



Atopic dermatitis in a Global Perspective Focus SubSaharan Africa



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Zuerich, SWITZERLAND

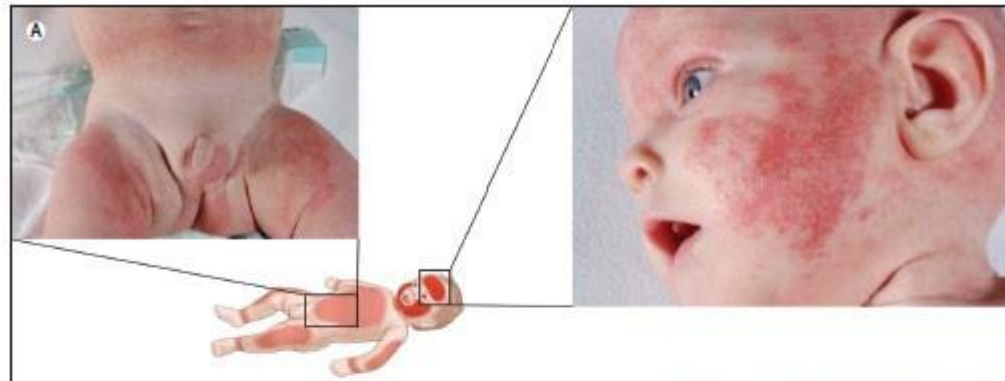


USZ Universitäts
Spital Zürich

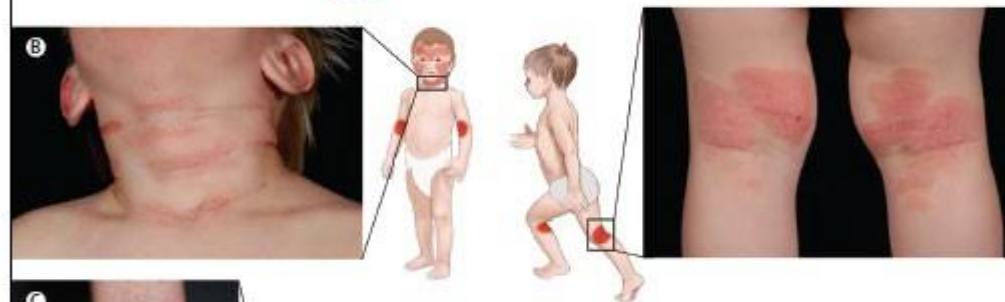


Atopic Dermatitis: Stratification based on age-related clinical picture

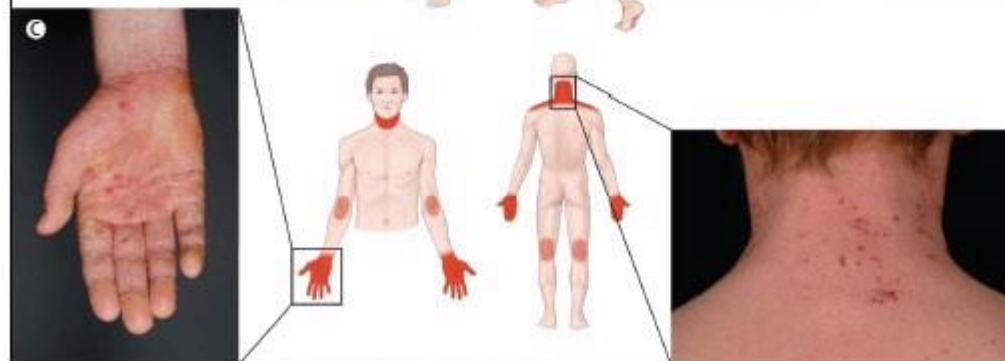
a) Neonates;



b) Infants

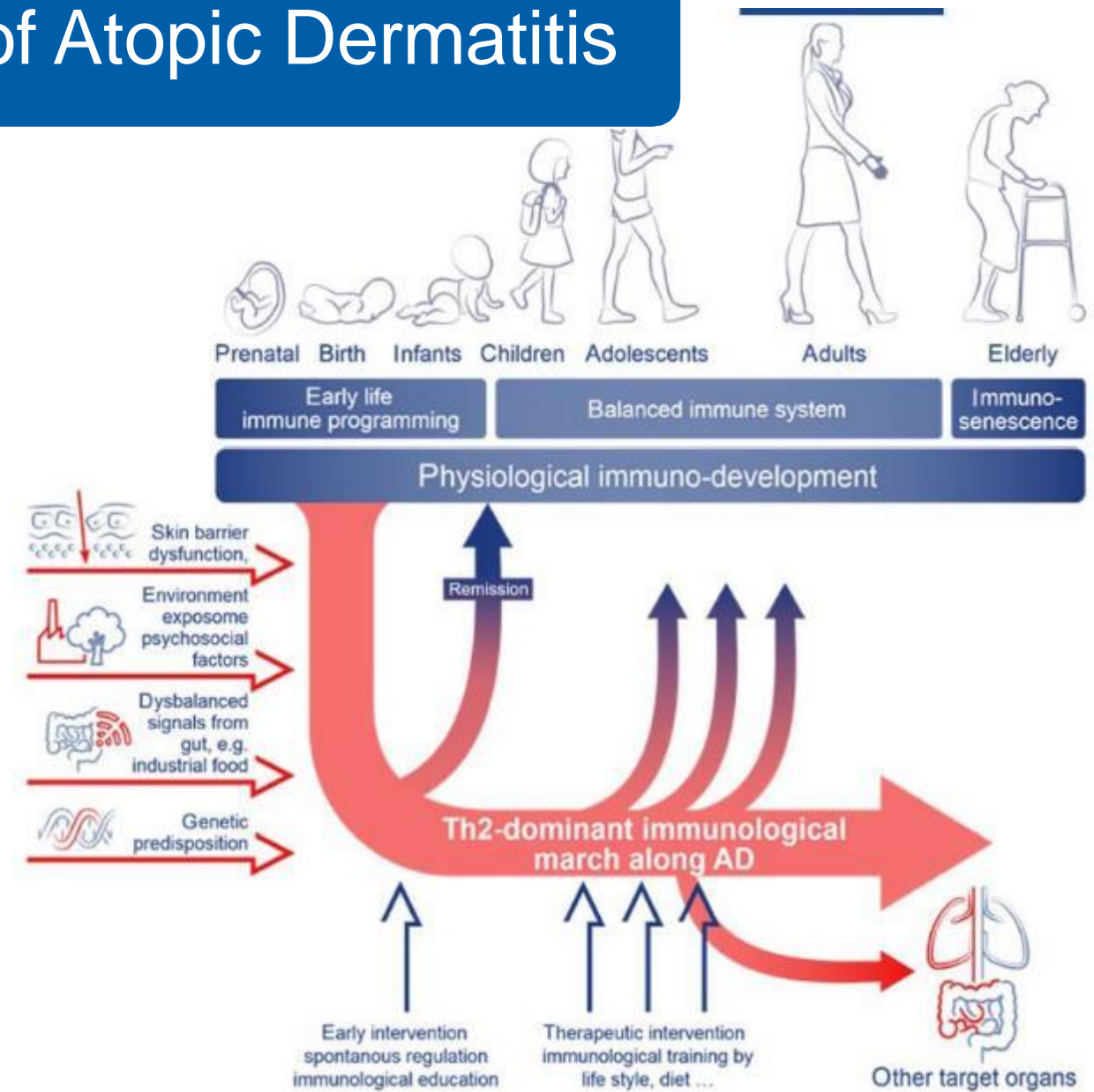


c) Adolescents



The immuno-development of Atopic Dermatitis

Traidl-Hoffmann C.....Schmid-Grendelmeier P.
Navigating the evolving landscape of atopic dermatitis: Challenges and future opportunities: The 4th Davos declaration.
Allergy. 2024 Aug 4



