MICROBIOMA CUTÂNEO

Wendie Roldán Villalobos
DMV, Esp, MSc, PhD, DLACVD
Professora Assistente Uniagraria, Colômbia
Prática privada em Dermatologia de pequenos animais

DERMATOVET
CURSOS

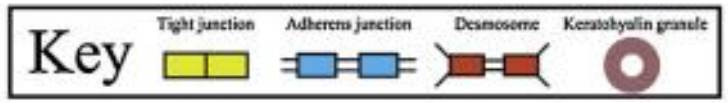
Microbial Barrier

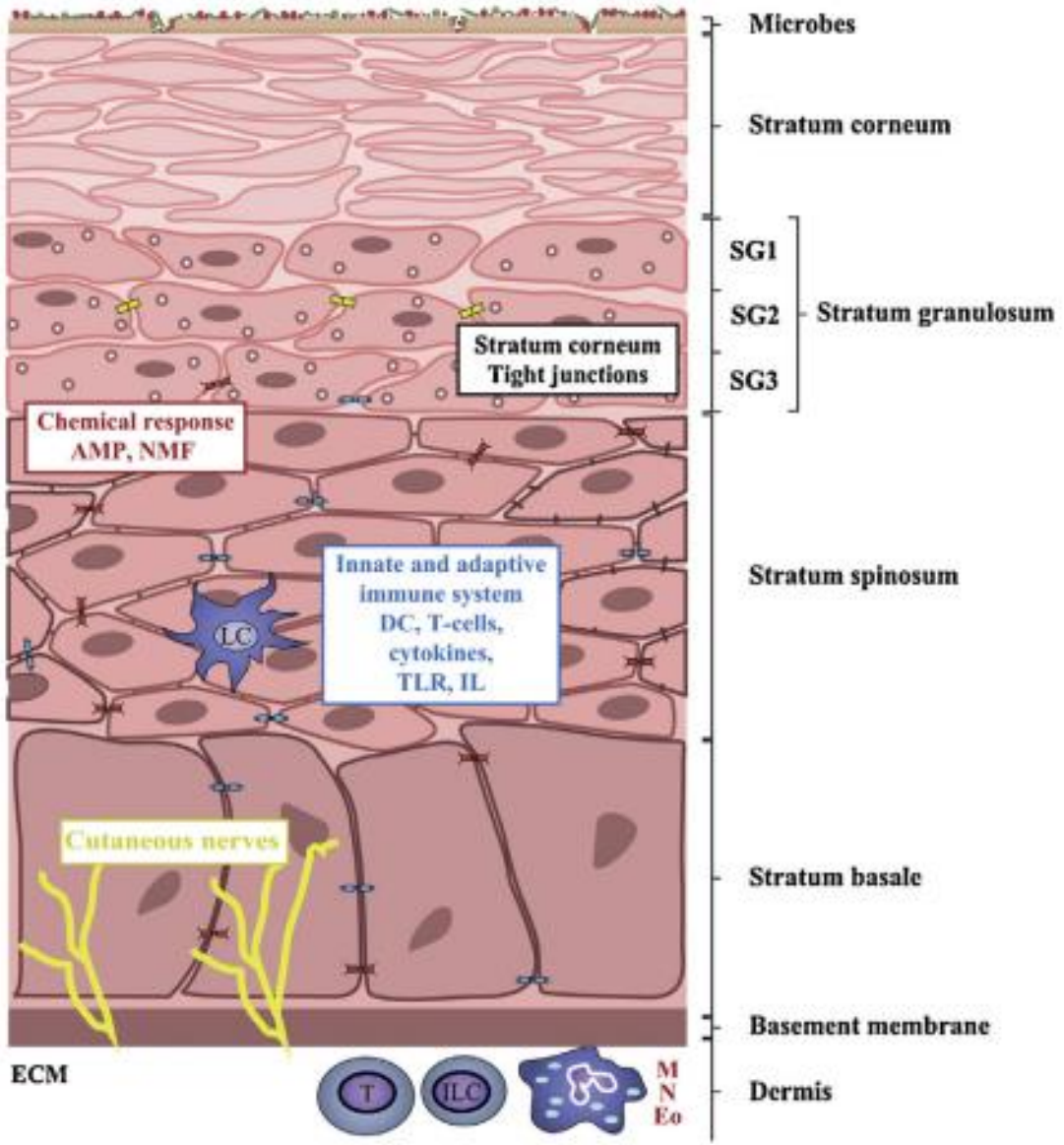
Physical Barrier

Chemical Barrier

Immunological Barrier

Neuro-sensory Barrier





Luger T, et al., 2021.

MICROBIOMA

Microrganismos
Genes, Metabólitos

MICROBIOTA

Microrganismos em microambiente definido

Diversidade alfa

Diversidade beta

DERMATOVET
CURSOS

Copyright: ©Pilipipa - stock.adobe.com

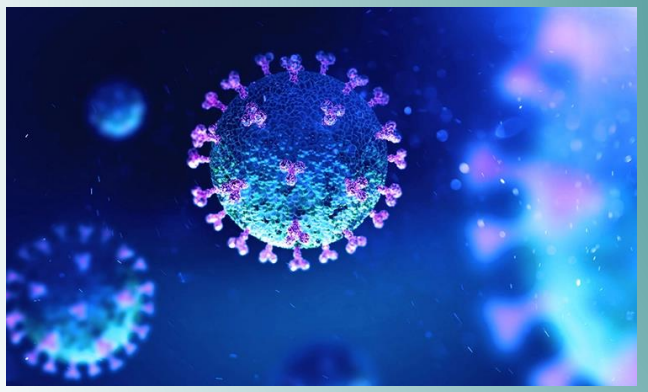
Lactobacillus,
Prevotella
Candida

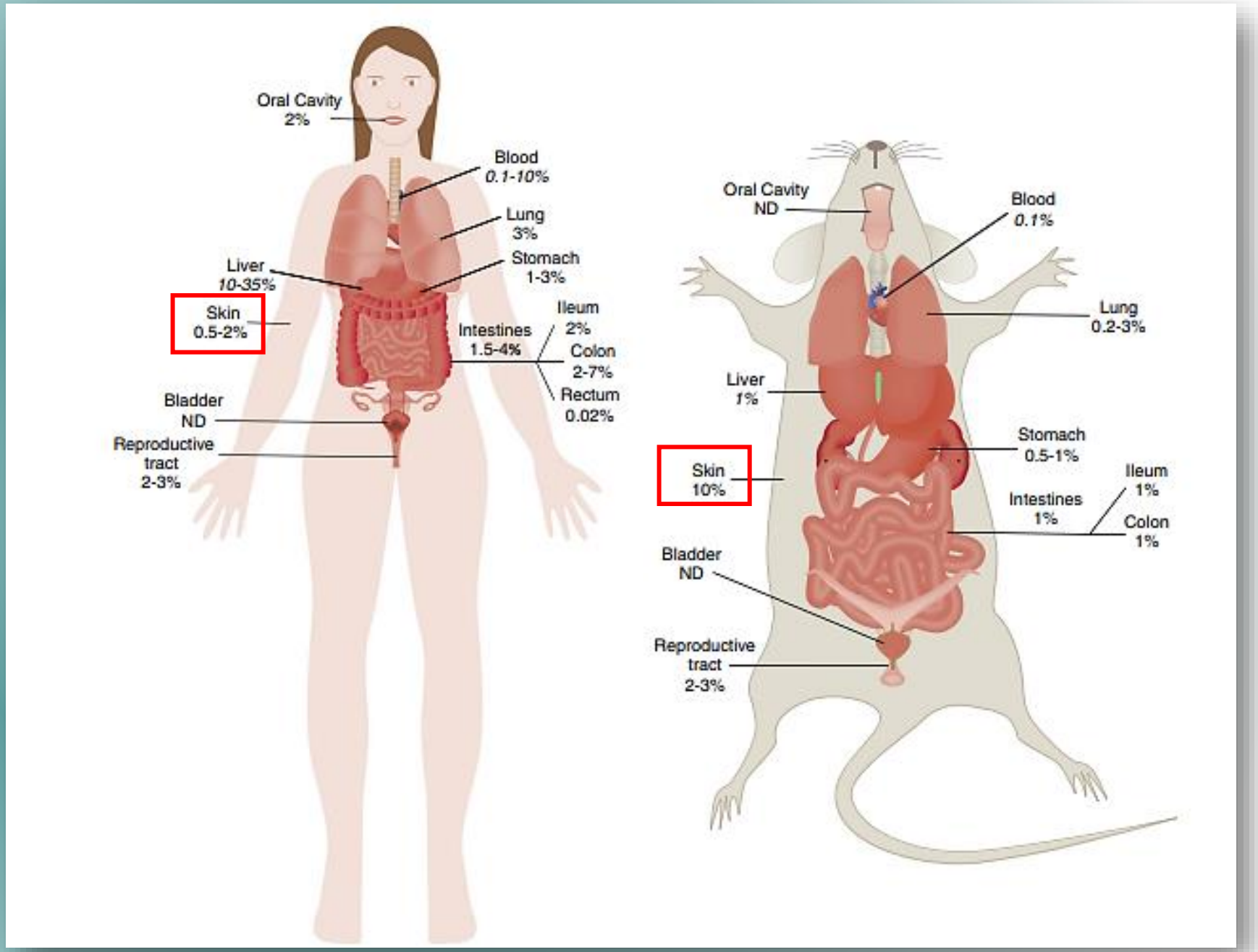
https://www.shutterstock.com/es/search/dog-giving-birth

Staphylococcus,
Corynebacyerium,
Cutibacteruim…

DERMATOVET
CURSOS

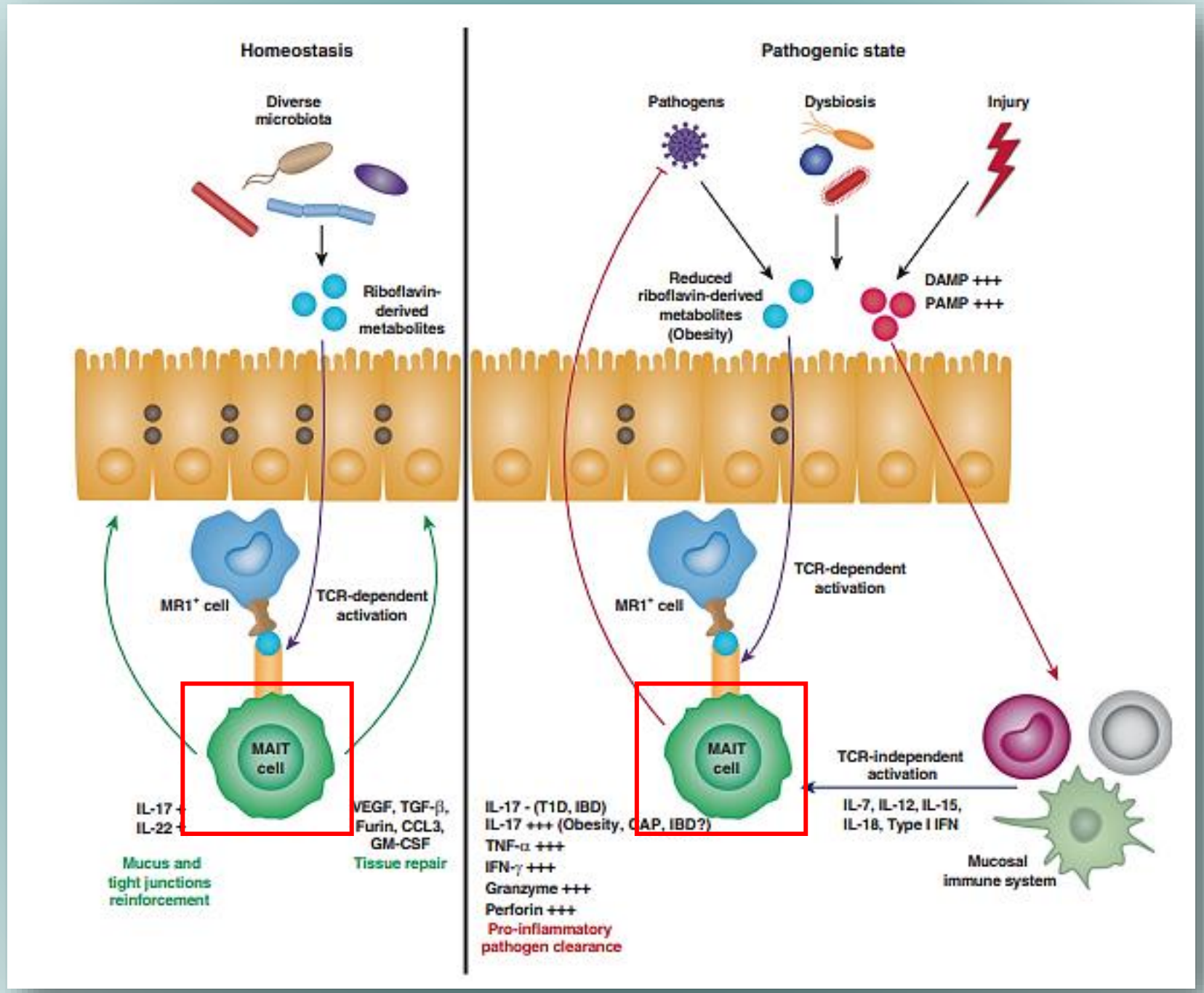
Células MAIT
"Mucosa associated invariant T cells"





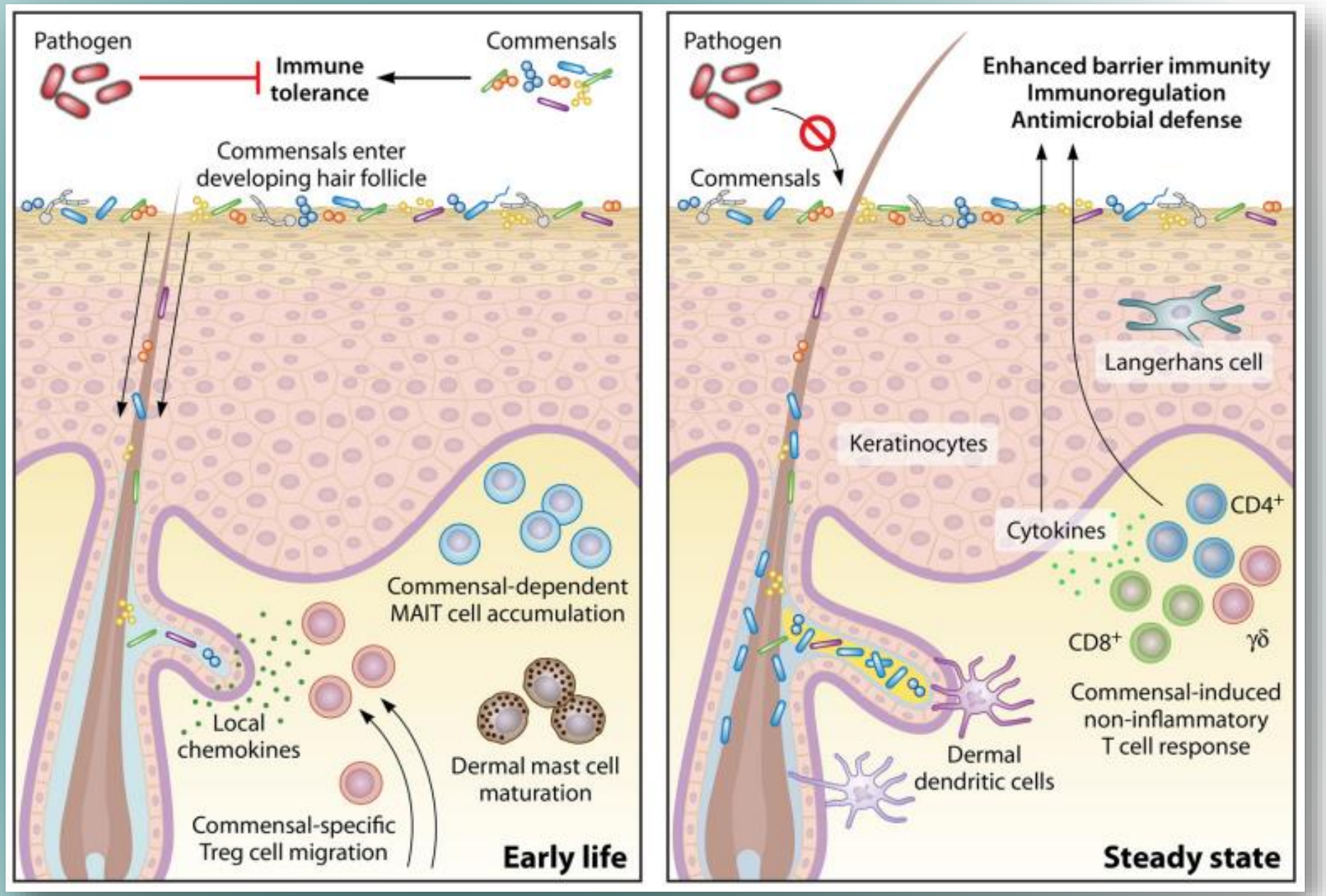
Nel I, et al., 2021.

