De biologische impact van lifestyle en klimaat op het immuunsysteem en de huid

Hok Bing Thio

Dermatologie, ErasmusMC, Rotterdam, NL

Dag van de huid, Utrecht 4 december 2025

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Disclaimer & disclosure Hok Bing Thio

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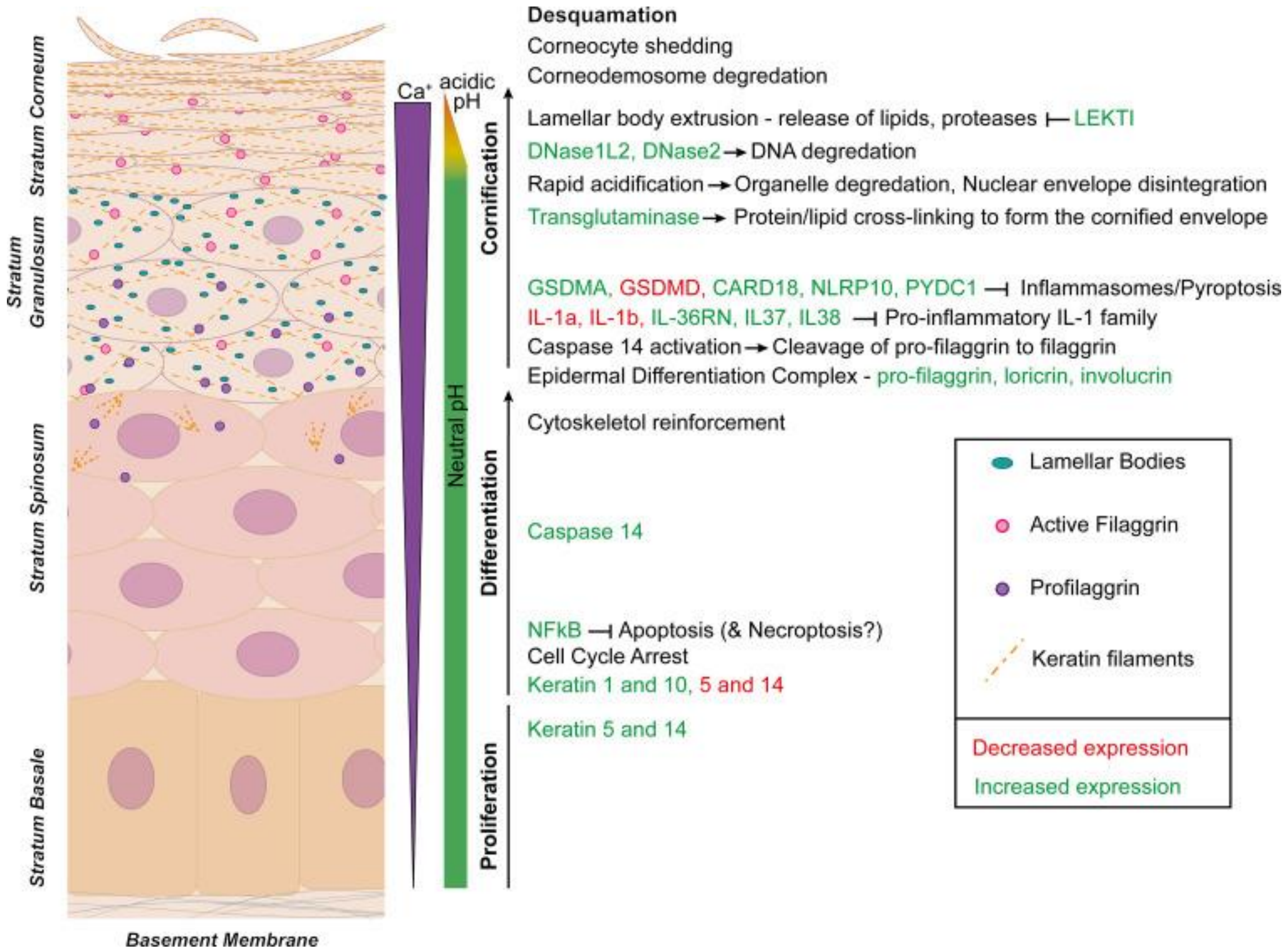
De informatie in deze slides kan afwijken van de huidige indicaties van de gepresenteerde geneesmiddelen. Raadpleeg de volledige SmPC's voor geldige voorschrijfinformatie.

Hok Bing Thio is/was consultant en gastspreker voor Astra Zeneca, Boehringer Ingelheim, Janssen, AbbVie, AMGEN, Galderma, LEO Pharma, Eli Lilly, Almirall, Kyowa Kirin, UCB en Novartis.

https://prints.sciencesource.com/featured/1-phagocytosis-science-picture-co.html

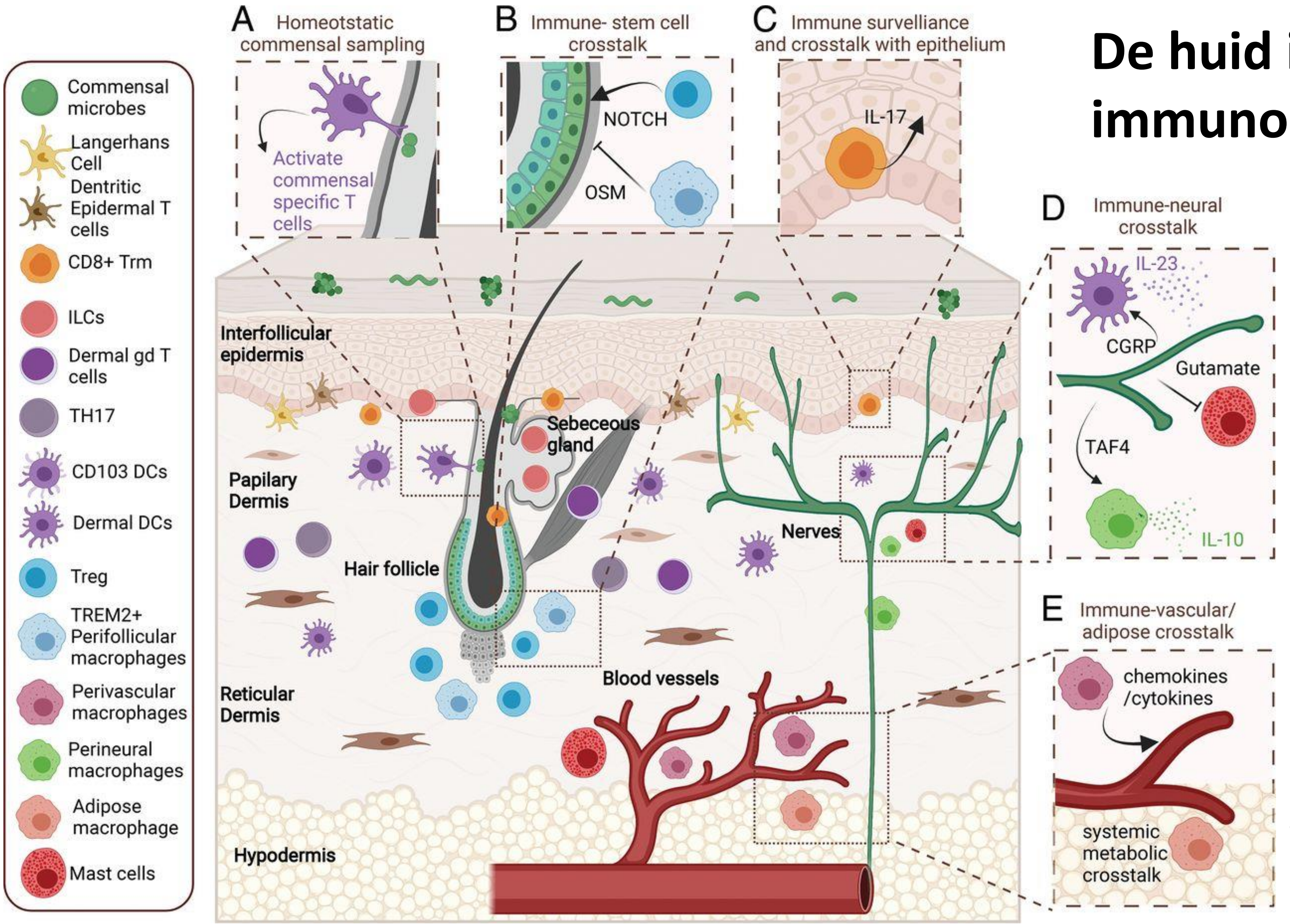

Wij verliezen 200 miljoen huidcellen per uur.
Dat is bijna 5 miljard cellen per dag…
https://www.imperial.ac.uk/news/176229/new-insights-into-skin-cells-could/
Reiko Tanaka

Opperhuid/ Epidermis

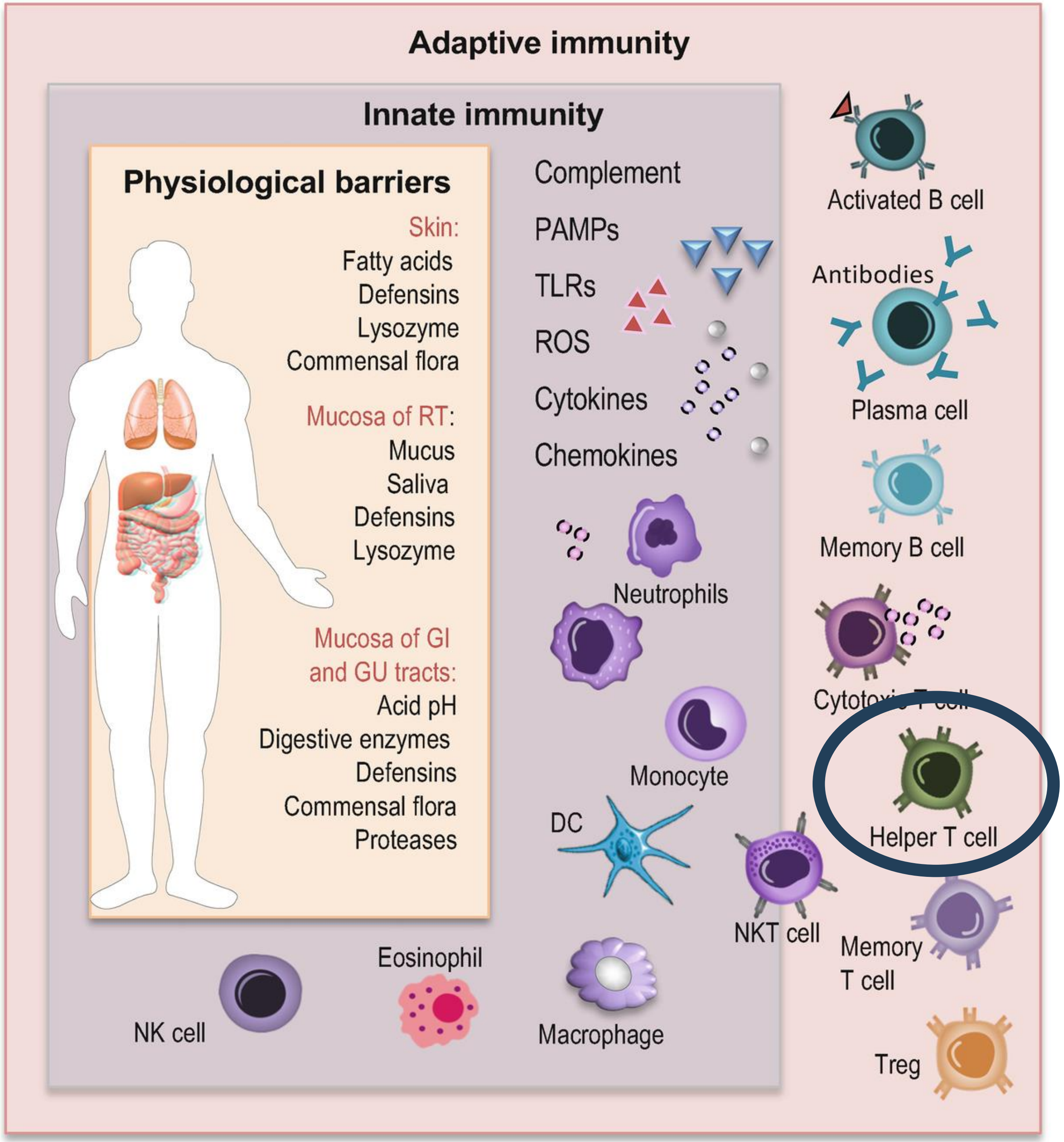


Anderton H, Alqudah S. Cell death in skin function, inflammation, and disease. Biochem J. 2022 Aug 12;479(15):1621-1651. doi: 10.1042/BCJ20210606. PMID: 35929827; PMCID: PMC9444075.

De huid is een neuro-immunologisch orgaan

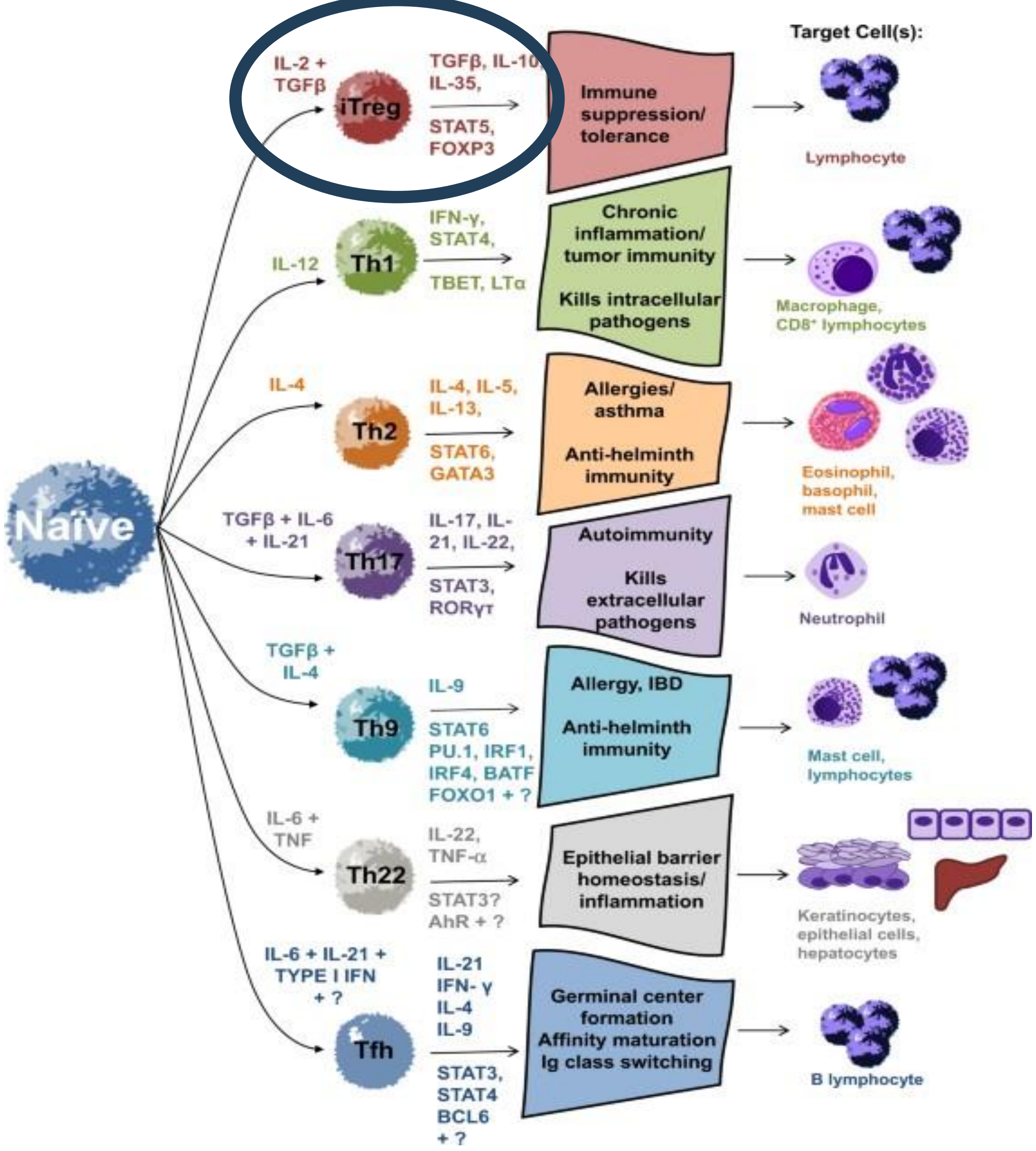


One Size Does Not Fit All: Diversifying Immune Function in the Skin. Shruti Naik. J Immunol January 15, 2022, 208 (2) 227-234;

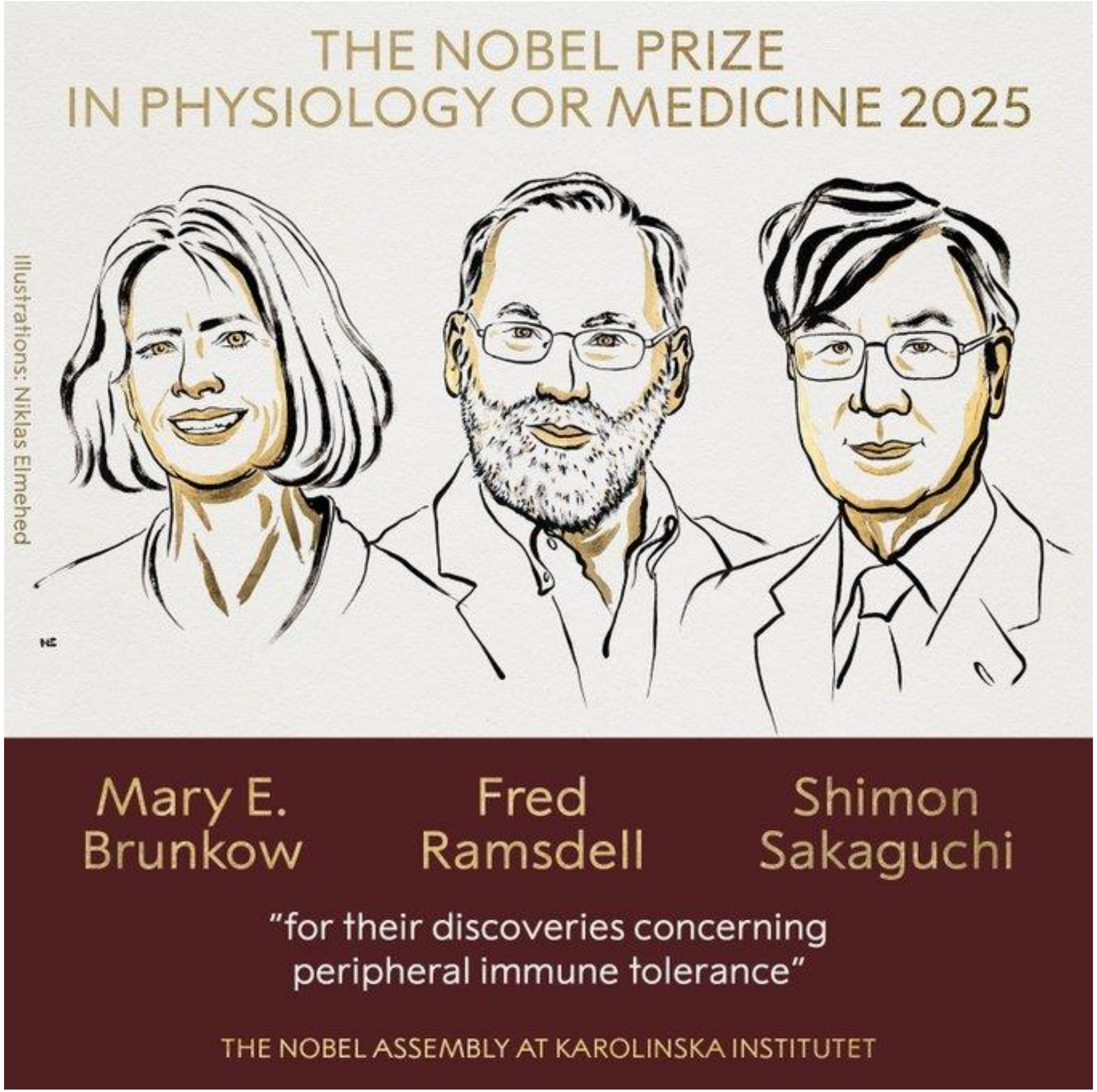


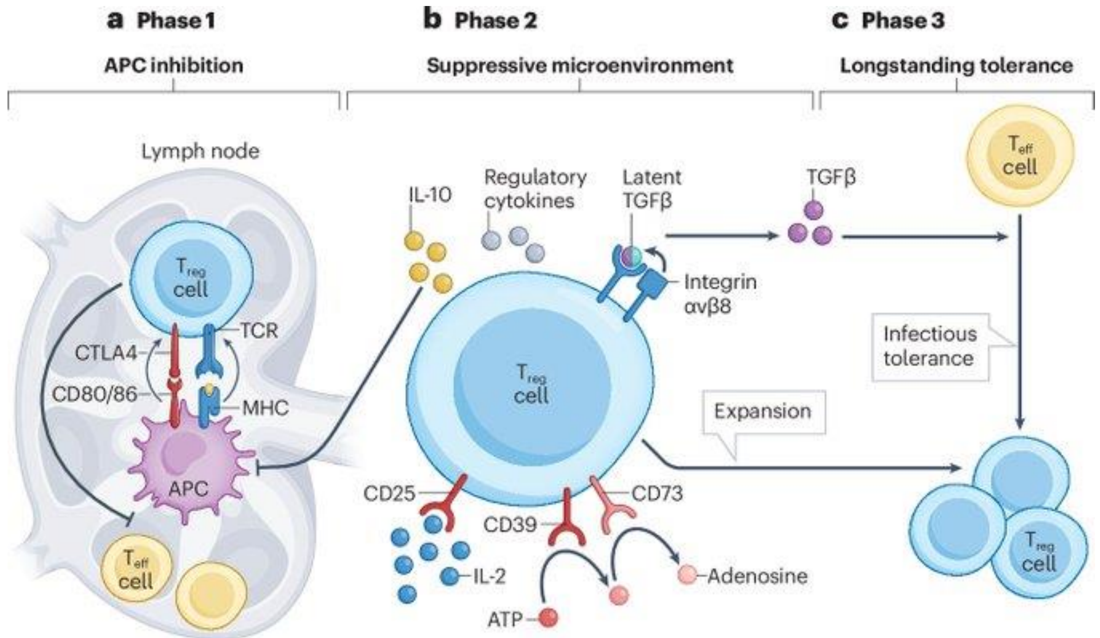
Huid is een belangrijk onderdeel van het immuun systeem

Müller L., Di Benedetto S., Pawelec G. (2019) The Immune System and Its Dysregulation with Aging. In: Harris J., Korolchuk V. (eds) Biochemistry and Cell Biology of Ageing: Part II Clinical Science. Subcellular Biochemistry, vol 91. Springer, Singapore

