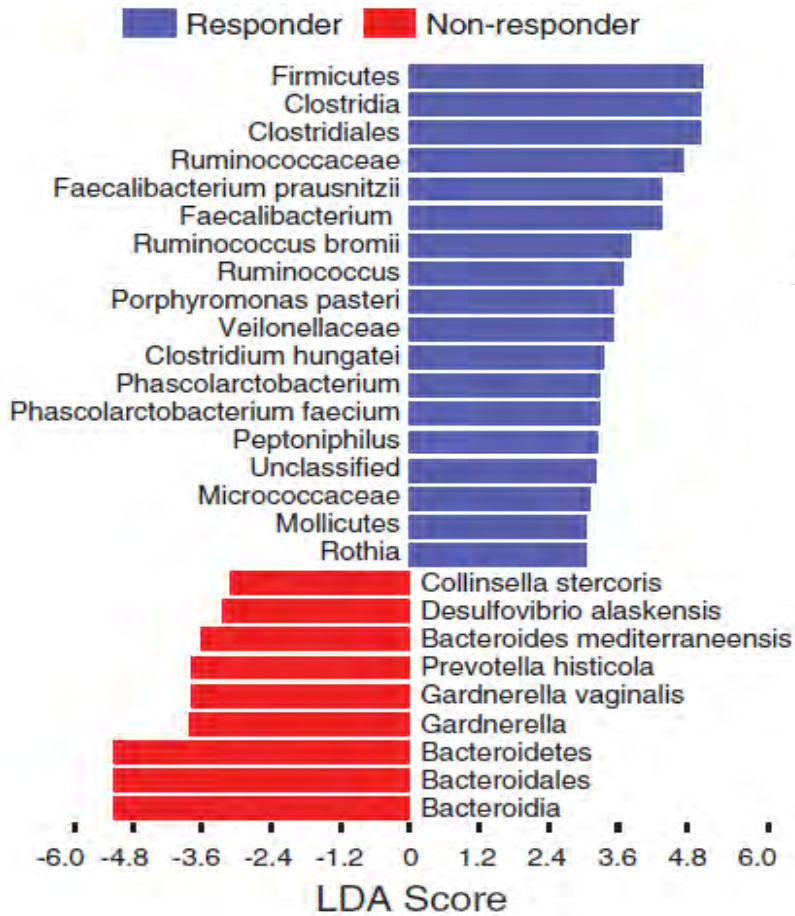
Doestzada et al. Pharmacomicrobiomics: a novel route towards personalized medicine?

Protein Cell 2018, 9(5):432–445

IMMUNELLENŐRZŐPONT GÁTLÓK (IMMUNE CHECKPOINT INHIBITORS)



Gut microbiome modulates response to anti-PD-1 immunotherapy in melanoma patients



CLINICAL TRIALS

Fecal microbiota transplant overcomes resistance to anti-PD-1 therapy in melanoma patients

Phase II Feasibility Study of Fecal Microbiota Transplant (FMT) in Advanced Melanoma Patients Not Responding to PD-1 Blockade (NCT03341143)

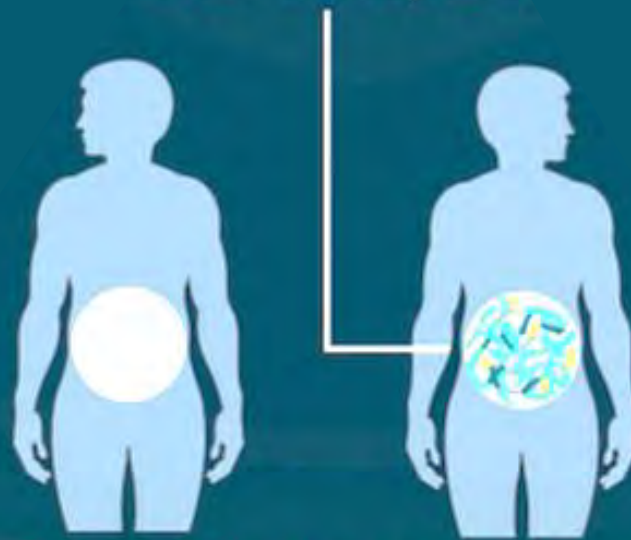
Davar et al., Science 371, 595–602 (2021)