DERMATOVET CURSOS



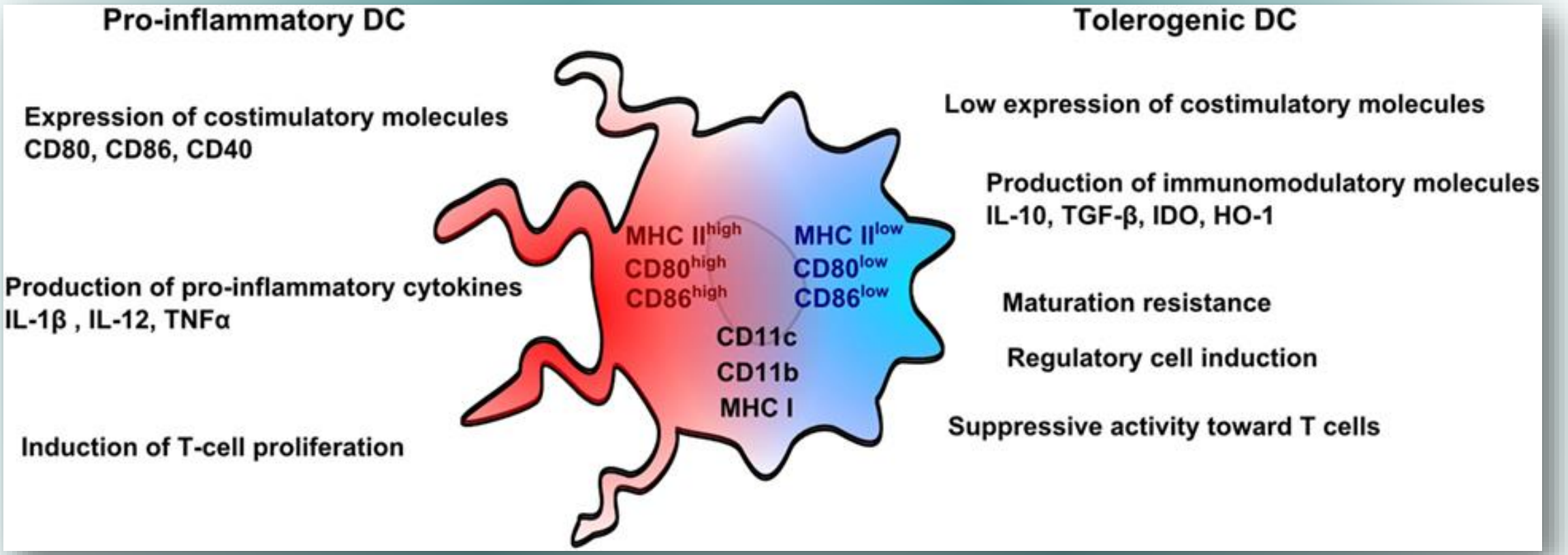
Nel I, et al., 2021.

MICROBIOMA



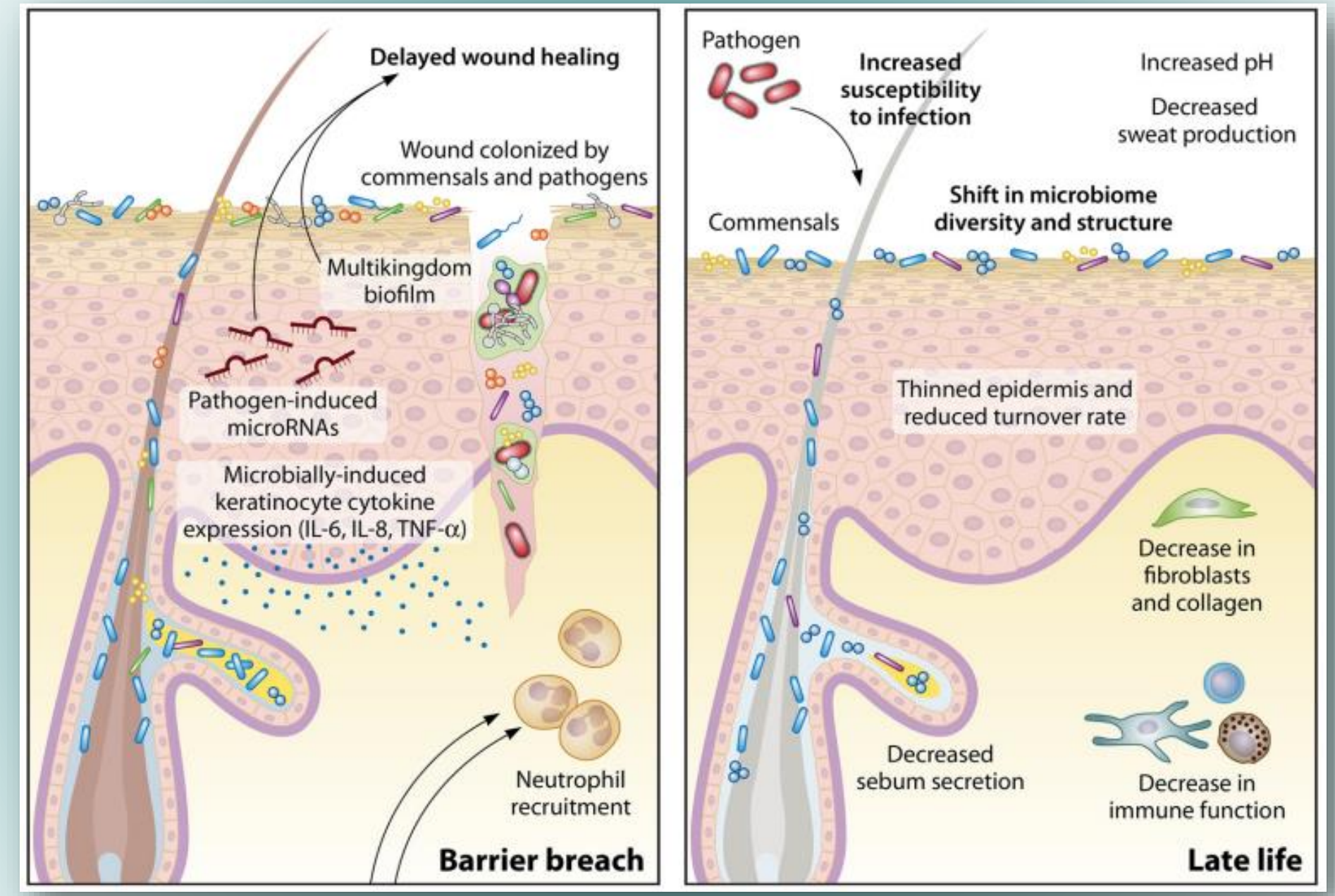
DERMATOVET CURSOS

Swaney M, et al., 2021.

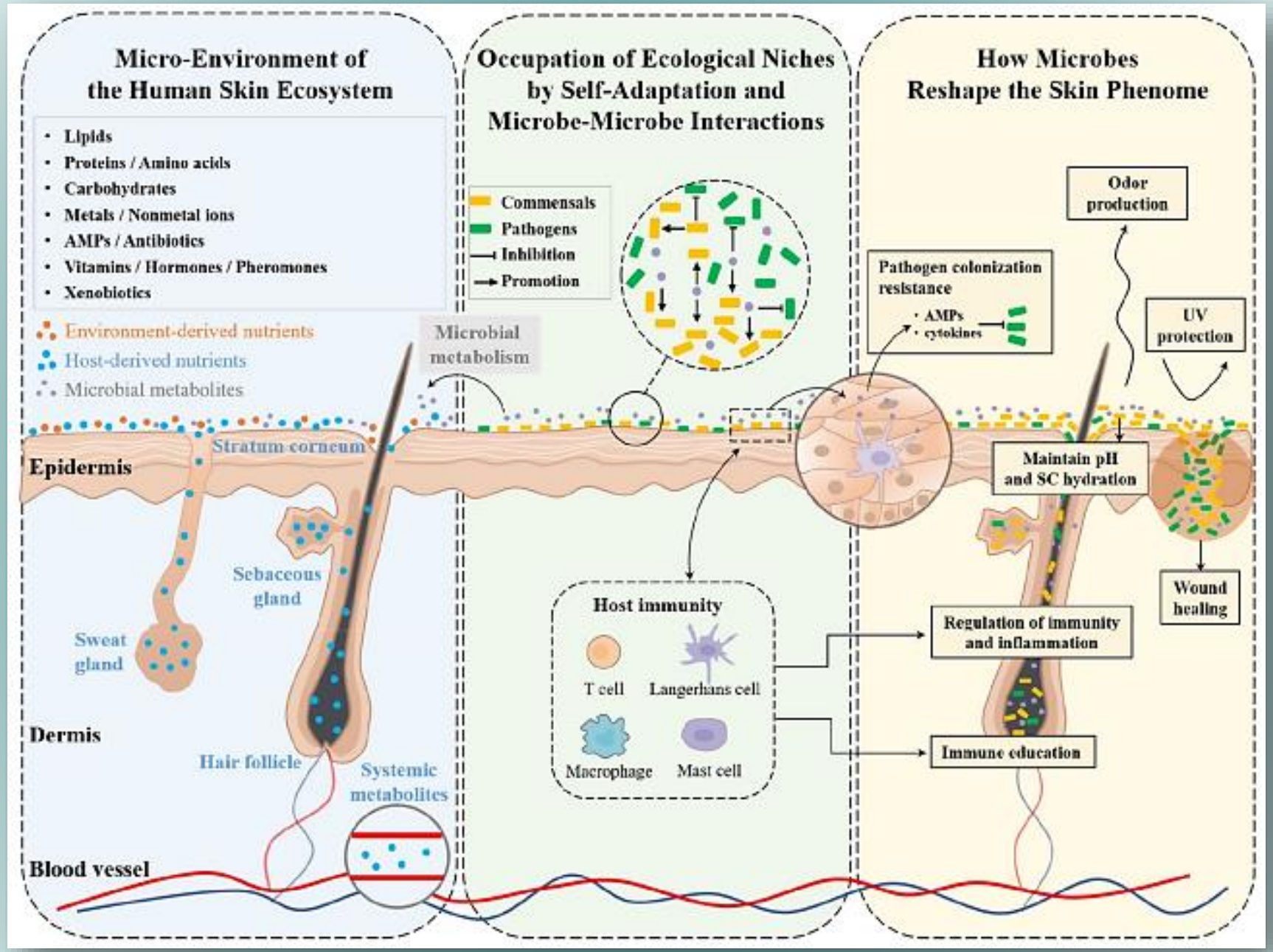


Marin E, et al., 2018

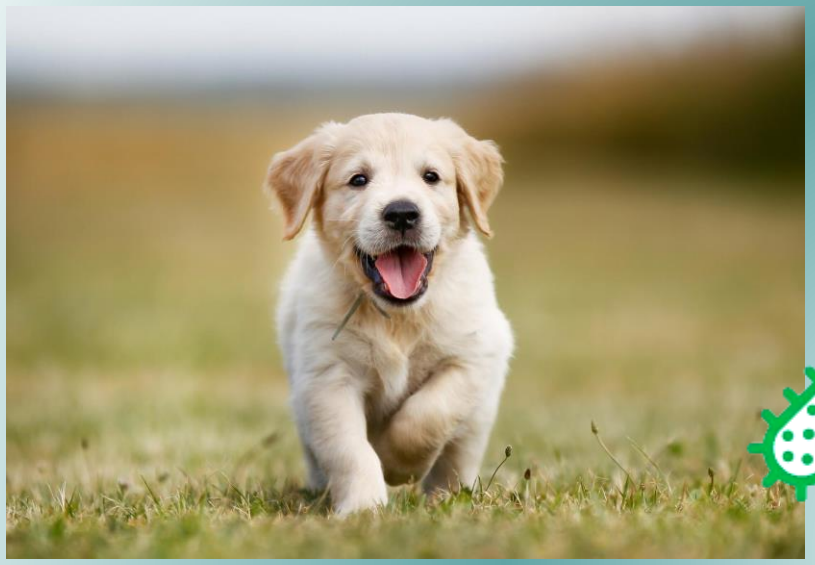
DERMATOVET
CURSOS

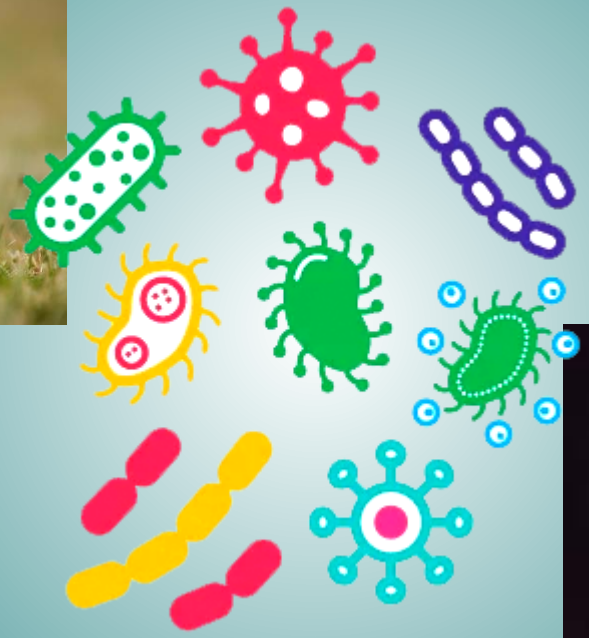


Swaney M, et al., 2021.

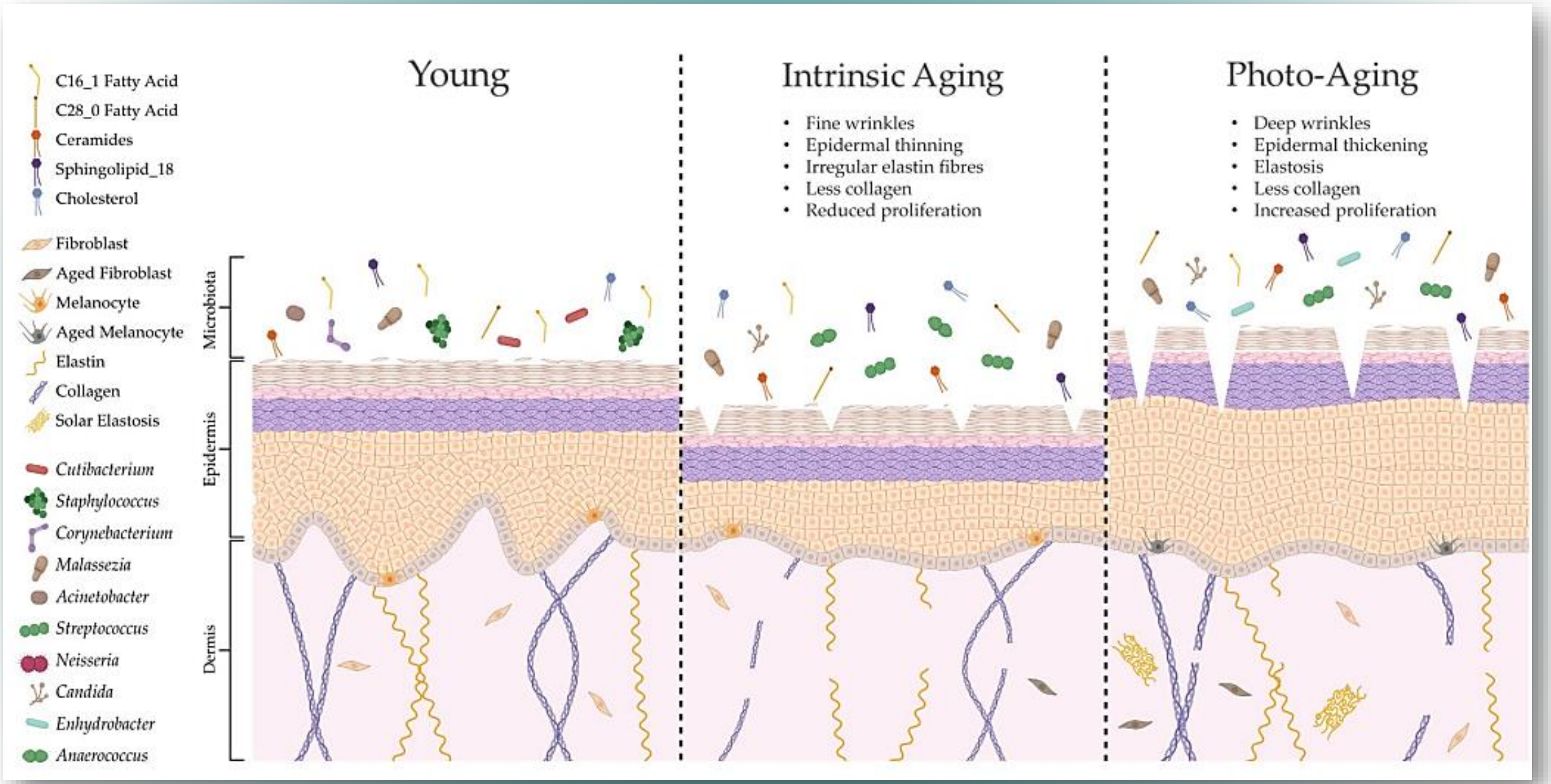


Chen H, et al., 2022.