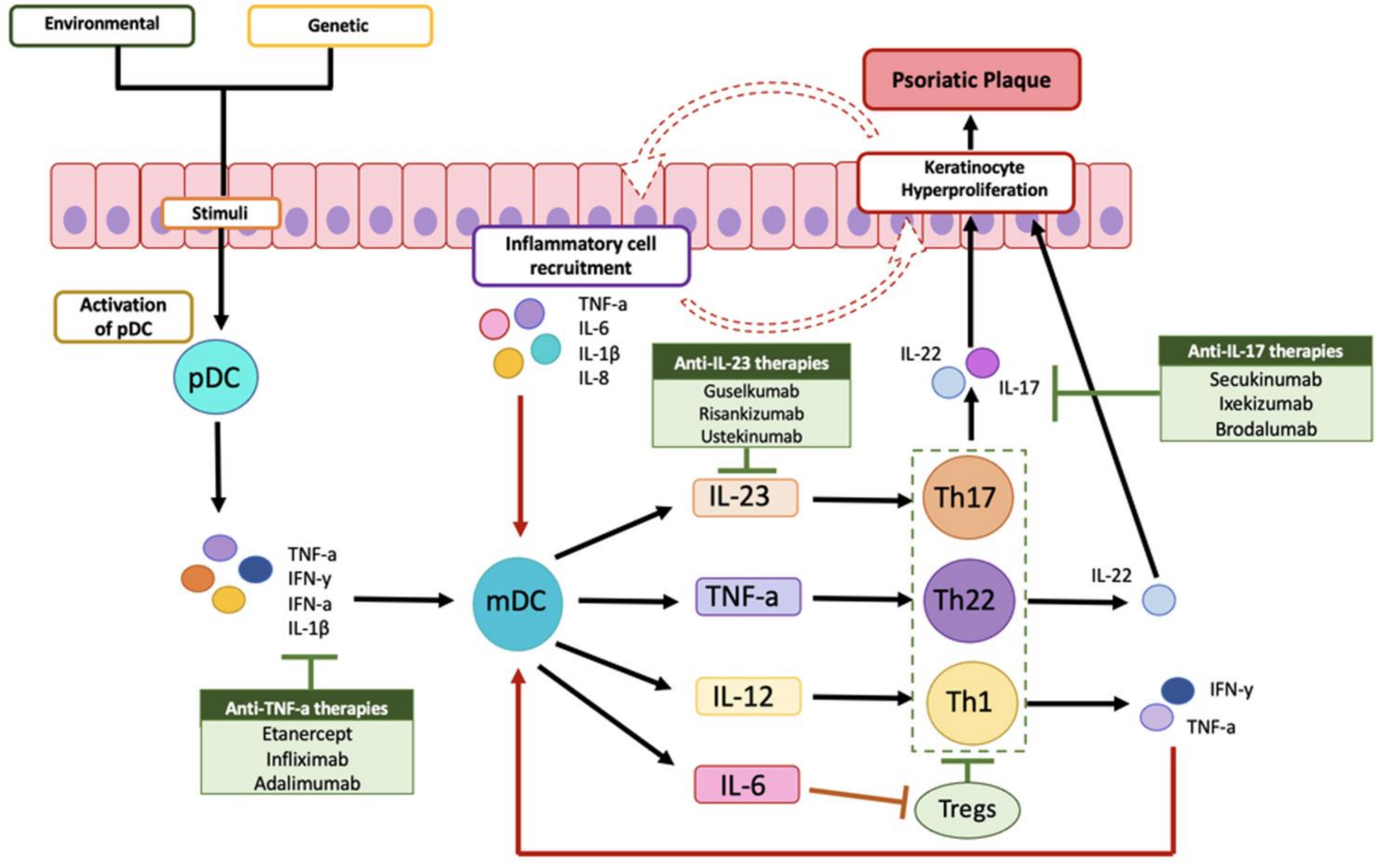


Knochelmann, H.M., Dwyer, C.J., Bailey, S.R. et al. When worlds collide: Th17 and Treg cells in cancer and autoimmunity. Cell Mol Immunol 15, 458–469 (2018). https://doi.org/10.1038/s41423-018-0004-4

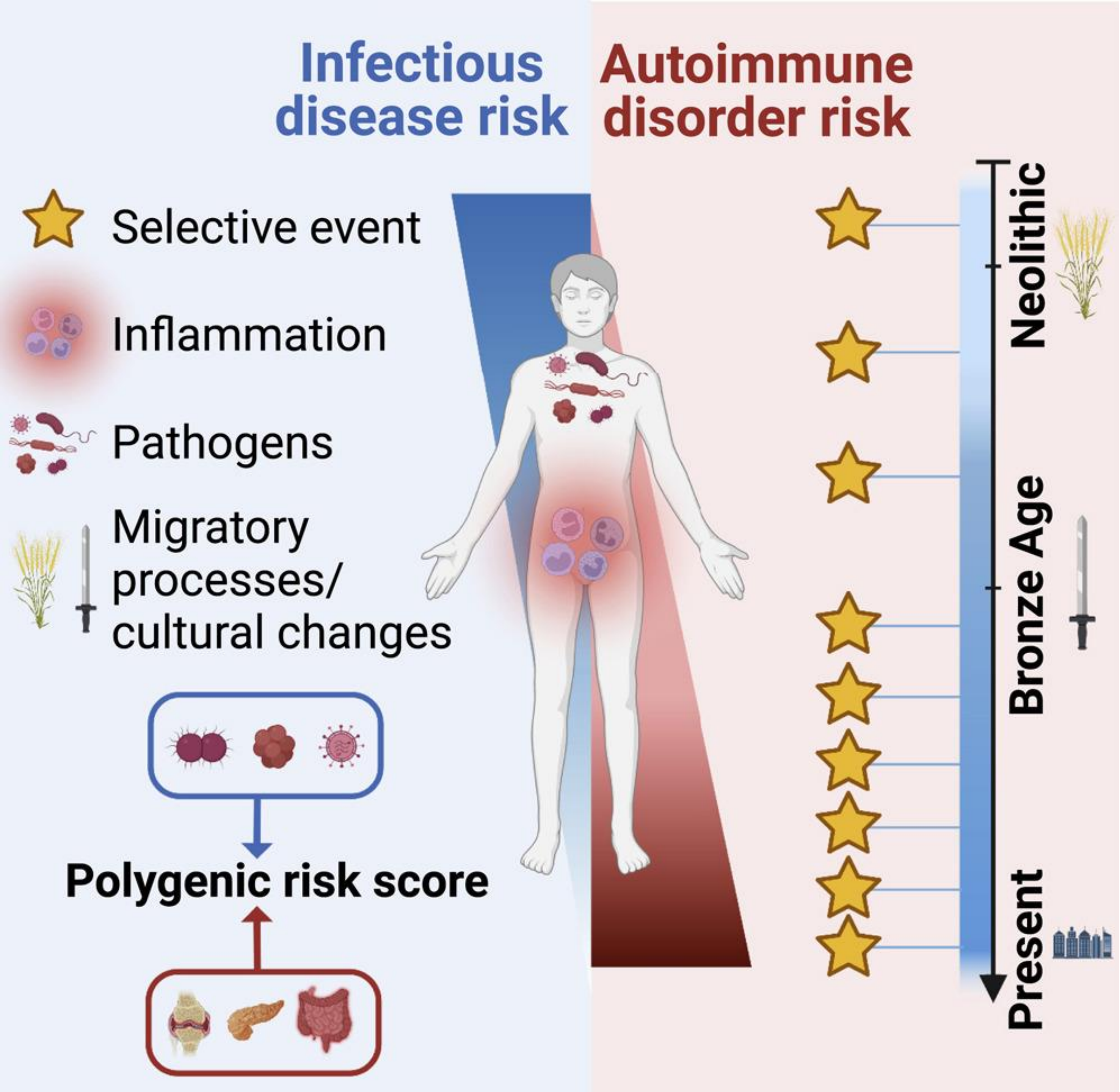




Wardell, C.M., Boardman, D.A. & Levings, M.K. Harnessing the biology of regulatory T cells to treat disease. Nat Rev Drug Discov 24, 93–111 (2025). https://doi.org/10.1038/s41573-024-01089-x



Hawkins P, Earl K, Tektonidis TG, Fallaize R. The role of diet in the management of psoriasis: a scoping review. Nutrition Research Reviews. Published online 2023:1-35. doi:10.1017/S0954422423000185



Genetic adaptation to pathogens and increased risk of inflammatory disorders in post-Neolithic Europe

- Ancient genomics studies allow detection of the extent of natural selection over time
- Genetic adaptation in Europe has mainly occurred after the start of the Bronze Age
- Immunity genes have been strongly affected by both positive and negative selection
- Resistance to infection has increased inflammatory disease risk in recent millennia

Kerner, Gaspard et al.
Cell Genomics, 2023, Volume 3, Issue 2, 100248


A quest for disease genes that unleash inflammation p. 1430
Tree rings authenticate musical instruments p. 1434
A chemoenzymatic cascade turns carbon dioxide into starch p. 1523
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Transient closed-loop electrotherapy pp. 917 & 1006
Potential for rapid adaptation across birds and mammals pp. 920 & 1012
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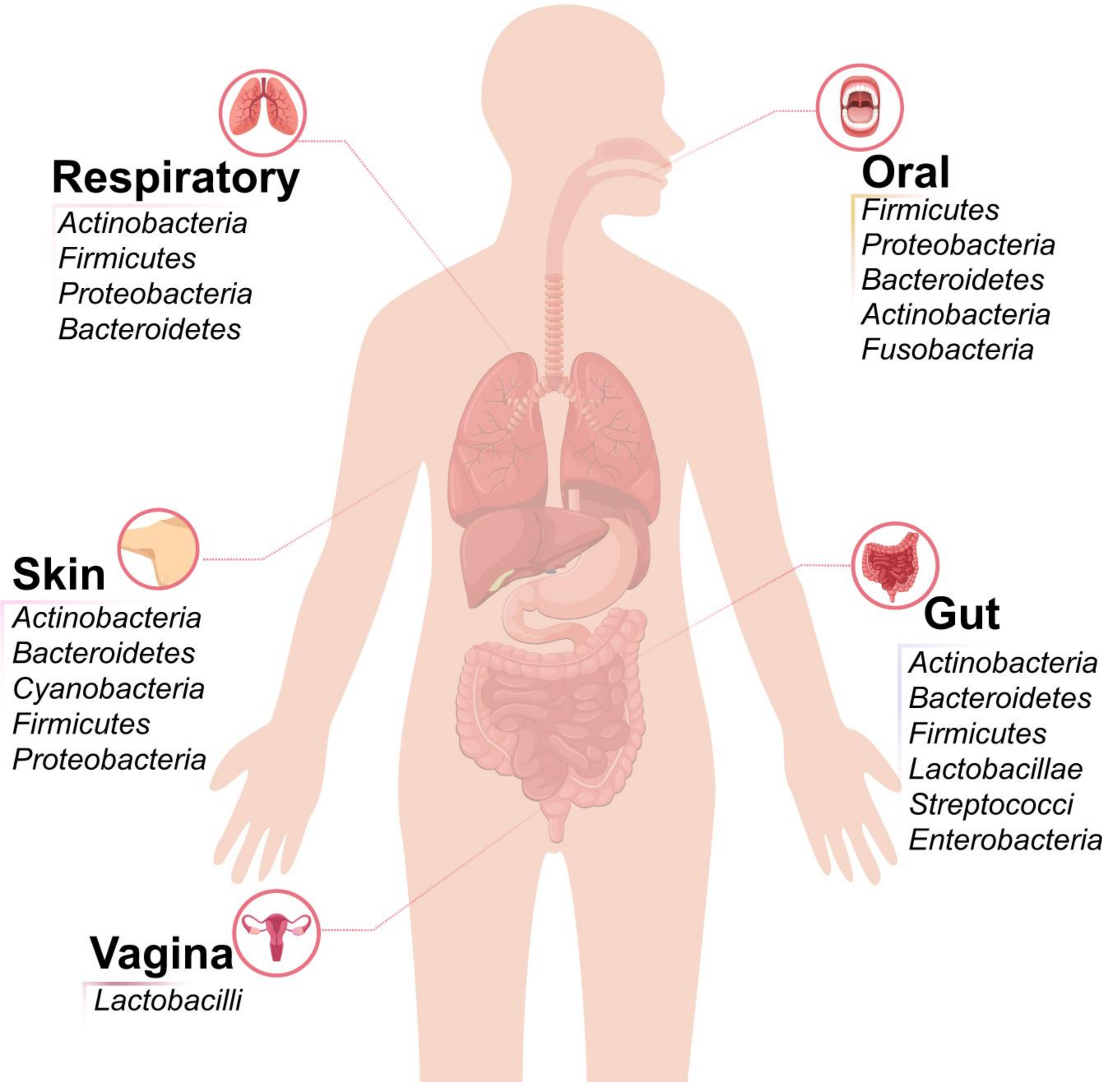
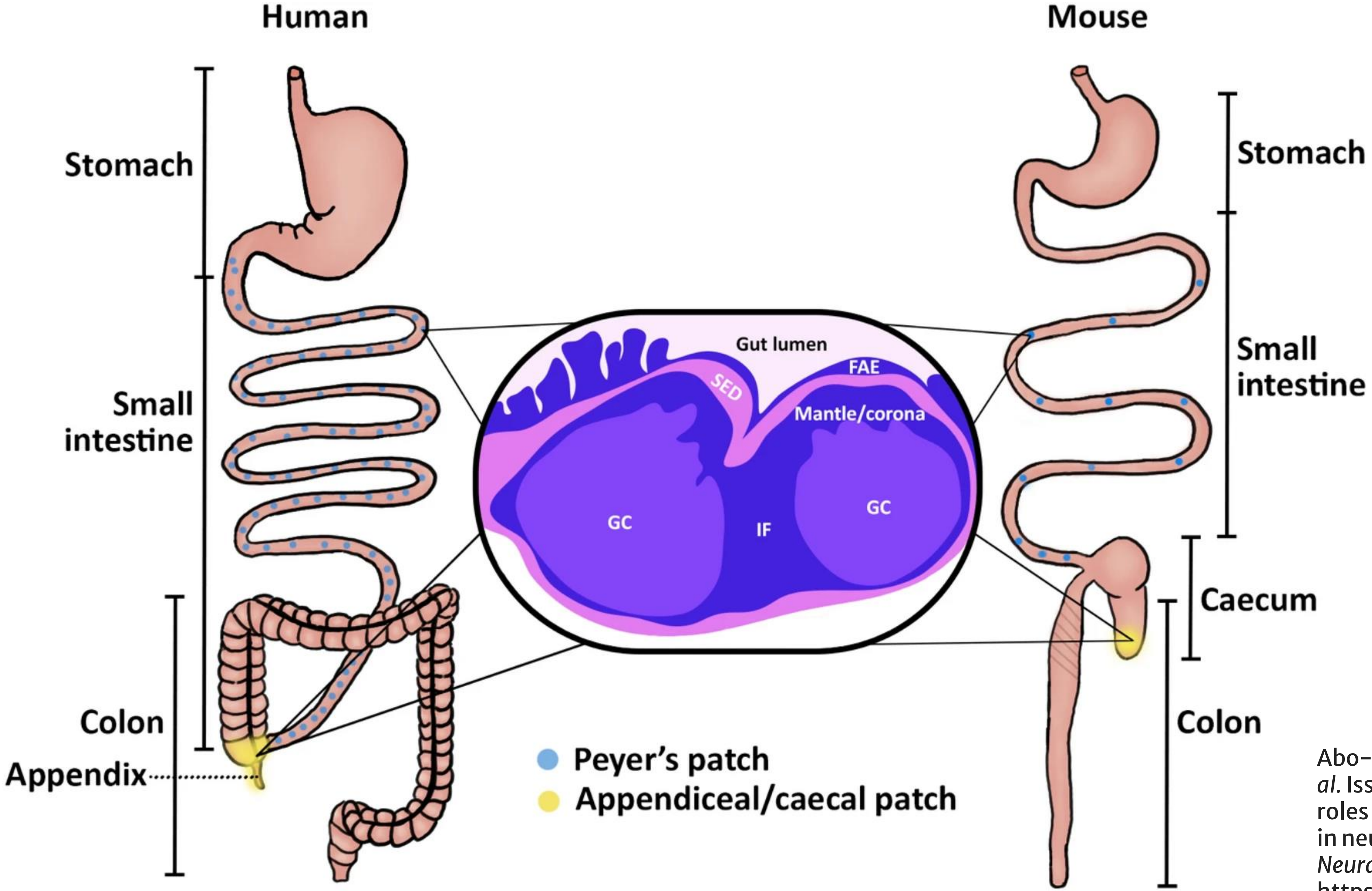
THE SYSTEMIC
MICROBIOME
How diverse microbial communities influence health and disease p. 932

Microbiota composition in different regions

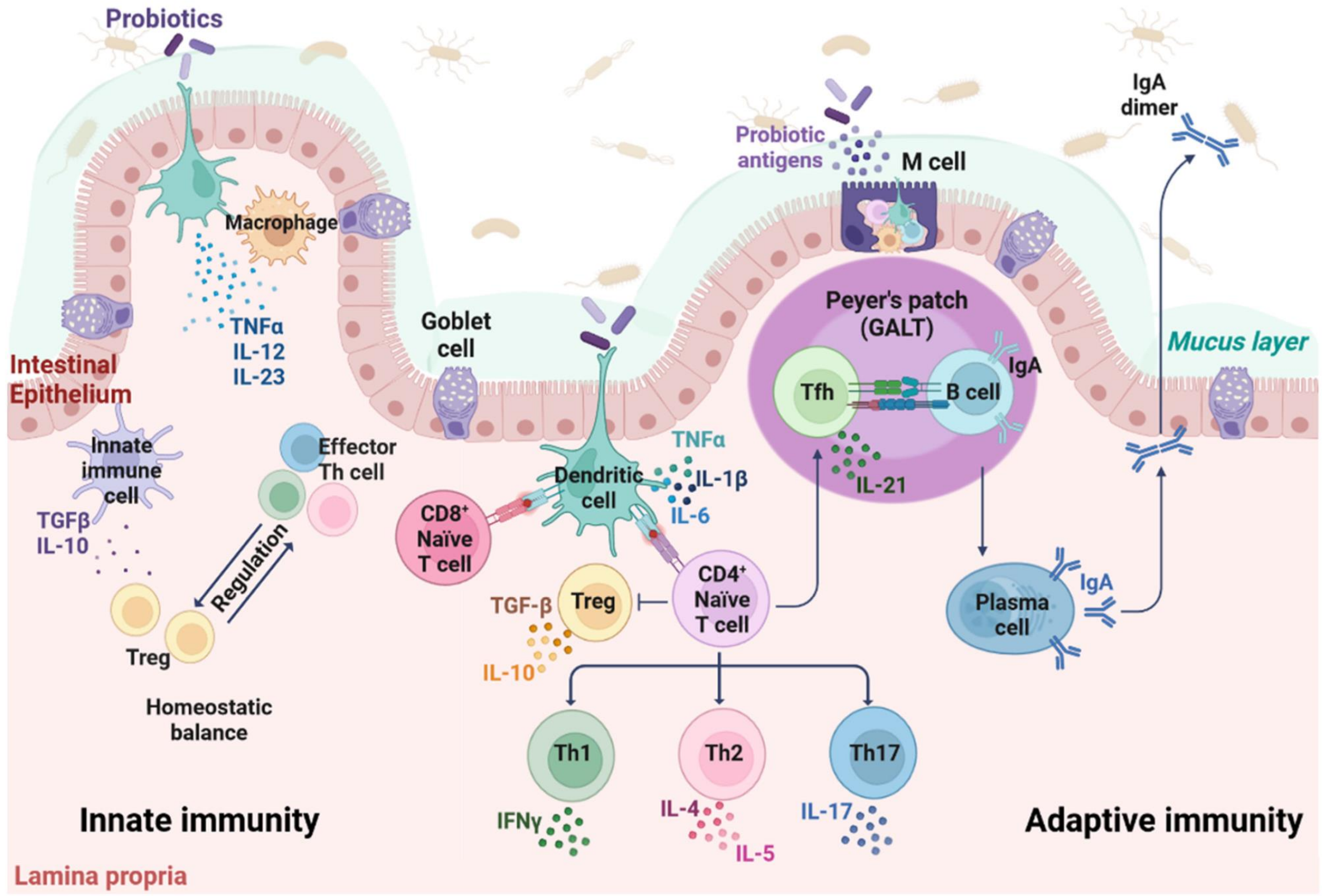


Hou, K., Wu, ZX., Chen, XY. et al. Microbiota in health and diseases. Sig Transduct Target Ther 7, 135 (2022). https://doi.org/10.1038/s41392-022-00974-4

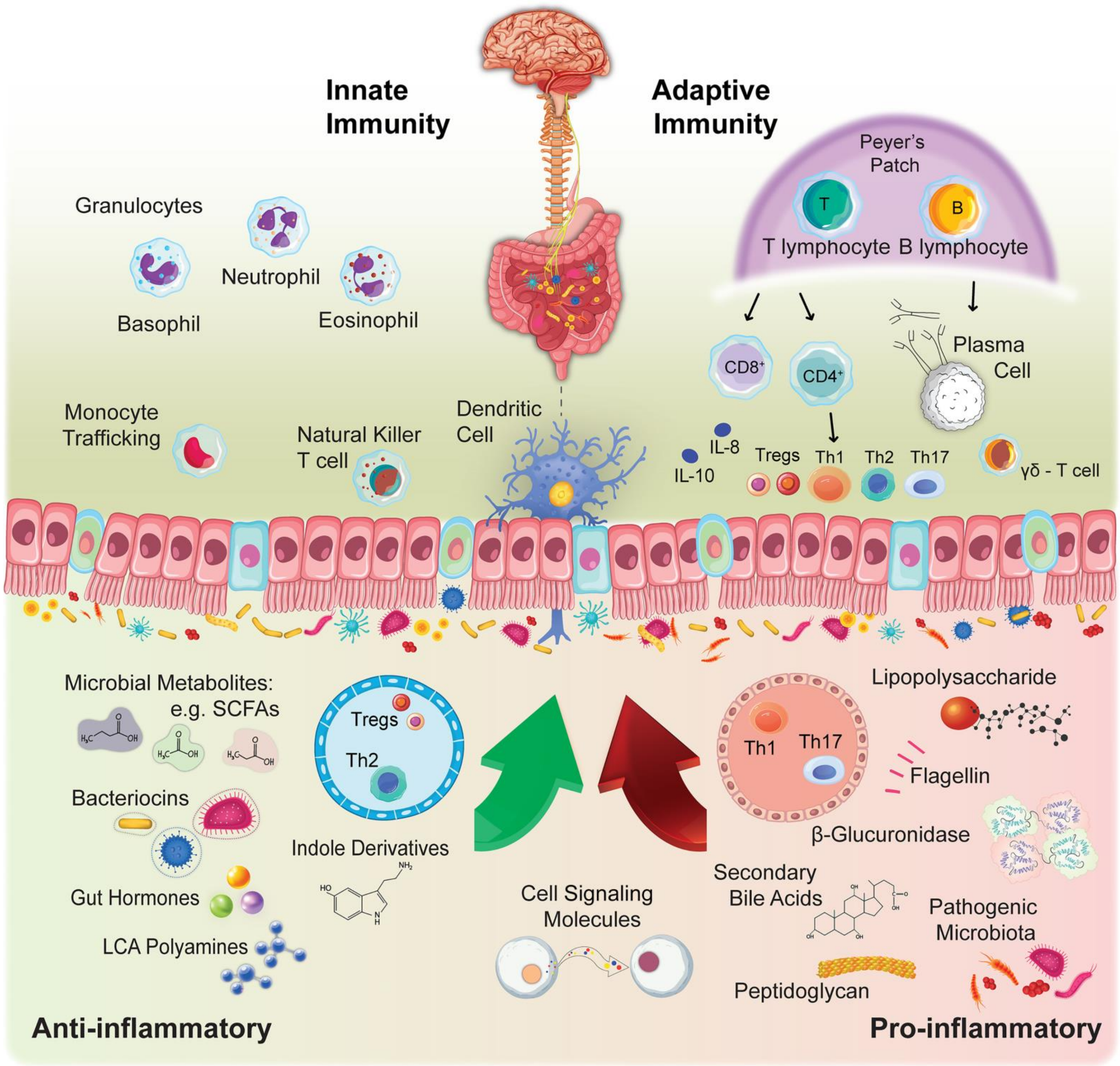


Gut microbiome and immune system connexion via gut-associated lymphoid tissue (GALT)

Abo-Shaban, T., Sharna, S.S., Hosie, S. *et al.* Issues for patchy tissues: defining roles for gut-associated lymphoid tissue in neurodevelopment and disease. *J Neural Transm* **130**, 269–280 (2023). https://doi.org/10.1007/s00702-022-02561-x