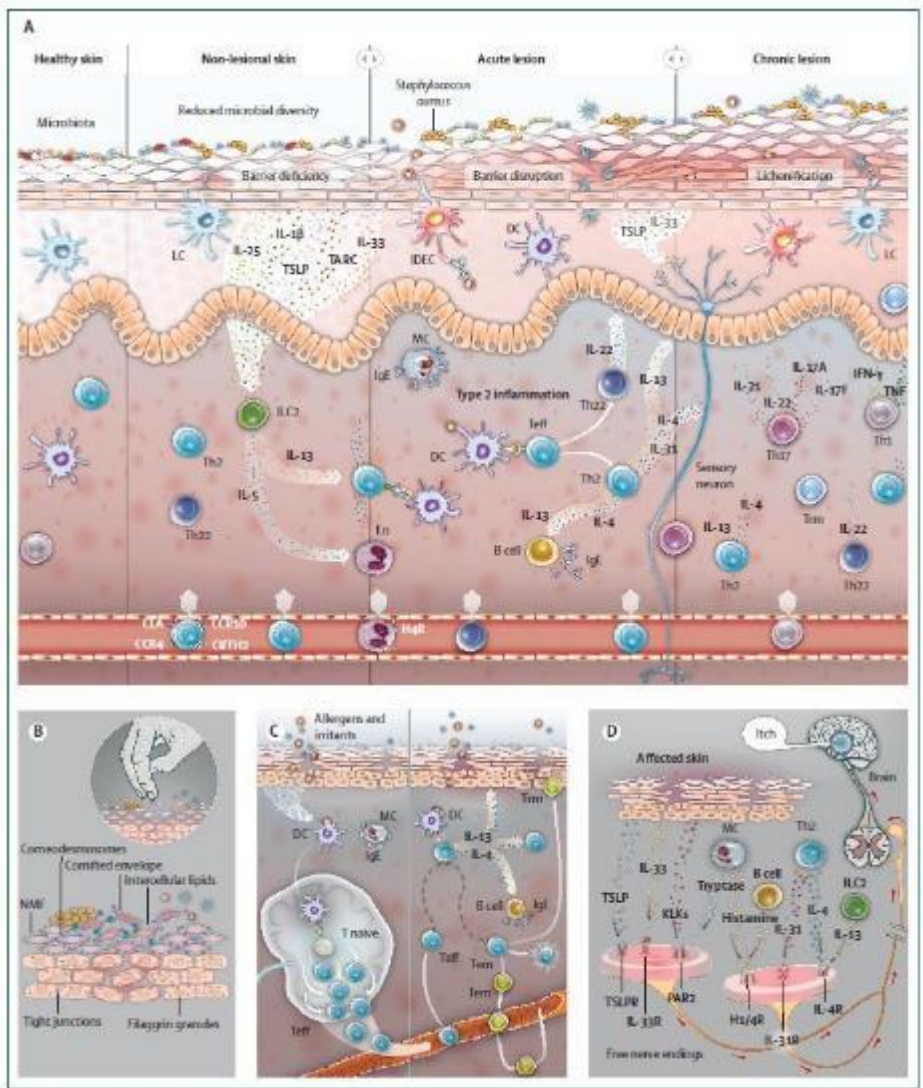
Pathophysiology and mechanism of AD

Immune Deviation

IBD-DDD

Barrier Disruption

Microbe Dysbiosis



Many new insights:

- Role of mediators and cell function
- Disrupted barrier function
- Role of environment
 - Allergens (Food?)
 - Microbiome
 - Mycobiome

Adapted from:

Sinéad M Langan, Alan D Irvine, Stephan Weidinger. Atopic dermatitis. *Lancet* 2020; 396: 345–60

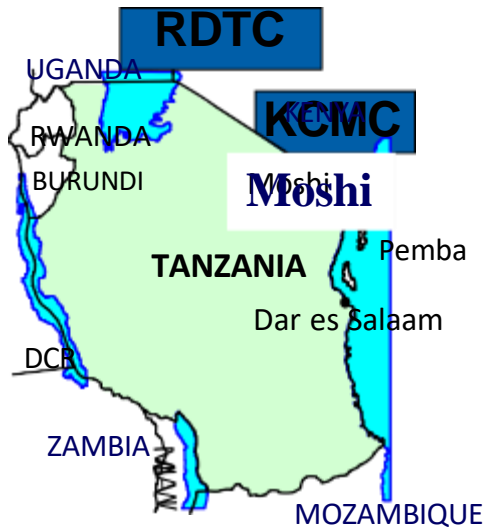


Zürich, Switzerland



Zürich, Switzerland







RDTC



2 years as consultant at the RDTC Continuously acting as external examiner and



Henning Grossmann



D. Mavura





Figure 3 c) severe bacterial superinfection in childhood AD

Atopic Dermatitis

Schmid-Grendelmeier et al, JEADV 2019; 33:2019-28

- Prevalence: 8-10 %
- Clinical feature: often quite papular, palmar hyperlinearity, flexural involvement



Atopic Dermatitis

Schmid-Grendelmeier et al, JEADV 2019; 33:2019-28

- Prevalence: 87-10 %
- Clinical feature: often quite papular, palmar hyperlinearity, flexural involvement
- Highly disturbing: Pityriasis alba (DD Pv, PMH, Leprosy)



Atopic dermatitis in
Zurich,
Switzerland



Atopic dermatitis in
Kilombero region, Tanzania



POSITION STATEMENT

Position Statement on Atopic Dermatitis in Sub-Saharan Africa: current status and roadmap

P. Schmid-Grendelmeier,¹ R. Takaoka,² K.C. Ahogo,³ W.A. Belachew,⁴ S.J. Brown,⁵ J.C. Correia,⁶ M. Correia,⁷ B. Degboe,⁸ V. Dorizy-Vuong,^{9,10} O. Faye,¹¹ L.C. Fuller,¹² K. Grandó,¹ C. Hsu,¹³ K. Kayitenkore,¹⁴ N. Lunjani,¹⁵ F. Ly,¹⁶ G. Mahamadou,^{17,9} R.C.F. Manuel,¹⁸ M. Kebe Dia,¹⁹ E.J. Masenga,²⁰ C. Muteba Baseke,²¹ A.N. Ouedraogo,²² F. Rapelanoro Rabenja,²³ J. Su,²⁴ J.N. Teclessou,²⁵ G. Todd,²⁶ A. Taieb^{9,10*}

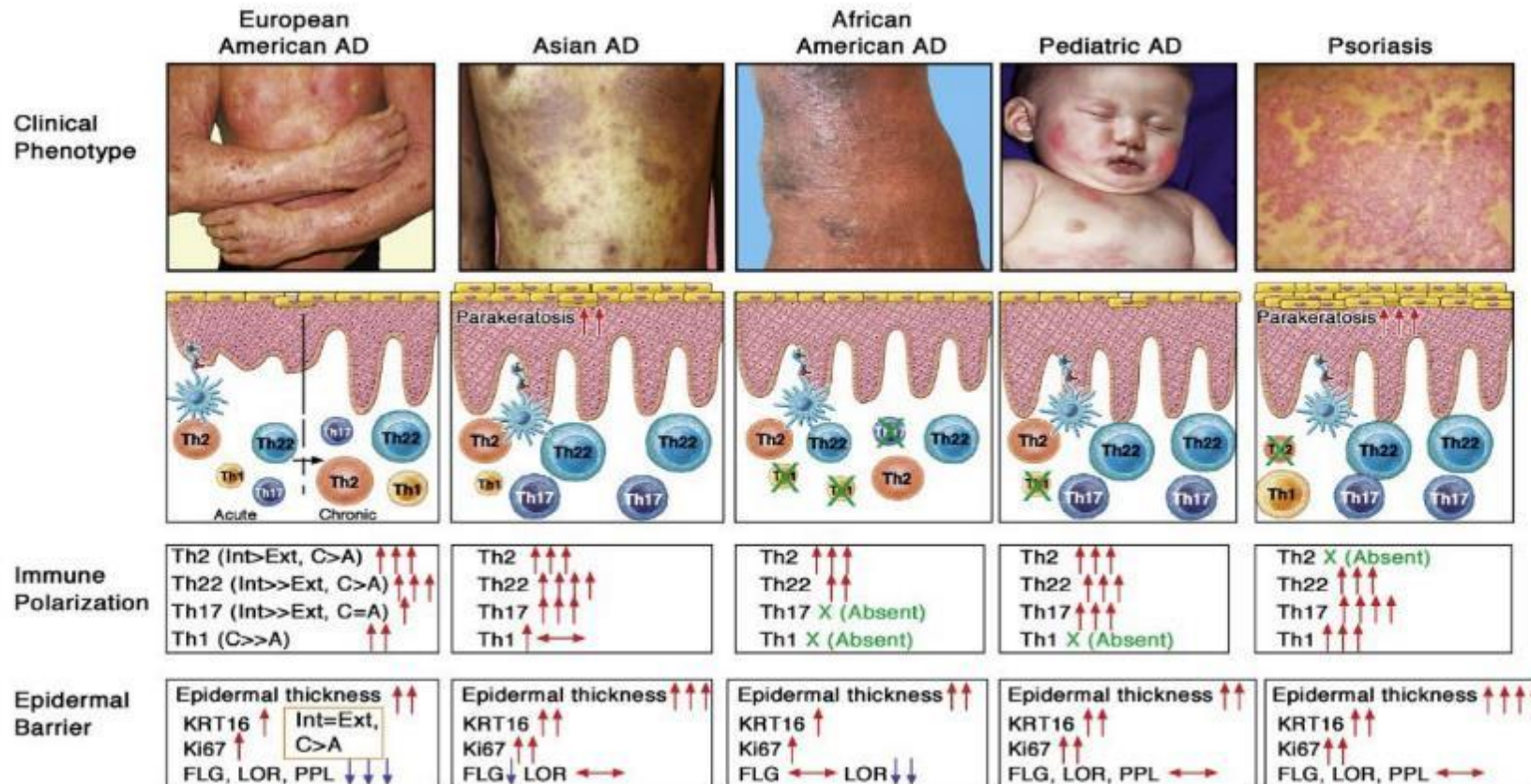


J Europ Acad Derm Venerol 2019

Atopic dermatitis endotypes and implications for targeted therapeutics



Tali Czarnowicki, MD, MSc,^{a,b} Helen He, BSc,^a James G. Krueger, MD, PhD,^b and Emma Guttman-Yassky, MD, PhD^{a,b} *New York, NY*