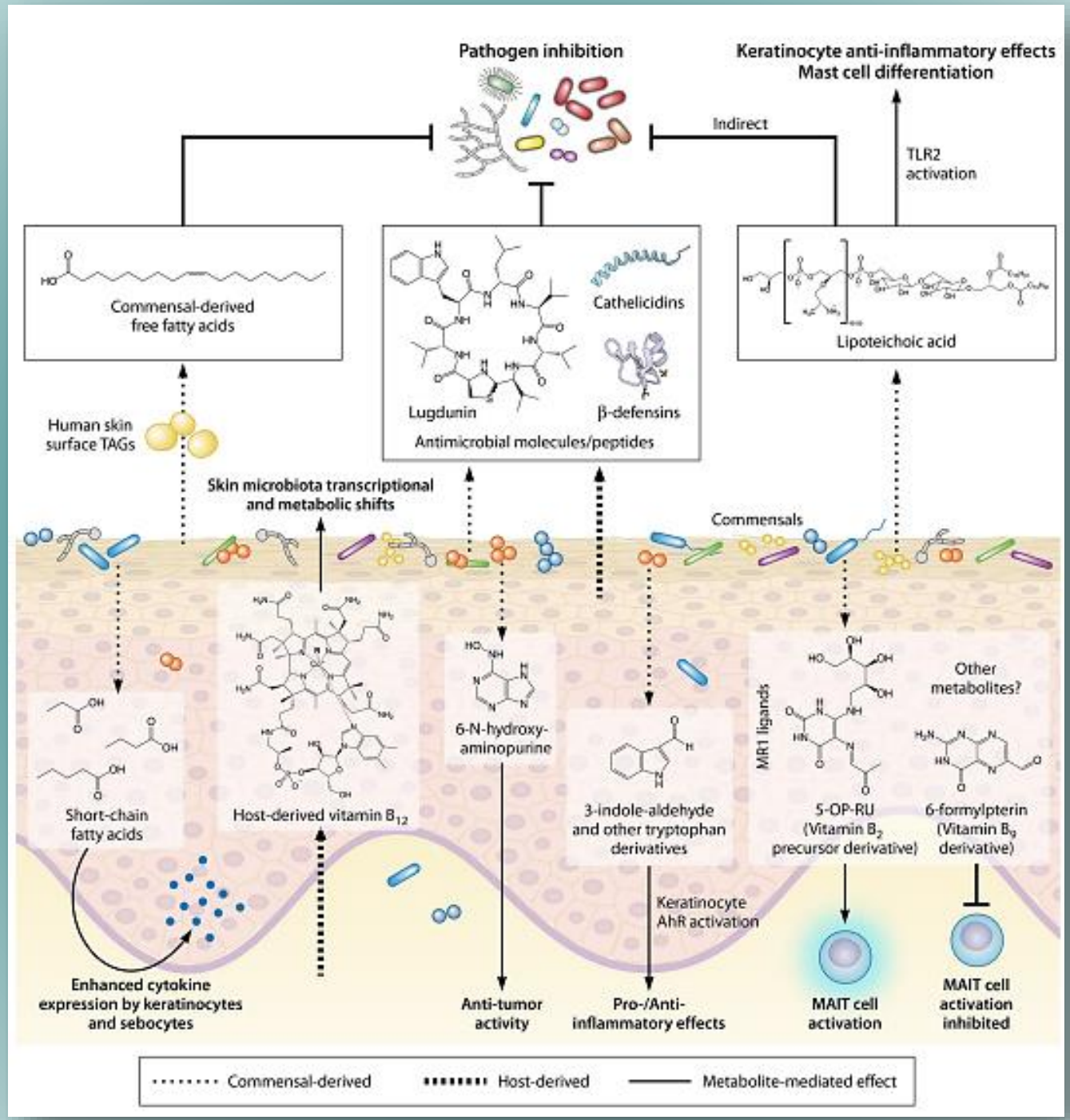




DERMATOVET
CURSOS

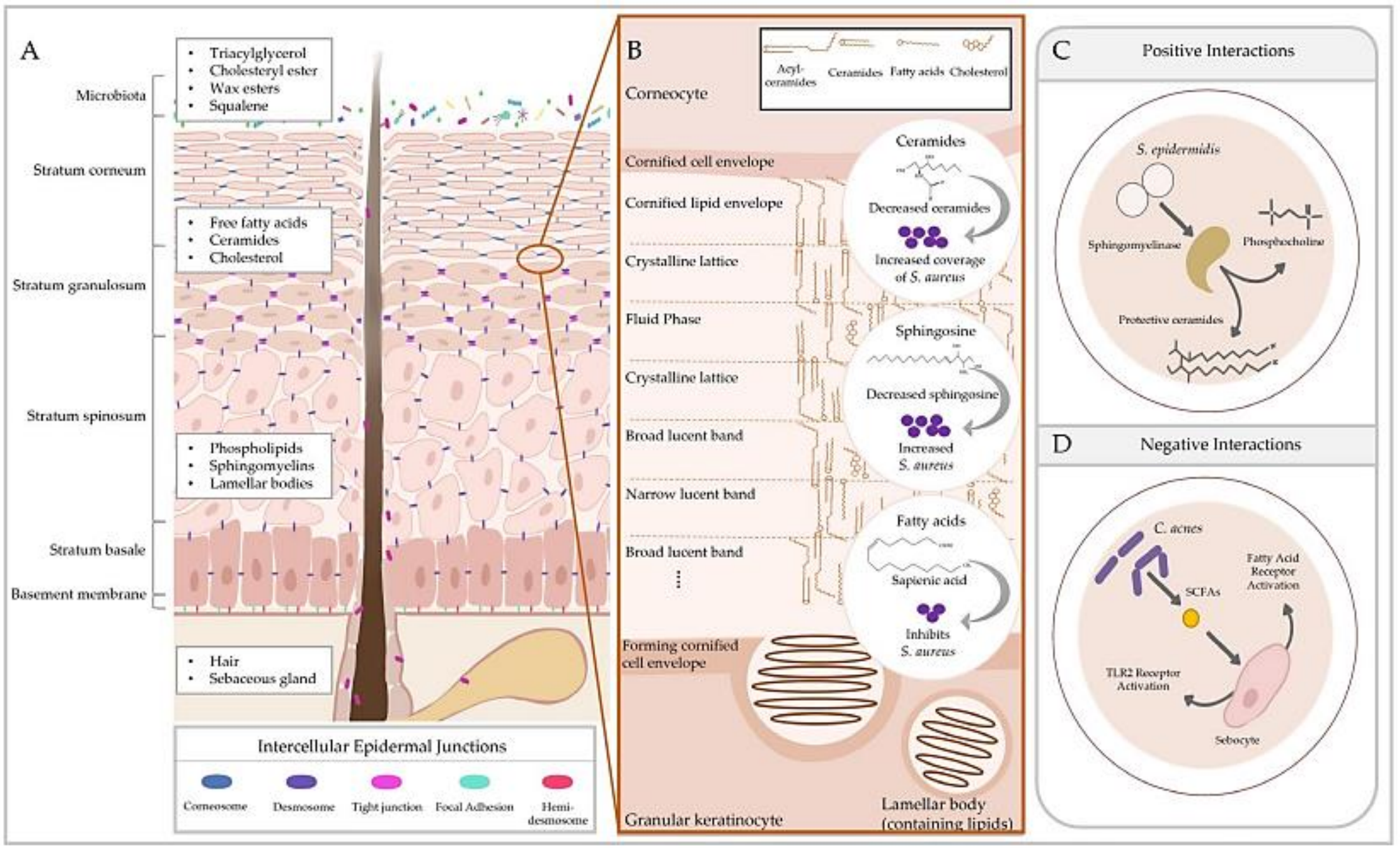


Smyhte P, et al., 2023.

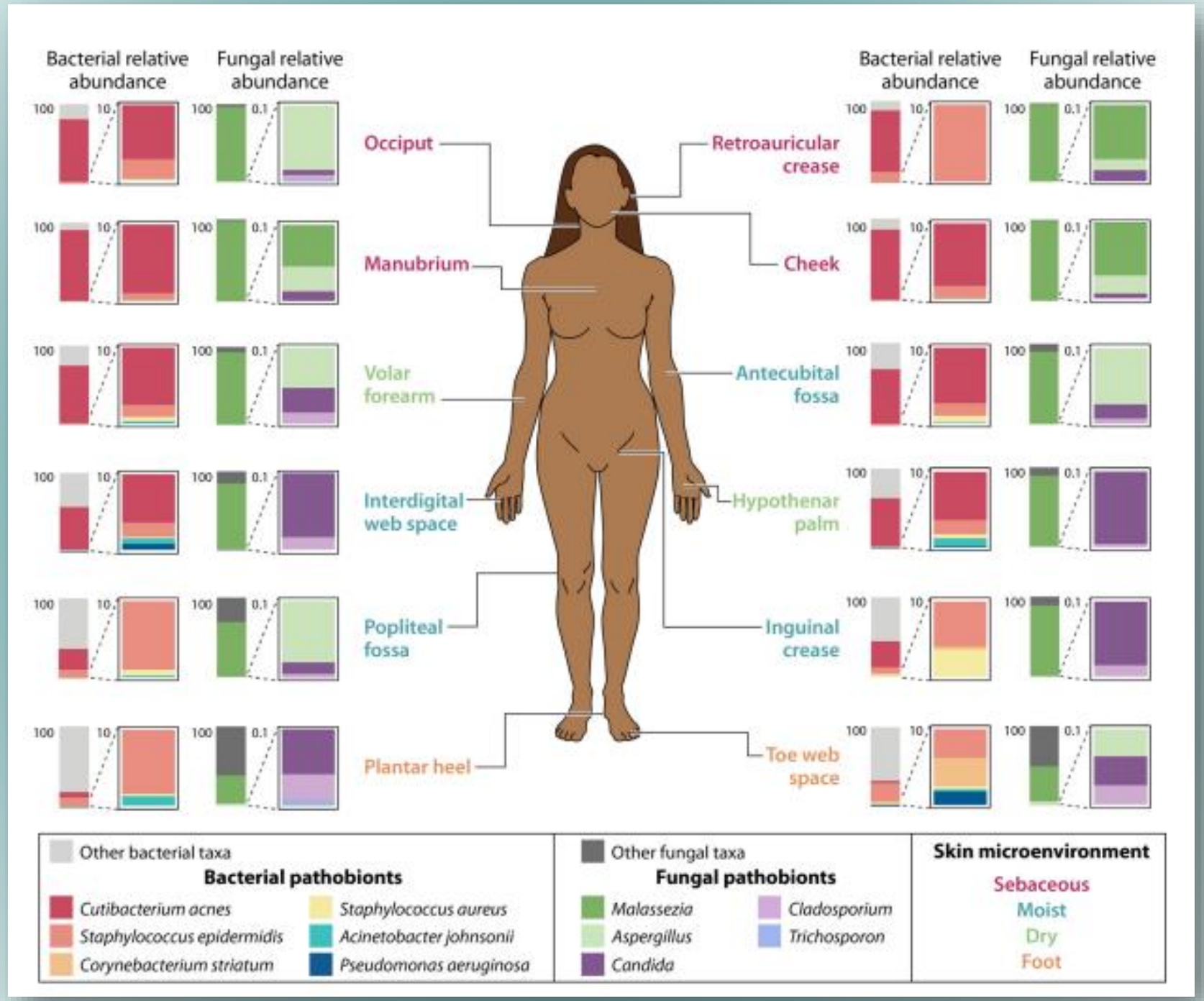


Swaney M, et al., 2021.

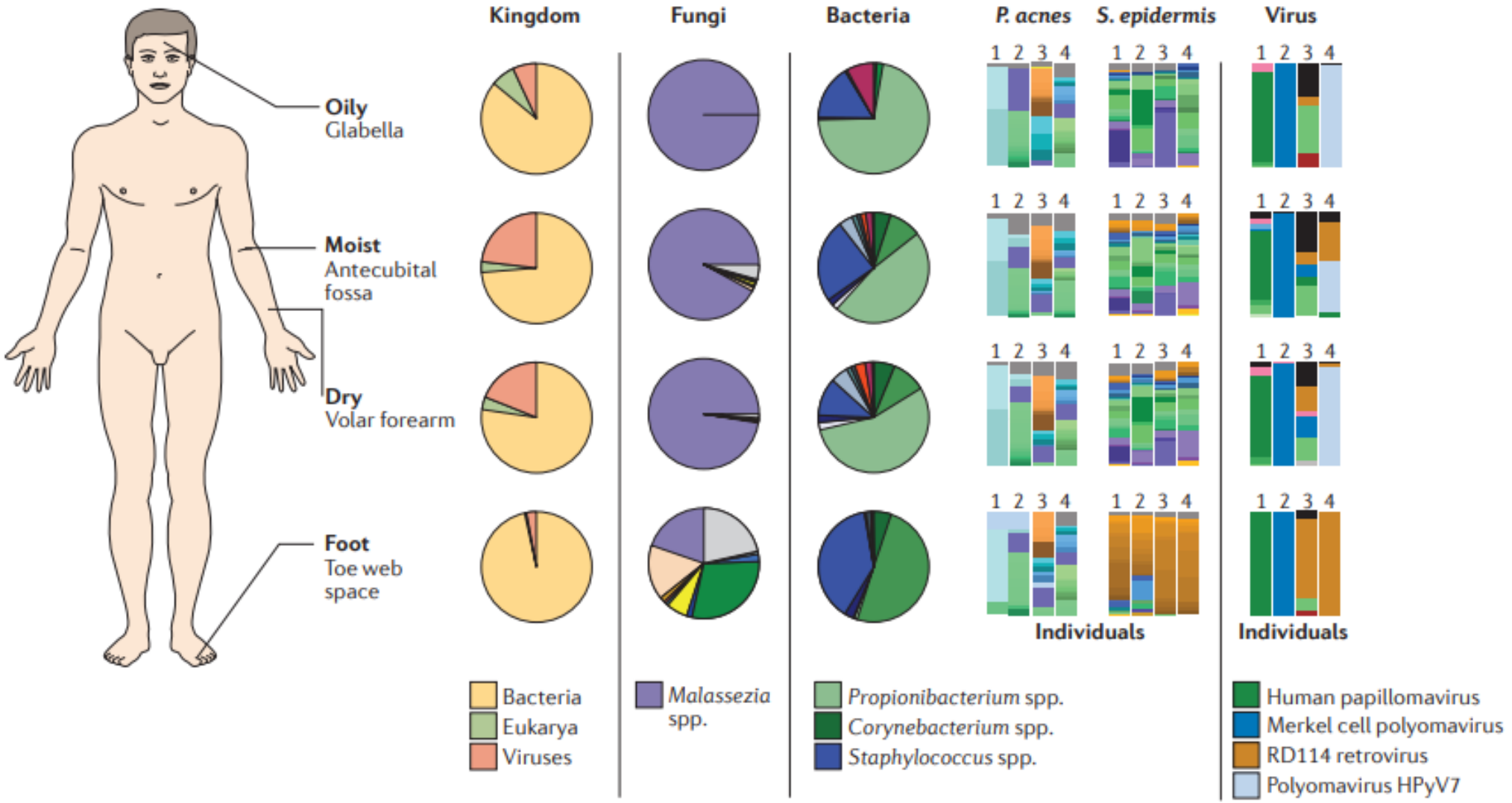
DERMATOVET
CURSOS



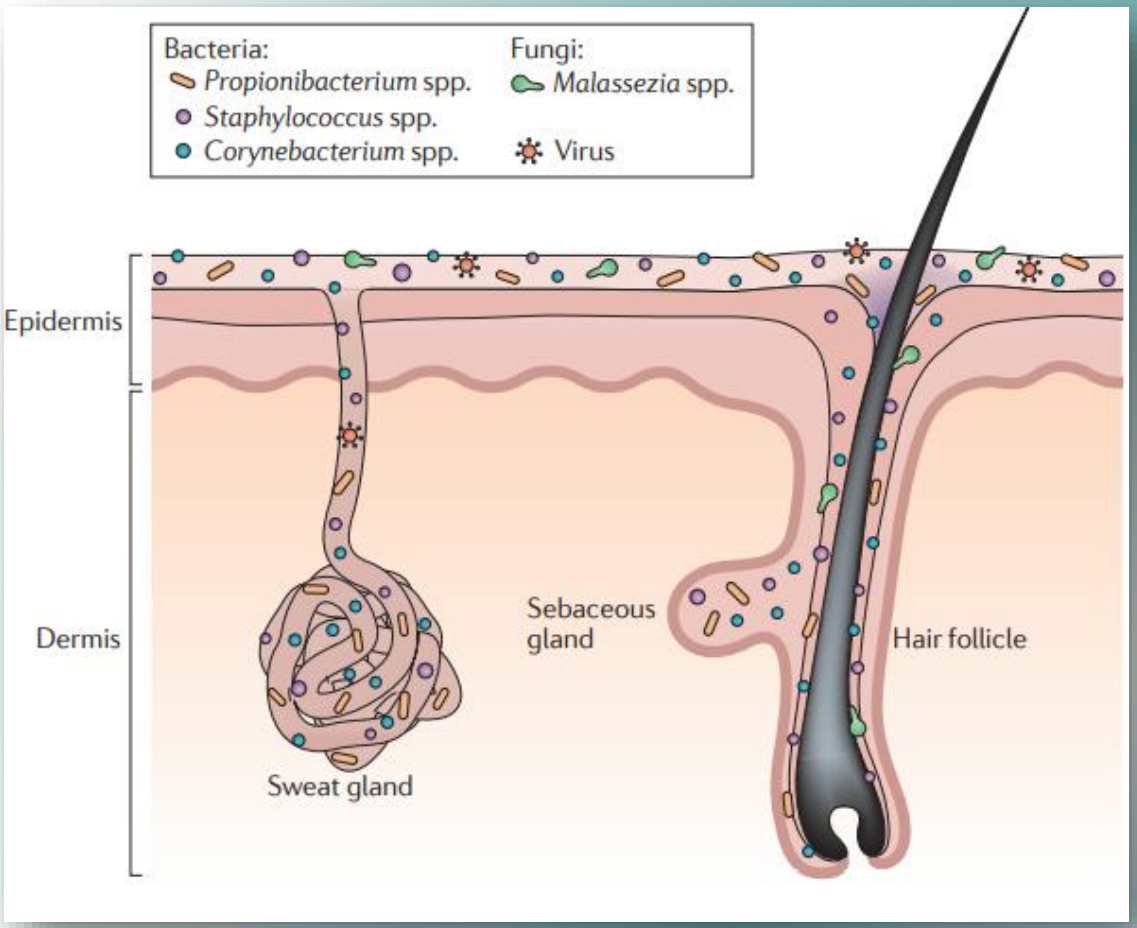
Smyhte P, et al., 2023.