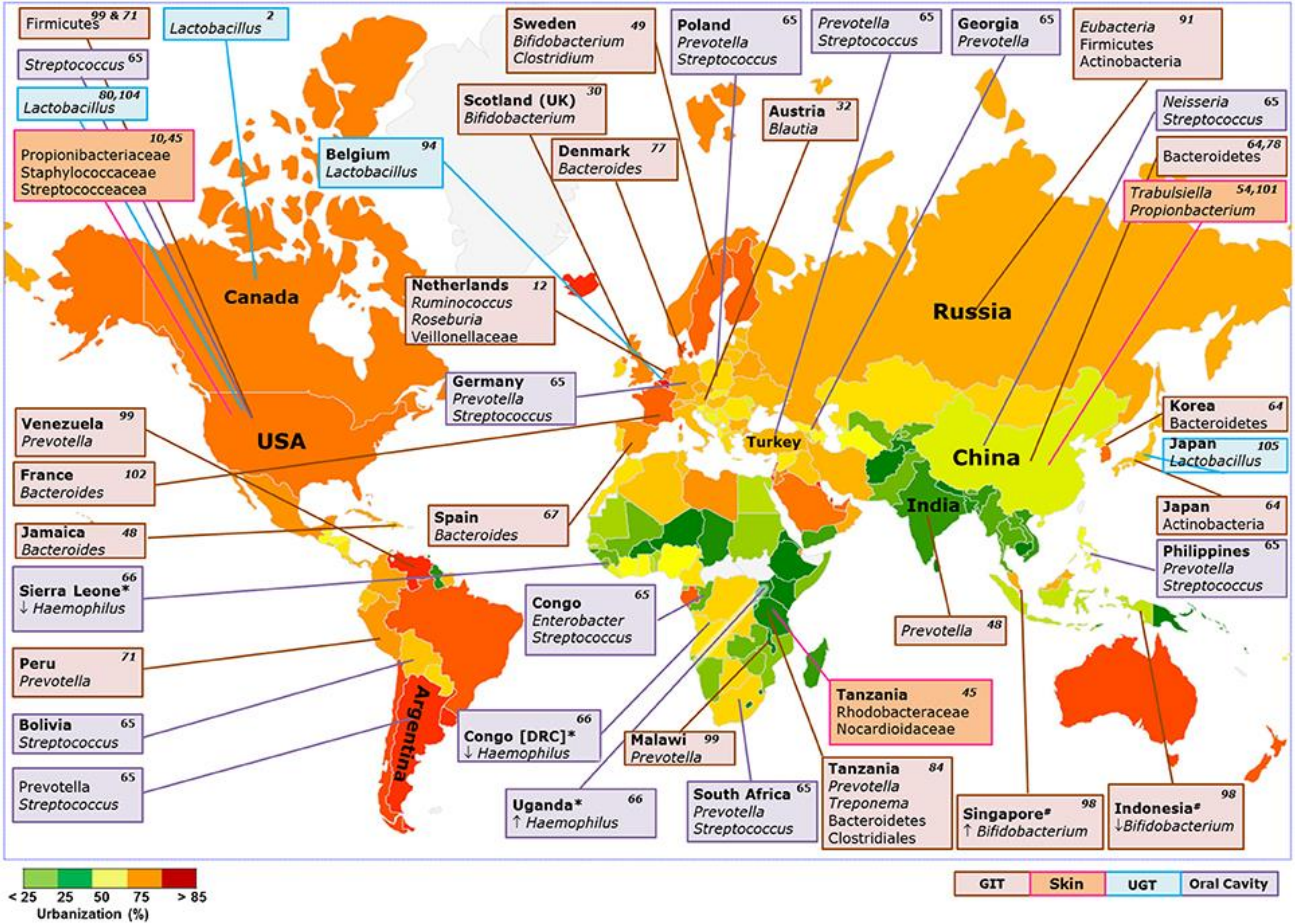


Mazziotta, C., Tognon, M., Martini, F., Torreggiani, E., & Rotondo, J. C. (2023). Probiotics Mechanism of Action on Immune Cells and Beneficial Effects on Human Health. Cells, 12(1), 184. https://doi.org/10.3390/cells12010184



Innate vs. adaptive immunity and the gut microbiome

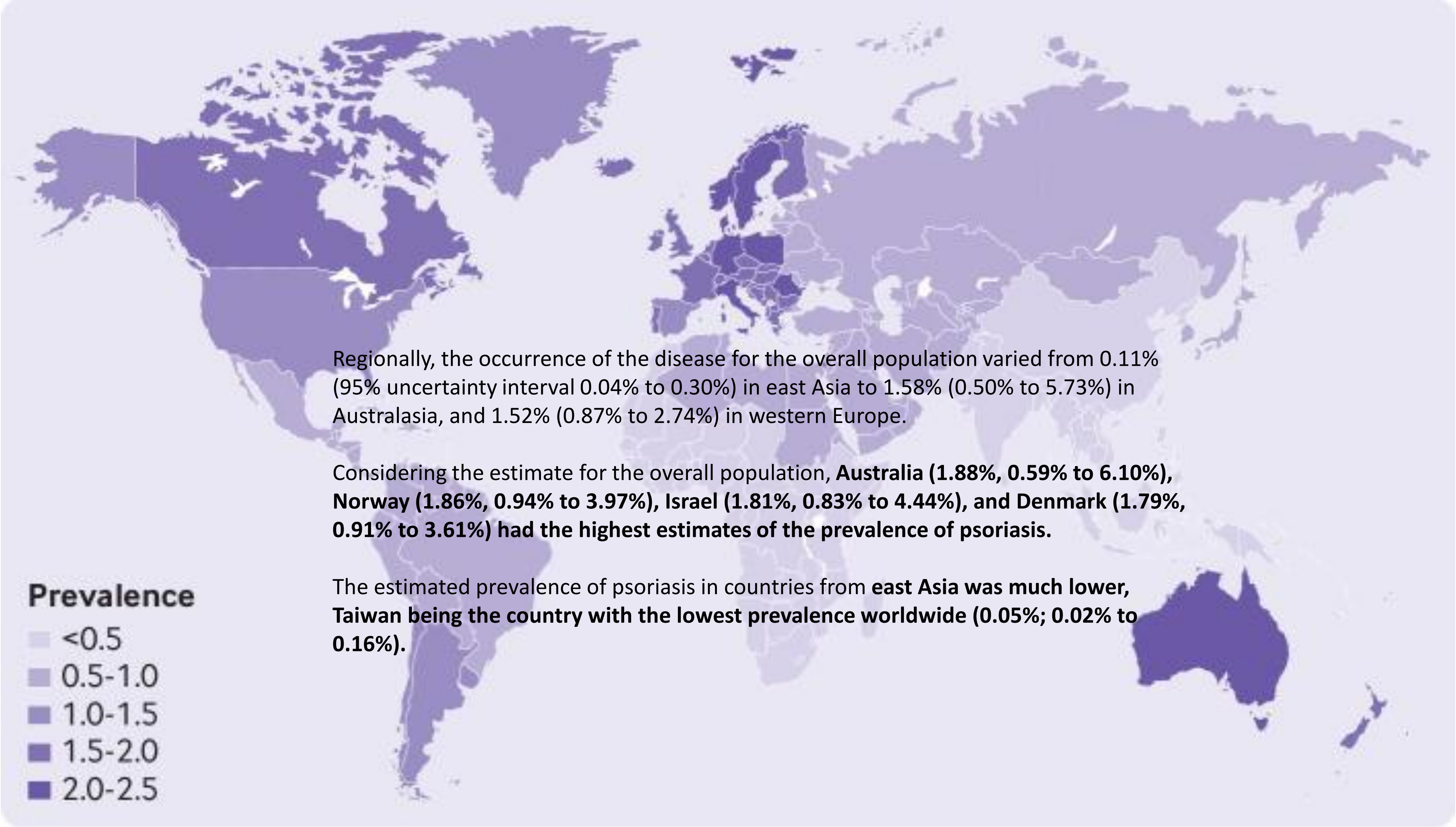
The gut microbiota-immune-brain axis: Therapeutic implications
O'Riordan, Kenneth J. et al.
Cell Reports Medicine, 2025, Volume 6, Issue 3, 101982



Geography, Ethnicity or Subsistence-Specific Variations in Human Microbiome Composition and Diversity

Front. Microbiol., 23 June 2017 | https://doi.org/10.3389/fmicb.2017.01162

Lifetime (physician or dermatologist diagnosed) prevalence of psoriasis in adults by country.

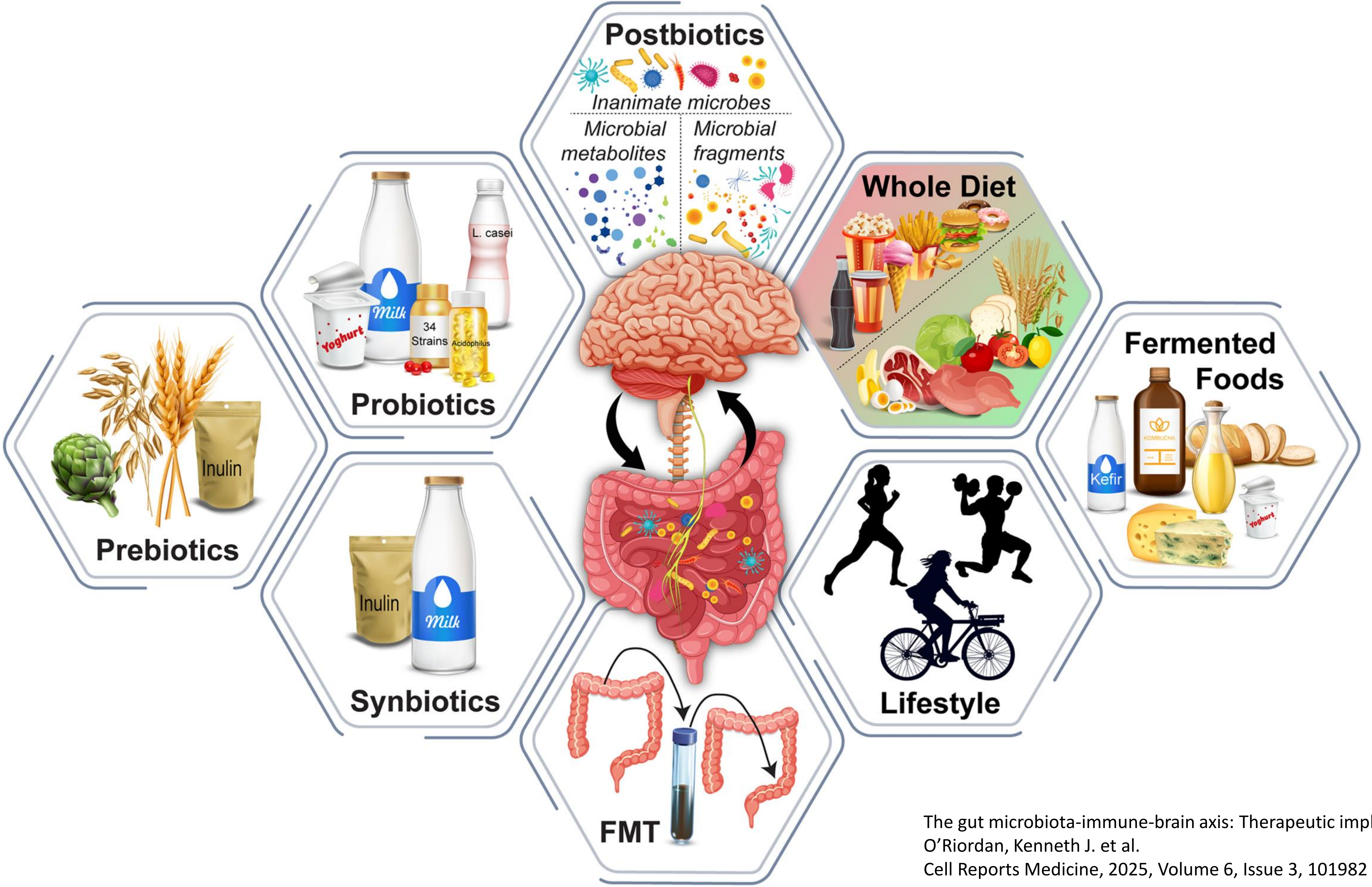


Regionally, the occurrence of the disease for the overall population varied from 0.11% (95% uncertainty interval 0.04% to 0.30%) in east Asia to 1.58% (0.50% to 5.73%) in Australasia, and 1.52% (0.87% to 2.74%) in western Europe.

Considering the estimate for the overall population, **Australia (1.88%, 0.59% to 6.10%), Norway (1.86%, 0.94% to 3.97%), Israel (1.81%, 0.83% to 4.44%), and Denmark (1.79%, 0.91% to 3.61%) had the highest estimates of the prevalence of psoriasis.**

The estimated prevalence of psoriasis in countries from **east Asia was much lower, Taiwan being the country with the lowest prevalence worldwide (0.05%; 0.02% to 0.16%).**

Parisi R, Iskandar IYK, Kontopantelis E, Augustin M, Griffiths CEM, Ashcroft DM; Global Psoriasis Atlas. National, regional, and worldwide epidemiology of psoriasis: systematic analysis and modelling study. BMJ. 2020 May 28;369:m1590. doi: 10.1136/bmj.m1590. PMID: 32467098; PMCID: PMC7254147.



The gut microbiota-immune-brain axis: Therapeutic implications
O'Riordan, Kenneth J. et al.
Cell Reports Medicine, 2025, Volume 6, Issue 3, 101982

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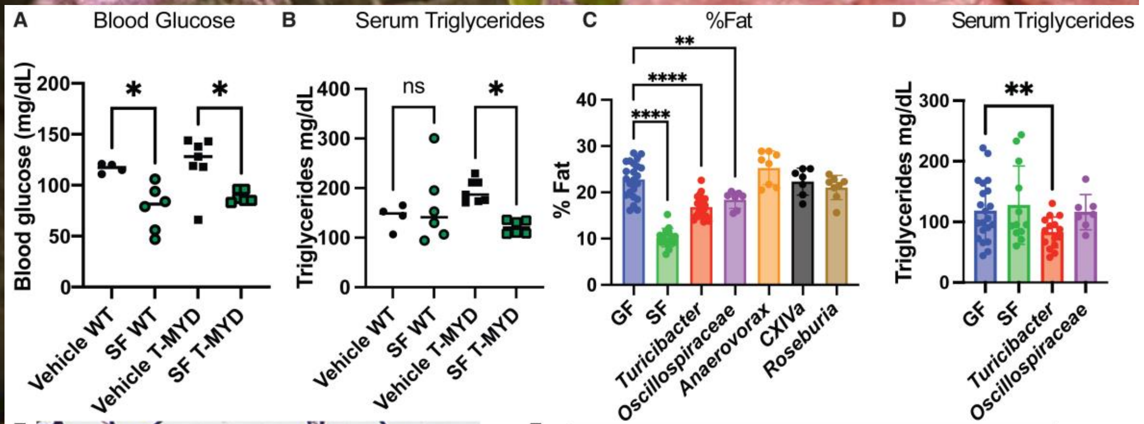
RESEARCH HIGHLIGHT | 12 November 2025

Gut bacteria help mice to stay lean

Researchers have identified a specific genus in the mouse microbiome that aids weight loss, providing another potential route to anti-obesity treatments.



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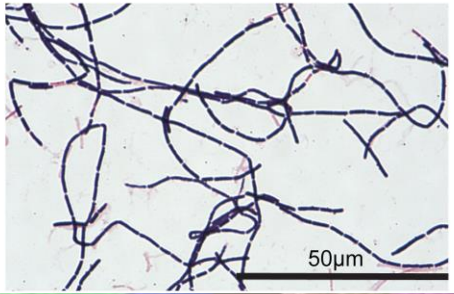

F

Query	Strain	ANI Estimate
Turicibacter sp. KKT8	18F6	79.3851
Turicibacter sp. KKT8	MOL361	79.4549
Turicibacter sp. KKT8	GALT-E2	79.5248
Turicibacter sp. KKT8	T46	79.5248
Turicibacter sp. KKT8	T129	79.985
Turicibacter sp. KKT8	GALT-G1	80.0305
Turicibacter sp. KKT8	H121	80.3566
Turicibacter sp. KKT8	TA25	99.017
Turicibacter sp. KKT8	1E2_	99.1095

Cell Metabolism

CellPress
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Article

Dietary fat disrupts a commensal-host lipid network that promotes metabolic health

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[2]Department of Nutrition and Integrative Physiology, College of Health, University of Utah, Salt Lake City, UT 84112, USA

[3]Department of Medicine, Division of Infectious Diseases, Edison Family Center for Genome Sciences & Systems Biology, Washington University School of Medicine, St. Louis, MO 63110, USA

[4]Metabolomics Core Research Facility, University of Utah, Salt Lake City, UT 84112, USA

[5]Department of Microbiome Science, Max Planck Institute for Biology, Tübingen, Germany

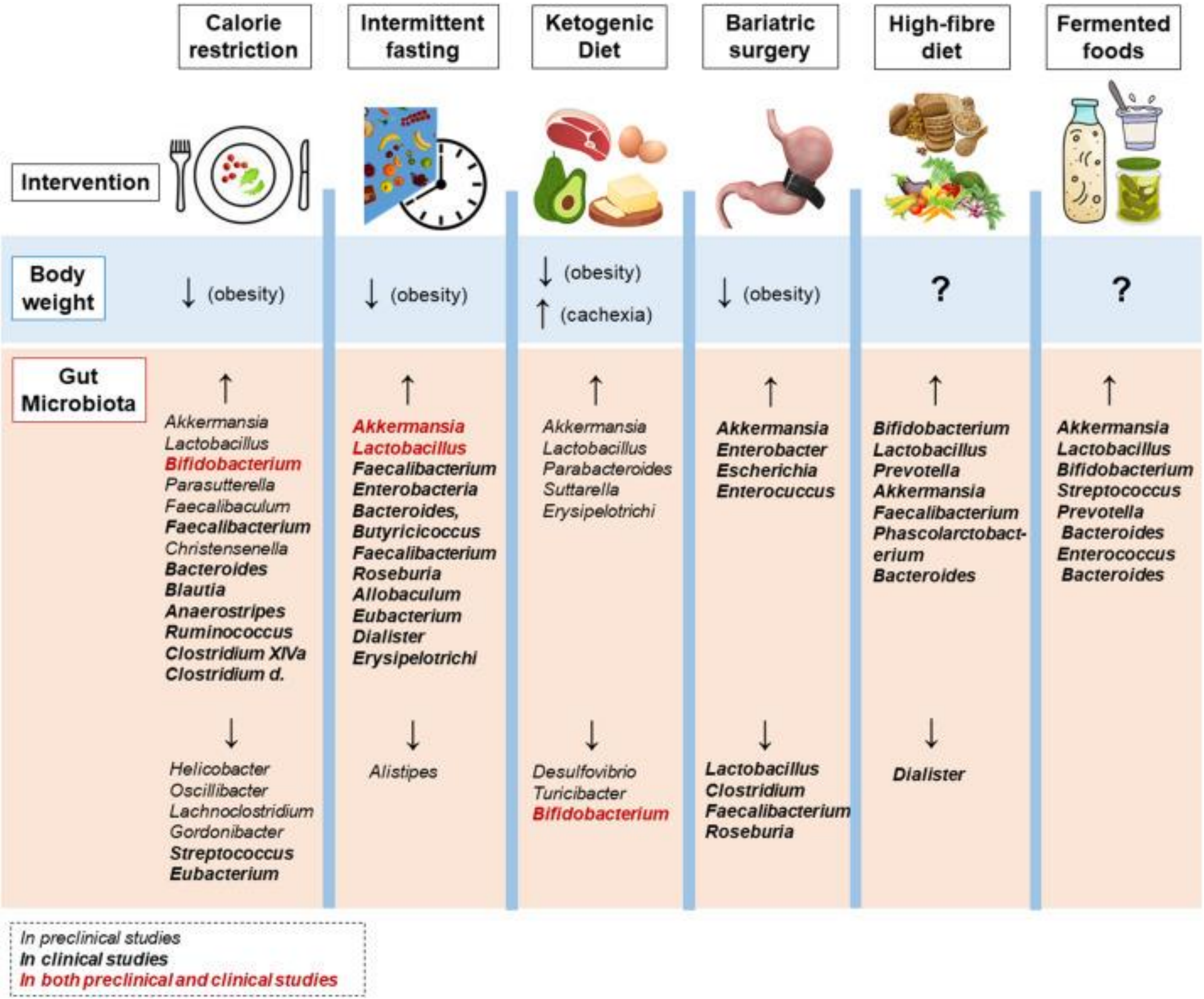
[6]Lead contact

*Correspondence: june.round@path.utah.edu

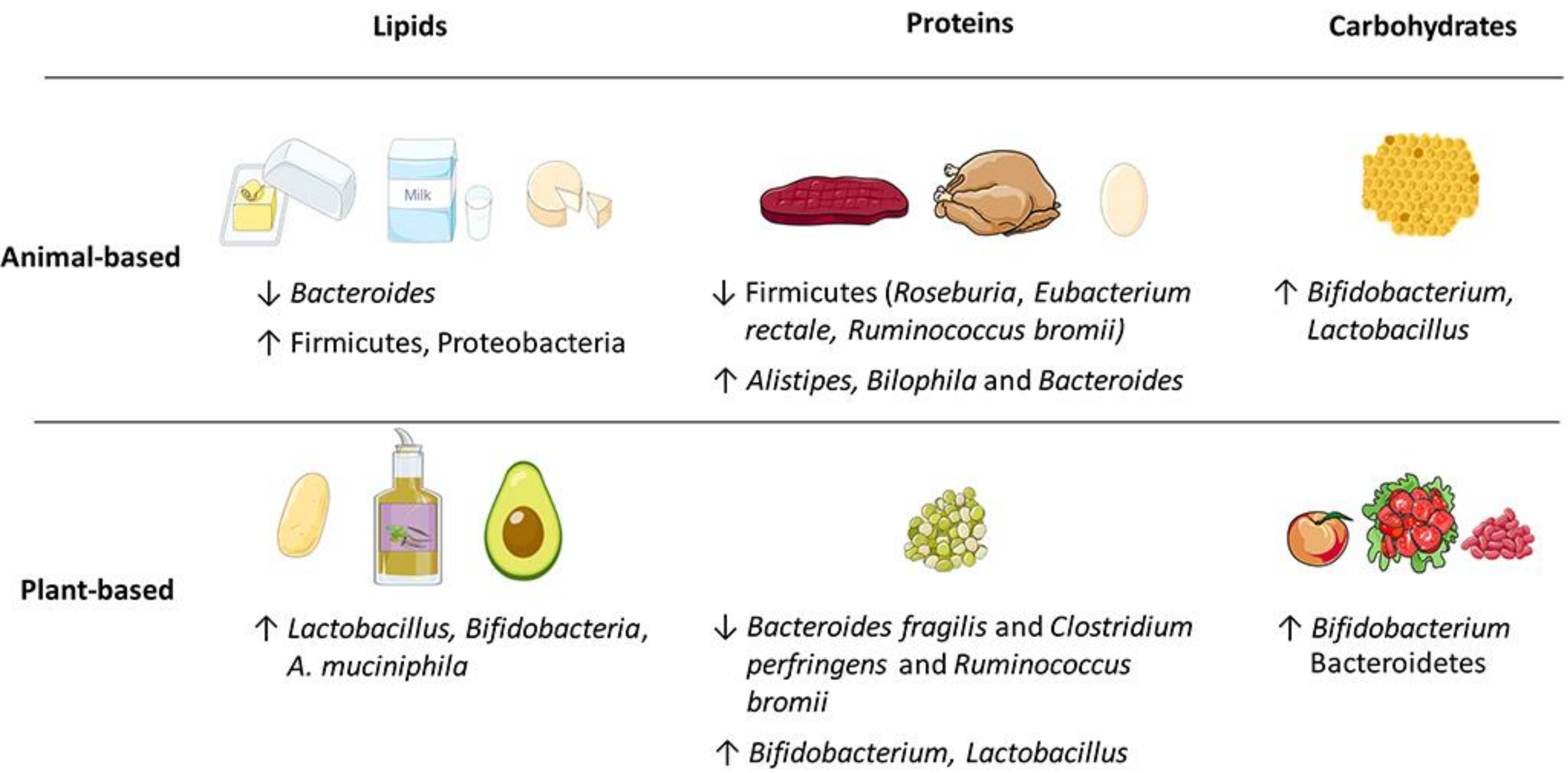
https://doi.org/10.1016/j.cmet.2025.10.007