- Project:
- Atopic Dermatitis Tricontinental
- Zurich – Moshi – New York

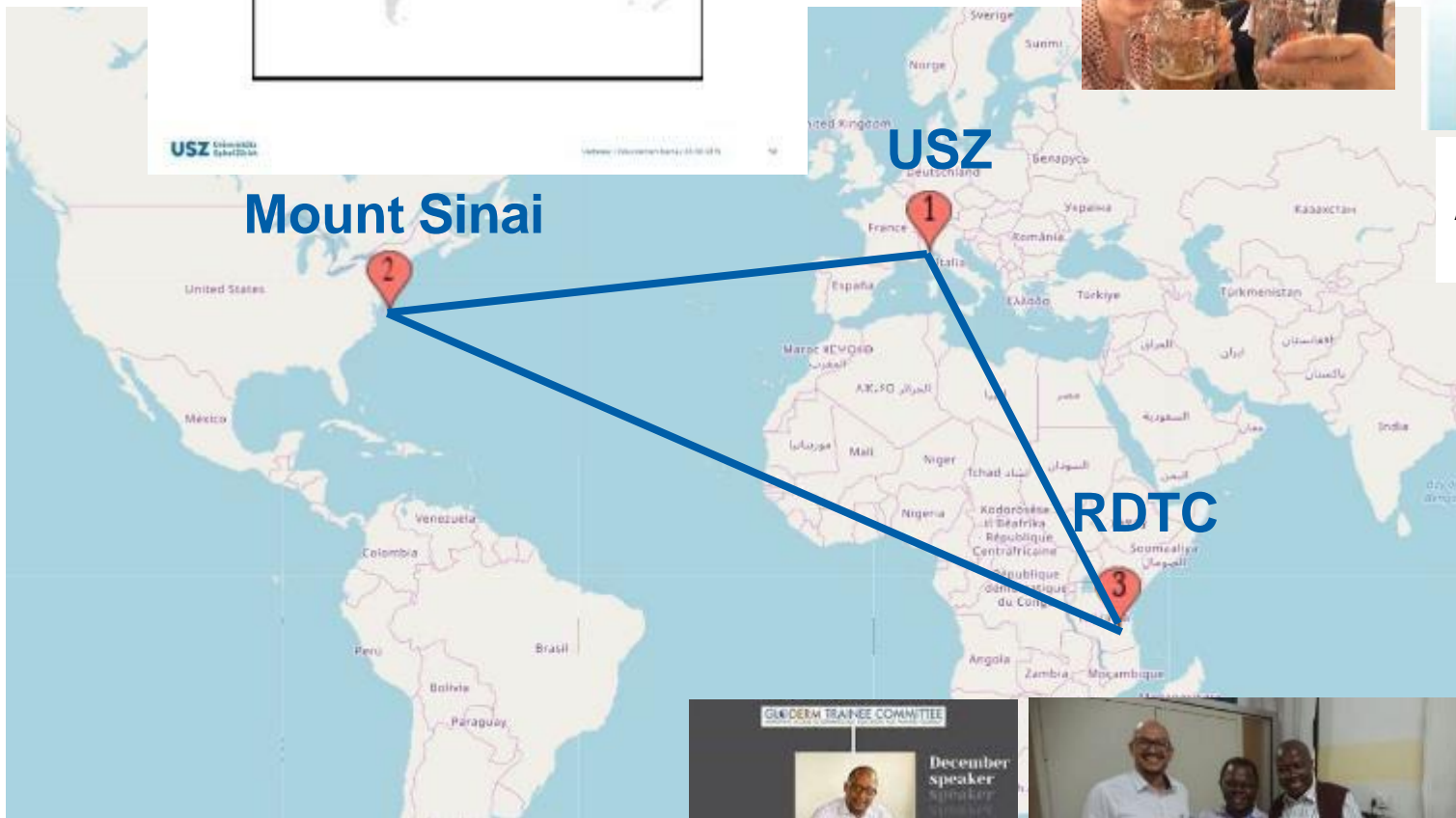


CK CARE

ProRaD

Prospektive Längsschnittstudie zur Untersuchung der Remissionsphase bei Patienten mit atopischer Dermatitis und assoziierten Erkrankungen wie Asthma und allergischer Rhinitis (Heuschnupfen)

ProRaD:
AD cohort currently with 1168 patients



GLI/DERM TRAINEE COMMITTEE

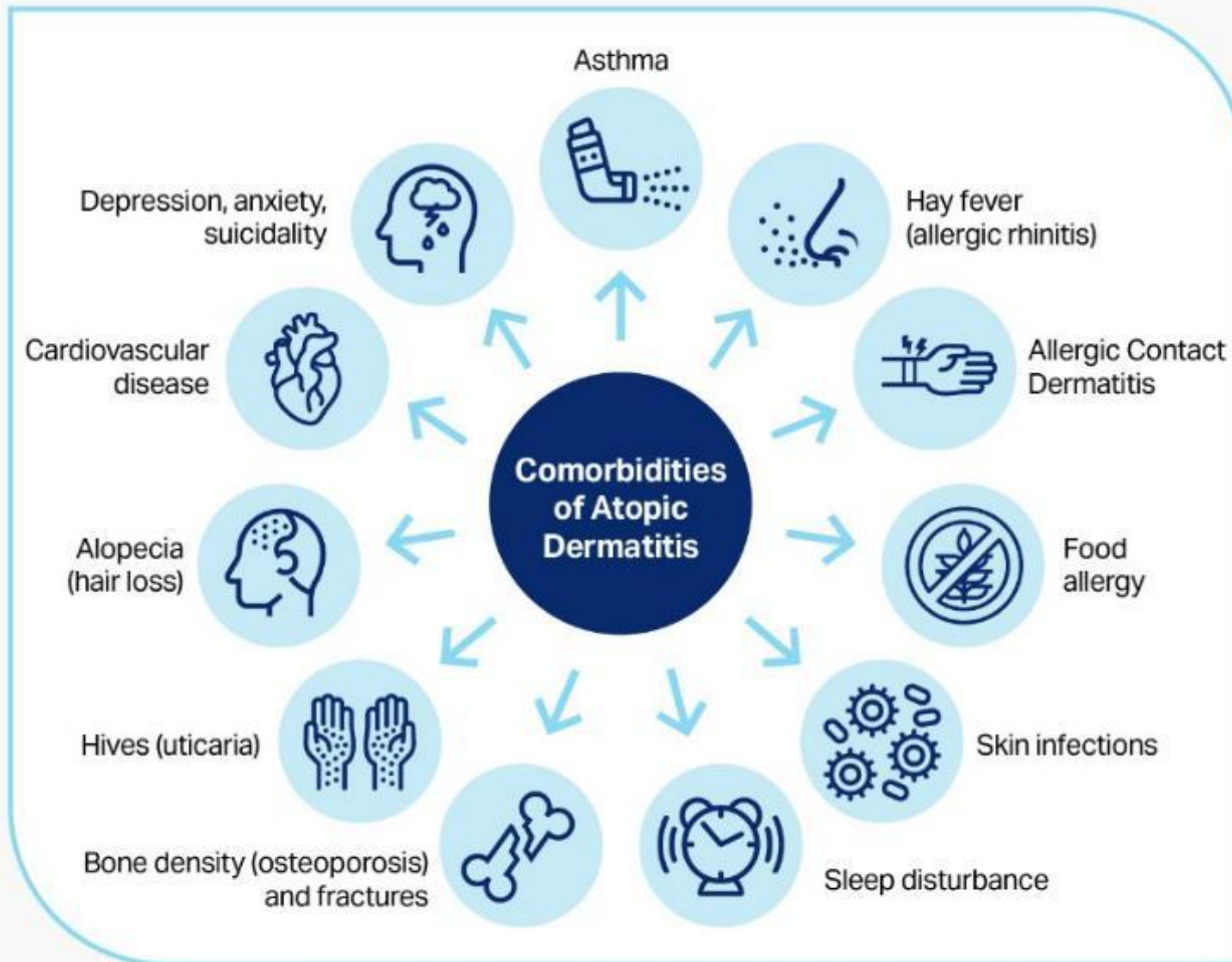
December speaker



Dr. Theres Mwaera
Principal of the Moshi-based Dermatology Training Centre (RDTC), Moshi, Tanzania



Comorbidities in AD



Atopic dermatitis patient/healthy control characteristics



	AD TZ	AD CH	HC TZ	HC CH
Sex	F: 3 M: 7	F: 3 M: 7	F: 5 M: 5	F: 5 M: 5
Age (mean years \pm SD)	43 +/- 12	42 +/- 14	33 +/- 14	31 +/- 8
Disease severity	Moderate: 4 Severe: 6	Moderate: 3 Severe: 7	-	-
Allergic rhinoconjunctivitis	8/10	7/10	0/10	2/10
Allergic asthma	-	4/10		
Food allergies	-	-	-	-

10

Atopic dermatitis (AD)




10

10

Healthy controls (HC)

10

Trigger factors in AD according to age

		Infancy	Childhood	Puberty	Adulthood	
Food	Food hypersensitivity	[Shaded]				 
	Type IV allergy		[Shaded]			
	Inhalant allergy		[Shaded]			
M i c r o b e s	Bacterial infections	[Shaded]				
	Viral infections	[Shaded]				
	Malaria			[Shaded]		
						