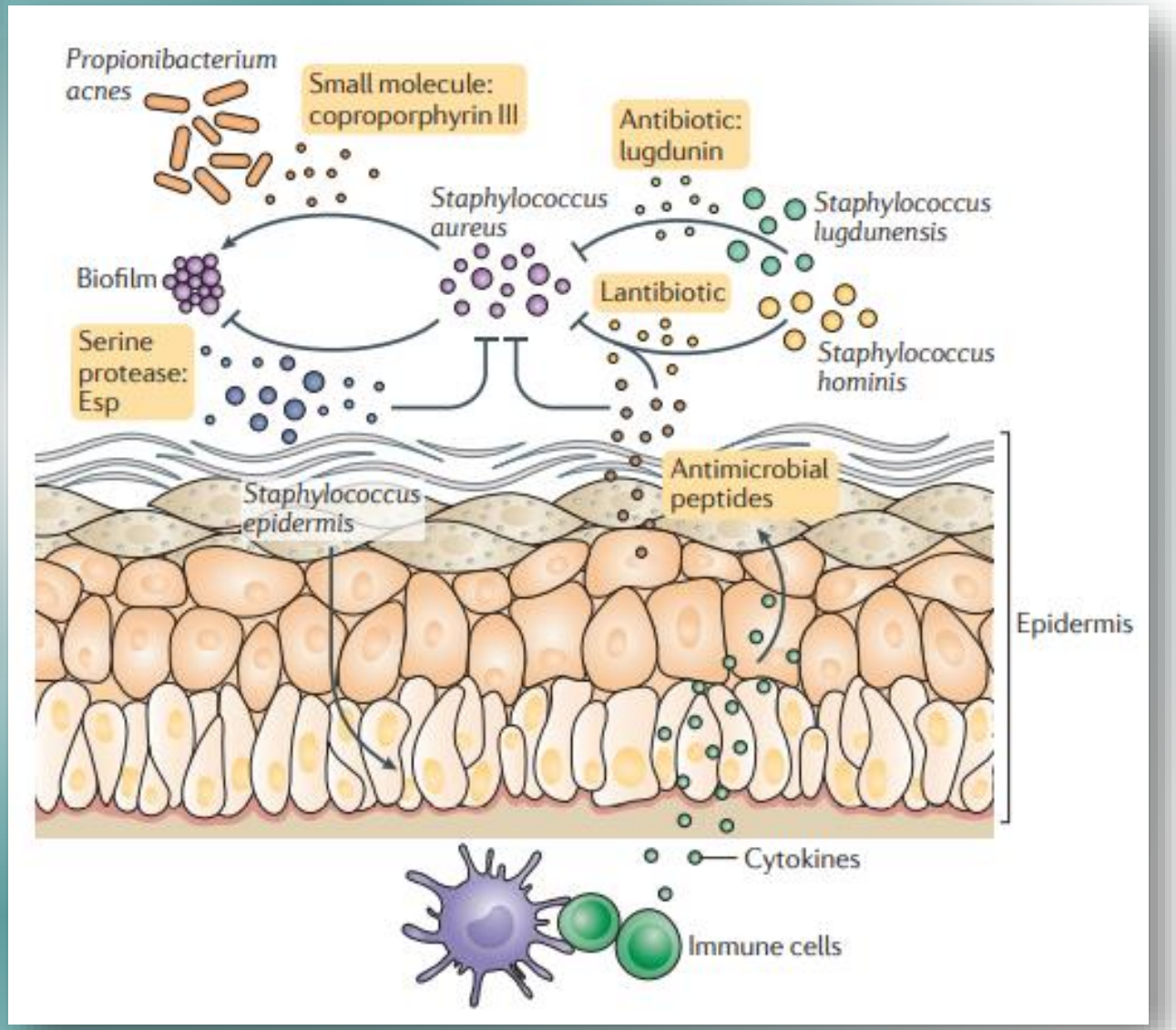
Swaney M, et al., 2021.


Oily
Glabella
Moist
Antecubital fossa
Dry
Volar forearm
Foot
Toe web space
Kingdom
Fungi
Bacteria
P. acnes
S. epidermis
Virus
1 2 3 4
Individuals
Bacteria
Eukarya
Viruses
Malassezia spp.
Propionibacterium spp.
Corynebacterium spp.
Staphylococcus spp.
Human papillomavirus
Merkel cell polyomavirus
RD114 retrovirus
Polyomavirus HPyV7

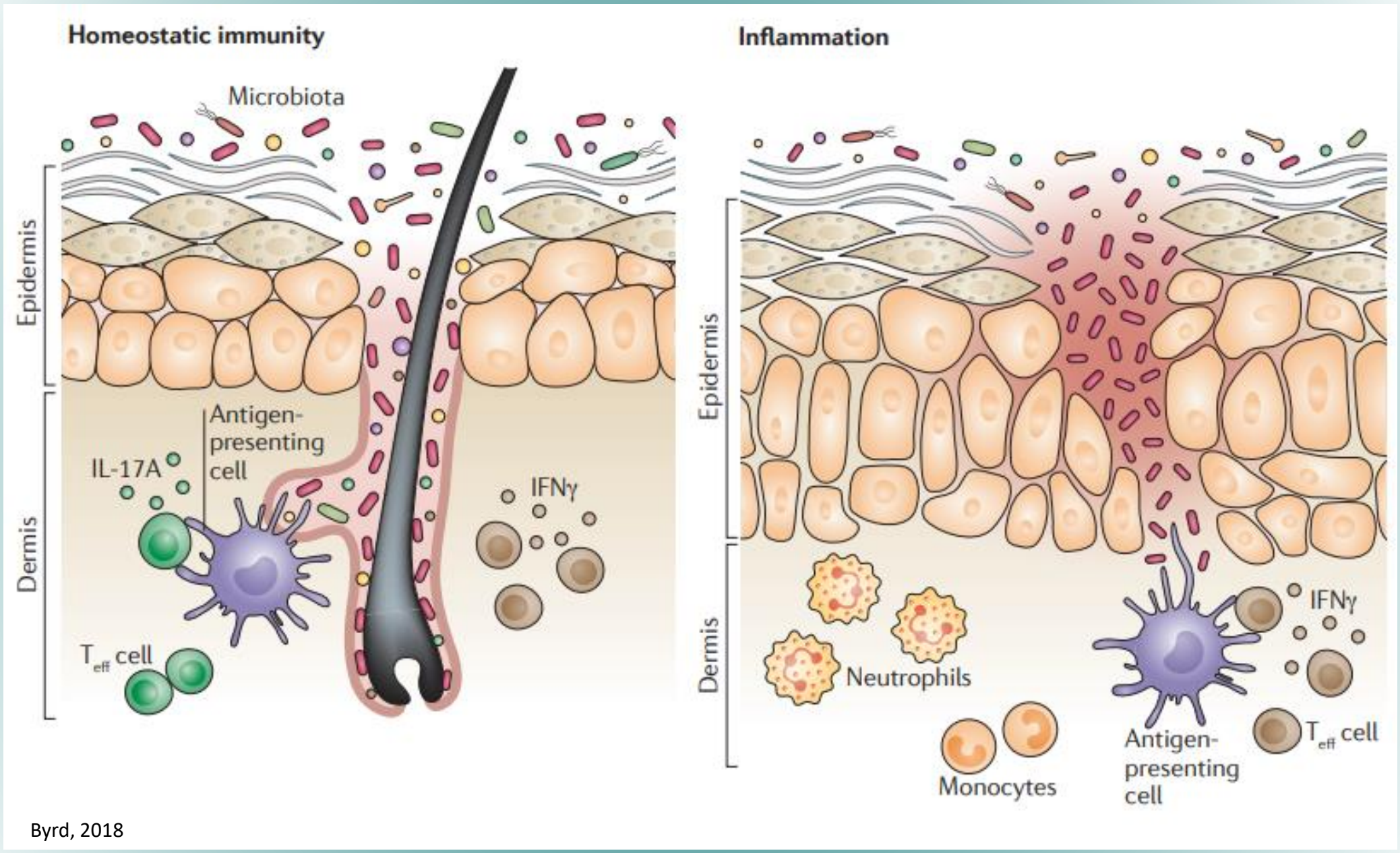
Byrd, 2018



Byrd, 2018



DERMATOVET
CURSOS


Homeostatic immunity
Microbiota
Epidermis
Dermis
Antigen-presenting cell
IL-17A
IFNγ
T$_{eff}$ cell
Inflammation
Epidermis
Dermis
Neutrophils
IFNγ
Monocytes
Antigen-presenting cell
T$_{eff}$ cell

Byrd, 2018

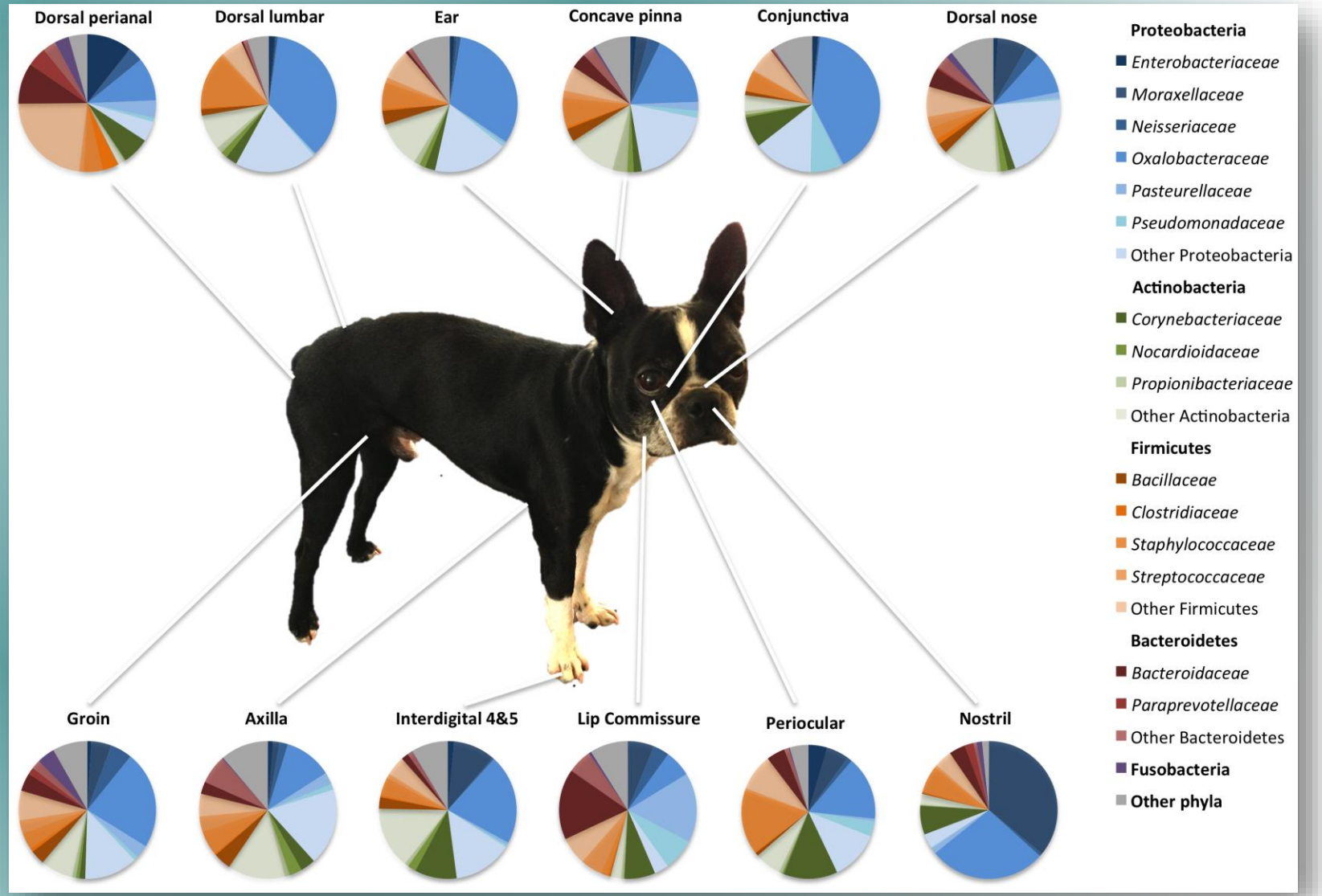
OPEN ACCESS Freely available online

PLOS | ONE

The Skin Microbiome in Healthy and Allergic Dogs

Aline Rodrigues Hoffmann[1*], Adam P. Patterson[2], Alison Diesel[2], Sara D. Lawhon[4], Hoai Jaclyn Ly[1], Christine Elkins Stephenson[3], Joanne Mansell[1], Jörg M. Steiner[3], Scot E. Dowd[5], Thierry Olivry[6], Jan S. Suchodolski[3]

2014 | Volume 9 | Issue 1 | e83197



DERMATOVET CURSOS

AMERICAN SOCIETY FOR MICROBIOLOGY | Microbiology Spectrum

RESEARCH ARTICLE

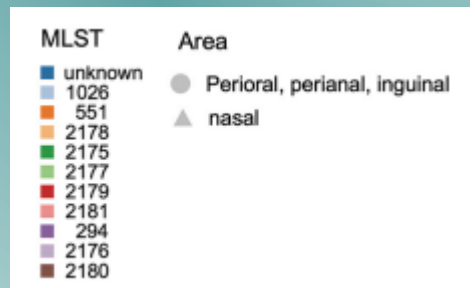
Diverse Populations of *Staphylococcus pseudintermedius* Colonize the Skin of Healthy Dogs

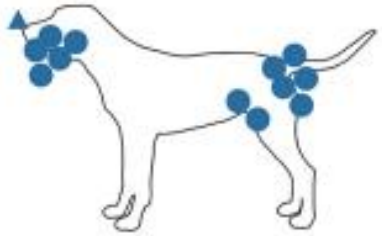
Norma Fàbregas,[a] Daniel Pérez,[b] Joaquim Viñes,[a]* Luís Ferrer,[b] Olga Francino[c]

March/April 2023 Volume 11 Issue 2

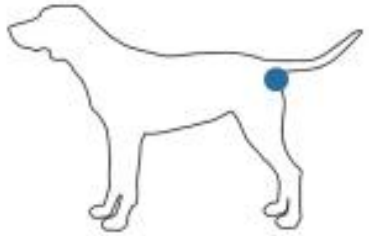
Multilocus sequence typing

18 genomas isolados – 39% MRSP

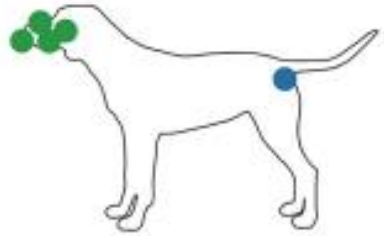




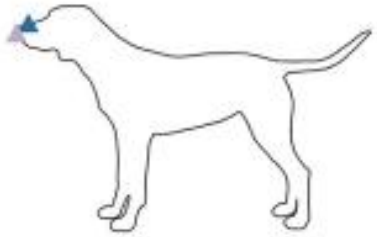
Dog 1.
13 Unknown MLST MRSP



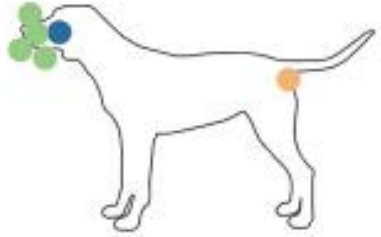
Dog 2.
1 Unknown MLST MSSP



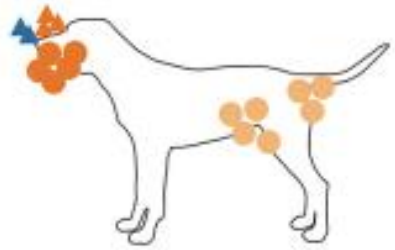
Dog 3.
4 ST2175 MSSP
1 Unknown MSSP



Dog 4.
1 ST2176 MSSP
1 Unknown MSSP

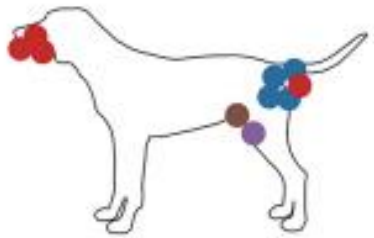


Dog 5.
4 ST2177 MRSP
1 Unknown MRSP
1 ST2178 MSSP

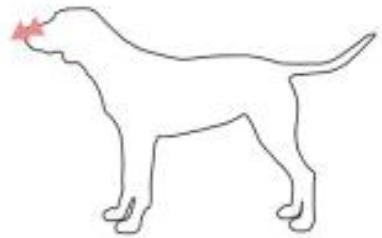


Dog 6.
2 Unknown MRSP
8 ST551 MRSP
7 ST2178 MSSP

Dog 7.
11 ST1026 MRSP



Dog 8.
4 ST2179 MSSP
4 Unknown MSSP
1 ST2180 MSSP
1 ST294 MRSP



Dog 9.
2 ST2181 MSSP

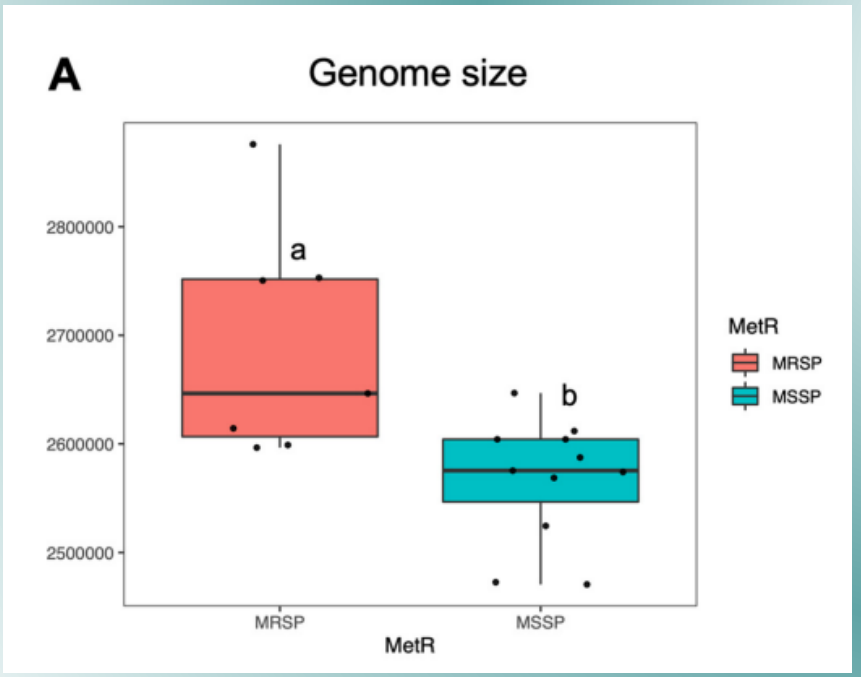
AMERICAN SOCIETY FOR MICROBIOLOGY | Microbiology Spectrum