SUMMARY

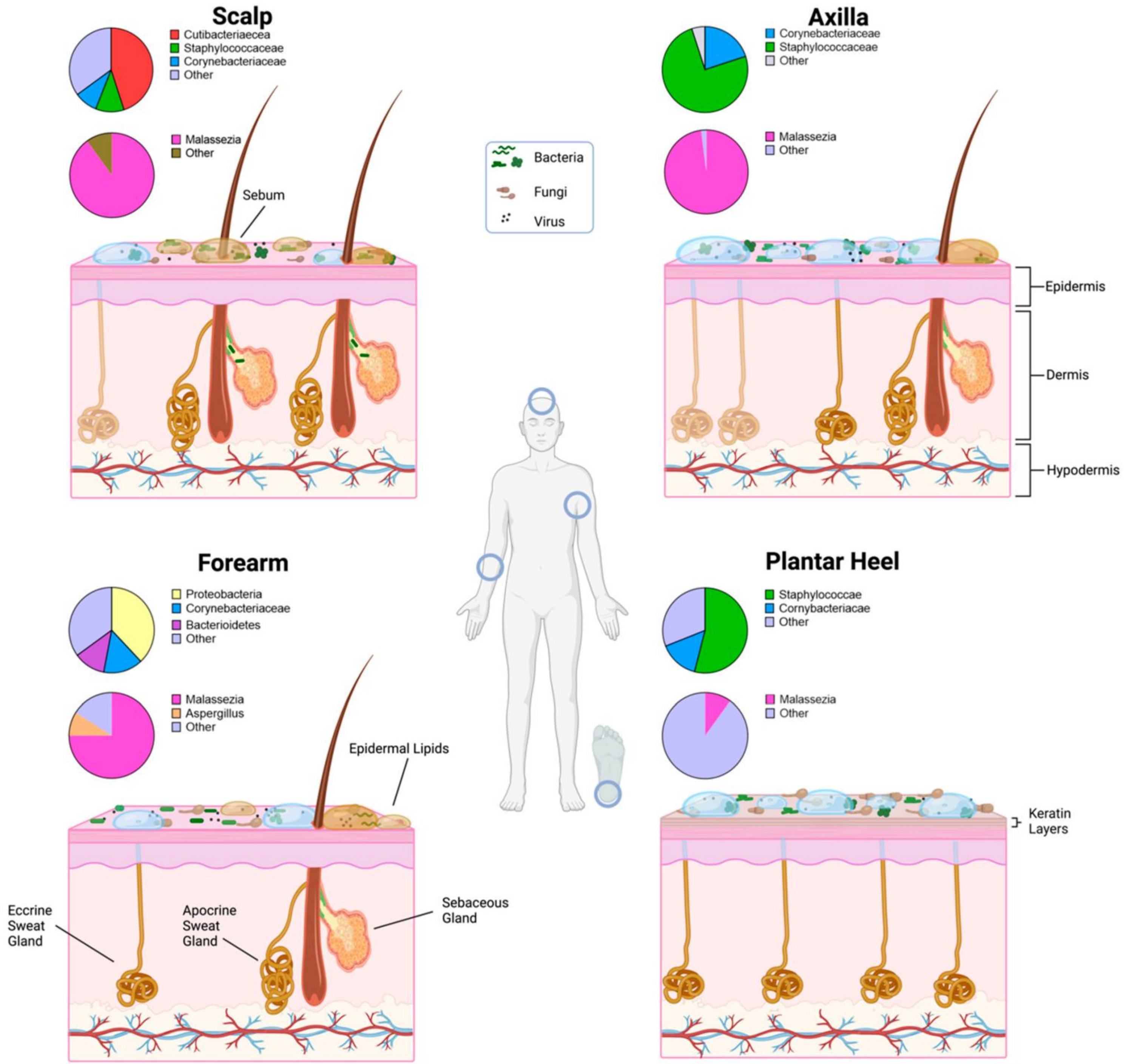
The microbiota influences metabolic health; however, few specific microbial molecules and mechanisms have been identified. We isolated a *Turicibacter* strain from a community of spore-forming bacteria that promotes leanness in mice. Human metagenomic analysis demonstrates reduced *Turicibacter* abundance in individuals with obesity. Similarly, a high-fat diet reduces *Turicibacter* colonization, preventing its weight-suppressive effects, which can be overcome with continuous *Turicibacter* supplementation. Ceramides accumulate during a high-fat diet and promote weight gain. Transcriptomics and lipidomics reveal that the spore-forming community and *Turicibacter* suppress host ceramides. *Turicibacter* produces unique lipids, which are reduced during a high-fat diet. These lipids can be transferred to host epithelial cells, reduce ceramide production, and decrease fat uptake. Treatment of animals with purified *Turicibacter* lipids prevents obesity, demonstrating that bacterial lipids can promote host metabolic health. These data identify a lipid metabolic circuit between bacteria and host that is disrupted by diet and can be targeted therapeutically.



Serena Boscaini, Sarah-Jane Leigh, Aonghus Lavelle, Rubén García-Cabrerizo, Timothy Lipuma, Gerard Clarke, Harriët Schellekens, John F. Cryan,
Microbiota and body weight control: Weight watchers within?,
Molecular Metabolism,
Volume 57, 2022, 101427,ISSN 2212-8778,
https://doi.org/10.1016/j.molmet.2021.101427.

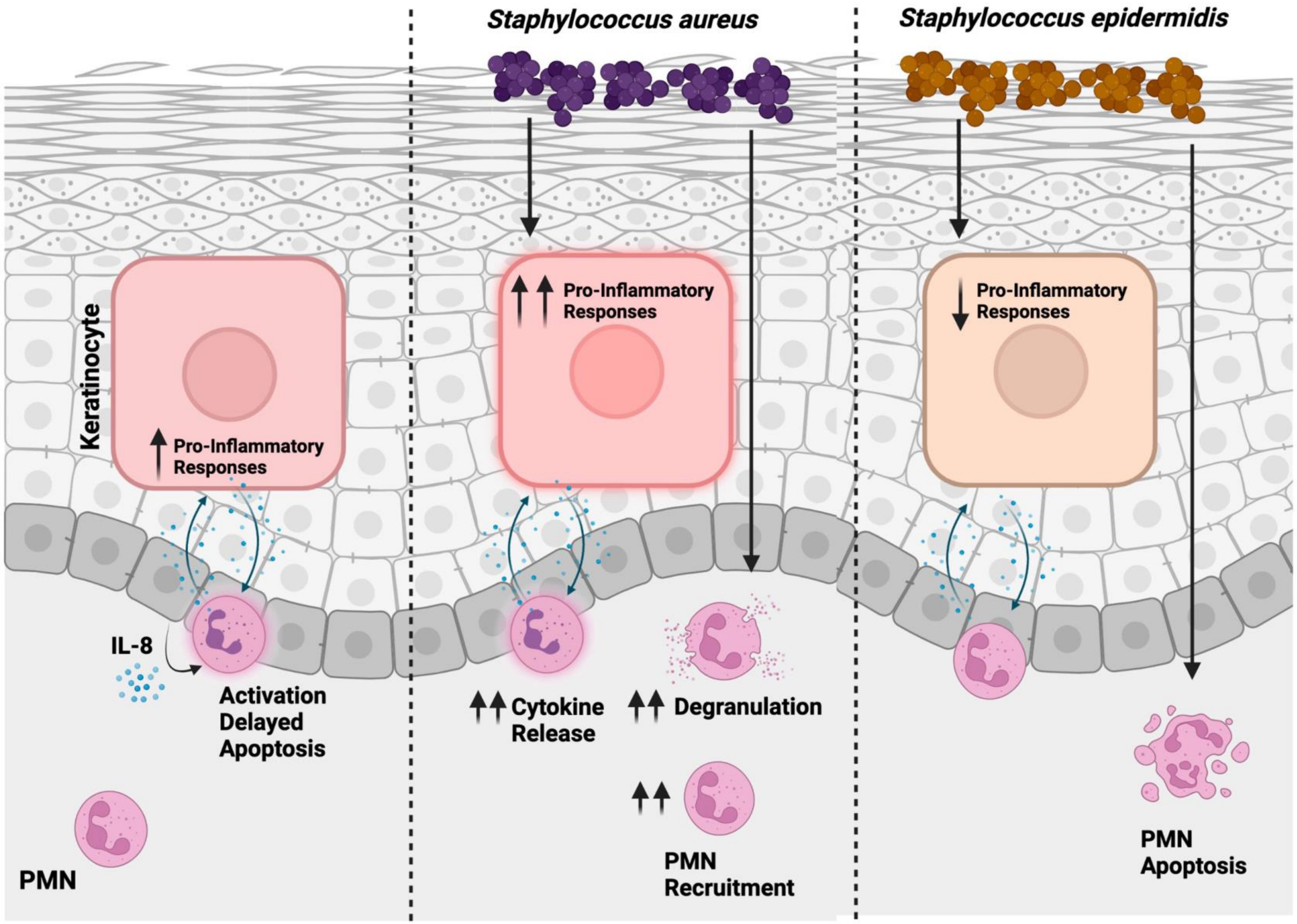


Front. Immunol., 09 June 2020 . Does an Apple a Day Also Keep the Microbes Away? The Interplay Between Diet, Microbiota, and Host Defense Peptides at the Intestinal Mucosal Barrier. Fabiola Puértolas-Balint and Bjoern O. Schroeder



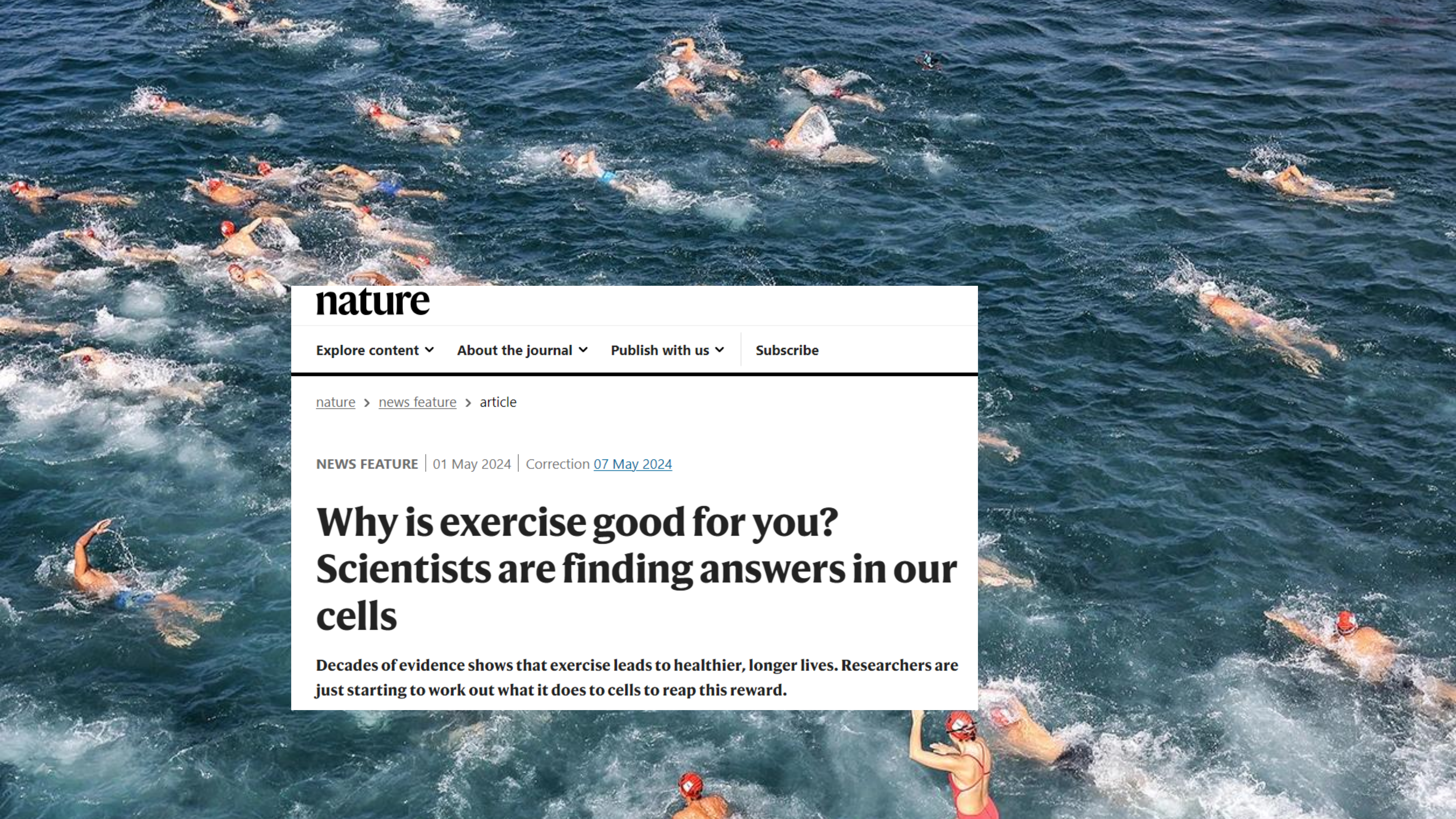
Huidmicrobioom

Nicholas-Haizelden, K.; Murphy, B.; Hoptroff, M.; Horsburgh, M.J. Bioprospecting the Skin Microbiome: Advances in Therapeutics and Personal Care Products. *Microorganisms* **2023**, *11*, 1899. https://doi.org/10.3390/microorganisms11081899



Front. Immunol., 16 February 2024
Volume 15 - 2024 |
https://doi.org/10.3389/fimmu.2024.1275153
Crosstalk between keratinocytes and neutrophils shapes skin immunity against S. aureus infection
Jule Focken, Birgit Schittek

Polymorphonuclear neutrophils (PMNs)



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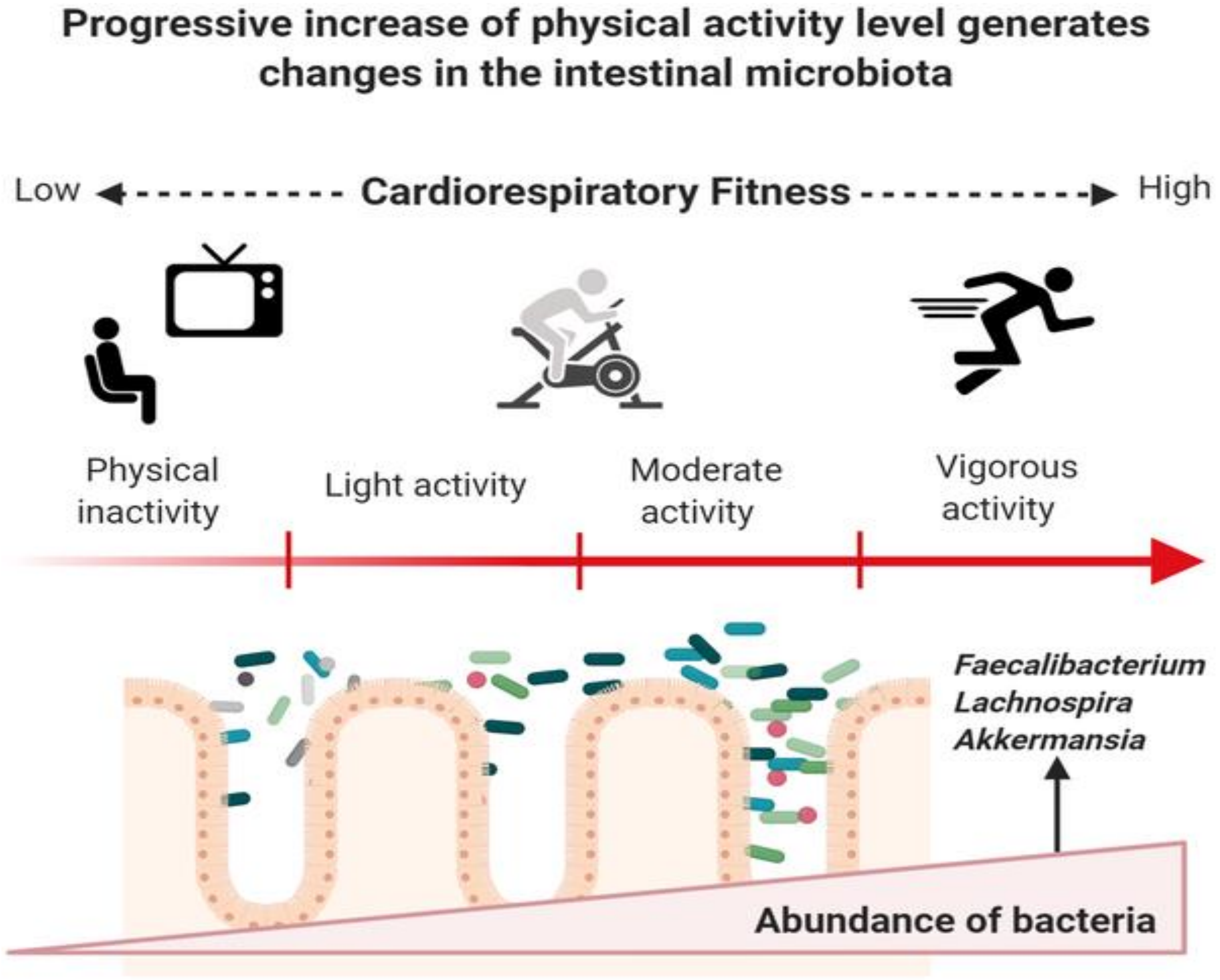
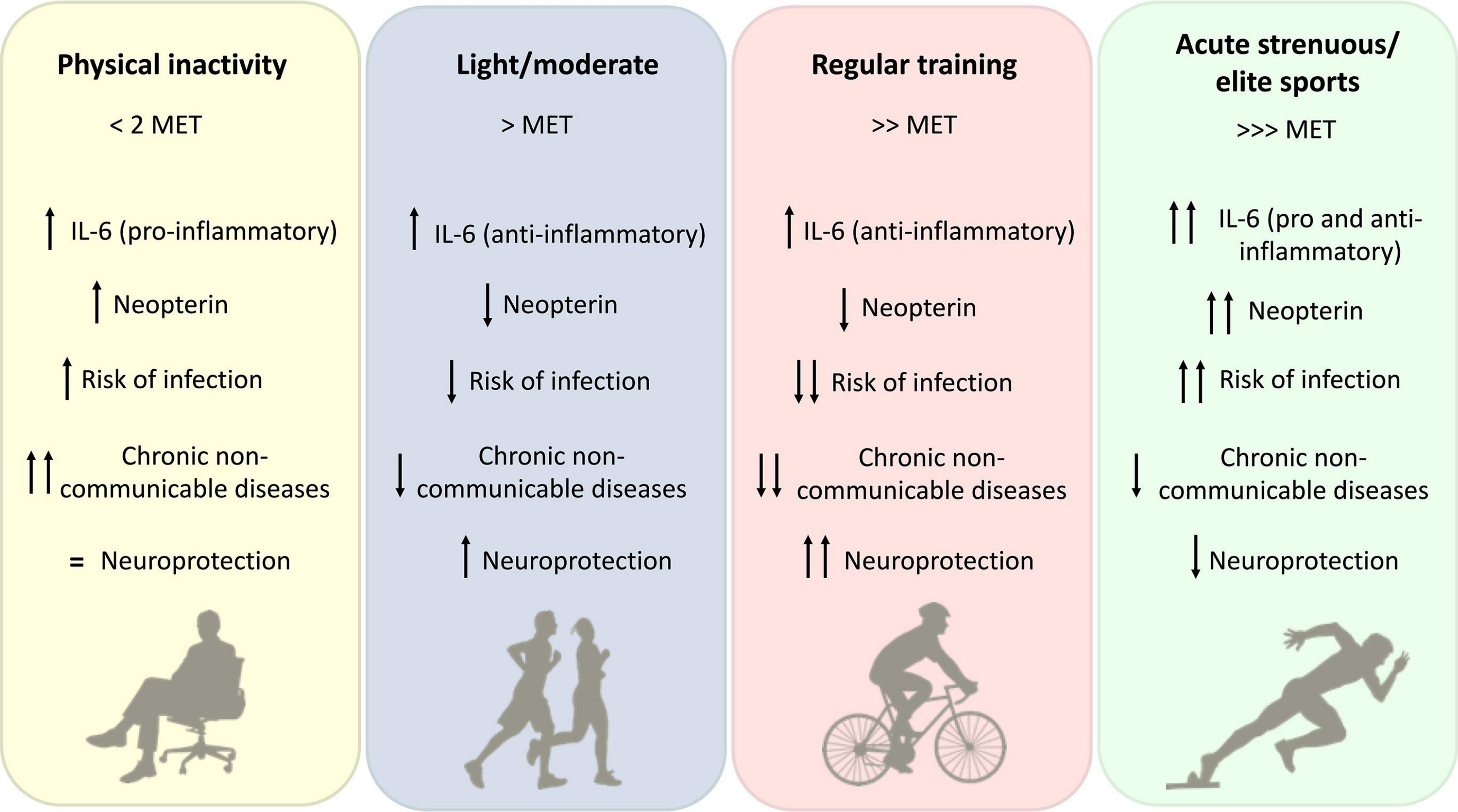
NEWS FEATURE | 01 May 2024 | Correction 07 May 2024

Why is exercise good for you? Scientists are finding answers in our cells

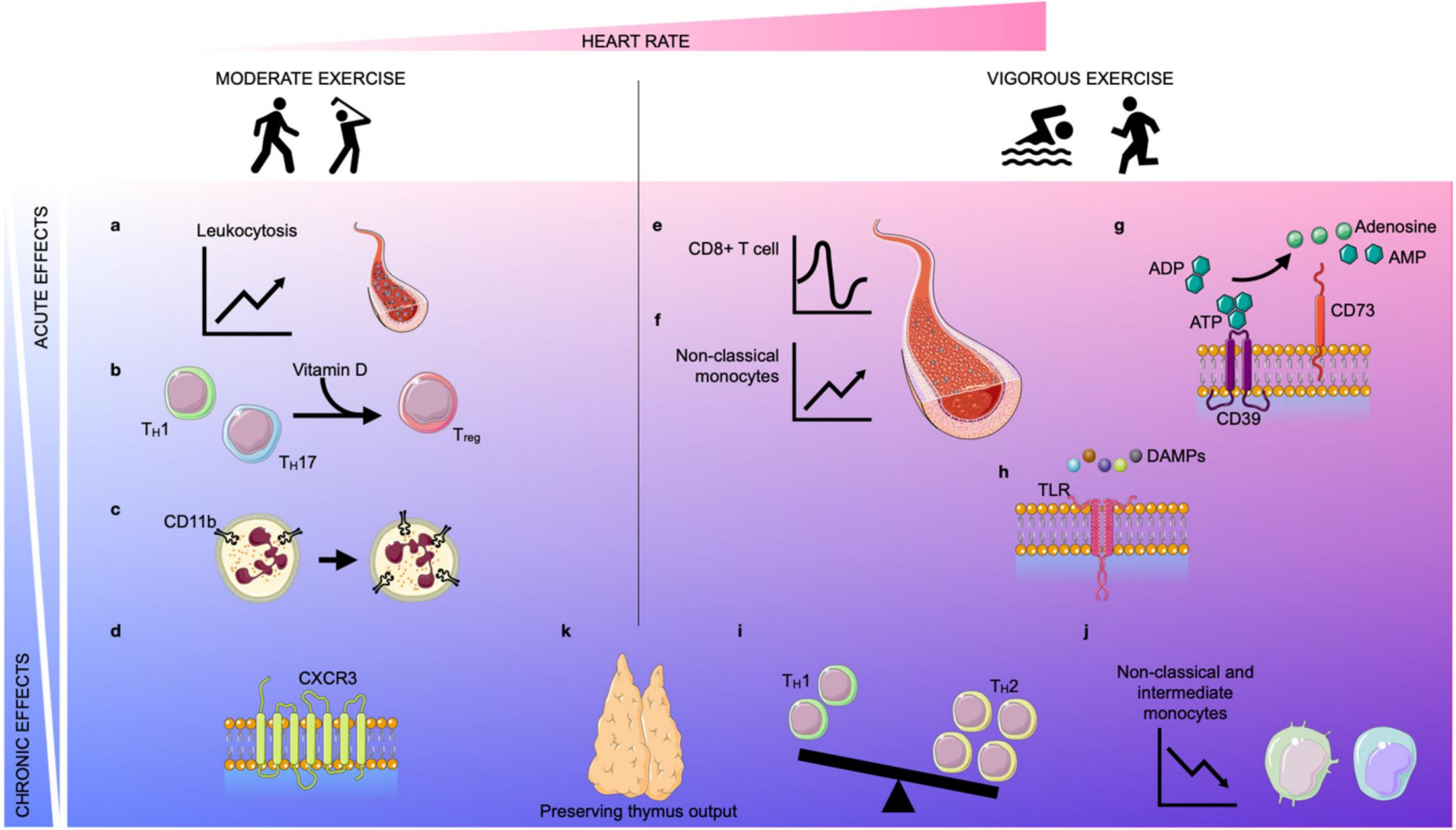
Decades of evidence shows that exercise leads to healthier, longer lives. Researchers are just starting to work out what it does to cells to reap this reward.