CLINICAL TRIALS

Fecal microbiota transplant promotes response in immunotherapy-refractory melanoma patients

Altering the Gut Microbiota of Melanoma Patients Who Failed Immunotherapy Using Fecal Microbiota Transplantation (FMT) From Responding Patients (Phase 1, NCT03353402)

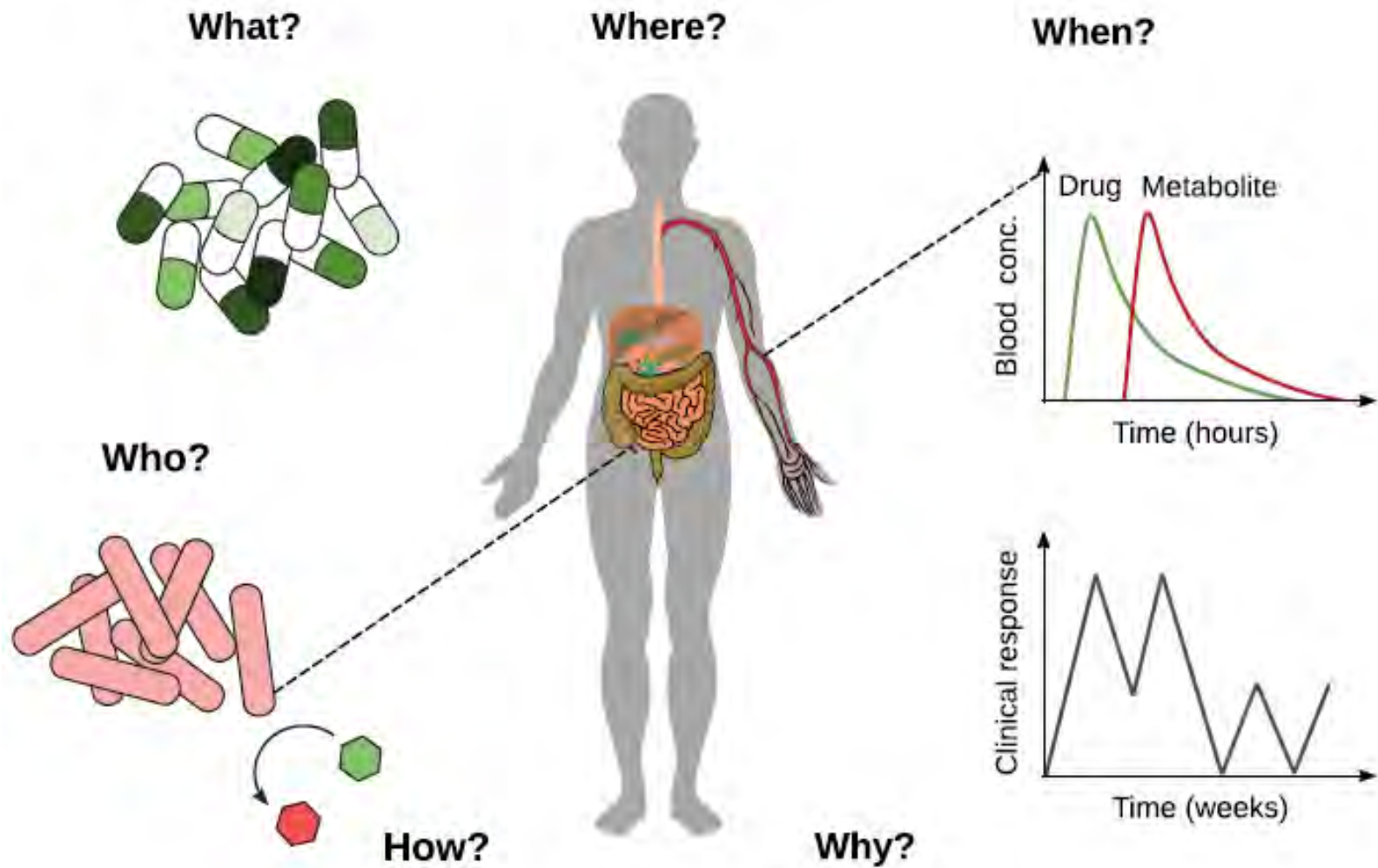
Baruch et al., Science 371, 602–609 (2021)