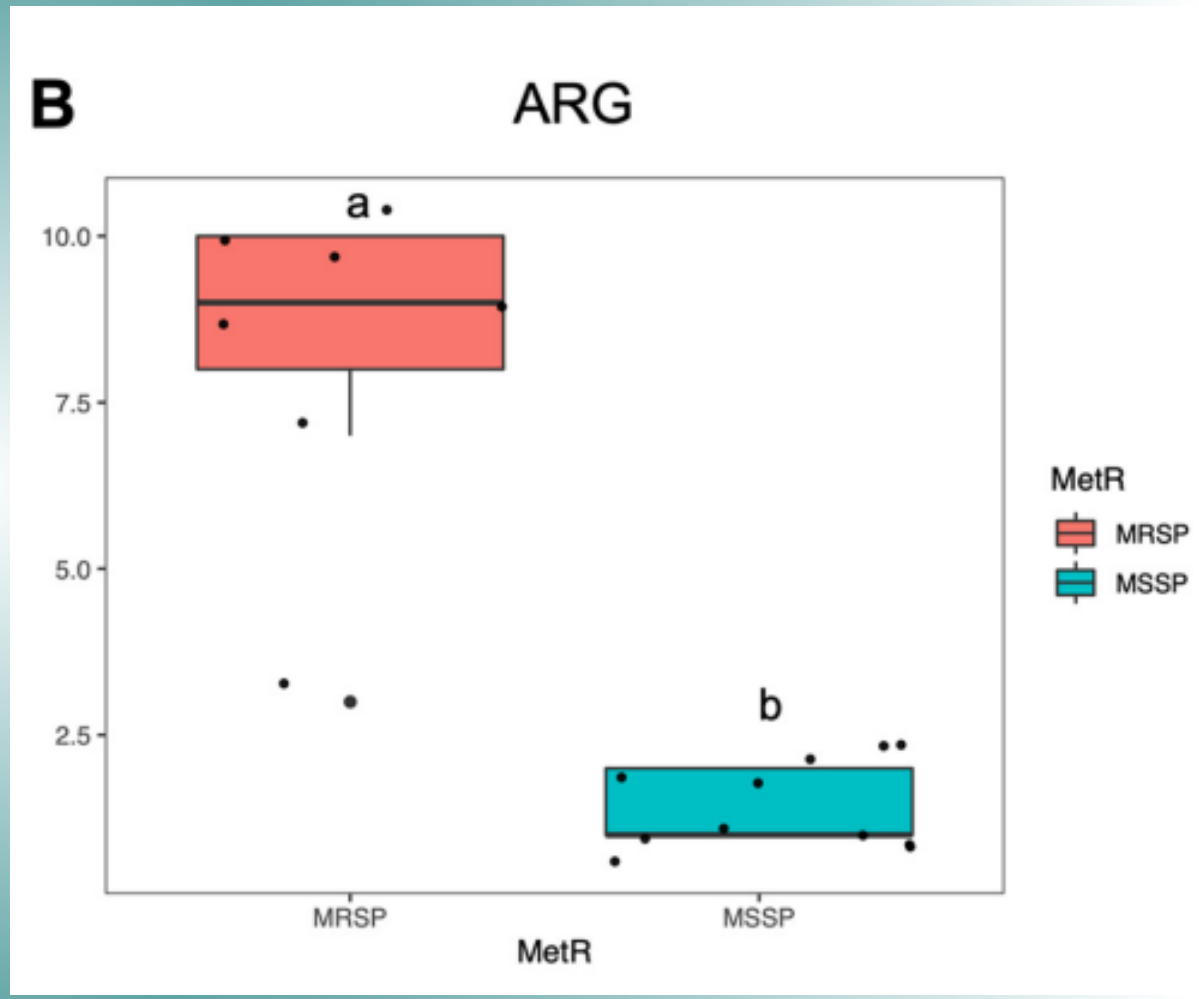
RESEARCH ARTICLE

March/April 2023 Volume 11 Issue 2

Diverse Populations of *Staphylococcus pseudintermedius* Colonize the Skin of Healthy Dogs

Norma Fàbregas,[a] Daniel Pérez,[b] Joaquim Viñes,[a*] Anna Cuscó,[a§] Lourdes Migura-García,[c,d] Lluís Ferrer,[b] Olga Francino[e]





OXFORD FEMS JOURNALS investing in science

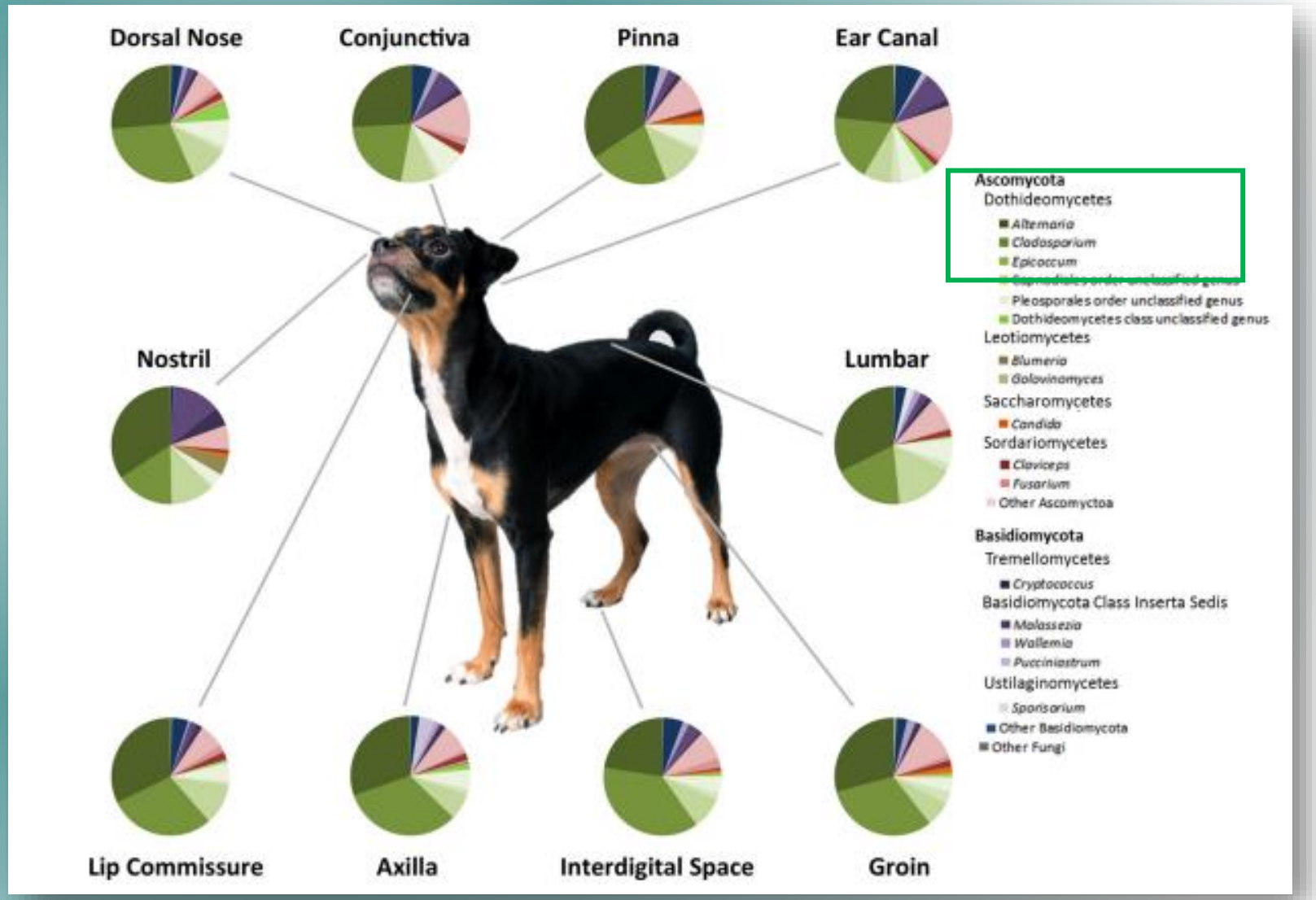
FEMS Microbiology Ecology, 91, 2015, fiv139

doi: 10.1093/femsec/fiv139
Advance Access Publication Date: 5 November 2015
Research Article

RESEARCH ARTICLE

What is living on your dog's skin? Characterization of the canine cutaneous mycobiota and fungal dysbiosis in canine allergic dermatitis

Courtney Meason-Smith[1], Alison Diesel[2], Adam P. Patterson[2], Caitlin E. Older[1], Joanne M. Mansell[1], Jan S. Suchodolski[2] and Aline Rodrigues Hoffmann[1,*]



DERMATOVET CURSOS

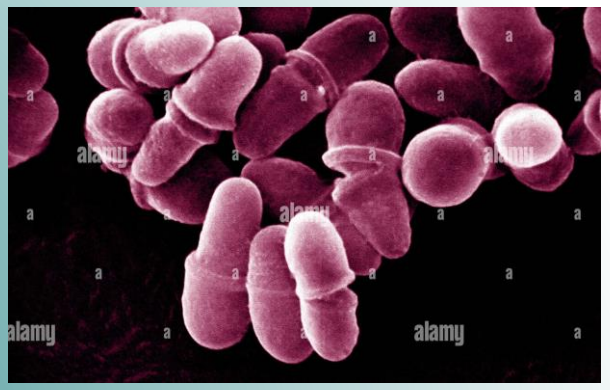
ISHAM
INTERNATIONAL SOCIETY FOR HUMAN AND ANIMAL MYCOLOGY

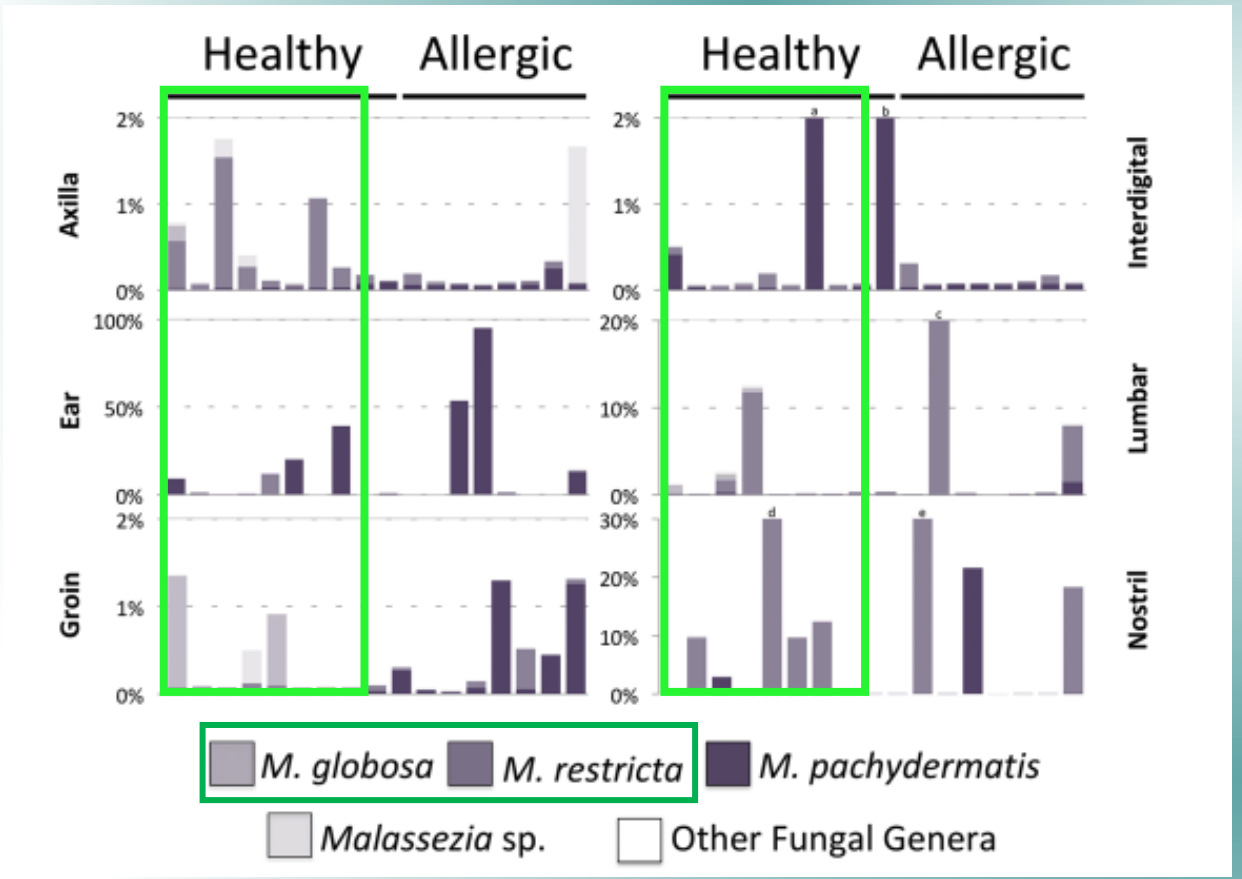
Medical Mycology, 2019, 0, 1–10
doi:10.1093/mmy/myz118
Advance Access Publication Date: 0 2019
Original Article

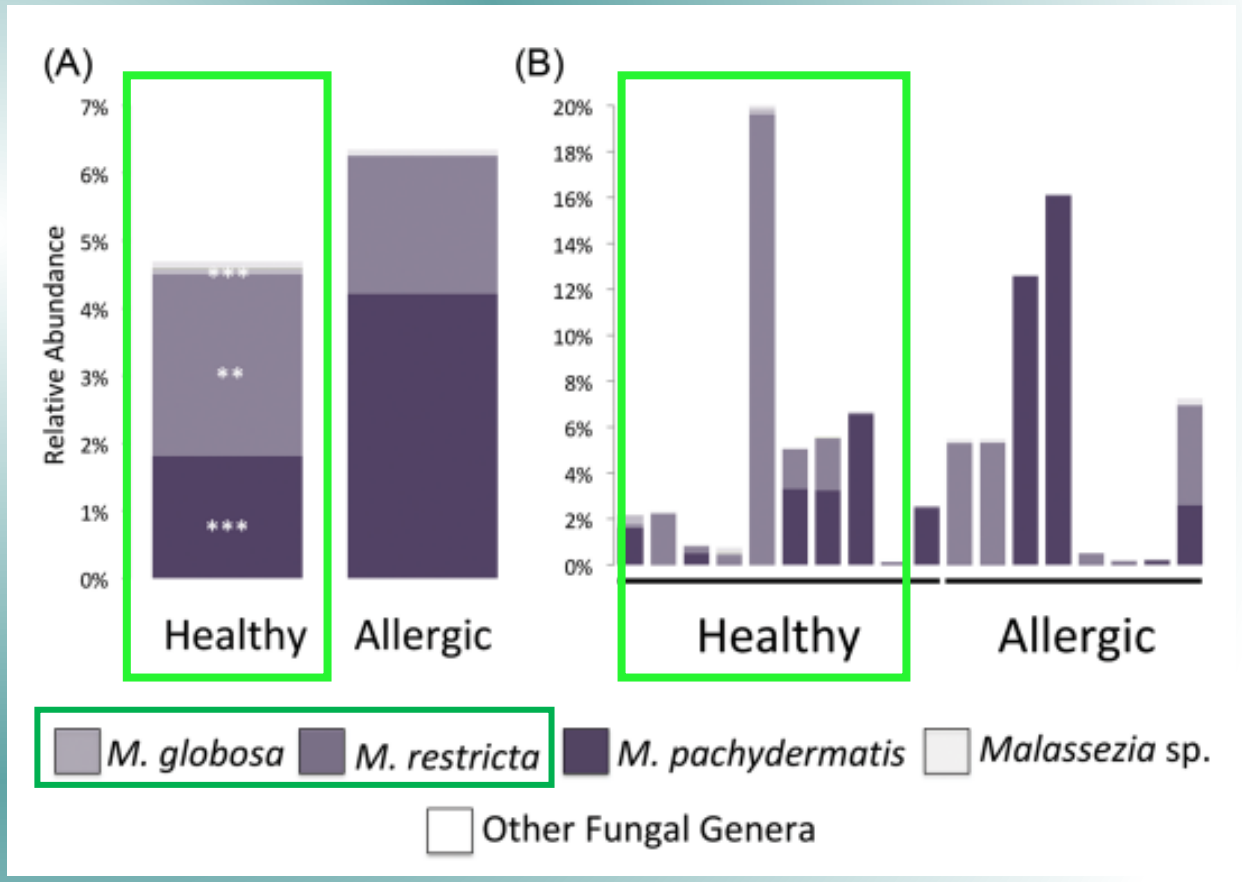
Original Article

Malassezia species dysbiosis in natural and allergen-induced atopic dermatitis in dogs