Aya V, Flórez A, Perez L, Ramírez JD (2021) Association between physical activity and changes in intestinal microbiota composition: A systematic review. PLOS ONE 16(2): e0247039.

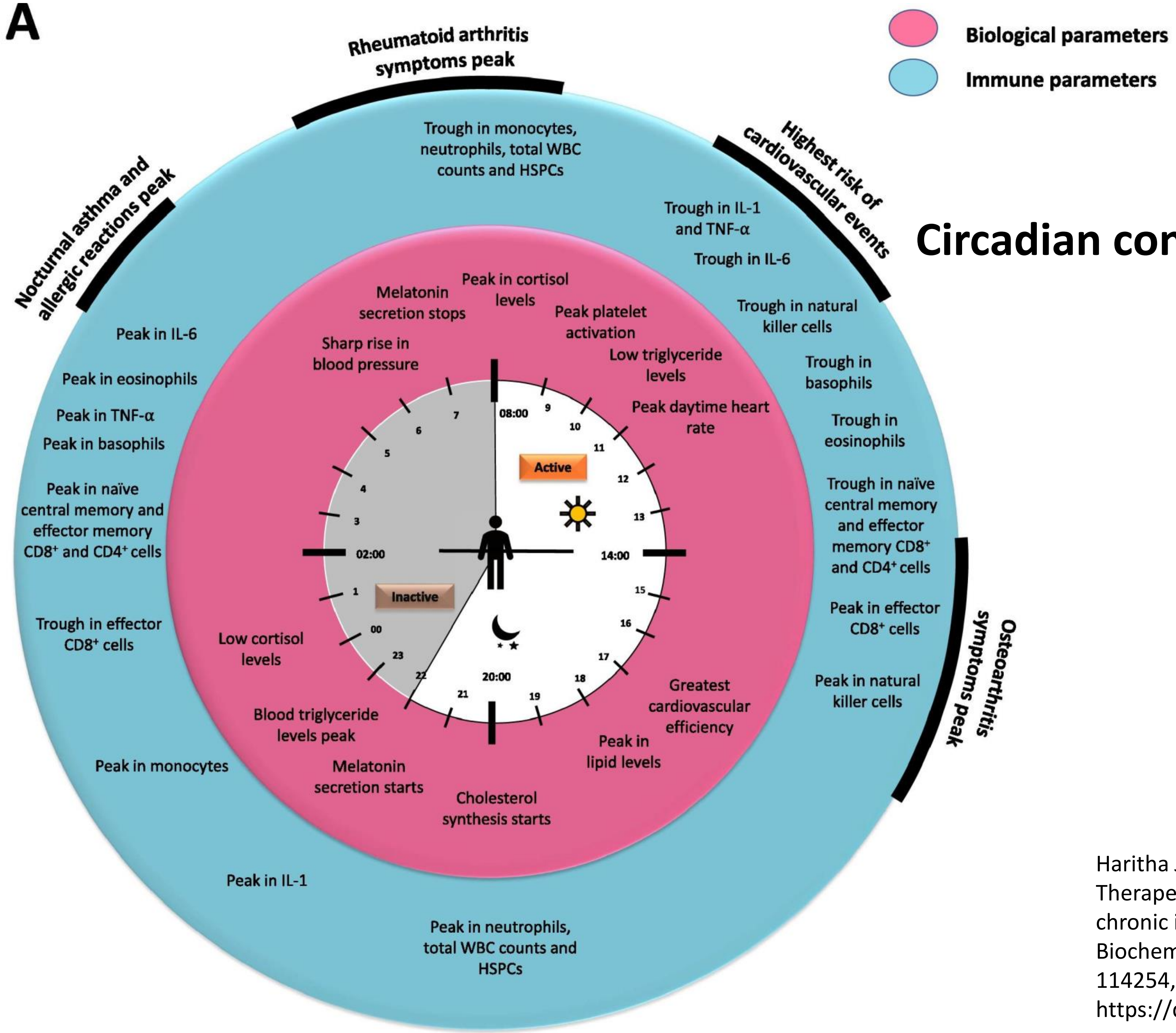


Débora da Luz Scheffer, Alexandra Latini,
Exercise-induced immune system response: Anti-inflammatory status on peripheral and central organs, Biochimica et Biophysica Acta (BBA) - Molecular Basis of Disease, Volume 1866, Issue 10, 2020, 165823,

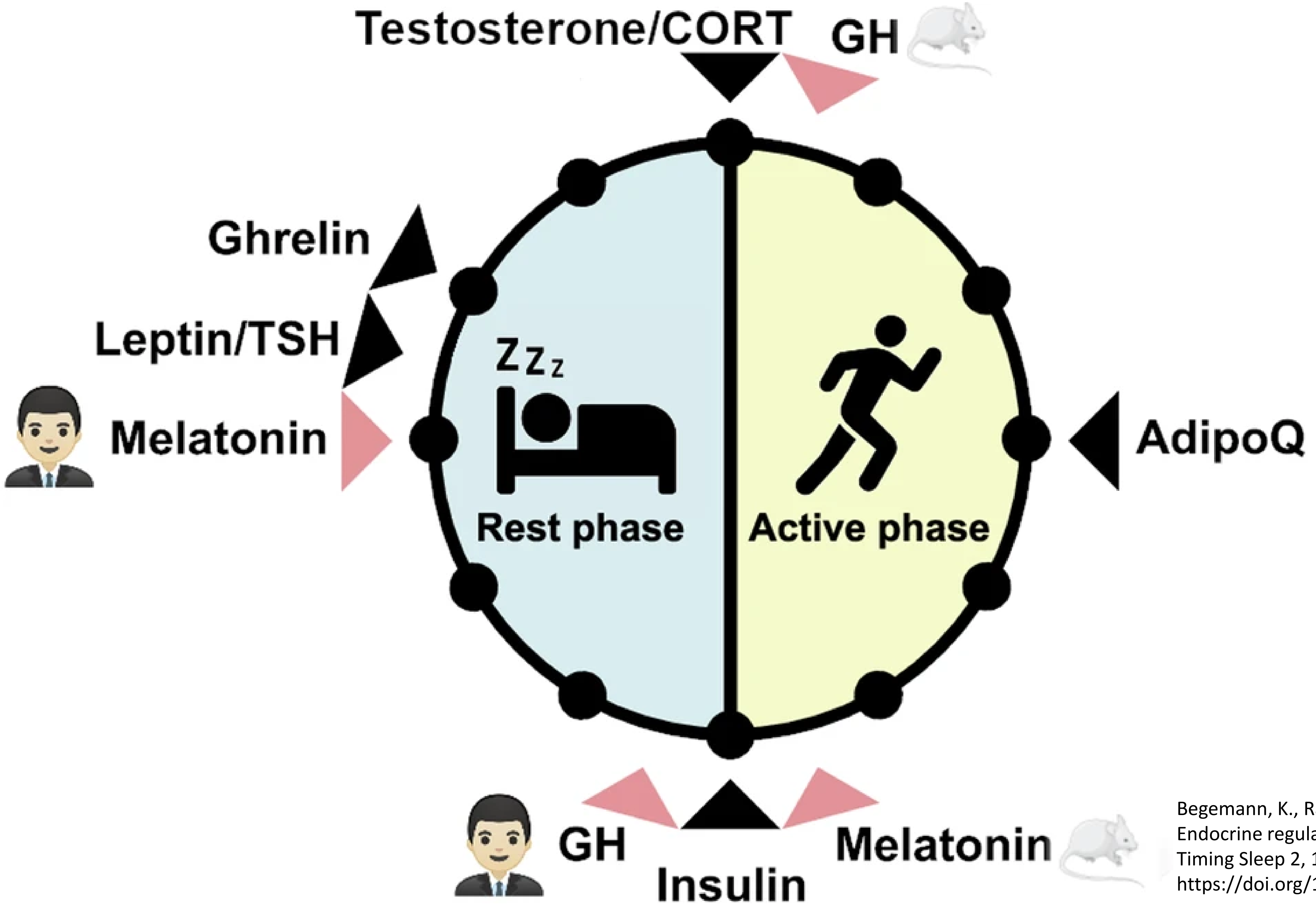


Meyer-Lindemann, U.; Moggio, A.; Dutsch, A.; Kessler, T.; Sager, H.B. The Impact of Exercise on Immunity, Metabolism, and Atherosclerosis. Int. J. Mol. Sci. 2023, 24, 3394. https://doi.org/10.3390/ijms24043394

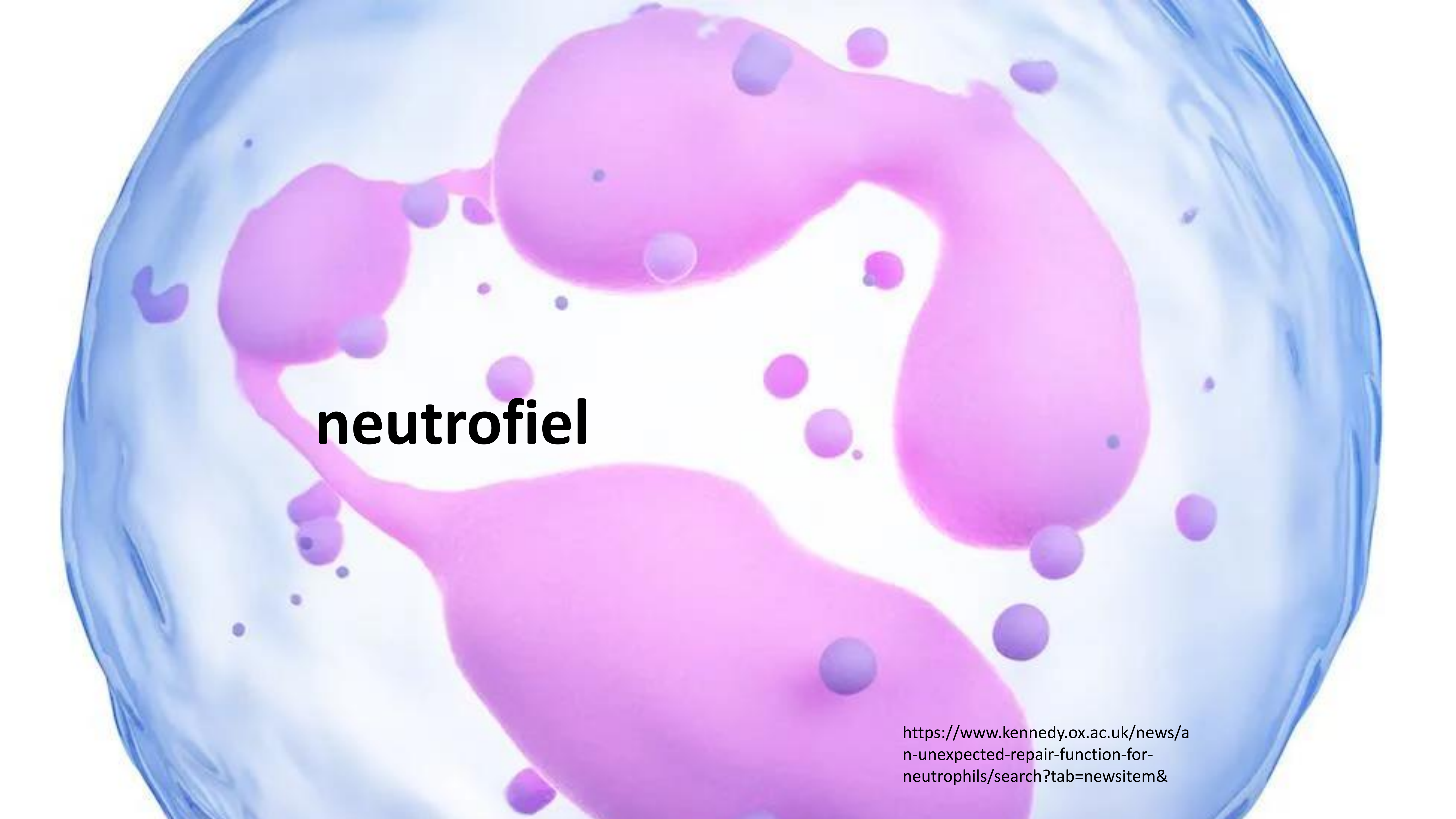
Circadian control of immune system



Haritha Jacob, Annie M. Curtis, Cathal J. Kearney,
Therapeutics on the clock: Circadian medicine in the treatment of chronic inflammatory diseases,
Biochemical Pharmacology,Volume 182,2020,
114254,ISSN 0006-2952,
https://doi.org/10.1016/j.bcp.2020.114254.

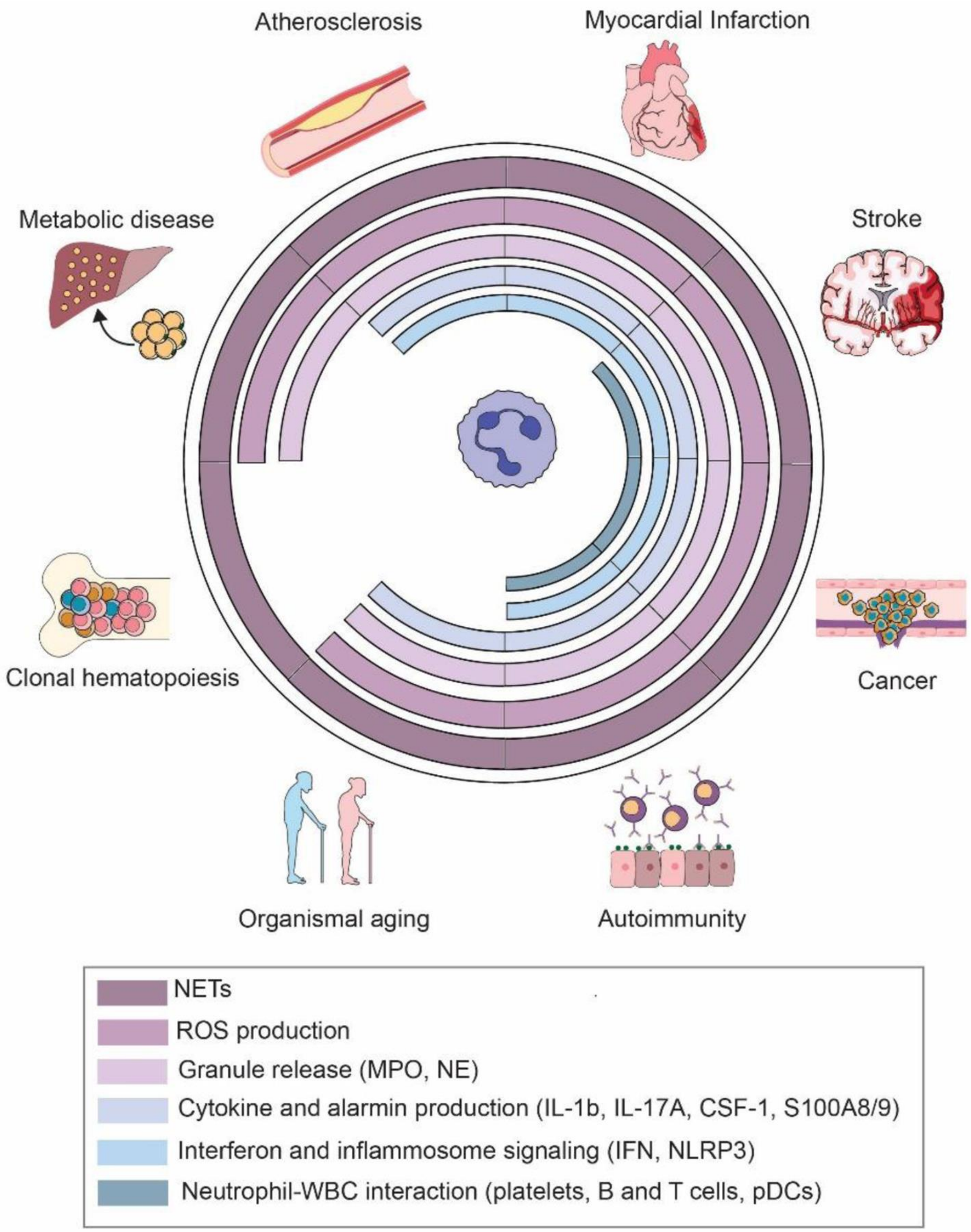


Begemann, K., Rawashdeh, O., Olejniczak, I. et al. Endocrine regulation of circadian rhythms. npj Biol Timing Sleep 2, 10 (2025). https://doi.org/10.1038/s44323-025-00024-6



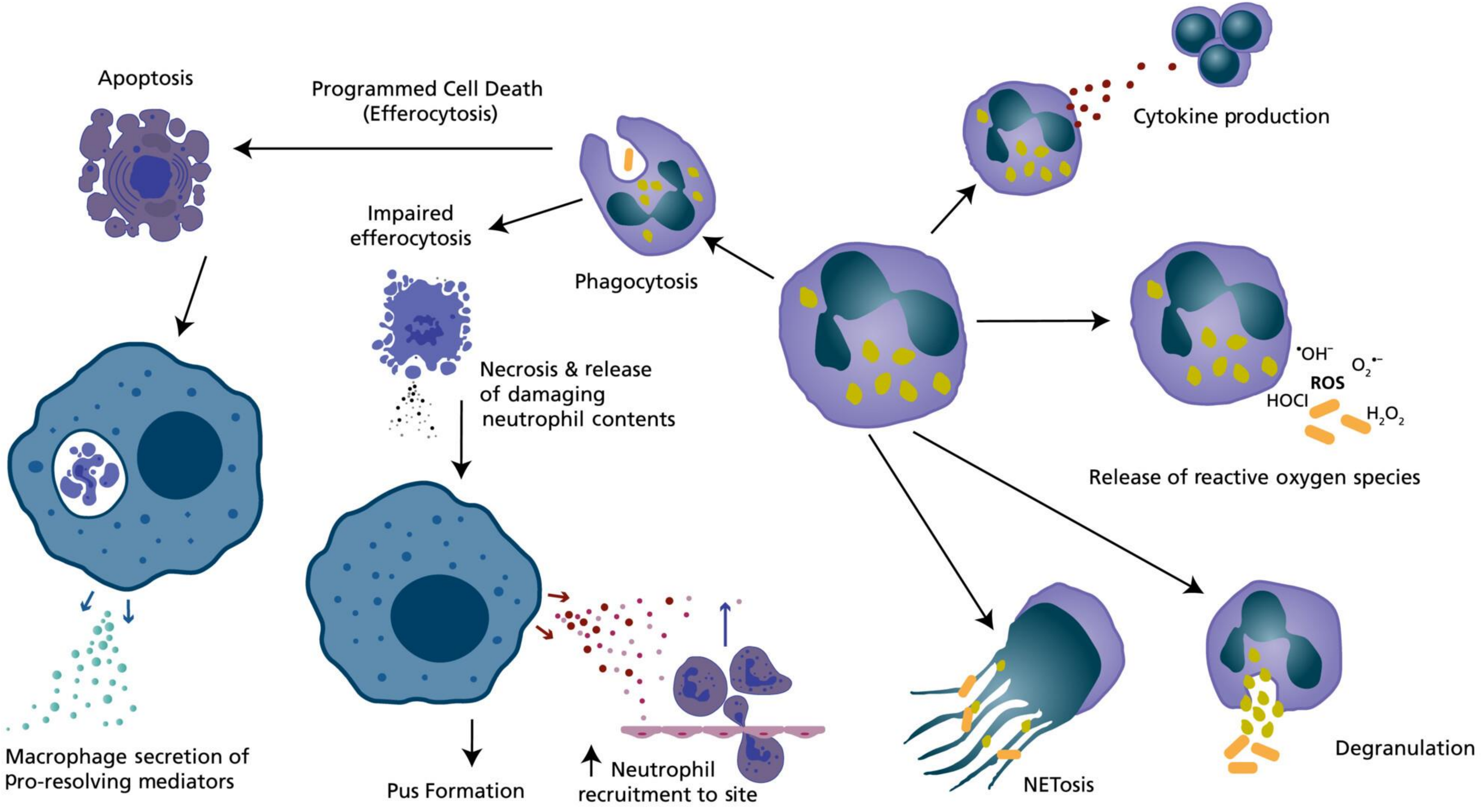
neutrofiel

https://www.kennedy.ox.ac.uk/news/an-unexpected-repair-function-for-neutrophils/search?tab=newsitem&



Neutrophils in Physiology and Pathology

Aroca-Crevillén A, Vicanolo T, Ovadia S, Hidalgo A. Neutrophils in Physiology and Pathology. Annu Rev Pathol. 2024 Jan 24;19:227-259. doi: 10.1146/annurev-pathmechdis-051222-015009. PMID: 38265879; PMCID: PMC11060889.