Practall position paper AAAACI / EAACI
 Akdis CA et al Allergy 2006
 Akdis CA et al J Allergy Clini Immunol 2006

Trigger factors in AD according to age

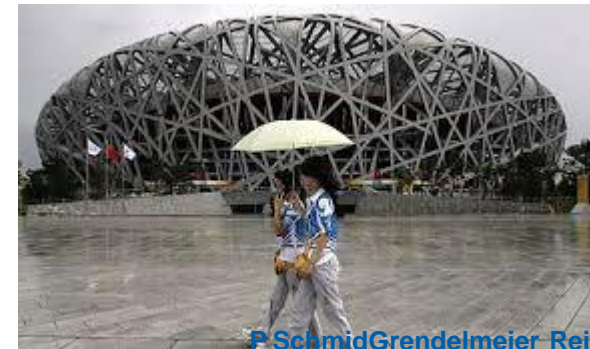
		Infancy	Childhood	Puberty	Adulthood	
Food	Food hypersensitivity	[Shaded]				
	Type IV allergy	[Shaded]				
	Inhalent allergy	[Shaded]				
M i c r o b e s	Bacterial infections	[Shaded]				
	Viral infections	[Shaded]				
	Malaria			[Shaded]	[Shaded]	







Bird's nest



Platforms for MicroArray IgE (110-250 spec IgE values from 20-30 μ l Serum)



ALEX²
ALLERGY EXPLORER 2



ALEX Allergy Explore

ALEX wird durch EUSA-basierte Analyse Multipler Allergene, der die gleichzeitig Messung von Gesamt-IgE, IgG und spezifischen IgE (sIgE) ermöglicht. Verfügen Sie über spezifische und molekulare Allergene im Blut.

In dieser Funktion steht das Nachfolgeprodukt ALEX.

MAD^X

Component/Allergen	Allergen	Component name	Substrate name	Component	Reference/Indication
Protein					
Substrate					
E	012	Waldnuss	Cydonia malus		
E	013	Birchweissbrot	Cynodon dactylon		
E	014	Compositae Weed	Phragmites australis		
E	015	Orchard Grass	Setaria sp.		
E	016	Lupinus Cereale	Cephus pratensis		
E	017	Pollenized Eggplant	Lycopersicon	017A1	Beiz-Eggplant
E	018	Rye	Secale cereale		
E	019	Timothy	Phleum pratense		
E	020	Timothy	Phleum pratense	020A1	Beiz-Eggplant
C	021	Timothy	Phleum pratense	021A1	Sheep
C	022	Timothy	Cynodon dactylon	022A1-022A2	Grass (New) UK
E	023	Timothy	Phleum pratense	023A1	Acid (New) UK
E	024	Timothy	Phleum pratense	024A1	Beizniss
E	025	Timothy	Phleum pratense	025A1	Polish
Total IgE					
E	016	Almond	Prunus amygdalus		
E	017	Almond	Prunus amygdalus		
E	018	Almond	Prunus amygdalus	018A1	FRG
E	019	Almond	Prunus amygdalus	019A1	Polish
E	020	Almond	Prunus amygdalus	020A1	Polish-Latin
E	021	Almond	Prunus amygdalus	021A1	Other 1/Polish
E	022	Almond	Prunus amygdalus		
E	023	Unfractionated	Prunus amygdalus		

Vales of >280 spezifischen IgE
- Allergens (zb Birch)
- Molecular Allergens (zB Bet v 1, Bet v 2)
Total IgE

© 05 2023

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ALEX²

ALLERGY EXPLORER

ALEX war der erste ELISA basierte in-vitro-Multiplex-Allergietest, der die gleichzeitige Messung von Gesamt-IgE (tIgE) und spezifischem IgE (sIgE) gegen eine Vielzahl von Allergenextrakten und molekularen Allergenen ermöglichte.

In dieser Tradition steht das Nachfolgeprodukt ALEX².



ALEX Allergy Explorer



Value of mehr than >280 spec IgE

- Allergens (zb Birch)
- Molecular Allergens (e.g Bet v 1, Bet v 2)

Total IgE



ALEX ² Allergen list					
Component/Extract	Allergencode	Common name	Scientific name	Component	Biochemical designation
Pollen					
Grass pollen					
E	g17	Bahia Grass	Paspalum notatum		
E	g2	Bermuda Grass	Cynodon dactylon		
E	g7	Common Reed	Phragmites communis		
E	g202	Corn	Zea mays		
E	g10	Johnson Grass	Sorghum halepense		
C	g100	Perennial Ryegrass	Lolium perenne	nLot p 1	Beta-Expansin
E	g12	Rye	Secale cereale		
E	g6	Timothy	Pheum pratense		
C	g205	Timothy	Pheum pratense	rPhl p 1	Beta-Expansin
C	g206	Timothy	Pheum pratense	rPhl p 2	Expansin
C	g215	Timothy	Pheum pratense	rPhl p 5.0101	Grass Goup 5/6
C	g209	Timothy	Pheum pratense	rPhl p 6	Grass Goup 5/6
C	g210	Timothy	Pheum pratense	rPhl p 7	Polcalcin
C	g212	Timothy	Pheum pratense	rPhl p 12	Profilin
Tree pollen					
E	t19	Acacia	Acacia spp.		
E	t2	Alder	Alnus glutinosa		
C	t100	Alder	Alnus glutinosa	rAln g 1	PR-10
C	t101	Alder	Alnus glutinosa	rAln g 4	Polcalcin
C	t226	Arizona Cypress	Cupressus arizonica	nCup a 1	Pectate Lyase
E	t25	Ash	Fraxinus excelsior		
C	t103	Ash	Fraxinus excelsior	rFra e 1	Ole e 1-Family
E	t5	Beech	Fagus sylvatica		
E	t14	Cottonwood	Populus nigra		

ALEX (in vitro multiplex allergy test, containing **283 allergens from 60 µl**)

Natural and molecular allergens

Plants

- Grass pollen
- Tree pollen
- Weed pollen

Animals, microbes

- Dander & epithelia
- Mites & cockroaches
- Moulds & yeasts

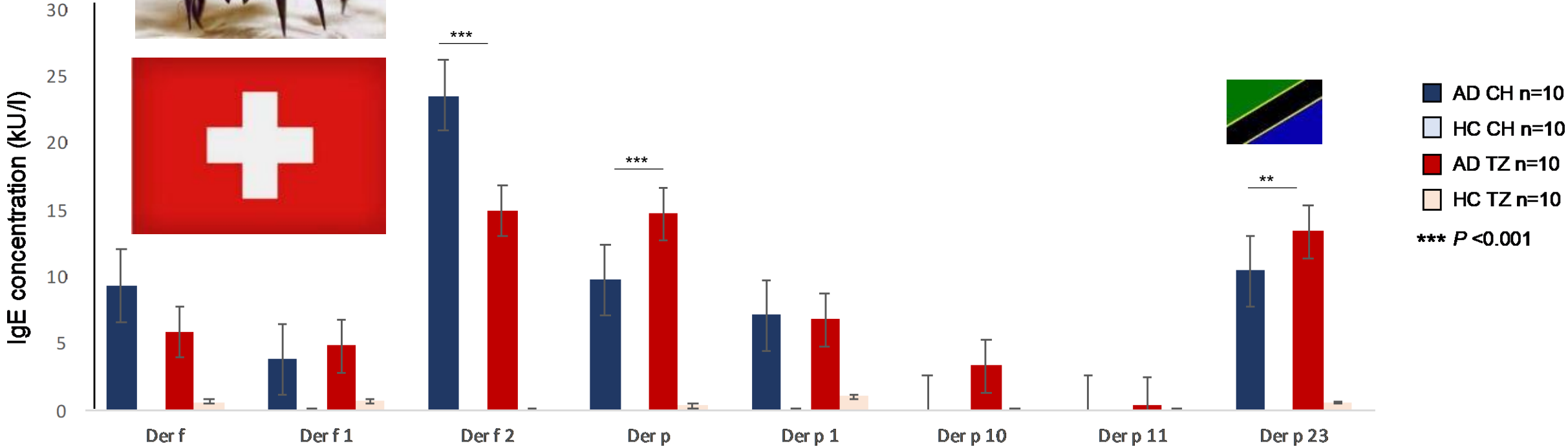
Food

- Cereals & seeds
- Egg & milk
- Fruits
- Legumes & nuts
- Meat
- Seafood
- Spices
- Vegetables

Results: Distinct sensitization to house dust mite antigens in Swiss vs. Tanzanian AD