Courtney Meason-Smith[1,*], Thierry Olivry[2], Sara D. Lawhon[1] and Aline Rodrigues Hoffmann[1]





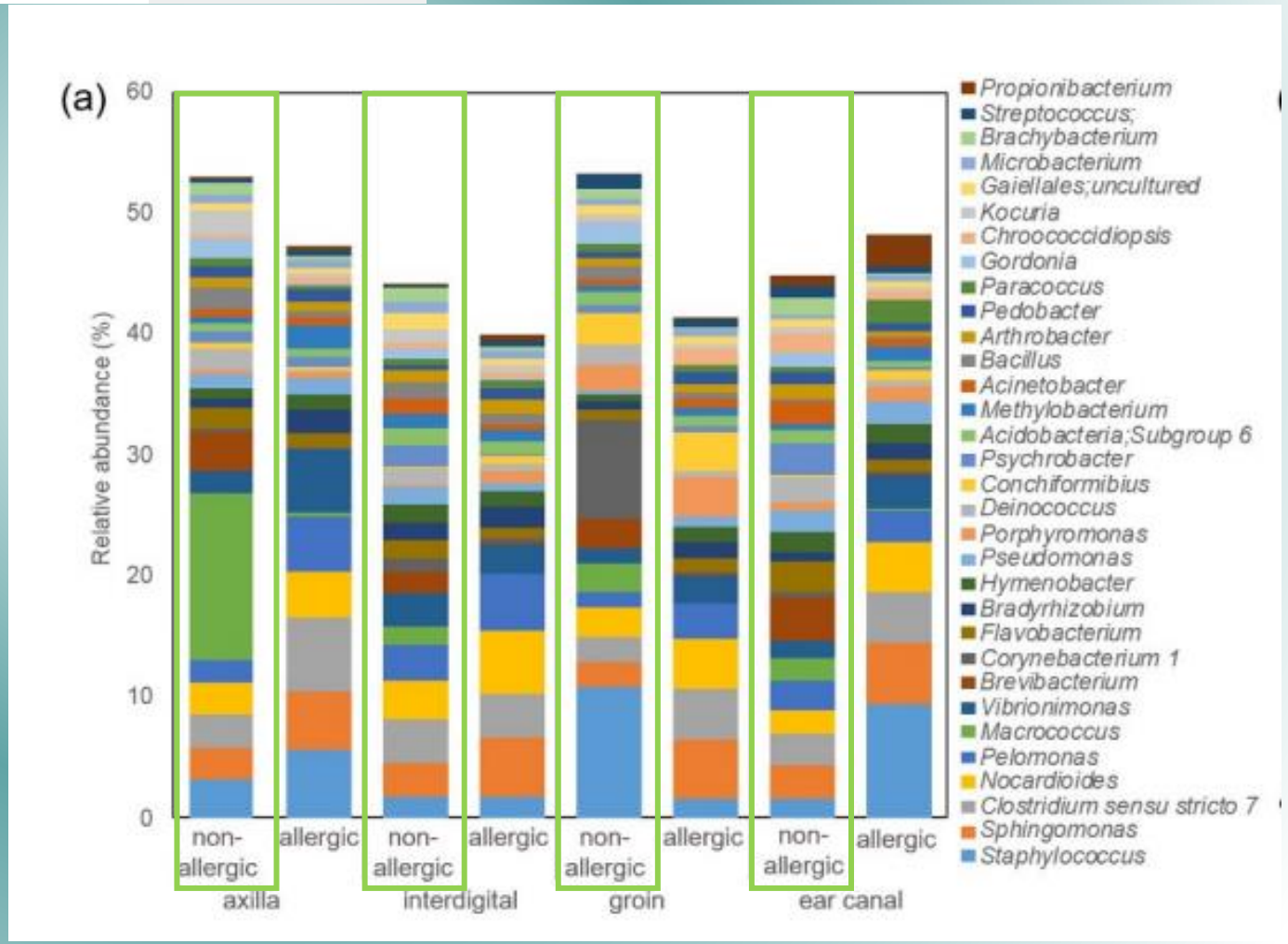


Description and comparison of the skin and ear canal microbiota of non-allergic and allergic German shepherd dogs using next generation sequencing

Neoklis Apostolopoulos, Stefanie P. Glaeser, Ruchi Bagwe, Stefan Janssen, Ursula Mayer, Christa Ewers, Peter Kämpfer, Reto Neiger, Nina Thom

Published: May 3, 2021 • https://doi.org/10.1371/journal.pone.0250695

PLOS ONE



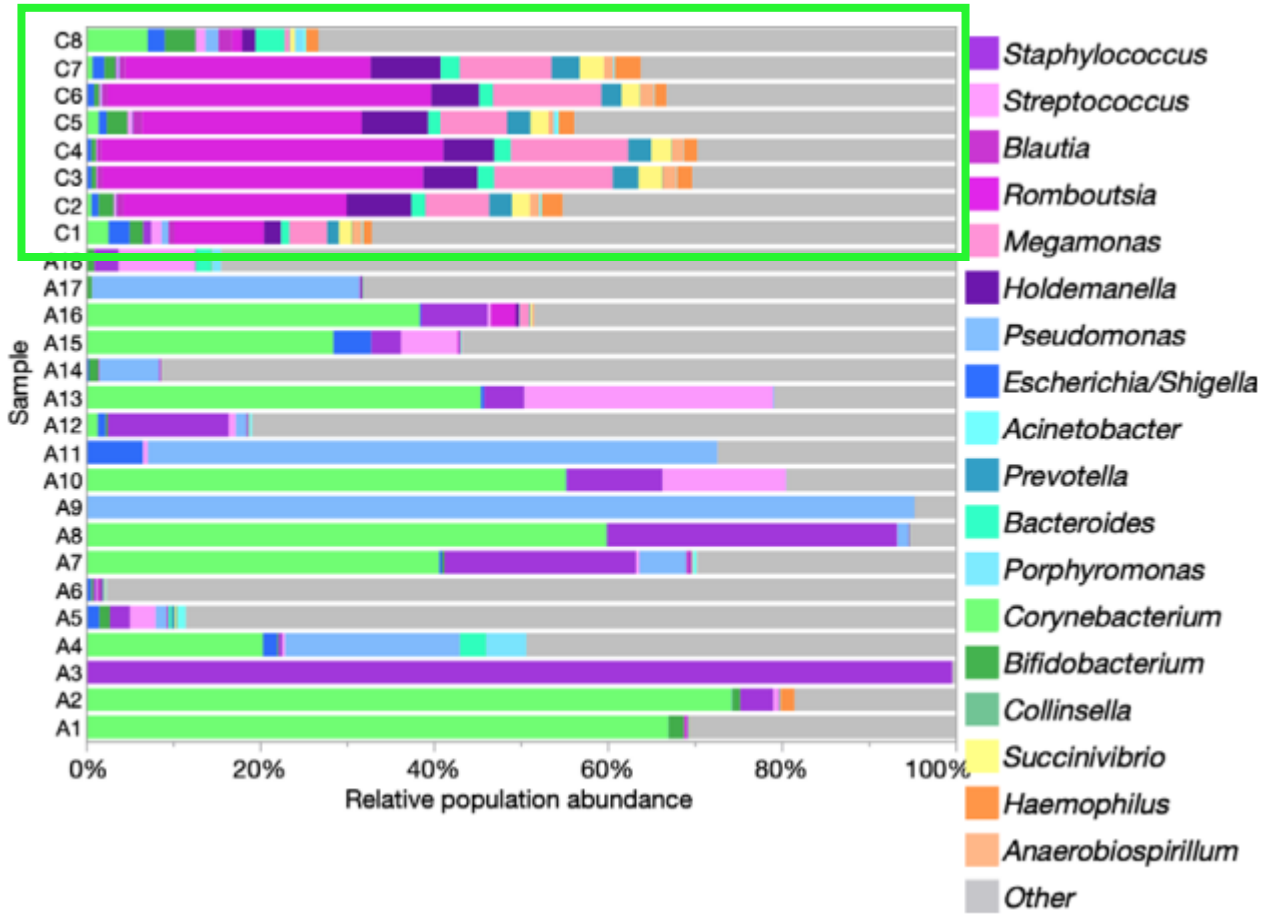
DERMATOVET CURSOS

Veterinary Dermatology

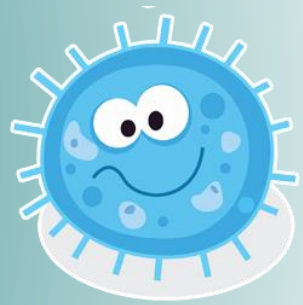
Vet Dermatol 2019 DOI: 10.1111/vde.12734

Characterization of the otic bacterial microbiota in dogs with otitis externa compared to healthy individuals

Juraj Korbelik*, Ameet Singh†, Joyce Rousseau* and J. Scott Weese*



Phylum:
Firmicutes
Proteobacteria
Bacteroidetes
Actinobacteria



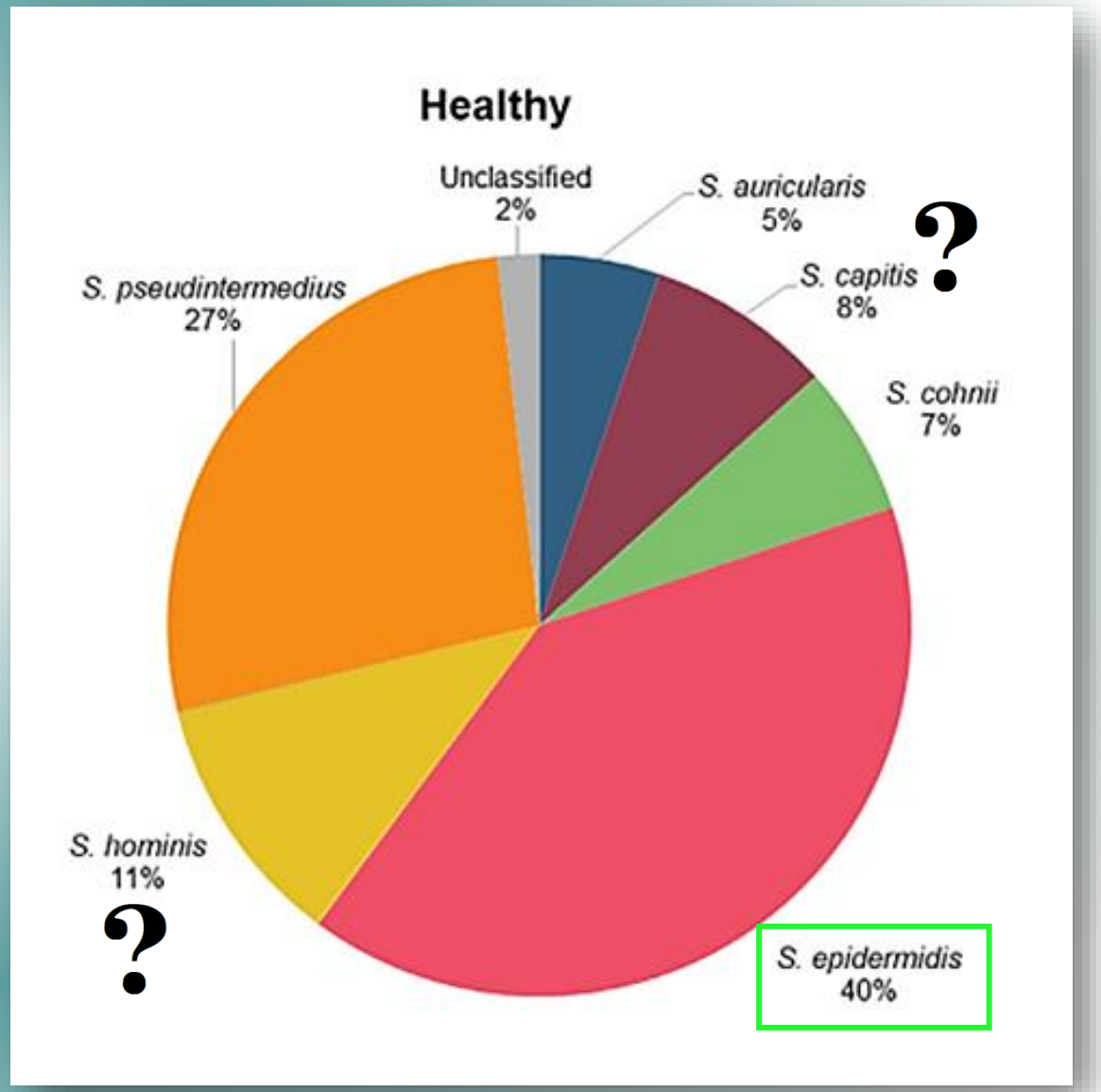
Gênero:
Porphyromonas
Escherichia

Veterinary Dermatology

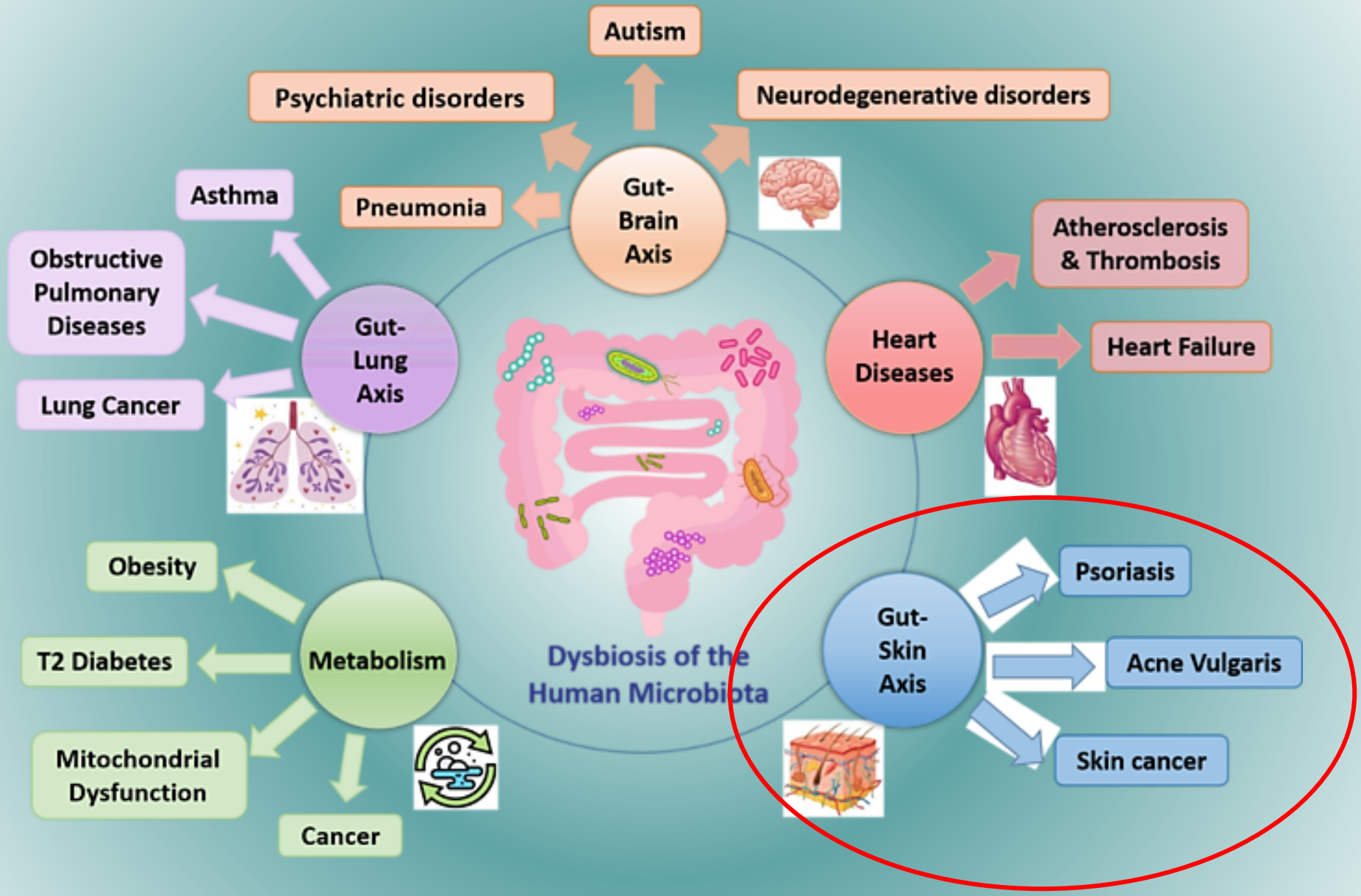
Vet Dermatol 2020 DOI: 10.1111/vde.12885

Characterization of staphylococcal communities on healthy and allergic feline skin