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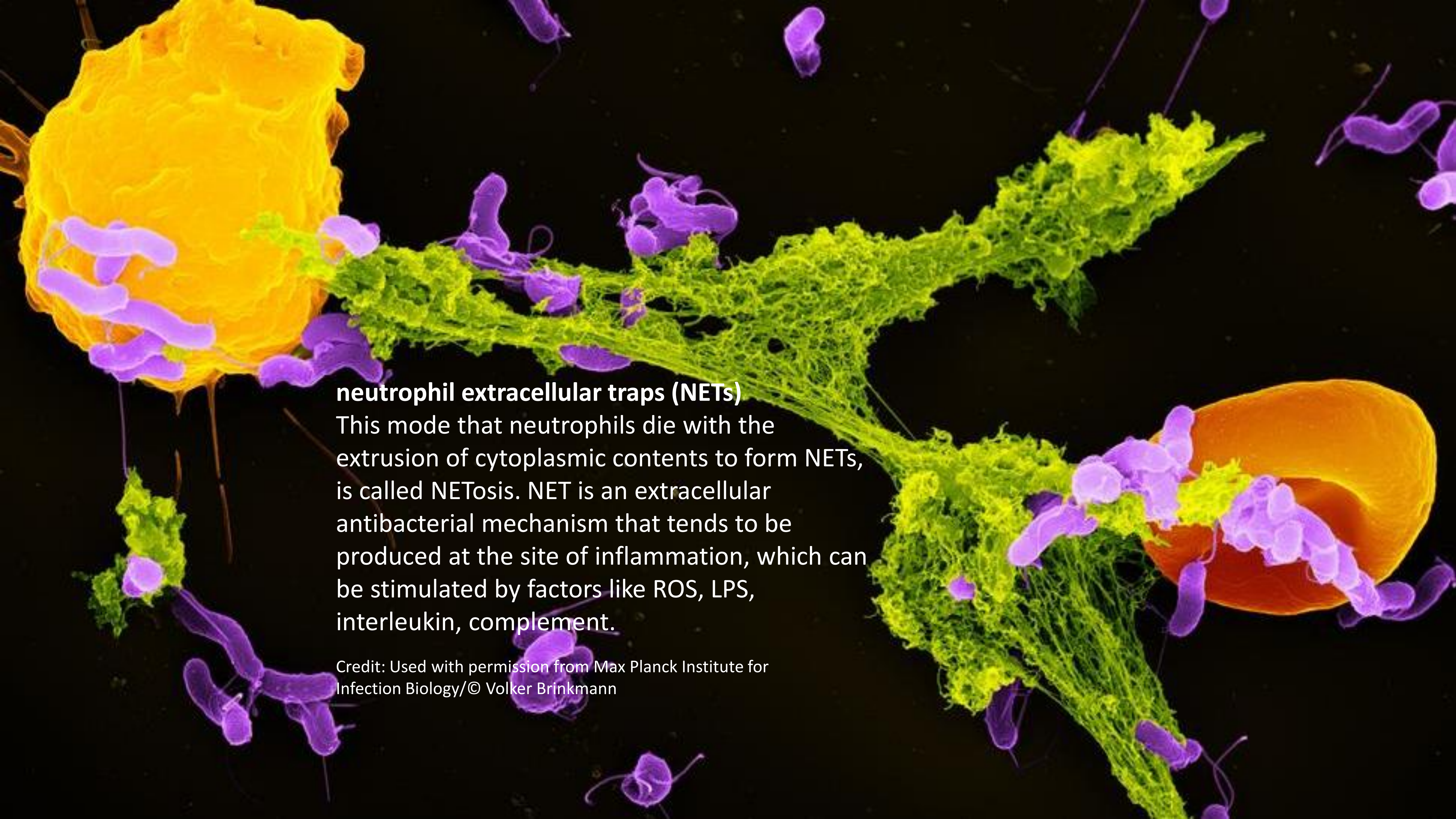
Chapple ILC, Hirschfeld J, Kantarci A, Wilensky A, Shapira L. The role of the host—Neutrophil biology. Periodontol 2000. 2023; 00: 1-47. doi:10.1111/prd.12490



neutrophil extracellular traps (NETs)

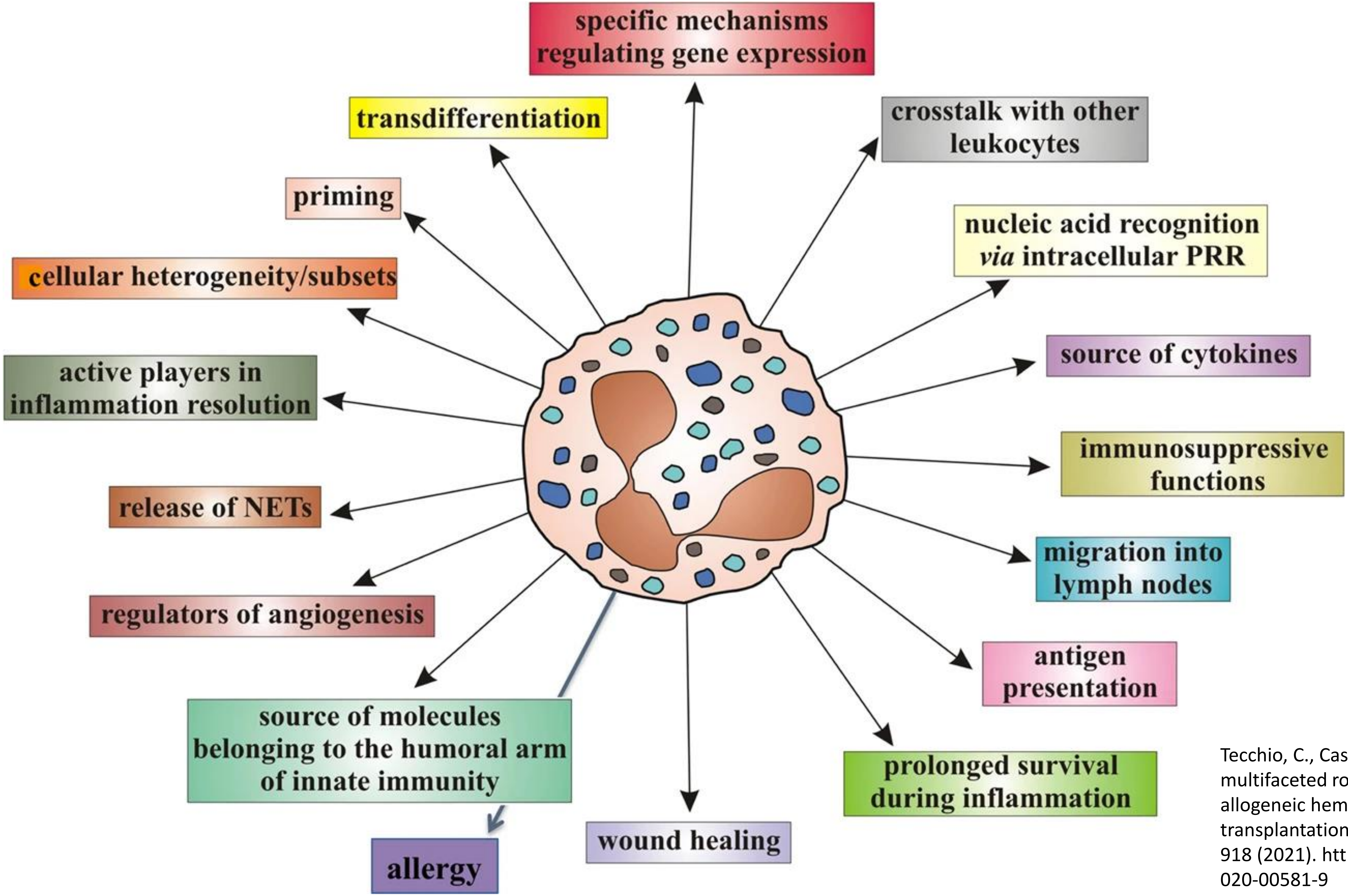
This mode that neutrophils die with the extrusion of cytoplasmic contents to form NETs, is called NETosis. NET is an extracellular antibacterial mechanism that tends to be produced at the site of inflammation, which can be stimulated by factors like ROS, LPS, interleukin, complement.

Credit: Used with permission from Max Planck Institute for Infection Biology/© Volker Brinkmann

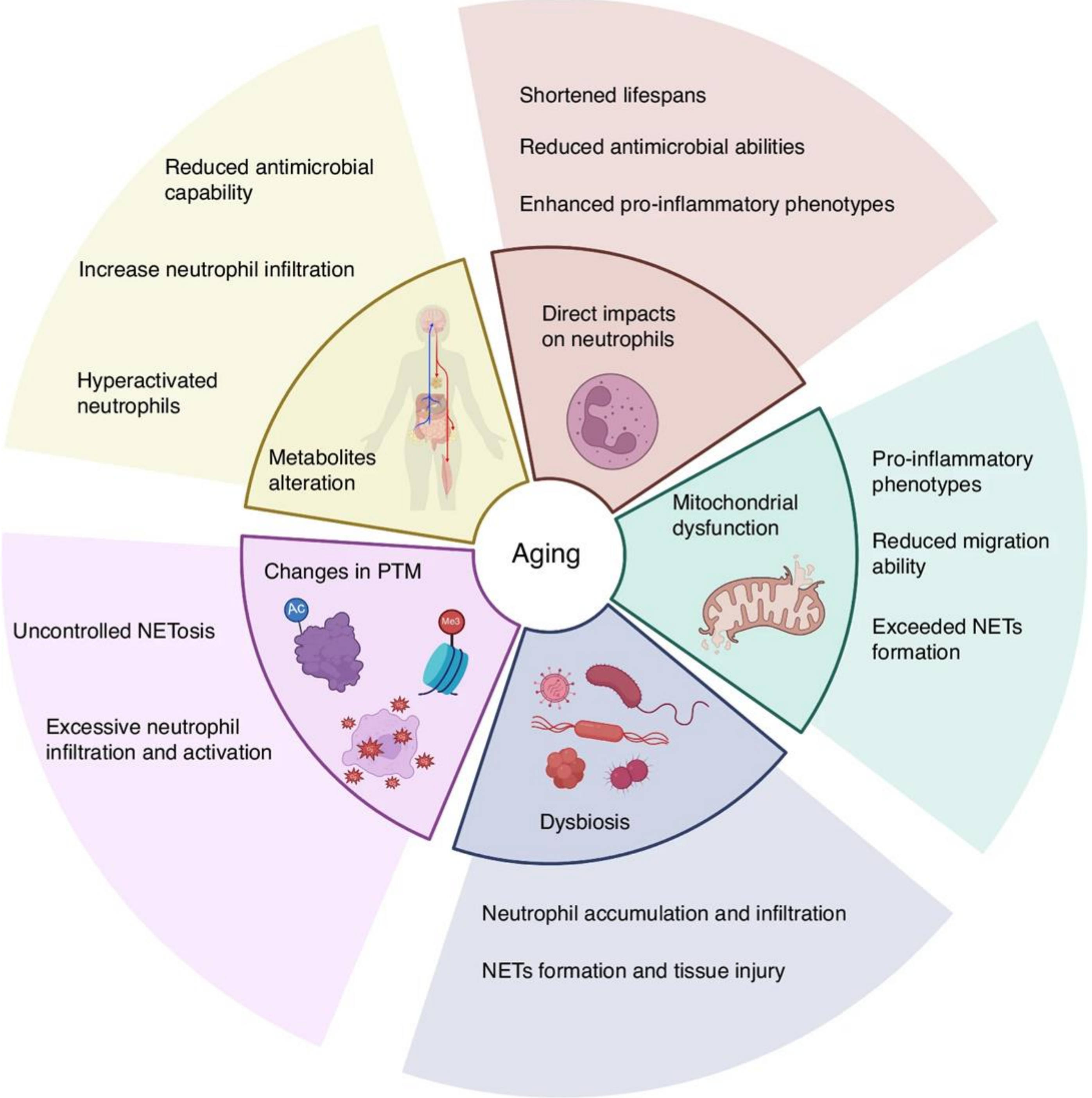
Skin Infections Caused by Staphylococcus aureus.

Skin Infections Caused by Staphylococcus aureus. Pascal del Giudice. Accepted Mar 19, 2020; Epub ahead of print Mar 24, 2020 Acta Derm Venereol 2020; 100: adv00110.

https://netec.org/2024/07/11/mpox-in-2024-10-takeaways-for-frontline-health-care-staff/

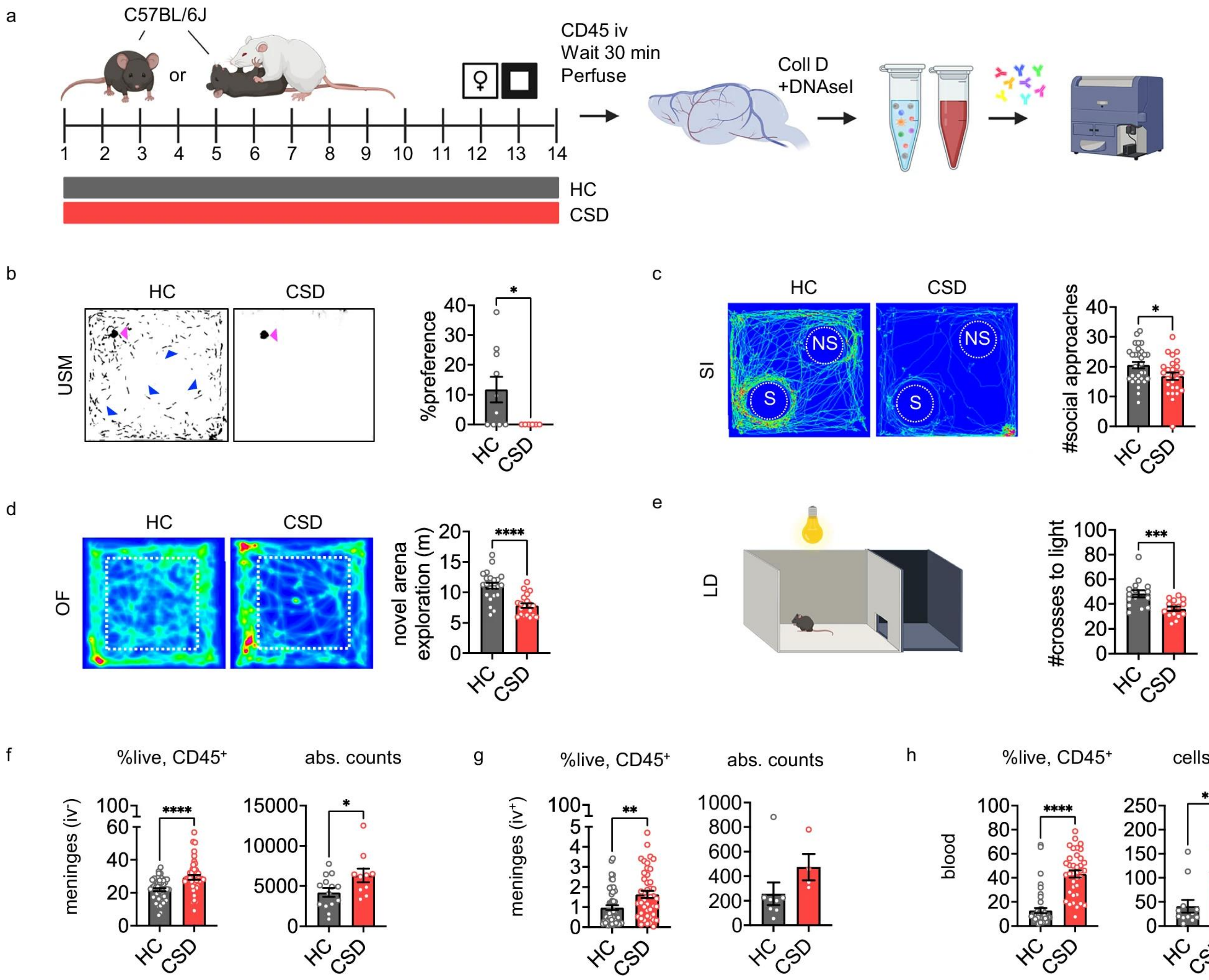


Tecchio, C., Cassatella, M.A. Uncovering the multifaceted roles played by neutrophils in allogeneic hematopoietic stem cell transplantation. Cell Mol Immunol 18, 905–918 (2021). https://doi.org/10.1038/s41423-020-00581-9



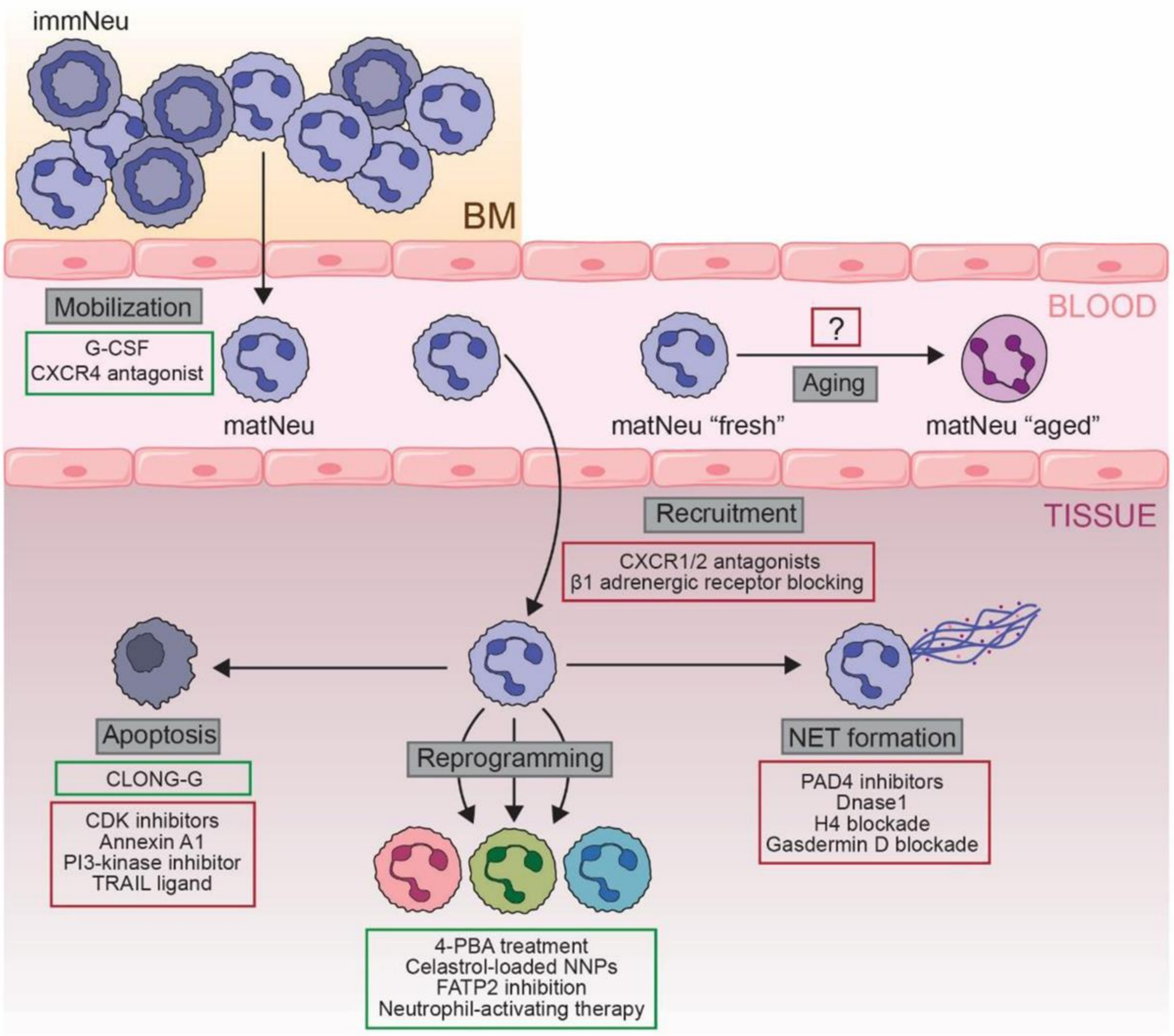
The effects of aging-induced changes on neutrophil functions

Wang, Z., Saxena, A., Yan, W. et al. The impact of aging on neutrophil functions and the contribution to periodontitis. Int J Oral Sci 17, 10 (2025). https://doi.org/10.1038/s41368-024-00332-w



stress induces meningeal neutrophilia via type I interferon signaling in male mice

Kigar, S.L., Lynall, ME., DePuyt, A.E. et al. Chronic social defeat stress induces meningeal neutrophilia via type I interferon signaling in male mice. Nat Commun 16, 8153 (2025). https://doi.org/10.1038/s41467-025-62840-5



Strategies to target neutrophils

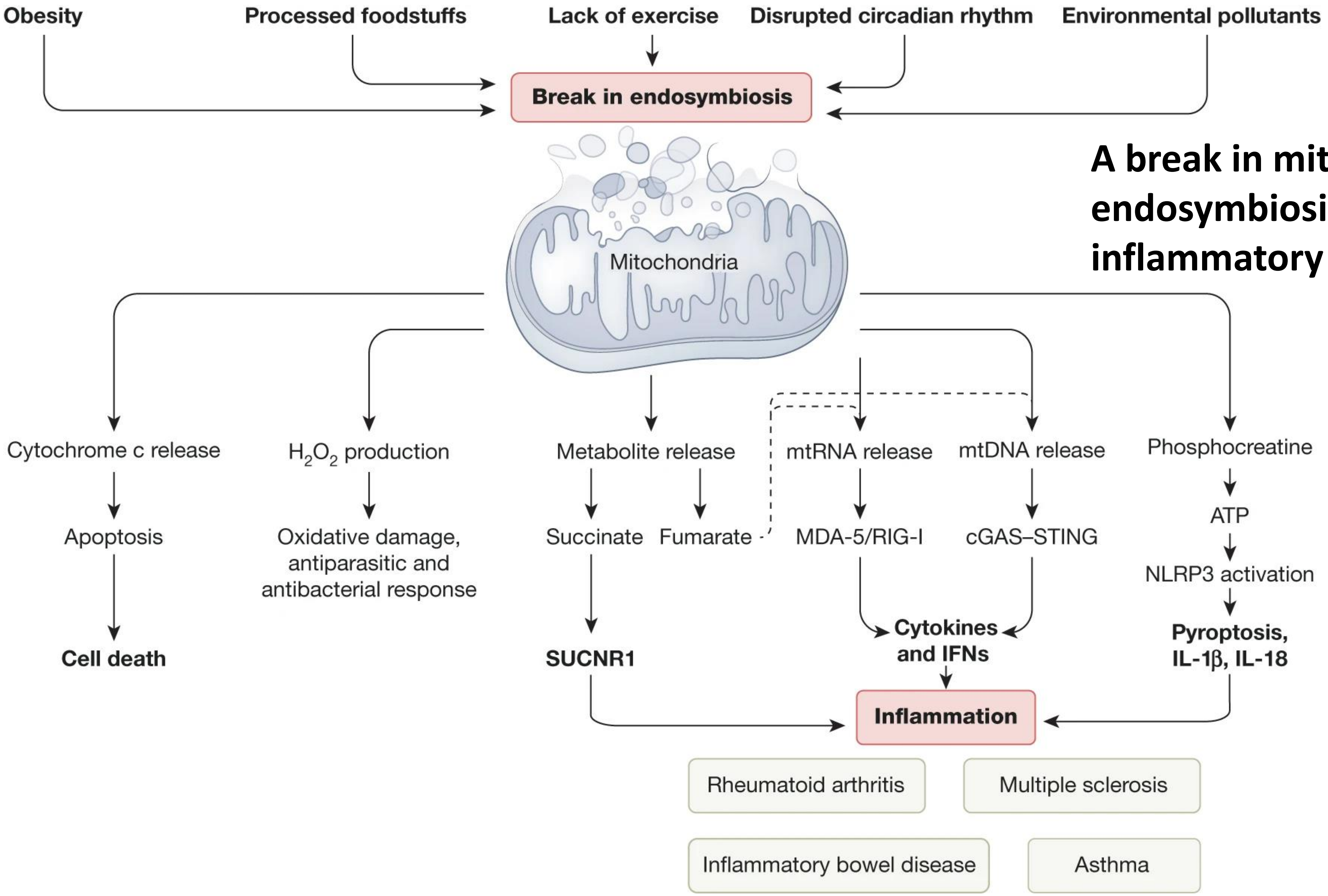
Aroca-Crevillén A, Vicanolo T, Ovadia S, Hidalgo A. Neutrophils in Physiology and Pathology. Annu Rev Pathol. 2024 Jan 24;19:227-259. doi: 10.1146/annurev-pathmechdis-051222-015009. PMID: 38265879; PMCID: PMC11060889.

Table 1. Uses and mechanisms of action of anti-neutrophilic drugs for dermatological and autoimmune disorders.

