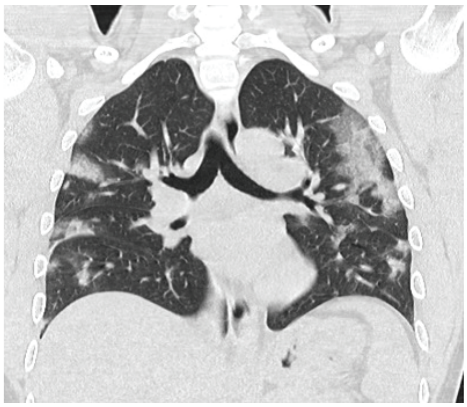
e:Medium flash NEWSLETTER

August 2025

Dear Reader,
In this August edition of e:Medium Flash, we highlight fresh insights and key publications from the e:Med network. Explore how our community continues to advance the frontiers of systems medicine. With our updated format, we aim to strengthen visibility, foster exchange and encourage collaborations across all areas of systems medicine. Please share your new publications with us via e:Med Website!

Enjoy reading and have a great summer vacation!
Your e:Med Management Office



SWEET RESCUE FROM LUNG INJURY

Mannose-6-phosphate reduces lung damage by preventing ASM attachment

Acute lung injury, as seen in severe infections, involves the enzyme acid sphingomyelinase (ASM). Scientists of e:Med alliance SYMPATH led by Martin Witzenrath found under the supervision of Wolfgang Kuebler that ASM anchors to a receptor in lung cells and that it can be released by the sugar molecule mannose-6-phosphate (M6P). In lab and animal studies, M6P reduced lung damage by preventing ASM's harmful effects. These findings suggest that M6P—or drugs that act like it—could help to treat lung injury and improve outcomes in severe respiratory conditions.

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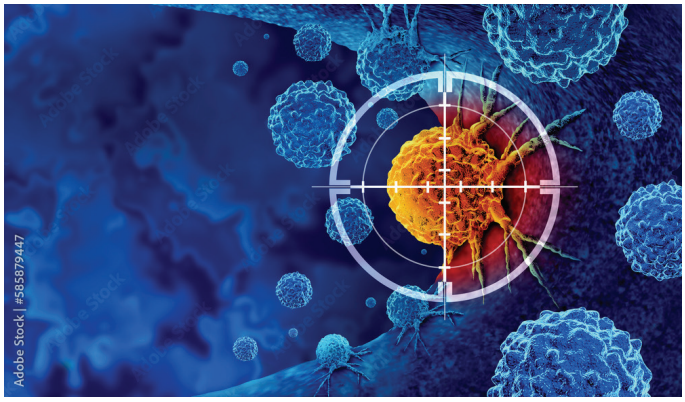

DOUBLE TROUBLE AGAINST LEUKEMIA

Therapy improved when CAR-T cells and bispecific antibodies collaborate

Co-administering CAR-T cells and CD20-bispecific antibodies improved immunotherapy efficacy against leukemia, as shown by researchers of e:Med alliance SYMPATHY around Sascha Dietrich. Both in cell culture and in mouse models, this strategy improved treatment against B-cell malignancies, enhanced T-cell expansion and led to lon-ger survival with 80% of mice going into complete remission. This booster combination can be of great help in disease control.

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e:Med SYSTEMS MEDICINE

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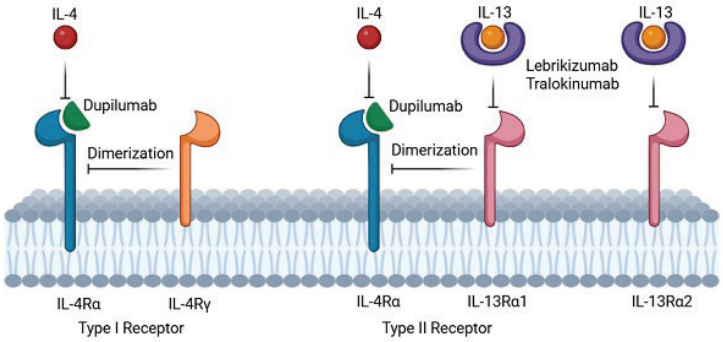

WHEN CANCER THERAPY HITS THE SKIN

IL-4 and IL-13 blockers as a treatment for irBP in cancer patients

Immune checkpoint inhibitors can trigger immune-related bullous pemphigoid (irBP), a blistering skin disease, as side effect of cancer therapy. Now Lucie Heinzerling of e:Med alliance MelAutim led by Julio Vera-González, analyzed in a multi-center study irBP skin biopsies and found increased IL-4 and IL-13 expression - similar to spontaneous BP. These findings suggest that IL-4/IL-13 inhibitors like dupilumab, already used for other skin diseases, may offer a new treatment option for irBP.

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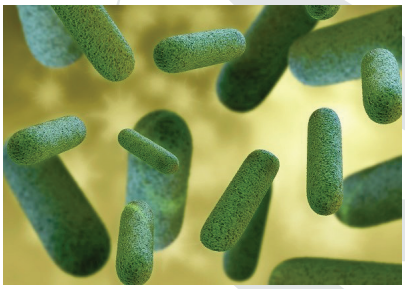
CACOPHONY OF THE GUT

Disturbed harmony in IBD

How do IBDs disrupt the metabolic balance between host and gut microbiome? By integrating multi-omics data and metabolic modeling, the research group of Christoph Kaleta, in collaboration with iTREAT and Try-IBD (led by Philip Rosenstiel and Konrad Aden, respectively), explored this complex relationship. Their analyses revealed alterations in key metabolic pathways, including NAD metabolism, amino acid turnover, and one-carbon metabolism. Notably, their results indicate a potential tryptophan depletion that impaired NAD biosynthesis, contributing to a disrupted metabolic state that complicates disease progression and treatment. These findings highlight the potential of personalized dietary interventions targeting metabolic pathways as a novel therapeutic strategy for IBD patients. read more



SEIZING CONTROL OF THE HOST

How Salmonella turns NEDD9 against the immune system

NEDD9, a scaffolding protein known for regulating cell migration, also shapes innate immunity. Using transcriptomics, microscopy, and murine models, researchers from e:Med alliance MILES led by Martin Sos, under the supervision of Tamina Seeger-Nukpezah, show that Salmonella Typhimurium exploits NEDD9-FAK/AKT signaling to evade lysosomal clearance. Loss of NEDD9 boosts bacterial killing, revealing therapeutic potential against bacterial infections.

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THE SCIENTIFIC MANAGEMENT EXCHANGE

Calling for Abstracts!

Join us on October 1st, 2025 at DKFZ Heidelberg to explore the future of scientific project management in medicine. SciNetPro brings together managers, coordinators, and enablers of research to share insights and foster collaboration. Submit your abstract by August 20, 2025—your perspective matters.

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