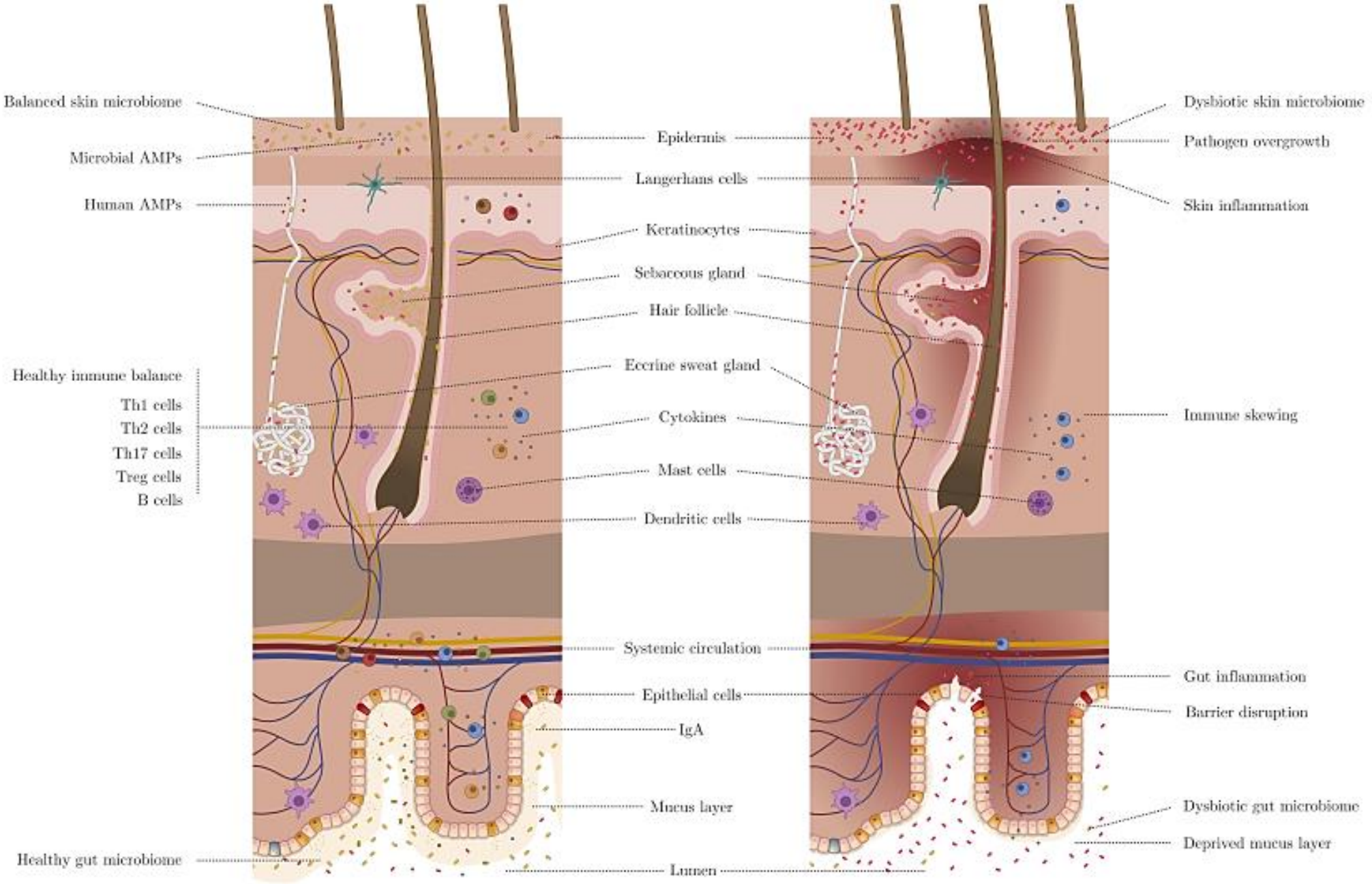
Caitlin E. Older*, Alison B. Diesel†, Jill M. Starks*, Sara D. Lawhon* and Aline Rodrigues Hoffmann*



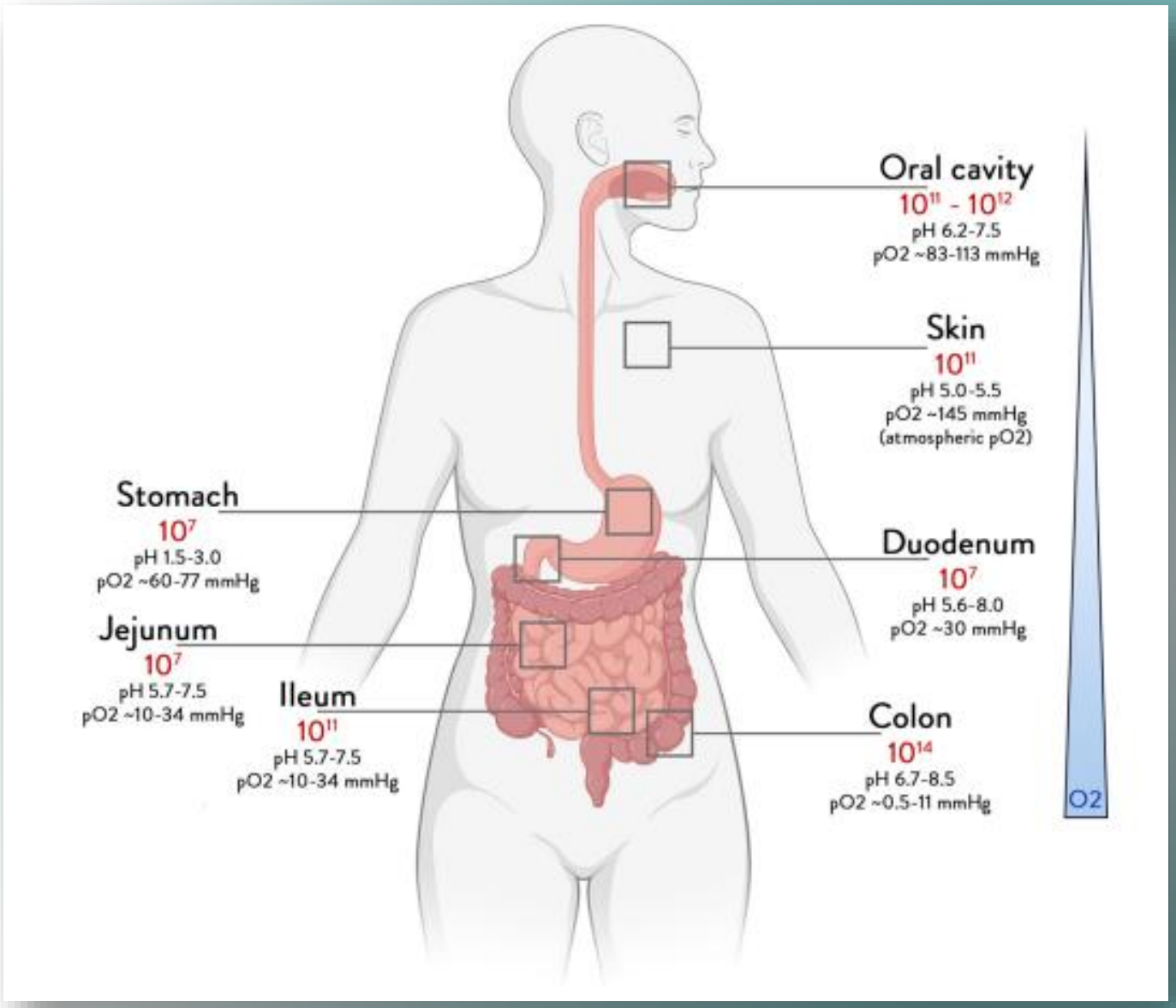
DERMATOVET
CURSOS

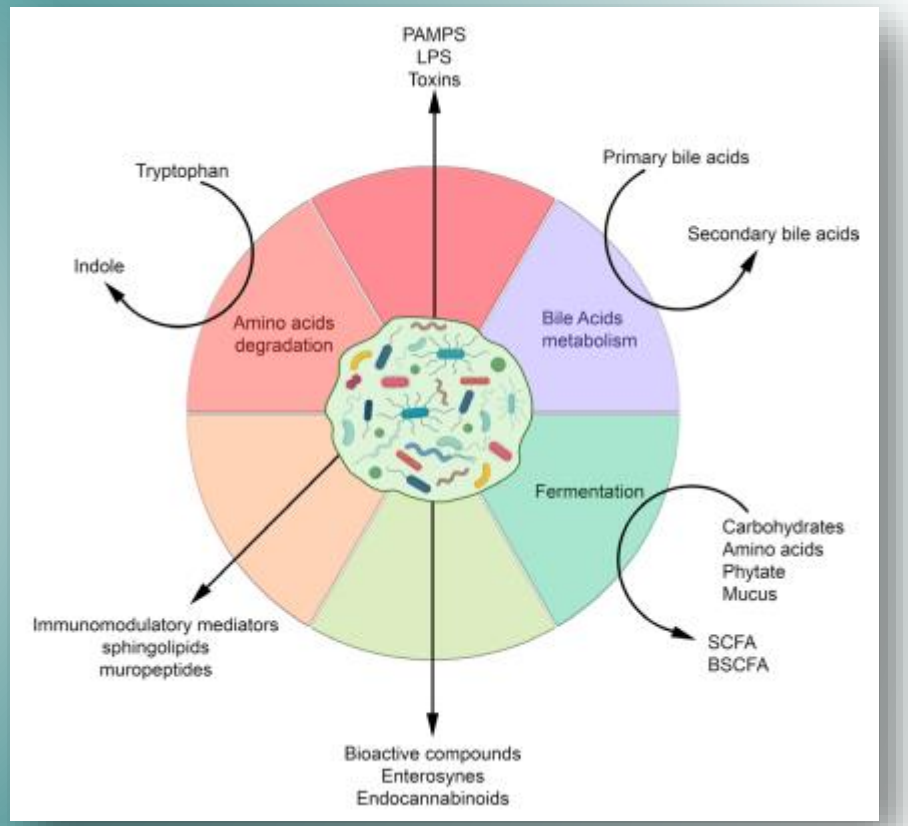


Gebraye, 2022

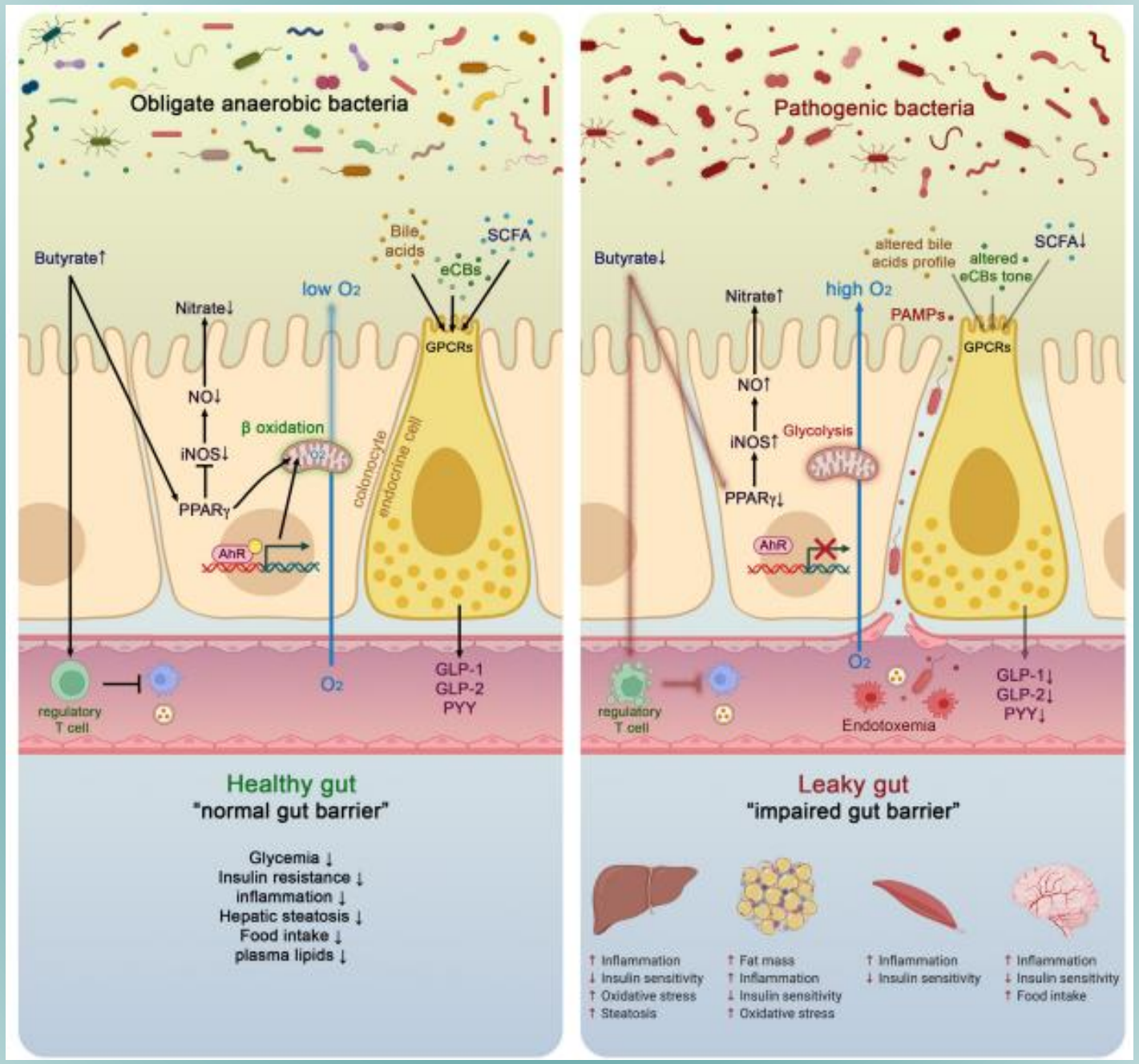


De Pessemier, 2021





Willem M de Vos et al. Gut microbiome and health: mechanistic insights. Recent advances in basic science, 2022.

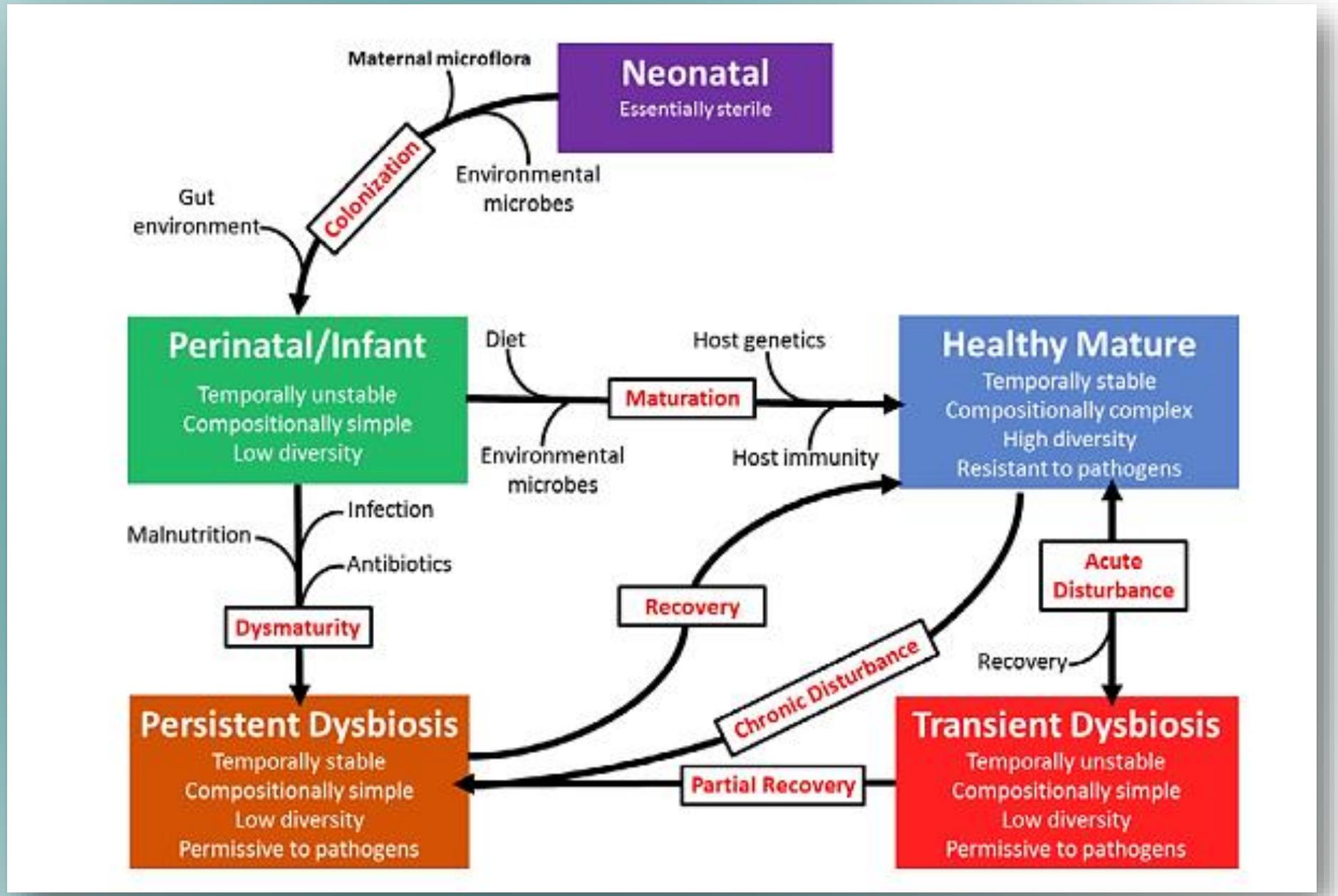


Willem M de Vos et al. Gut microbiome and health: mechanistic insights. Recent advances in basic science, 2022.