Treatment	Use	Mechanism of Action
Dapsone	Dermatitis herpetiformis Autoimmune bullous disorders Sweet syndrome and pyoderma gangrenosum Erythema elevatum diutinum Urticarial vasculitis Leukocytoclastic vasculitis Pustular psoriasis Hidradenitis suppurativa Eosinophilic dermatoses: wells syndrome, granuloma faciale, eosinophilic annular erythema and chronic idiopathic urticaria Cutaneous lupus erythematosus Recurrent erythema multiforme Generalized granuloma annulare Rheumatoid papular eruption	Inhibits neutrophil chemotaxis. Reduces oxidative damage in tissues. Reduces tumor necrosis factor.
Colchicine	Autoimmune bullous disorders Sweet syndrome and pyoderma gangrenosum Pustular psoriasis Hidradenitis suppurativa Behçet's syndrome	Disrupts microtubule formation. Reduces neutrophil migration and activity. Decreases inflammatory cytokines.
Tetracyclines	Acne Rosacea Autoimmune bullous disorders Sweet syndrome and pyoderma gangrenosum Erythema elevatum diutinum Leukocytoclastic vasculitis Hidradenitis suppurativa Pustular psoriasis Wells syndrome Lichen planus pilaris Generalized granuloma annulare and cutaneous sarcoidosis	Inhibits neutrophil chemotaxis. Reduces cytokines. Reduces matrix metalloproteinases. Prevents oxidative damage. Anti-apoptotic effect.

Franceschin, L., Guidotti, A., Mazzetto, R., Tartaglia, J., Ciolfi, C., Alaibac, M., & Sernicola, A. (2024). Repurposing Historic Drugs for Neutrophil-Mediated Inflammation in Skin Disorders. Biomolecules, 14(12), 1515. https://doi.org/10.3390/biom14121515

A break in mitochondrial endosymbiosis as a basis for inflammatory diseases.



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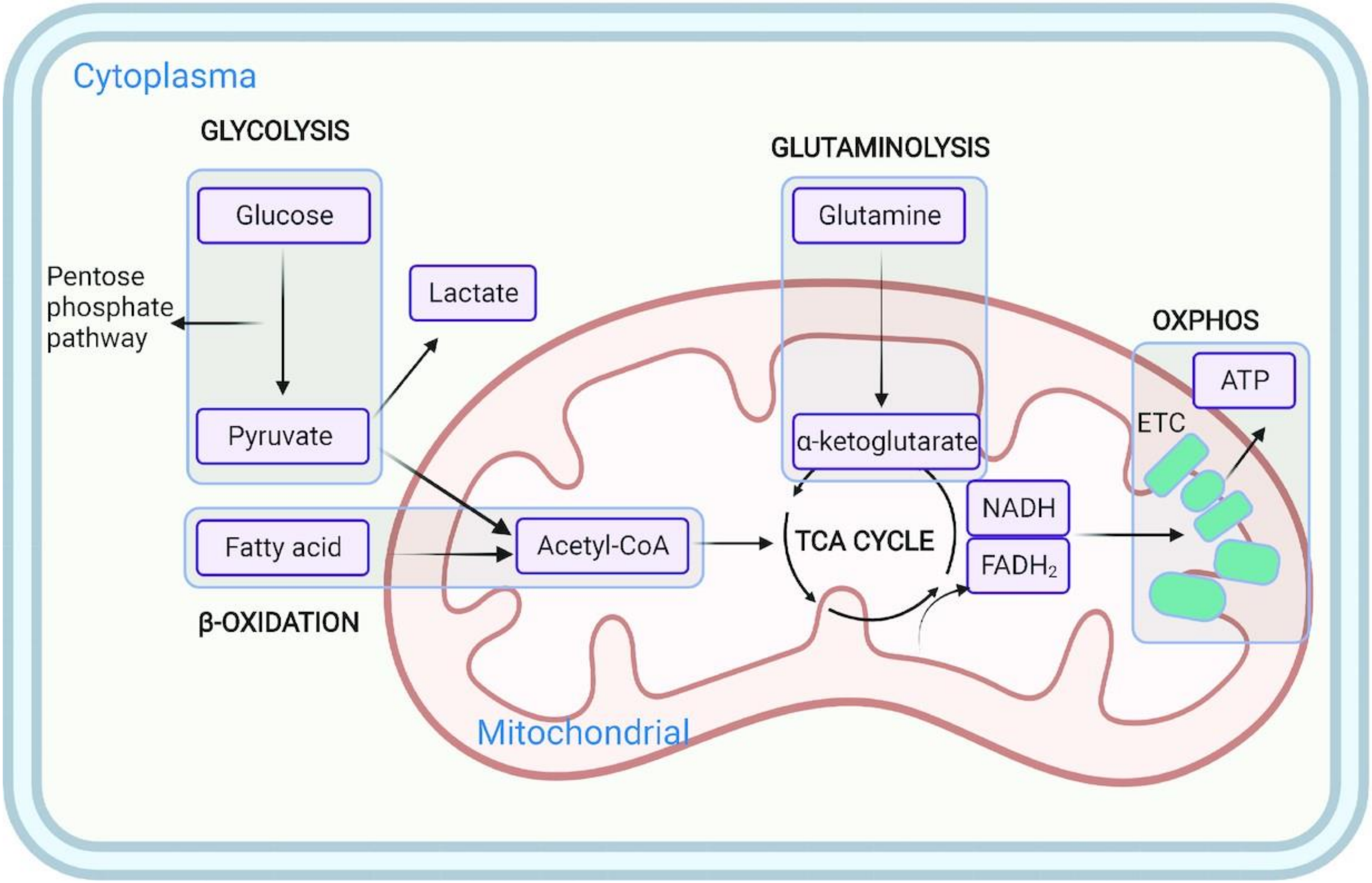

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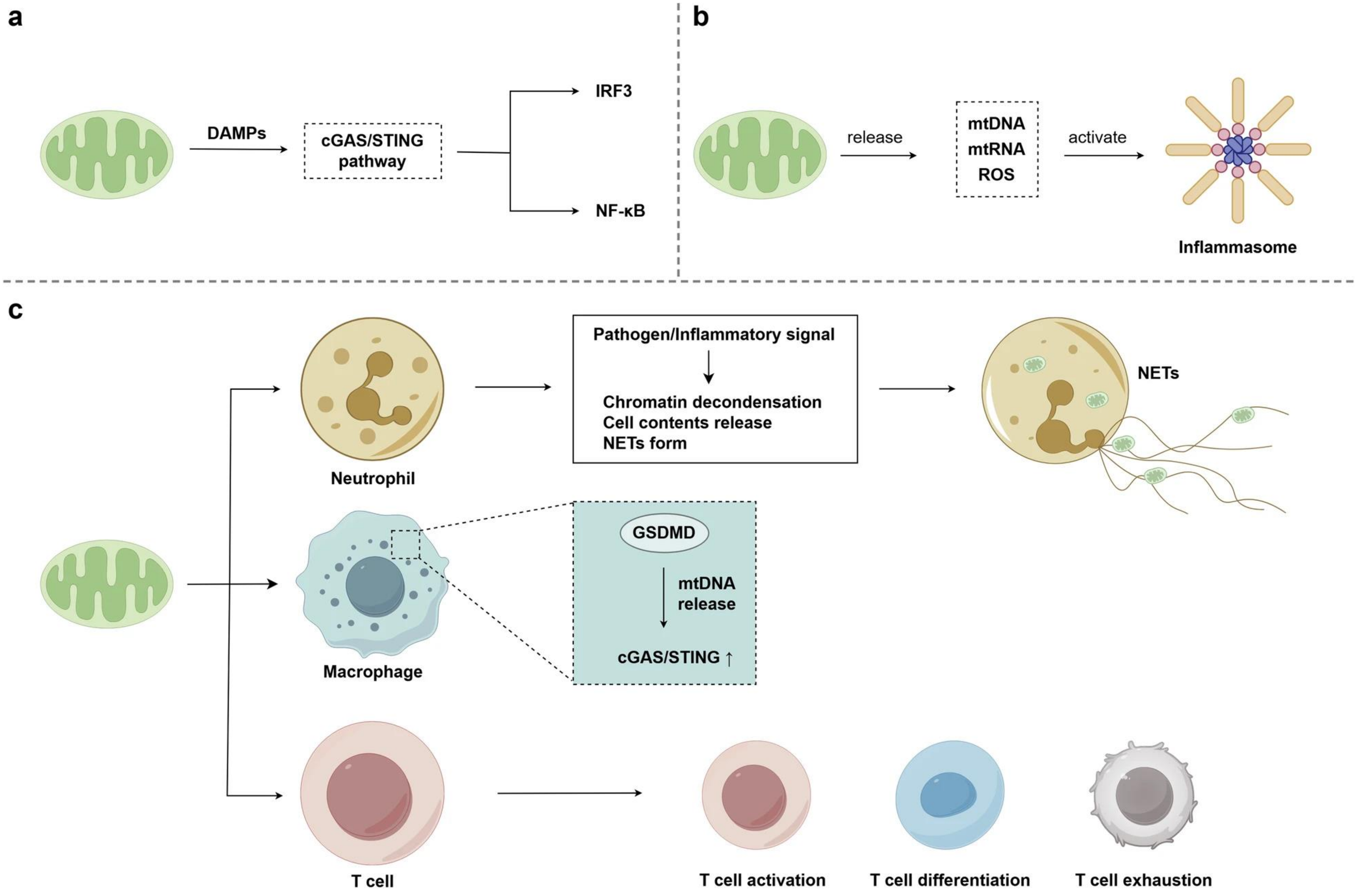
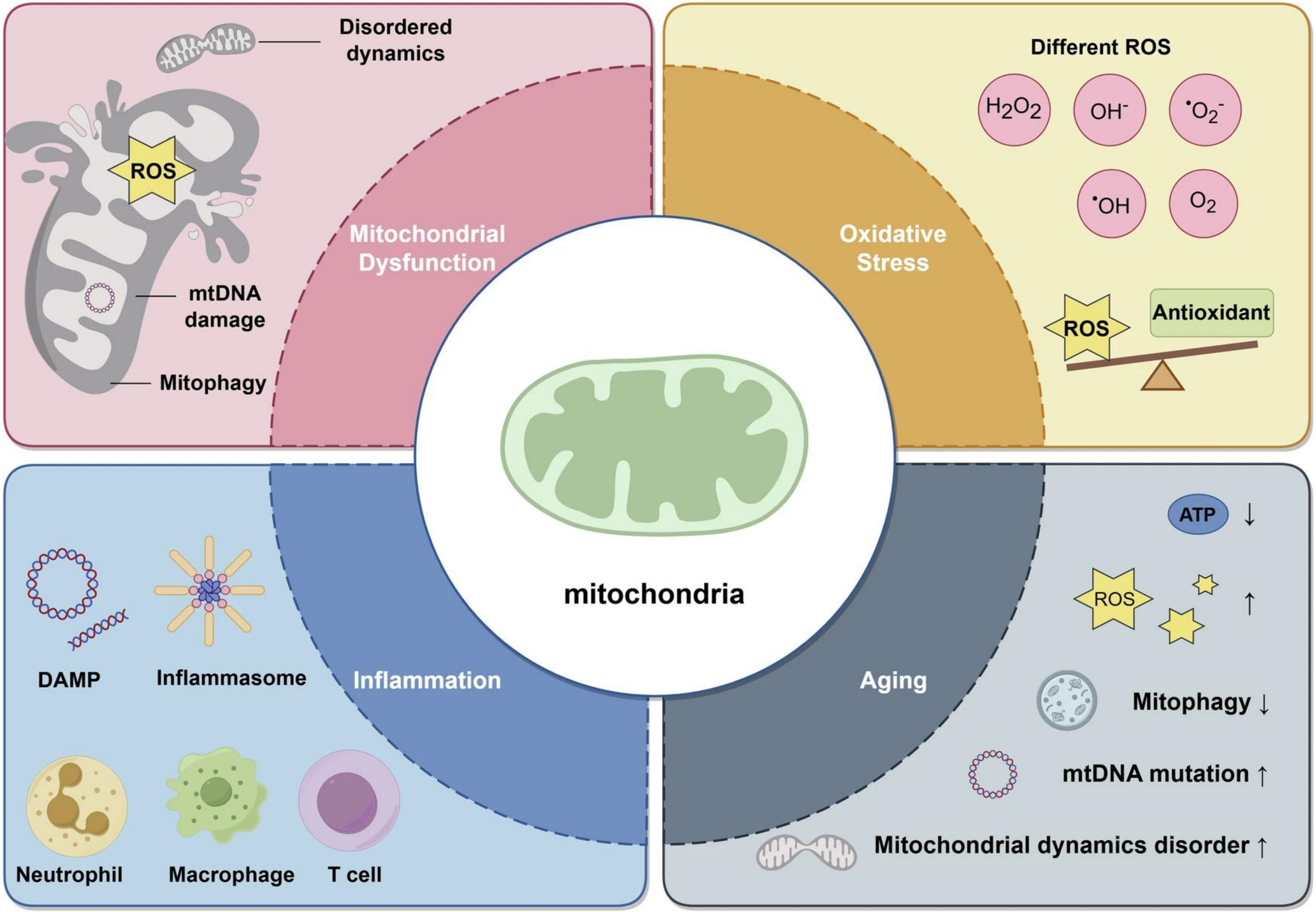


Xu, X., Pang, Y. & Fan, X. Mitochondria in oxidative stress, inflammation and aging: from mechanisms to therapeutic advances. Sig Transduct Target Ther 10, 190 (2025). https://doi.org/10.1038/s41392-025-02253-4



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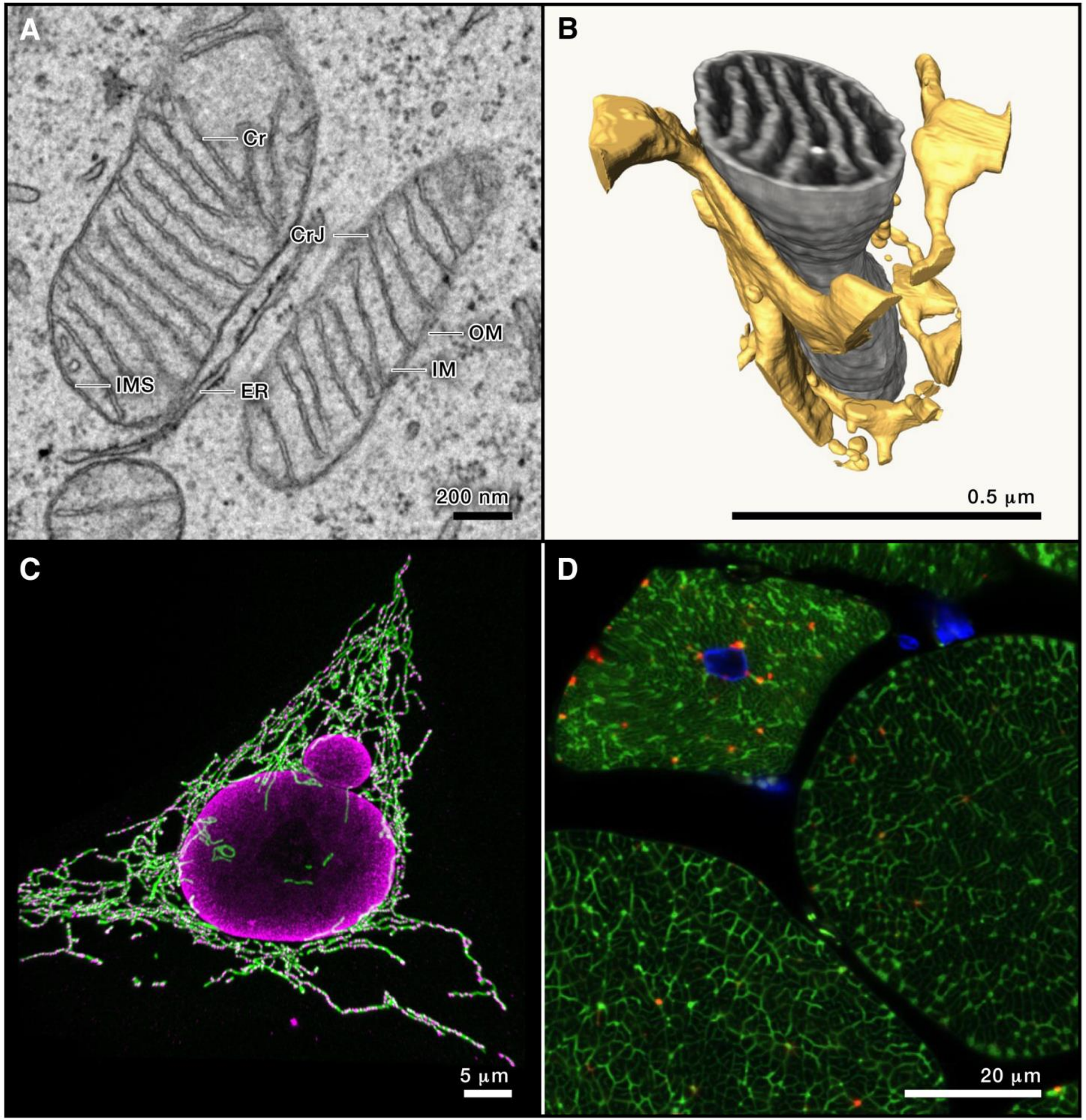
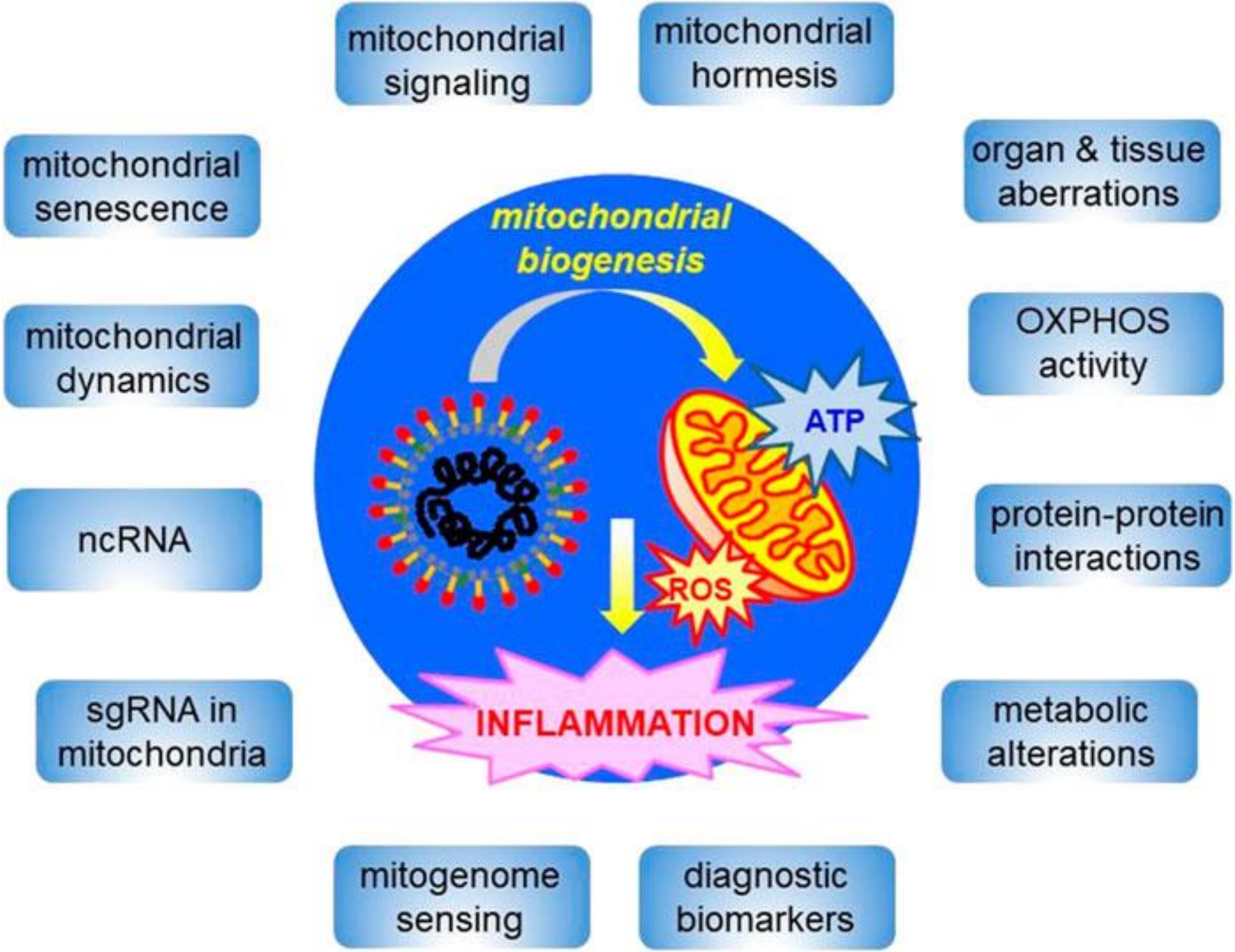


Mitochondria at the crossroads of health and disease

Mitochondria at the crossroads of health and disease
Suomalainen, Anu et al.
Cell, 2024,Volume 187, Issue 11, 2601 - 2627



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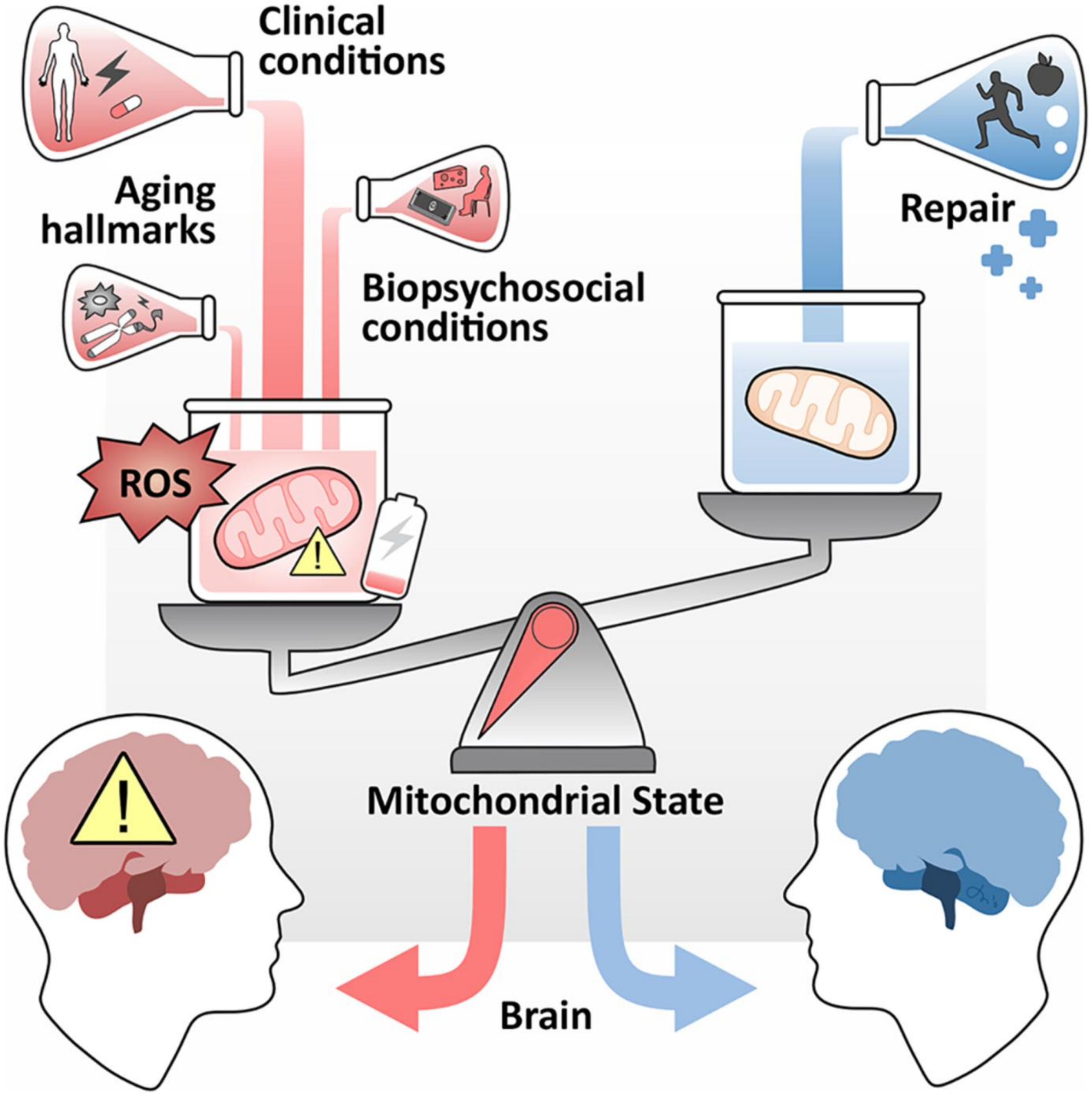
Mitochondria in COVID-19: from cellular and molecular perspective
Michał Rurek