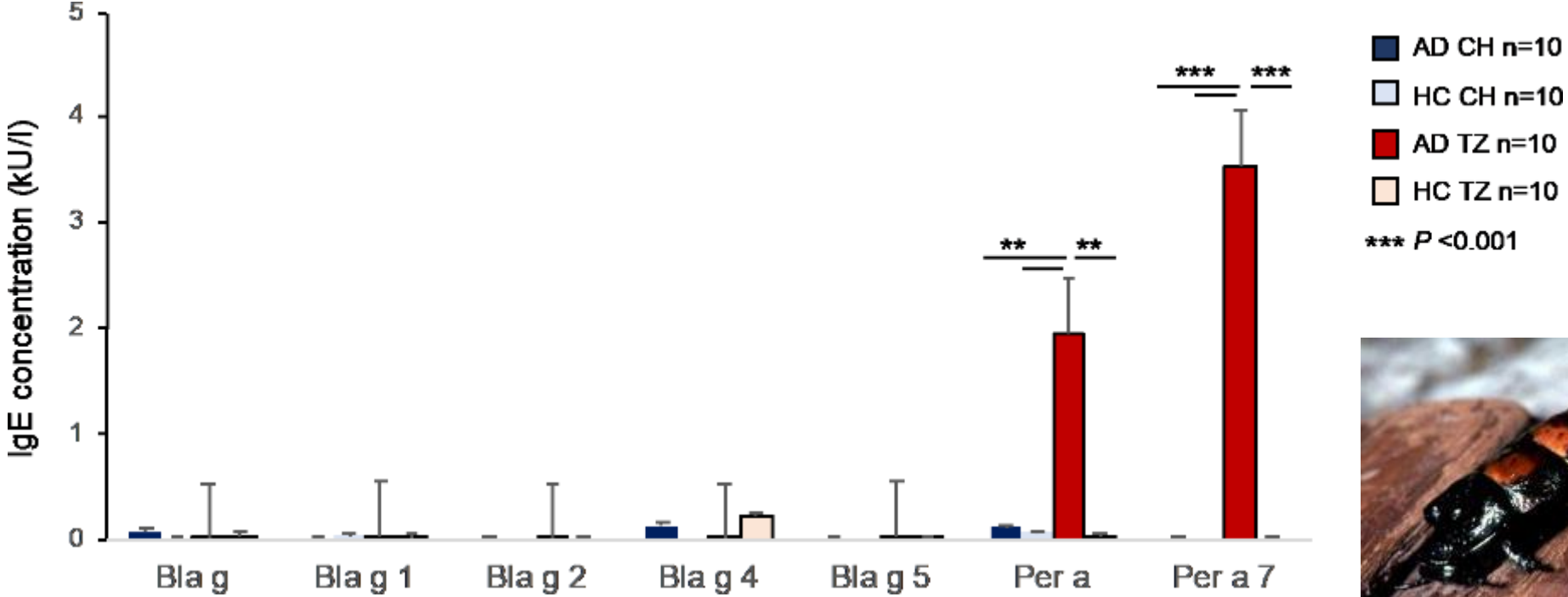
House dust mite-specific IgE



Results: Sensitization to cockroach antigens in Tanzanian AD patients only



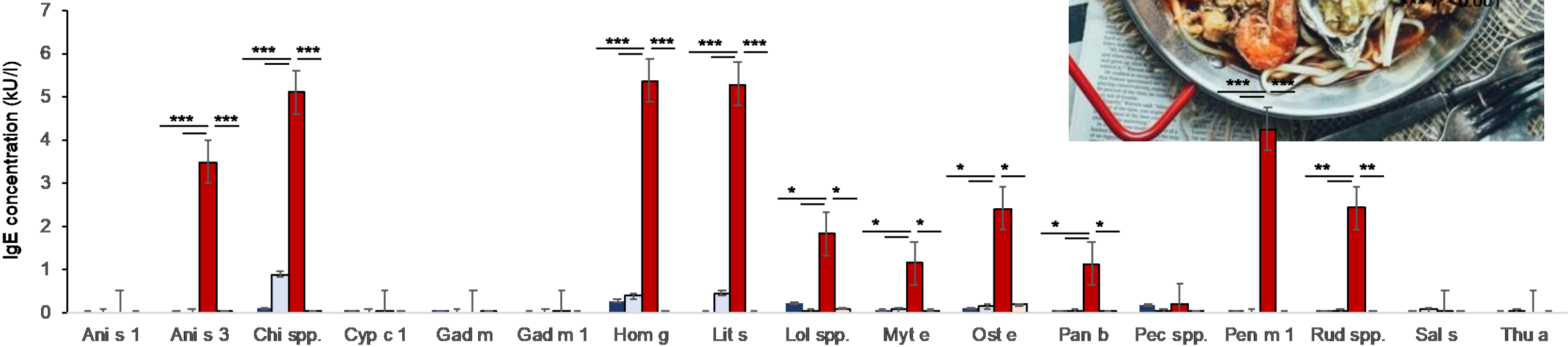
Cockroach antigen-specific IgE



Results: Sensitization to seafood antigens in Tanzanian AD patients



Seafood antigen-specific IgE



Tropomyosin

Tropomyosin Cross-reactivity



Parasites
Anisakis

Insects
Cockle sheets



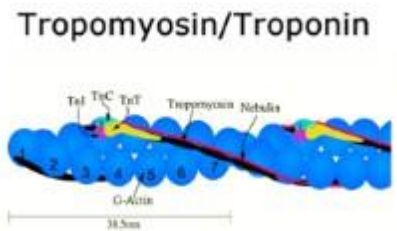
Table 1. Crossreactivity of tropomyosins from different invertebrate species

IgE-inducing tropomyosin	Crossreactive tropomyosin	Refs
<i>A. simplex</i> (nematode)	House dust mite	[60]
<i>O. volvulus</i> (nematode)	Shrimp	[22]
<i>P. aztecus</i> (shrimp)	Lobster, cockroach, grasshopper, fruit fly, house dust mites, silverfish	Reviewed in [42], [61]
<i>Homarus americanus</i> (lobster)	Other lobster, shrimp	Reviewed in [42]
<i>Charybdis feriatus</i> (crab)	Lobster, shrimp	Reviewed in [42]
<i>Periplaneta americana</i> (cockroach)	Shrimp	Reviewed in [42]
<i>Blattella germanica</i> (cockroach)	Other cockroach, mites	[62]
Mollusk	Shrimp, snail	Reviewed in [42]



Mites

Seafood



Tropomyosin

Lobster Hom a1



Shrimp Pen a 1



House dust mites The p10



Cockroaches Bla g 7



Octopus Oct v 1



Squid Sep e1



Snail Hel as1



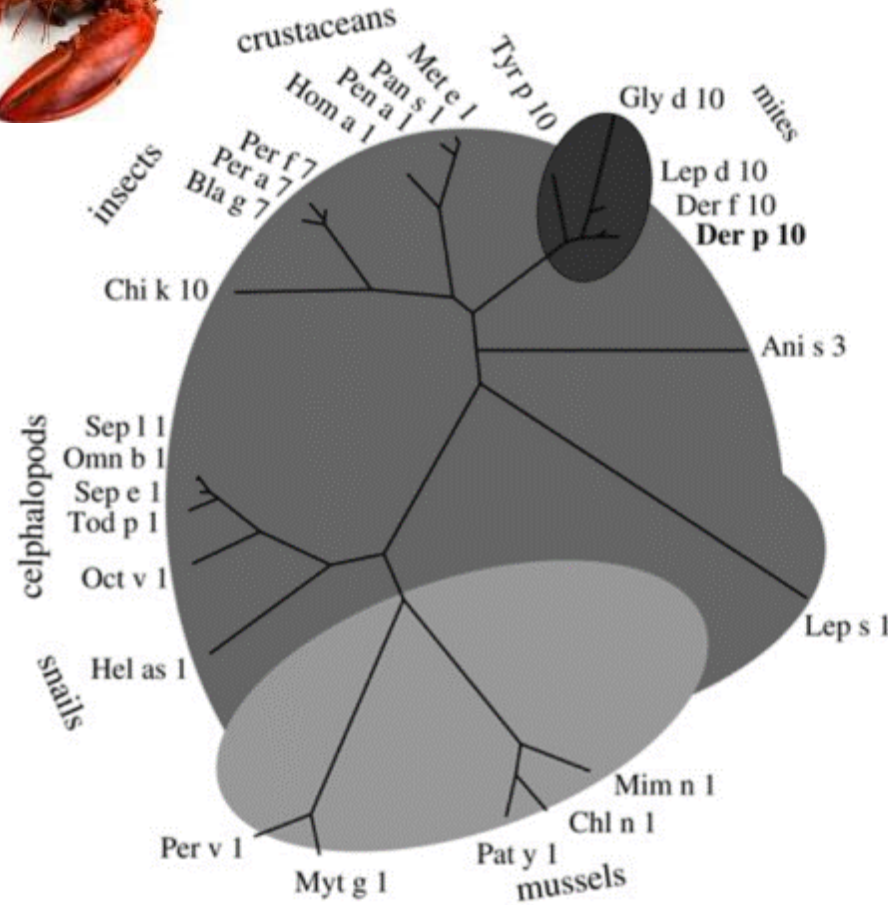
Mussels Per v1



Anisakis simplex Ani s3



Silverfish Lep s 1



%sequence identity



Allergens are distributed into few protein families and possess a restricted number of biochemical functions

Christian Radauer, PhD,* Merima Sublin, PhD,* Stefan Wegner, PhD,* Adriano Mari, MD,^{3,*} and Helmo Breiteneder, PhD* Vienna, Austria, and Latis and Rovere, Italy