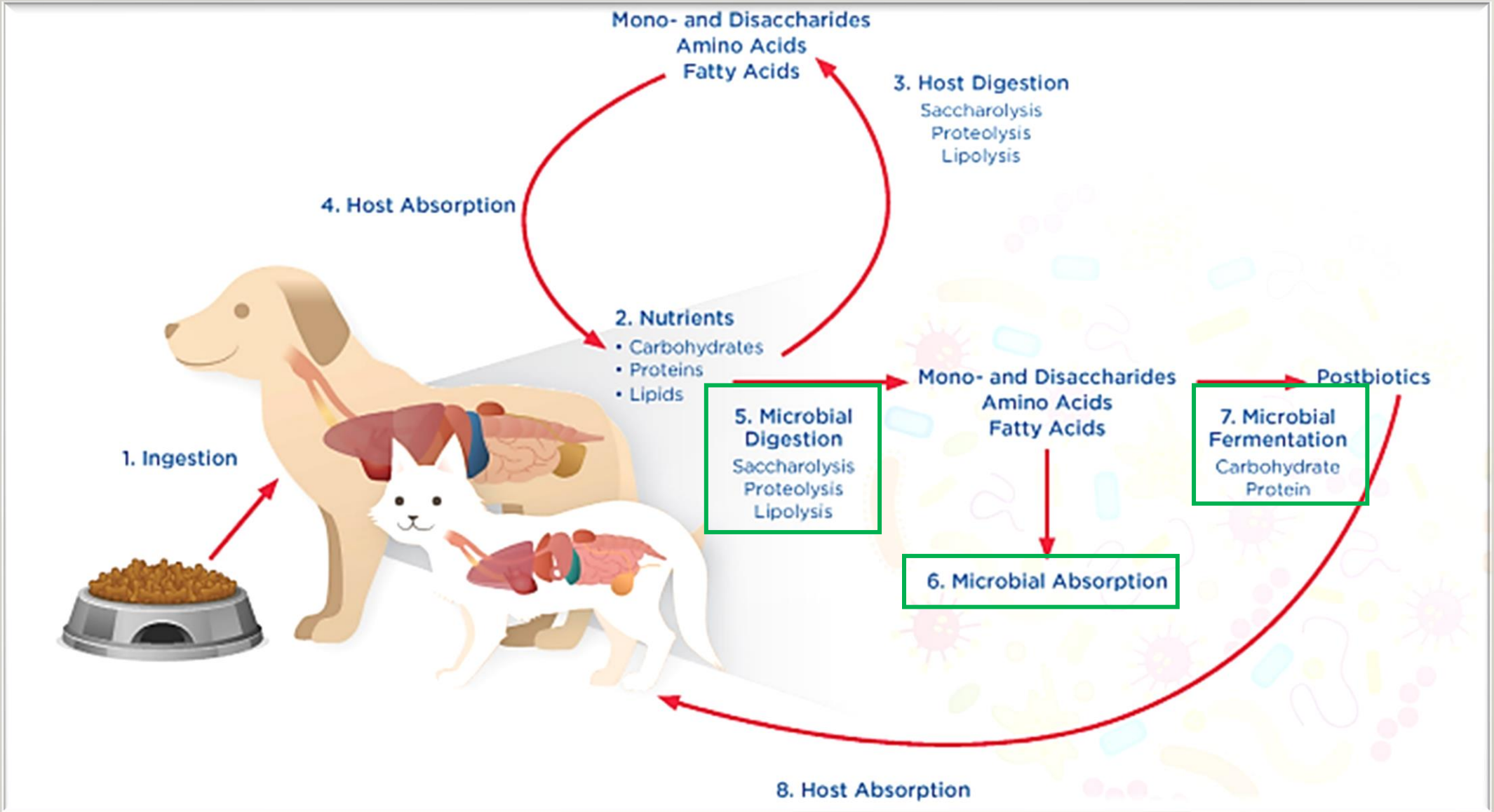
Journal of Veterinary Internal Medicine
ACVIM
Open Access
Review
J Vet Intern Med 2018;32:9–25

The Gastrointestinal Microbiome: A Review

P.C. Barko, M.A. McMichael, K.S. Swanson, and D.A. Williams



Phylum	Class	Order	Family	Genus
Firmicutes	*Clostridia*	*Clostridiales*	*Clostridiaceae*	*Clostridium*
			Ruminococcaceae	*Ruminococcus*
				Faecalibacterium
			Eubacteraceae	*Eubacterium*
	Bacilli	*Lactobacilliales*	*Lactobacillaceae*	*Lactobacillus*
			Streptococcaceae	*Streptococcus*
				Enterococcus
	Erysiphelotrichia	*Erisophelotrichales*	*Erysiphelotrichaceae*	*Turicibacter*
				Catenibacterium
				Coprobacillus
				Allobaculum
	Negativicutes	*Selenomonadales*	*Selenomonadaceae*	*Megamonas*
		Veillonellales	*Veillonellaceae*	*Dialister*
				Megasphaera
				Veillonella
Bacteroidetes	*Bacteroidia*	*Bacteroidales*	*Prevotellaceae*	*Prevotella*
			Bacteroidaceae	*Bacteroides*
Actinobacteria	*Coriobacteriia*	*Coriobacteriales*	*Coriobacteriaceae*	*Collinsella*
			Atopobiaceae	*Olsenella*
		Eggerthellales	*Eggerthellaceae*	*Slackia*
				Eggerthella
	Actinobacteria	*Bifidobacteriales*	*Bifidobacteriaceae*	*Bifidobacterium*
Fusobacteria	*Fusobacteriia*	*Fusobacteriales*	*Fusobacteriaceae*	*Fusobacterium*
Proteobacteria	*Gammaproteobacteria*	*Enterobacteriales*	*Enterobacteraceae*	*Escherichia*
				Shigella
		Aeromonadales	*Succinivibrionaceae*	*Succinivibrio*
				Anaerobiospirillum



Wernimont et al. The Effects of Nutrition on the Gastrointestinal Microbiome of Cats and Dogs: Impact on Health and Disease. Frontiers in Microbiology 2020; doi: 10.3389/fmicb.2020.01266

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Animals **2022**, *12*, 2377. https://doi.org/10.3390/ani12182377

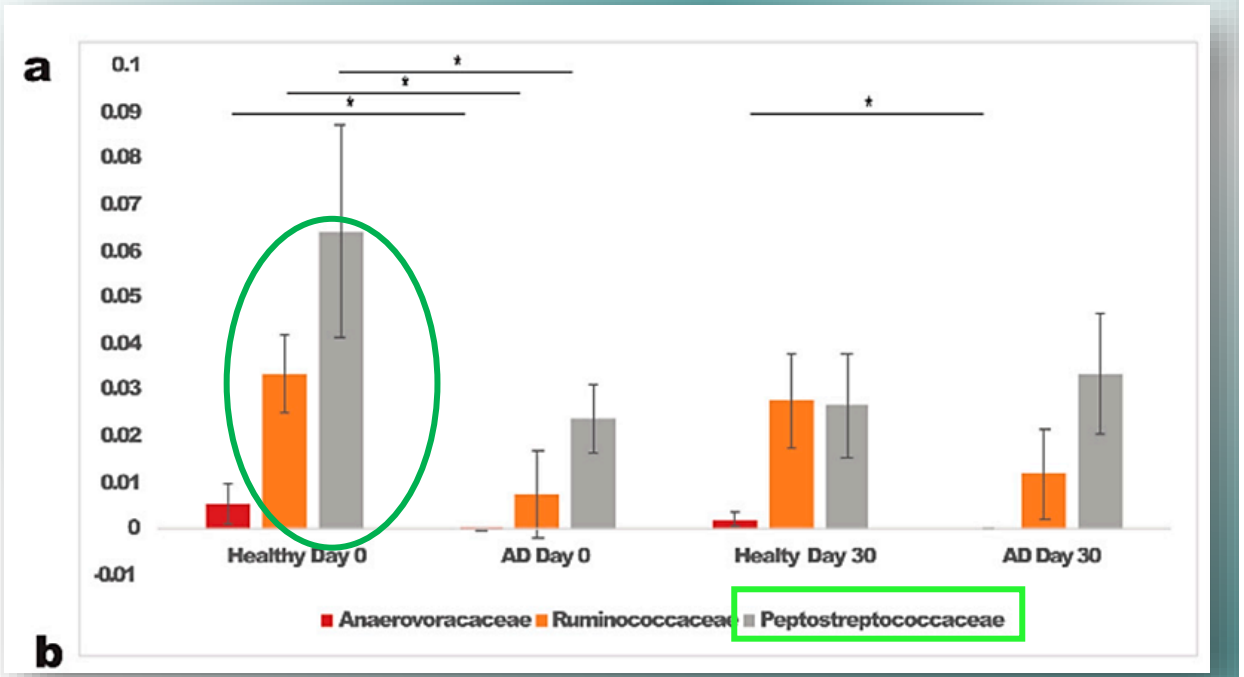
animals

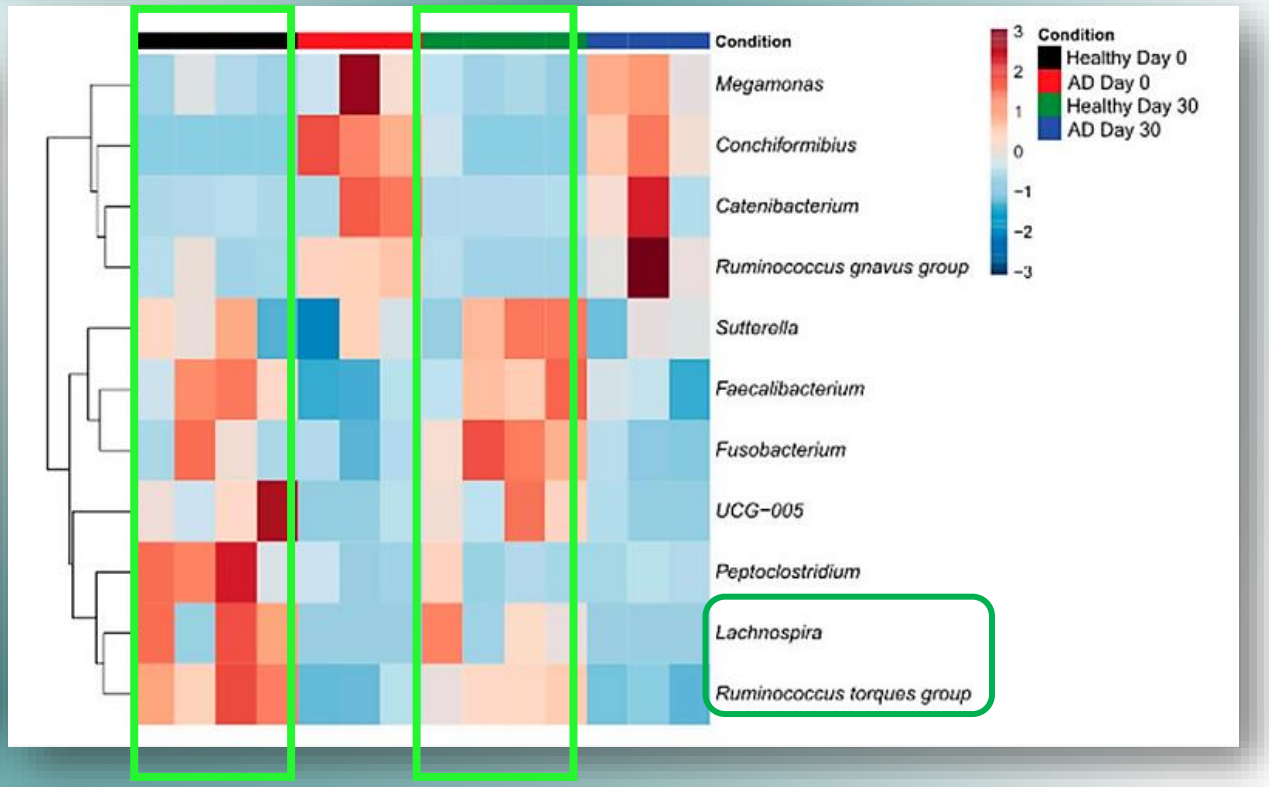
MDPI

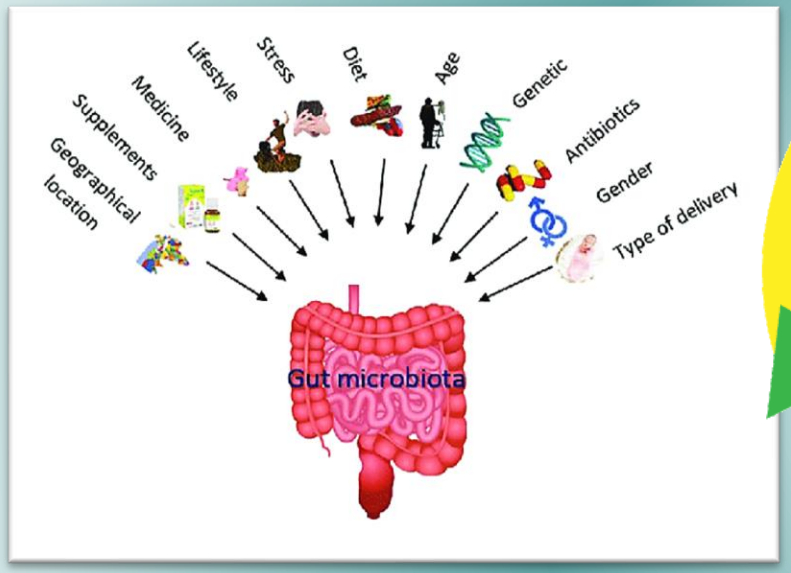
Communication

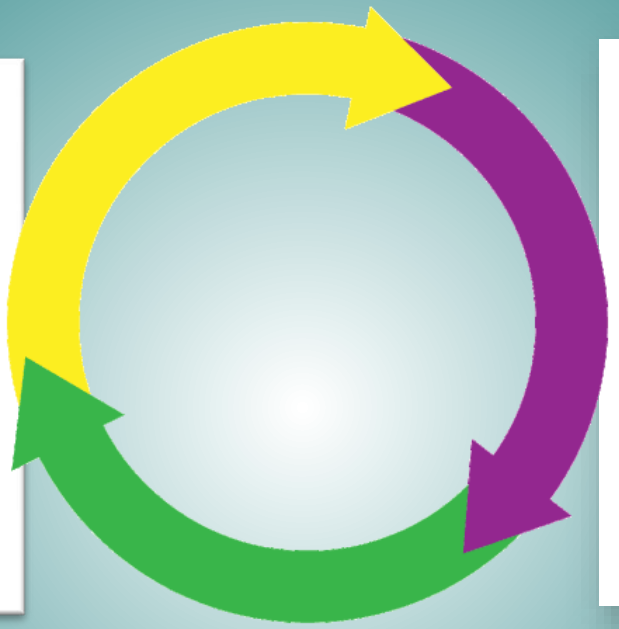
Comparison of the Gut Microbiome between Atopic and Healthy Dogs—Preliminary Data

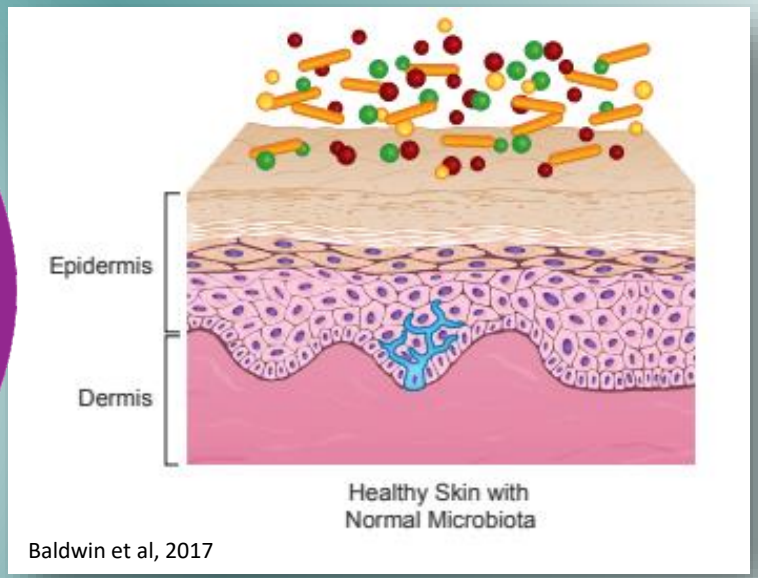
Ana Rostaher [1,*], Yasser Morsy [2], Claude Favrot [1], Stefan Unterer [1], Manuela Schnyder [3], Michael Scharl [2] and Nina Maria Fischer [1]











Baldwin et al, 2017

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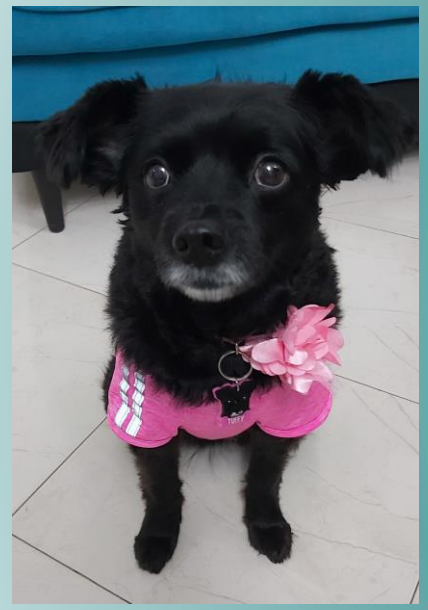

OBRIGADA!

wendyrol21@gmail.com

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