Anti-PD-1 Refractory
Melanoma Patient

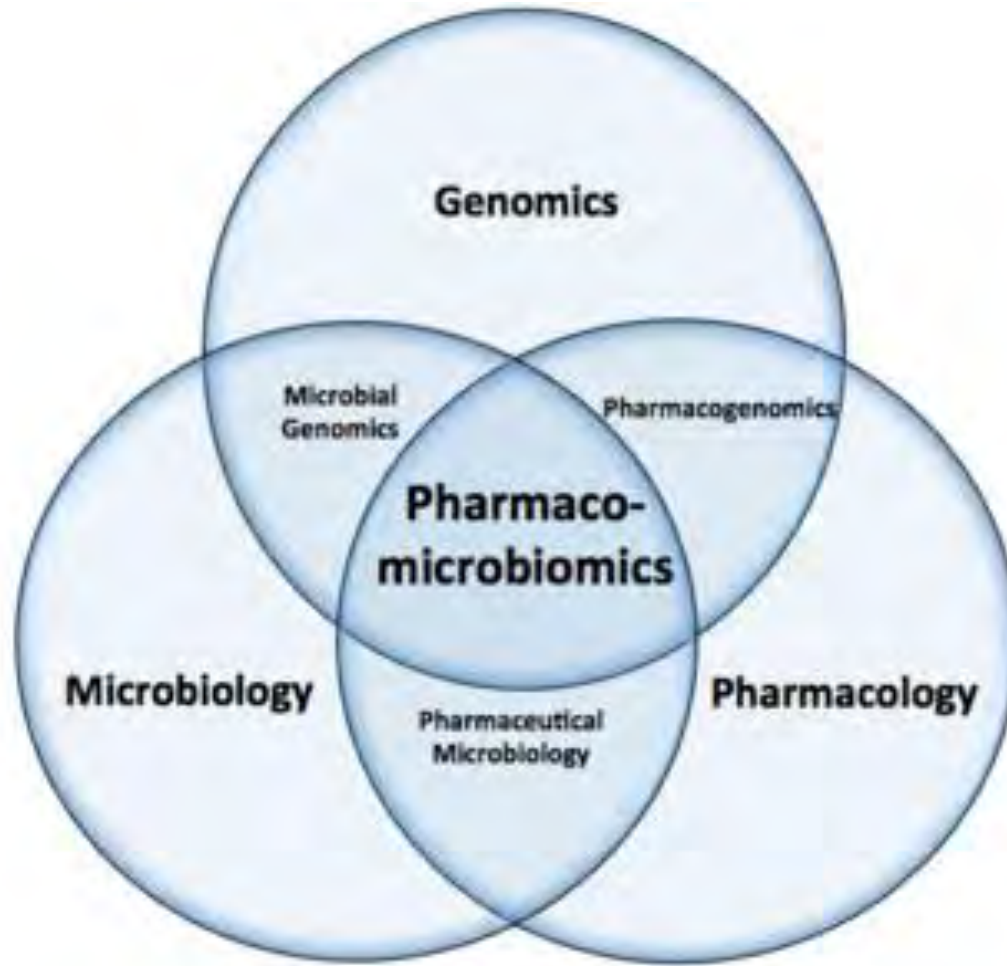
Baruch et al.,

Davar et al.,



Lam et al. Precision medicine goes microscopic: Engineering the microbiome to improve drug outcomes

Cell Host & Microbe 26, July 10, 2019



KÖSZÖNÖM A FIGYELMET!