Food and Agriculture
Organization of the
United Nations

LOOKING AT EDIBLE INSECTS FROM A FOOD SAFETY PERSPECTIVE



Challenges and opportunities for the sector

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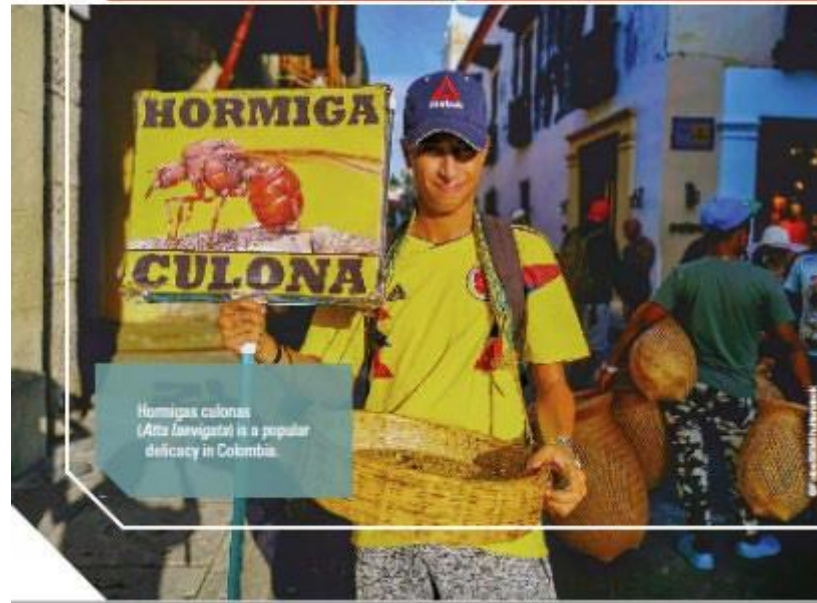
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Cookies (above) made from cricket flour (below).



Belefang goreng or fried grasshoppers from Indonesia.



Hormigas culonas (*Atractodes*) is a popular delicacy in Colombia.

FIGURE 2. COMPARISON OF FEED CONVERSION, WATER, GLOBAL WARMING POTENTIAL, AND LAND NEEDED TO PRODUCE 1 KG OF THE LIVE ANIMAL. ALSO SHOWN IS THE PERCENTAGE OF EACH ANIMAL THAT IS EDIBLE.



* denote numbers are for mealworms, not crickets.

Source:
Personal communication with Dr van Huis.

B09 - Edible insects

Kitty C. M. Verhoeckx, André

Highlights

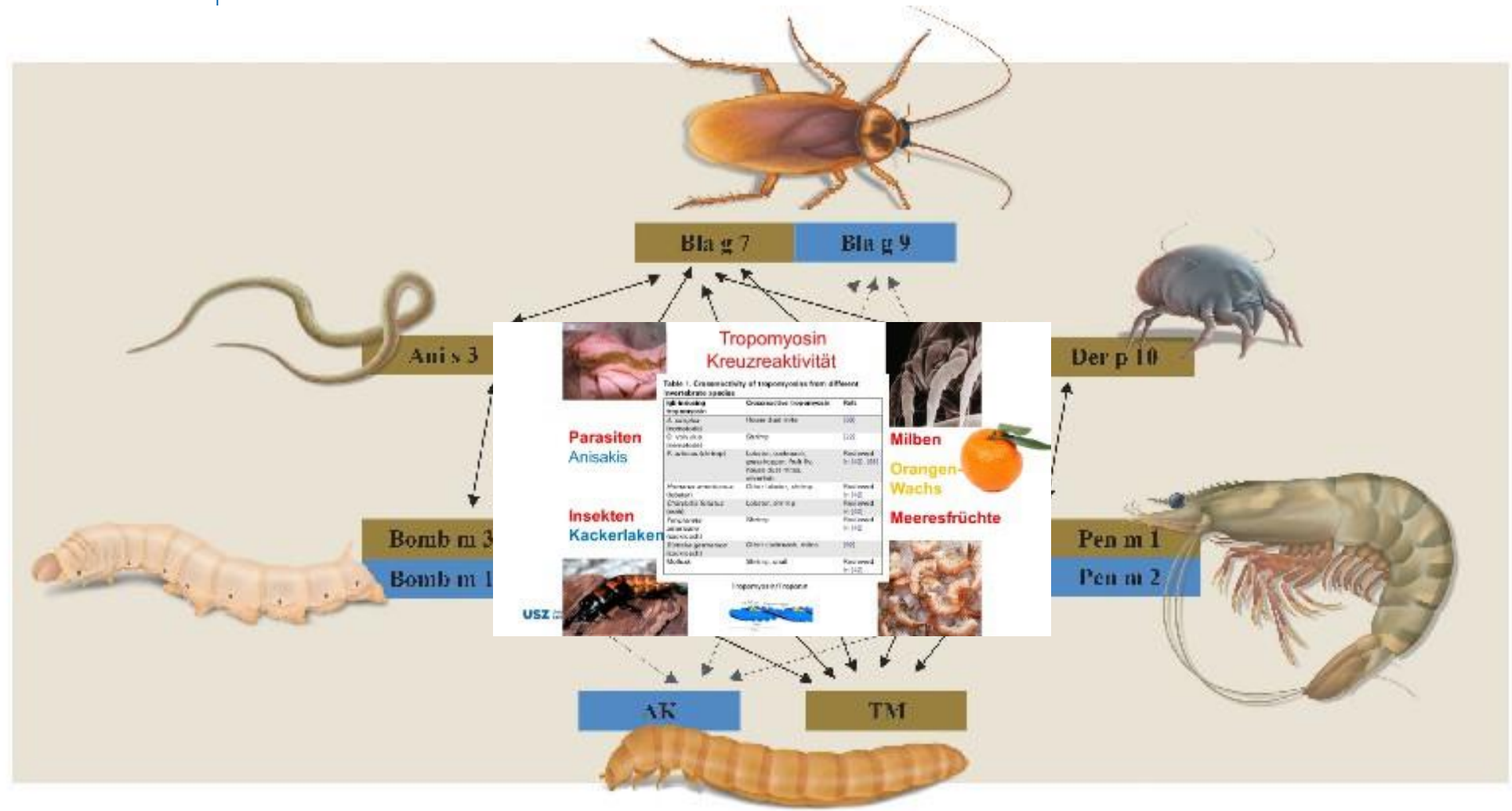


FIGURE 79 Cross-reactivity of tropomyosin (TM) and arginine kinase (AK) between different allergenic sources (Solid line=tropomyosin; dashed line=arginine kinase)



Contents lists available at ScienceDirect

Regulatory Toxicology and Pharmacology

journal homepage: www.elsevier.com/locate/yrtph



Commentary

Allergenicity assessment strategy for novel food proteins and protein sources

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^b Dep. Dermatology/Allergology, University Medical Centre Utrecht (UMCU), P.O. Box 85500, Internal mail no G02.124, 3508 GA, Utrecht



K. Verhoeckx et al. / Regulatory Toxicology and Pharmacology 79 (2016) 118–124

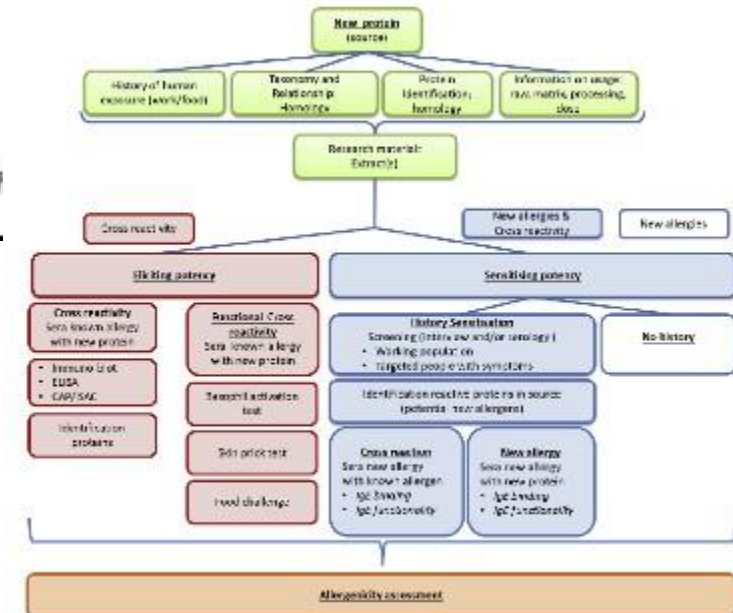


Fig. 2. Schematic overview of suggested allergenicity assessment strategy of novel proteins and protein-containing sources.