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nature aging

Analysis | Published: 10 November 2025

Multilingualism protects against accelerated aging in cross-sectional and longitudinal analyses of 27 European countries

Lucia Amoruso, Hernan Hernandez, Hernando Santamaria-Garcia, Sebastian Moguilner, Agustina Legaz, Pavel Prado, Jhosmary Cuadros, Liset Gonzalez, Raul Gonzalez-Gomez, Joaquín Migeot, Carlos Coronel-Oliveros, Josephine Cruzat, Manuel Carreiras, Vicente Medel, Marcelo Adrián Maito, Claudia Duran-Aniotz, Enzo Tagliazucchi, Sandra Baez, Adolfo M. García & Agustin Ibanez

Nature Aging **5**, 2340–2354 (2025) | Cite this article

Abstract

Aging trajectories are influenced by modifiable risk factors, and prior evidence has hinted that multilingualism may have protective potential. However, reliance on suboptimal health markers, small samples, inadequate confounder control and a focus on clinical cohorts led to mixed findings and limited applicability to healthy populations. Here, we developed biobehavioral age gaps, quantifying delayed or accelerated aging in 86,149 participants across 27 European countries. National surveys provided individual-level positive (functional ability, education, cognition) and adverse (cardiometabolic conditions, female sex, sensory impairments) factors, while country-level multilingualism served as an aggregate exposure. Biobehavioral factors predicted age ($R^2 = 0.24$, $r = 0.49$, root mean squared error = 8.61), with positive factors linked to delayed aging and adverse factors to accelerated aging. Multilingualism emerged as a protective factor in cross-sectional (odds ratio = 0.46) and longitudinal (relative risk = 0.70) analyses, whereas monolingualism increased risk of accelerated aging (odds ratio = 2.11; relative risk = 1.43). Effects persisted after adjusting for linguistic, physical, social and sociopolitical exposomes. These results underscore the protective role of multilingualism and its broad applicability for global health initiatives.

nature reviews drug discovery

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Review Article | Published: 04 March 2025

Thirty years of NRF2: advances and therapeutic challenges

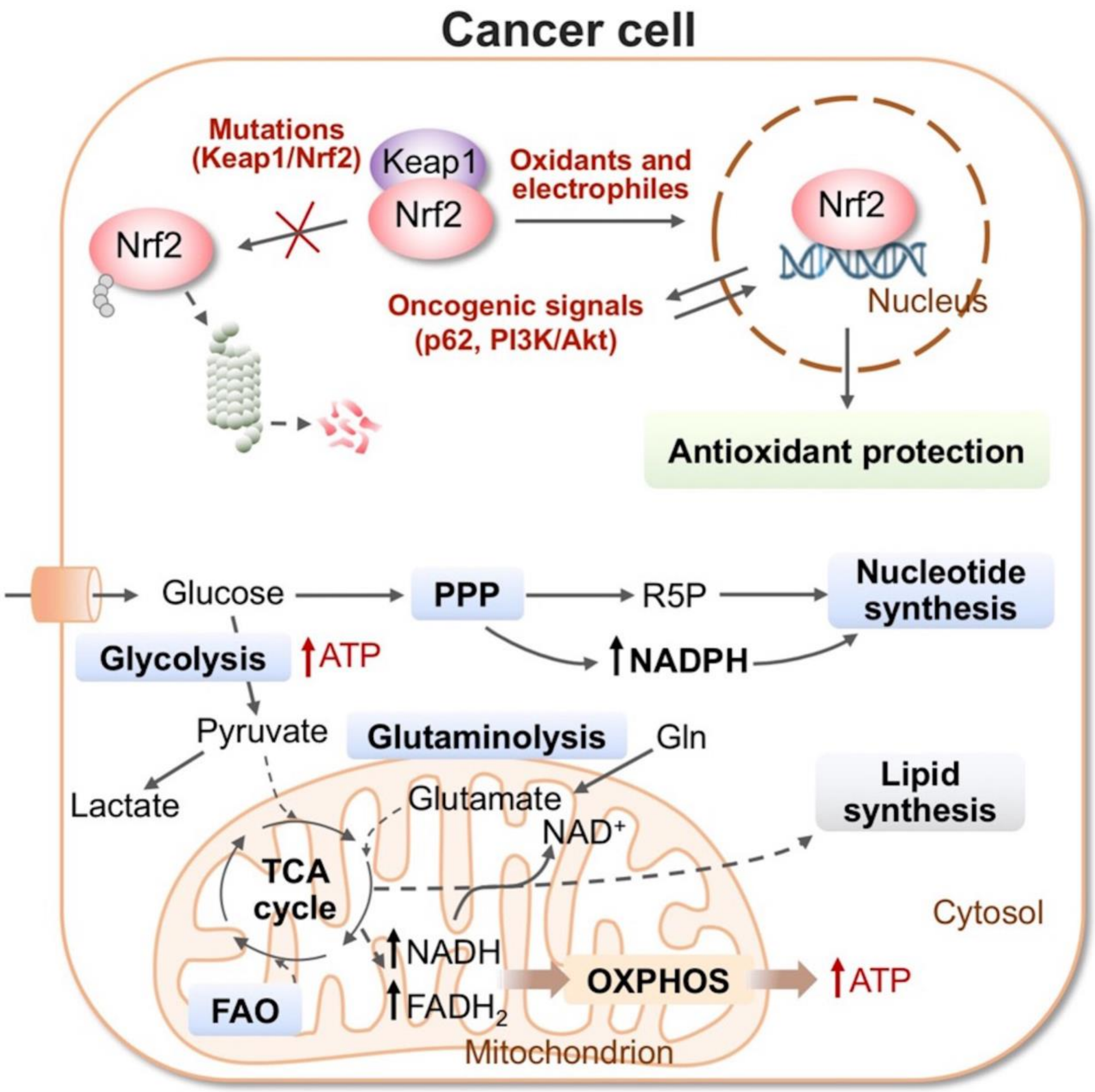
Donna D. Zhang

Nature Reviews Drug Discovery **24**, 421–444 (2025) | Cite this article

Abstract

Over the last 30 years, NRF2 has evolved from being recognized as a transcription factor primarily involved in redox balance and detoxification to a well-appreciated master regulator of cellular proteostasis, metabolism and iron homeostasis. NRF2 plays a pivotal role in diverse pathologies, including cancer, and metabolic, inflammatory and neurodegenerative disorders. It exhibits a Janus-faced duality, safeguarding cellular integrity in normal cells against environmental insults to prevent disease onset, whereas in certain cancers, constitutively elevated NRF2 levels provide a tumour survival advantage, promoting progression, therapy resistance and metastasis. Advances in understanding the mechanistic regulation of NRF2 and its roles in human pathology have propelled the investigation of NRF2-targeted therapeutic strategies. This Review dissects the mechanistic intricacies of NRF2 signalling, its cross-talk with biological processes and its far-reaching implications for health and disease, highlighting key discoveries that have shaped innovative therapeutic approaches targeting NRF2.

Nuclear factor erythroid 2-related factor 2 (NRF2)



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A Probiotic-Derived Topical Strategy to Strengthen Cutaneous Defense Against UV-Related Environmental Stress Through Nrf-2 Activation

Brief Title: Cutaneous Defense Against Environmental Stress

Prof. Cita Rosita Sigit Prakoeswa1,2, Prof. Anang Endaryanto2,3, Prof. Widjiati Widjiati4, Prof, Muhammad Yulianto Listiawan1,2, Prof. Ingrid Suryanti Surono5, Hok Bing Thio6, Marina Rimadhani, MD7*

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7Doctoral Program of Medical Science, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia

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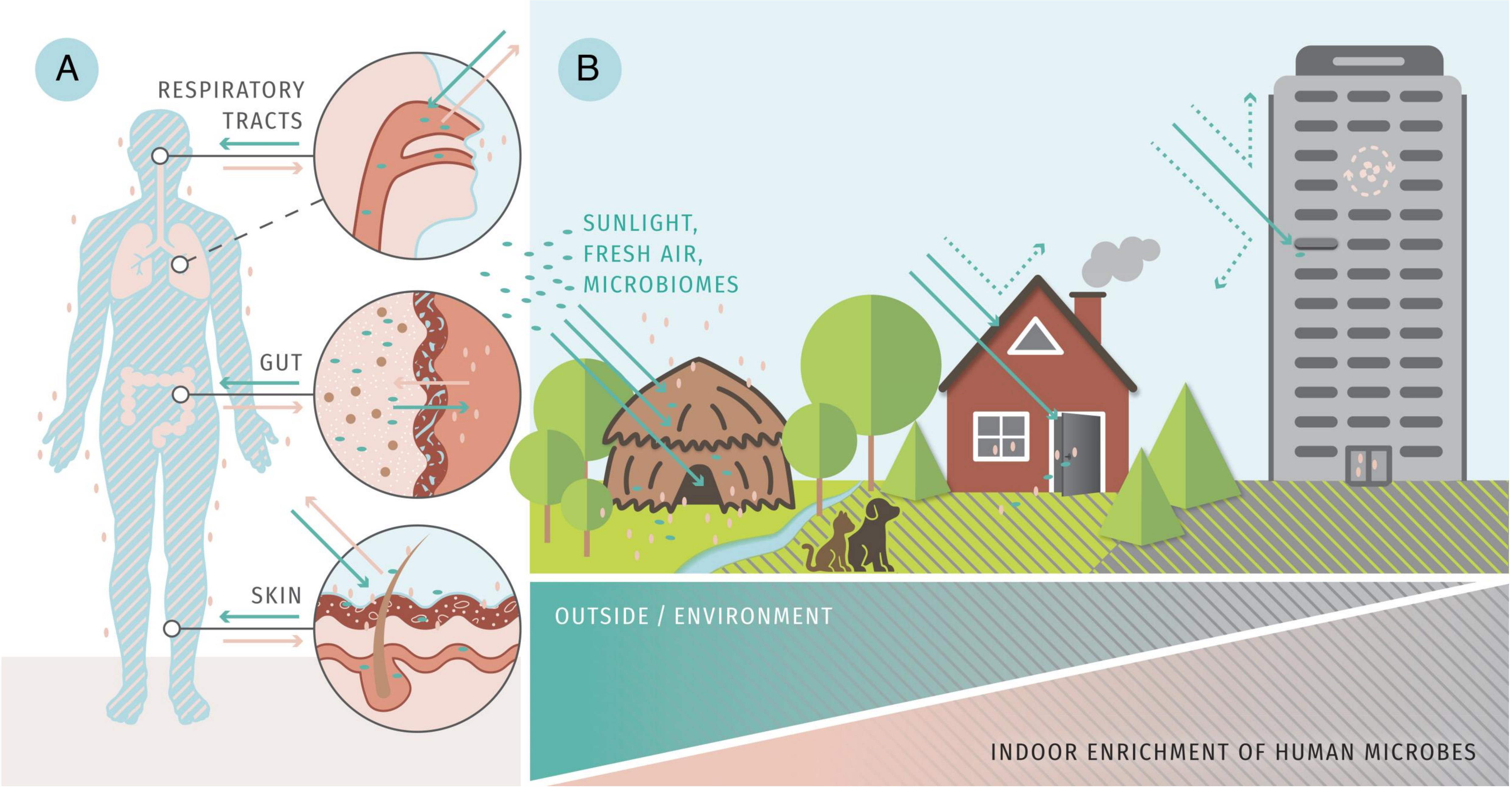

T.C.G. Bosch,M. Wigley,B. Colomina,B. Bohannan,F. Meggers,K.R. Amato,M.B. Azad,M.J. Blaser,K. Brown,M.G. Dominguez-Bello,S.D. Ehrlich,E. Elinav,B.B. Finlay,K. Geddie,N. Geva-Zatorsky,T. Giles-Vernick,P. Gros,K. Guillemin,L. Haraoui,[...]& M.K. Melby, The potential importance of the built-environment microbiome and its impact on human health, Proc. Natl. Acad. Sci. U.S.A. 121 (20) e2313971121, https://doi.org/10.1073/pnas.2313971121 (2024).

DUURZAAMHUID 2026

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Psoriasis vulgaris

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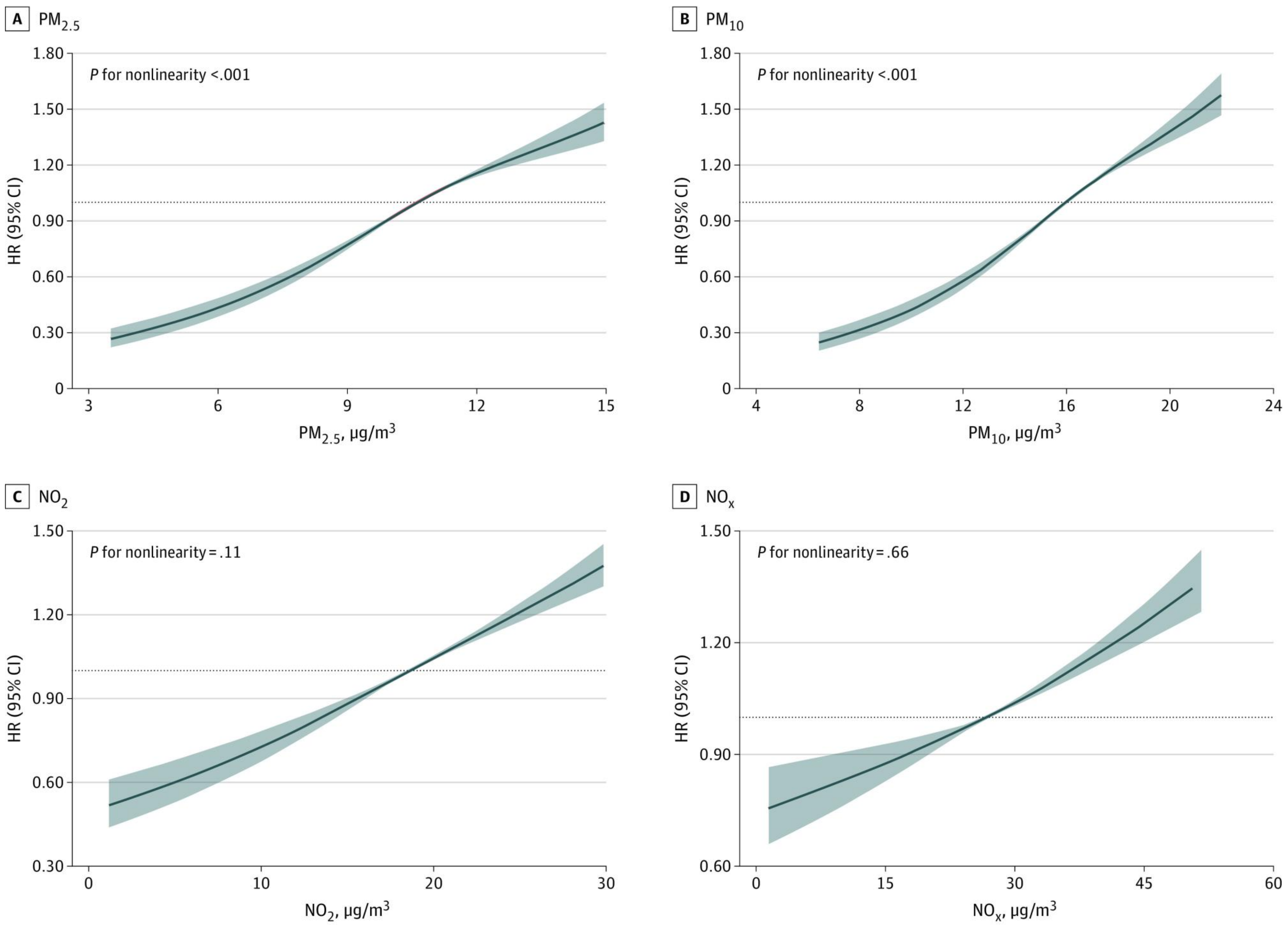


Exposure to Air Pollution, Genetic Susceptibility, and Psoriasis Risk in the UK

Wu J, Ma Y, Yang J, Tian Y. Exposure to Air Pollution, Genetic Susceptibility, and Psoriasis Risk in the UK. JAMA Netw Open. 2024;7(7):e2421665. doi:10.1001/jamanetworkopen.2024.21665

Atopisch eczeem

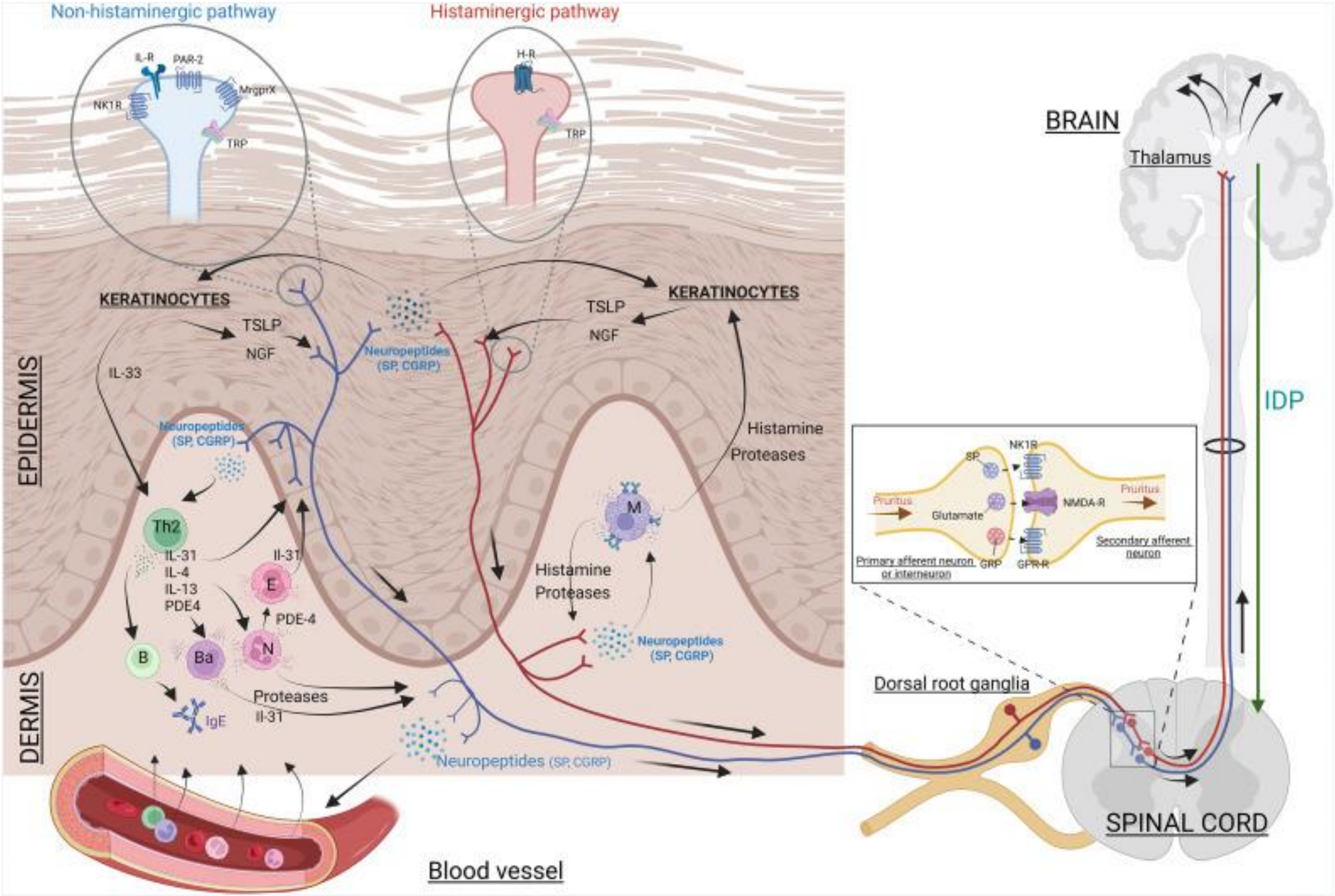
www18.ocn.ne.jp

9 October 2025

Data from more than 300,000 UK Biobank participants show that air pollution can raise older people's risk of a condition causing unbearably itchy skin.

UK Biobank participants living in areas with high air pollution are more likely to develop atopic eczema late in life. **Almost 16% of late-life eczema cases could be prevented by cutting air pollution in the worst-affected areas, the researchers estimate.** They suggest that studies such as this one should be a wake-up call for politicians and policymakers to push for cleaner air solutions.

https://www.ukbiobank.ac.uk/research-stories/cleaner-air-could-prevent-thousands-of-late-life-eczema-cases/



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Misery, Laurent et al.
Journal of Allergy and Clinical Immunology, 2023
Volume 152, Issue 1, 11 - 23

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JOURNAL ARTICLE ACCEPTED MANUSCRIPT

Weekly versus daily bathing for people with eczema: results of the Eczema Bathing online randomised controlled trial

Lucy Bradshaw, Laura M Howells, Ingrid Muller, Eleanor J Mitchell, Arabella Baker, Leila Thuma, Eleanor F Harrison, Liz Hartshorne, Yimin Jiang, Fiona Cowdell ... Show more

British Journal of Dermatology, ljaf417, https://doi.org/10.1093/bjd/ljaf417
Published: 10 November 2025 **Article history** ▾

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Abstract

Background

Questions about washing are a high priority for people with eczema (syn. atopic dermatitis, atopic eczema) but are rarely the focus of randomised controlled trials (RCTs).

Objectives

To assess the impact of weekly bathing compared to daily bathing in people with eczema in the first of a series of eczema citizen science online trials in the United Kingdom.

Methods

Pragmatic, two-arm, parallel-group superiority RCT. People with self-reported eczema aged ≥1 were eligible, excluding those with very mild eczema (Patient Orientated Eczema Measure (POEM) score ≤ 2). Participants were allocated (1:1) using minimisation, balancing on eczema severity (POEM), age and usual method of bathing, to either the weekly bathing group (bath or shower once or twice a week) or the daily bathing group (≥6 times a week) for 4 weeks. Participants were not blinded to their allocation. Primary outcome was participant reported eczema symptoms collected weekly over four weeks using POEM (range 0 to 28, higher scores more severe).

Results

438 people with eczema (108 aged <16 years) were randomised between 29th January and 8th July 2024: 218 to daily bathing and 220 to weekly bathing. The primary analysis included 195 participants (89%) allocated to daily bathing and 193 (88%) to weekly bathing who completed at least one follow-up questionnaire.

bathing group. The adjusted difference in mean POEM score over 4 weeks for weekly versus daily bathing was -0.4 (95% confidence interval -1.3 to 0.4, p = 0.30). Process evaluation data highlighted participants' experiences of making changes to bathing routines, including barriers to following the allocated routine. No serious unintended effects or harms were reported.

Conclusions

The trial found no evidence of a difference in eczema symptoms between bathing or showering weekly compared to daily. These results are helpful for people with eczema, giving them the freedom to choose what suits them best.

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Veel dank

h.thio@erasmusmc.nl