Accidental insect consumption p

1.5 kilogrammes per year

e.g. in

wheat flour (pancake syndrome)

dust on coffee beans and fruits





Invited Review Article

Respiratory sensitization to insect allergens: Species, components and clinical symptoms

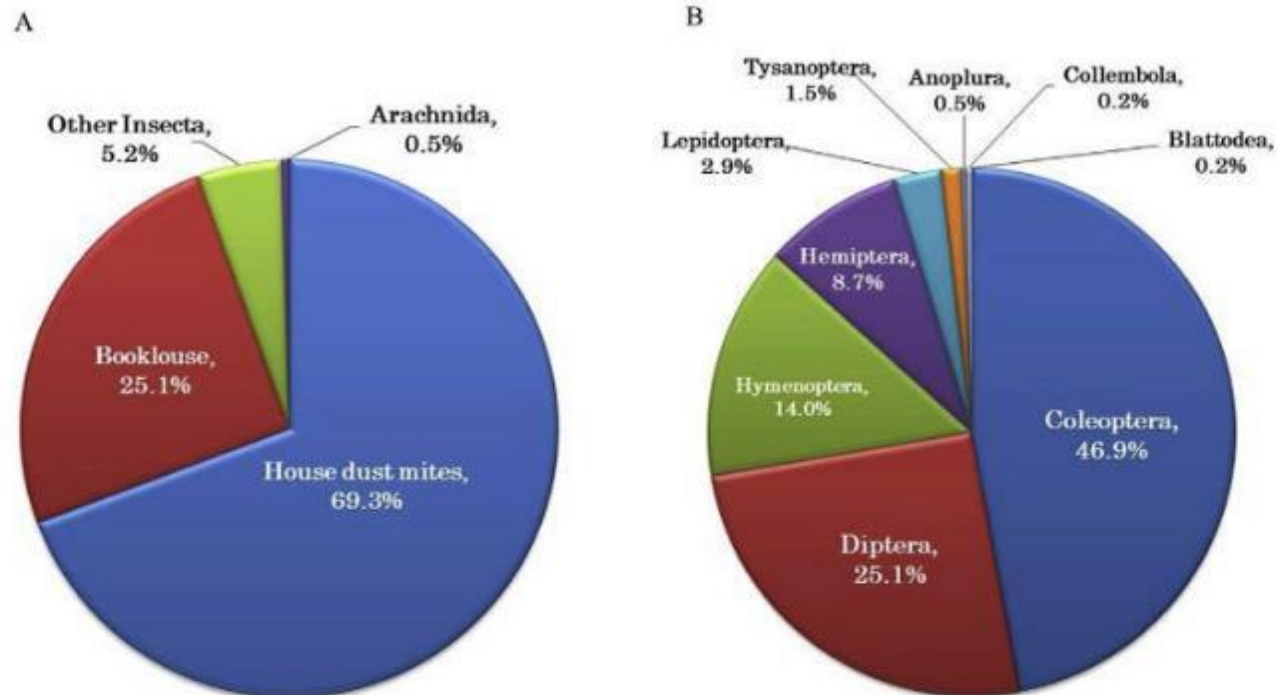
Yuma Fukutomi ^{a,*}, Yuji Kawakami ^{a,b}^a Clinical Research Center for Allergy and Rheumatology, National H^b Laboratory of Integrated Pest Management, FCG Research Institute,

Fig. 1. Ratio of arthropods isolated from house dust according to the average number isolated per room (A), and the breakdown of other insects (B). Reprinted with permission from Reference.³⁸

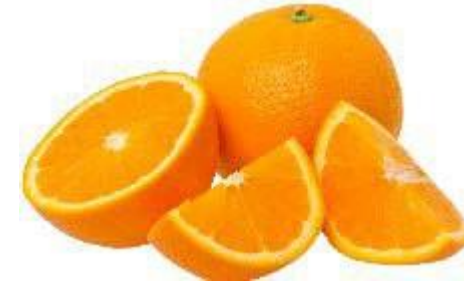
Where insects are already used as food



[youtube.com](https://www.youtube.com/watch?v=...)

The Future of **Food**: Eating **Insects** - YouTube

- Growing fruit and vegetables



- Colourings, for example in drinks (carmine)



- Carnithine in "power drinks"



Prevention and Therapy of Allergies



Allergenavoidance



Drugs



SIT



Prevention and Therapy of Allergies



Allergenavoidance



Drugs



SIT



The NEW ENGLAND
JOURNAL *of* MEDICINE

ESTABLISHED IN 1812

FEBRUARY 26, 2015

VOL. 372 NO. 9

Randomized Trial of Peanut Consumption
in Infants at Risk for Peanut Allergy

George Du Toit, M.B., B.Ch., Graham Roberts, D.M., Peter H. Sayre, M.D., Ph.D., Henry T. Bahnson, M.P.H.,
Suzana Radulovic, M.D., Alexandra F. Santos, M.D., Helen A. Brough, M.B., B.S., Deborah Phippard, Ph.D.,
Monica Basting, M.A., Mary Feeney, M.Sc., R.D., Victor Turcanu, M.D., Ph.D., Michelle L. Sever, M.S.P.H., Ph.D.,
Margarita Gomez Lorenzo, M.D., Marshall Plaut, M.D., and Gideon Lack, M.B., B.Ch., for the LEAP Study Team*

The NEW ENGLAND
JOURNAL of MEDICINE

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FEBRUARY 26, 2015

VOL. 372 NO. 9

Randomized Trial of Peanut Consumption
in Infants at Risk for Peanut Allergy

No peanut **higher** rate of panut allergy
Regular peanut consumption **lower** risk of peanut allergy

CONCLUSIONS

The early introduction of peanuts significantly decreased the frequency of the development of peanut allergy among children at high risk for this allergy and modulated immune responses to peanuts. (Funded by the National Institute of Allergy and Infectious Diseases and others; ClinicalTrials.gov number, NCT00329784.)



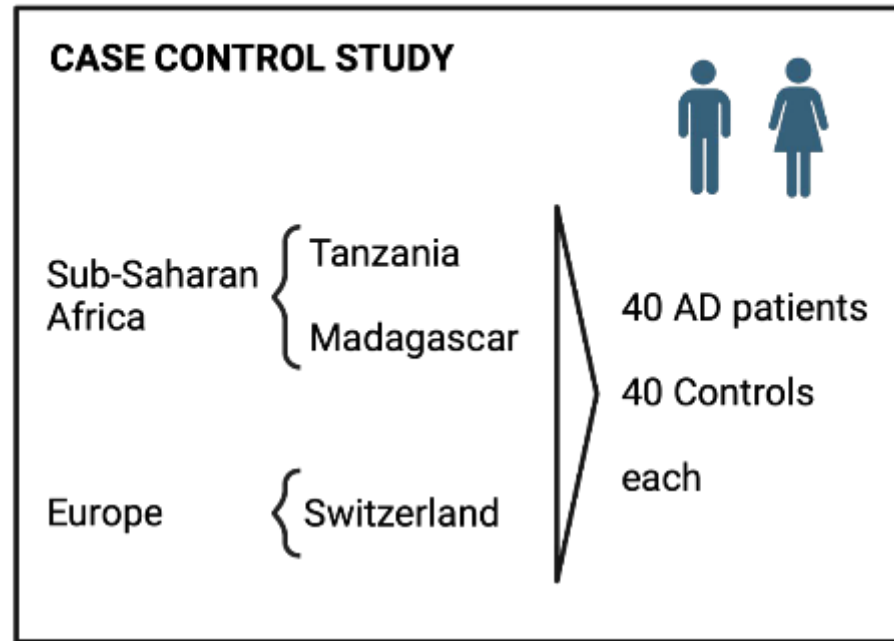
Food recommendation in early childhood to prevent AD



Up till recently



Study Design



Current Status

	AD Patients	Healthy Controls	Total
Switzerland	40	40	80
Tanzania	40	40	80
Madagascar	24	40	64



House dust mite also by far the most sensitization in AD in Nigeria Study by Dr Erere Otrofanawei, Lagos, presented at ISAD 2024

ISAD Doha 2024

Abstract

Title: Sensitization to Mites and cockroaches is highly predominant in atopic dermatitis in Nigeria - a pilot study from Lagos

Erere Otrofanawei^{1,2}, Danielle Fehr³, Olabisi Akanbi,¹ Ayesha Akinkugbe¹, Olusola O Ayanlowo¹, Cezmi Akdis², Peter Schmid-Grendelmeier³, Marie Charlotte-Brueggen³, Yasutaka Mitamura²

Affiliations:

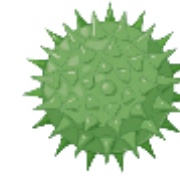
- 1) Lagos University Teaching Hospital, Lagos, Nigeria
- 2) Swiss Institute for Allergy Research SIAF Davos, Switzerland
- 3) Allergy Unit, Dept of Dermatology, University Hospital of Zurich, Switzerland

By far for the most common sensitizations was found to various mites and cockroaches, so on a molecular level from 16 patients (47%)

(Der f 2 /Der p2) , in descending order to Blo t 5, Der p 21 , Der p 23, Blo t 21, Der p 5, Gly d 2, Tyr p2 and Der f 1, Lep d 2 , Aca sand Der p 1 (11 AD/32%).



slgE to Grass Pollen in ALEX2

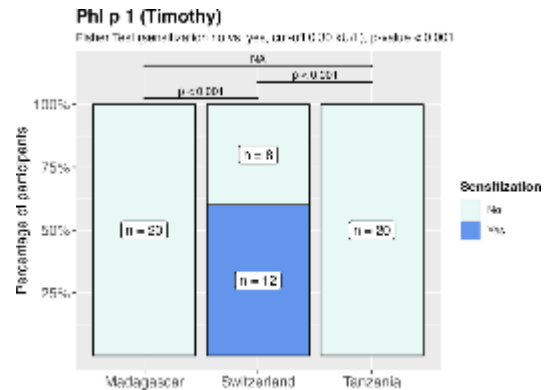


Common Name	Allergen Name	Scientific name
Bahia grass	Pas n	Paspalum notatum
Bermuda grass	Cyn d	Cynodon dactylon
Bermuda grass	Cyn d 1	Cynodon dactylon
Common reed	Phr c	Phragmites communis
Perennial ryegrass	Lol p 1	Lolium perenne
Rye	Sec c_pollen	Secale cereale
Timothy	Phl p 1	Phleum pratense
Timothy	Phl p 2	Phleum pratense
Timothy	Phl p 5.0101	Phleum pratense
Timothy	Phl p 6	Phleum pratense
Timothy	Phl p 7	Phleum pratense
Timothy	Phl p 12	Phleum pratense

Timothy Grass (*Phleum pratense*)

- «Plant from **cold** or **cool** climates.»
- «Sensitive to **drought**.»
- «Native to **Europe**, temperate **Asia** and **North Africa**»

FAO, 2013. Grassland Index. A searchable catalogue of grass and forage legumes. FAO, Rome, Italy.



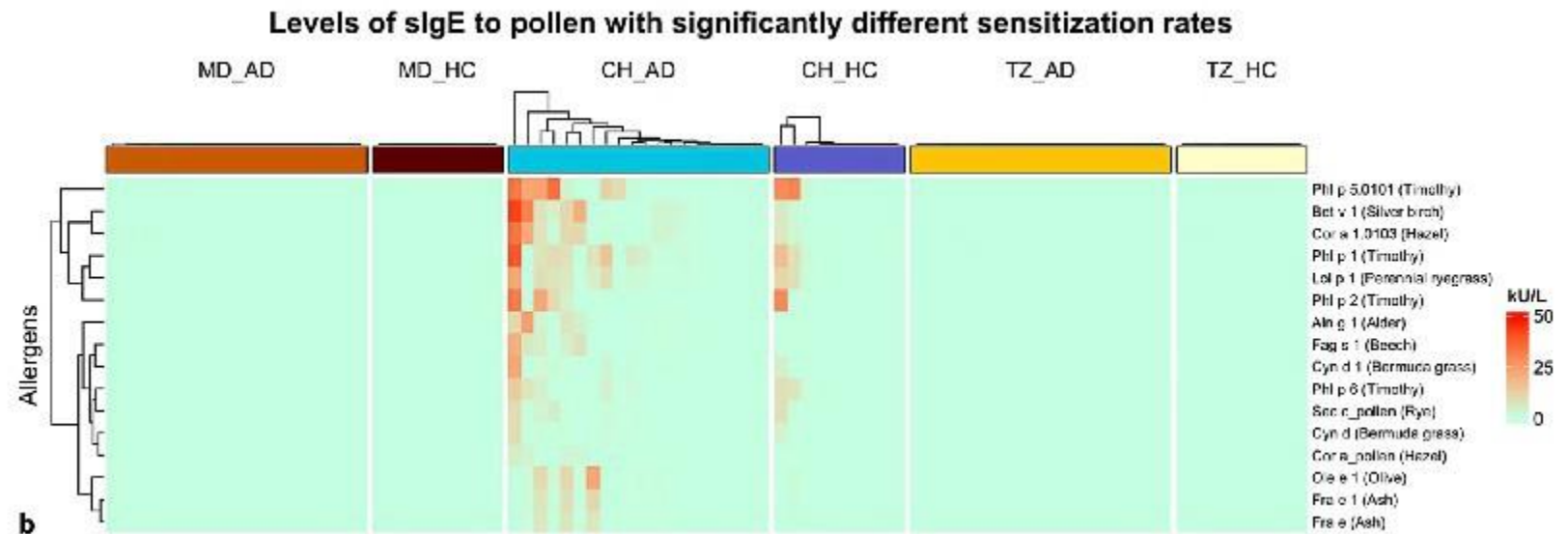
Picture:
<https://www.pollen.com/research/genus/phleum>

Allergo J Int
<https://doi.org/10.1007/s40629-024-00313-9>



Sensitizations to pollen differ between Central European and Sub-Saharan African atopic dermatitis patients

Danielle Fehr¹ · Muriel Rentschler · Fandresena Sendrasoa · Nick Li · Anna White · Meike Distler · Claudia Lang · Gloria Masenga · Nelson Masha · George Semango · Clara Clemens · Tahinamandranto Rasamoelina · Abel Hermann Soankasina · Fahafahantsoa Rapelanoro Rabenja · Daudi Mavura · John Elisante Masenga · Peter Schmid-Grendelmeier · Marie-Charlotte Br

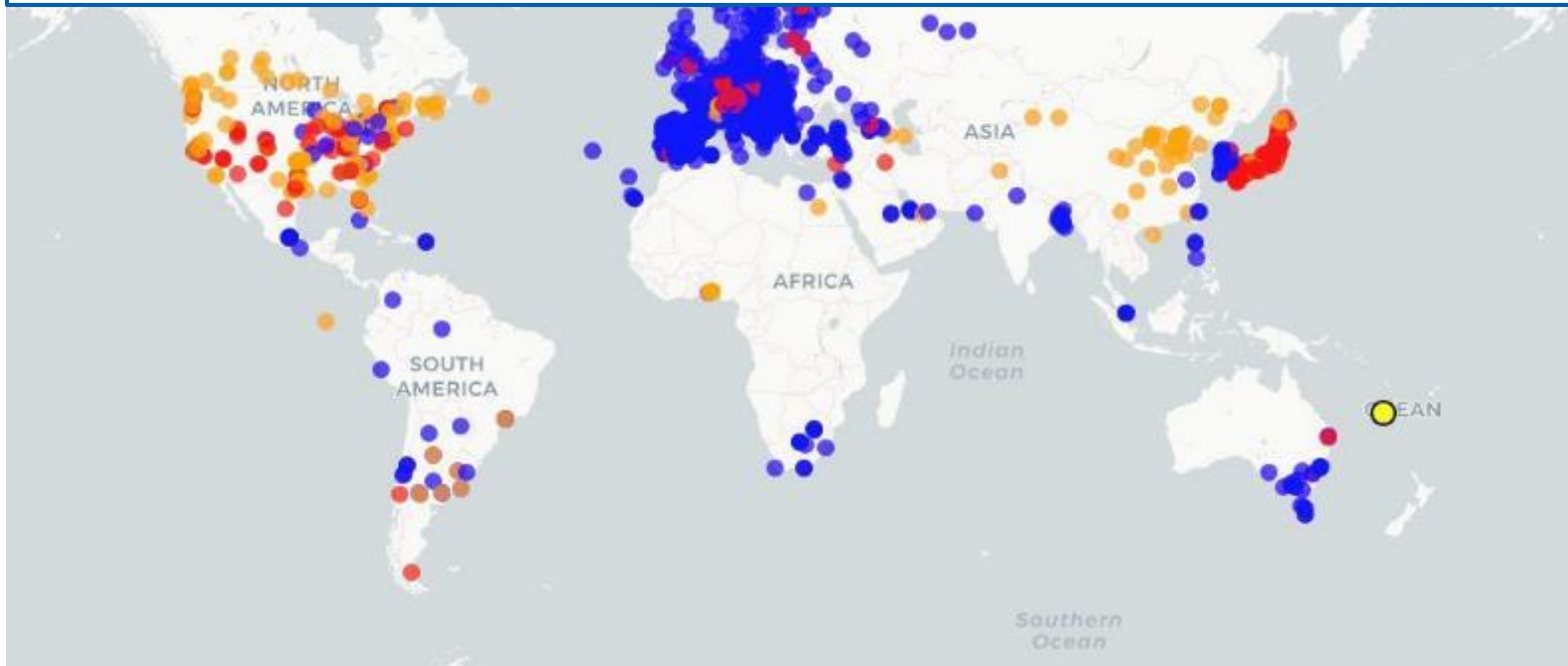


Running Pollen Monitoring Stations Worldwide

Lack of available data on pollen counts in most African countries

→ Lack of tailored sIgE panels for pollen allergens

→ Lack of tailored desensitization therapies



Pollen Monitoring Stations (EAACI Taskforce), Filter „Open-running station“=Yes, Access December 2023,
https://oteros.shinyapps.io/pollen_map/_w_3805eb39/#tab-8379-1

Evidence for different immune signatures and sensitization patterns in sub-Saharan African vs. Central European atopic dermatitis patients

Olink proteomics inflammation panel: AD Tanzania and AD Switzerland

- IL-17-dominated signature in SsA patients

Most significantly overexpressed proteins (TZ vs. CH)

Protein name	log2 ratio	P value
4E-BP1		
CCL19		
CXCL1		
TGF-beta		
CCL25		
TRAIL		
FGF-5		
IL-17C		
IL-17A		
TNF		
CXCL5		

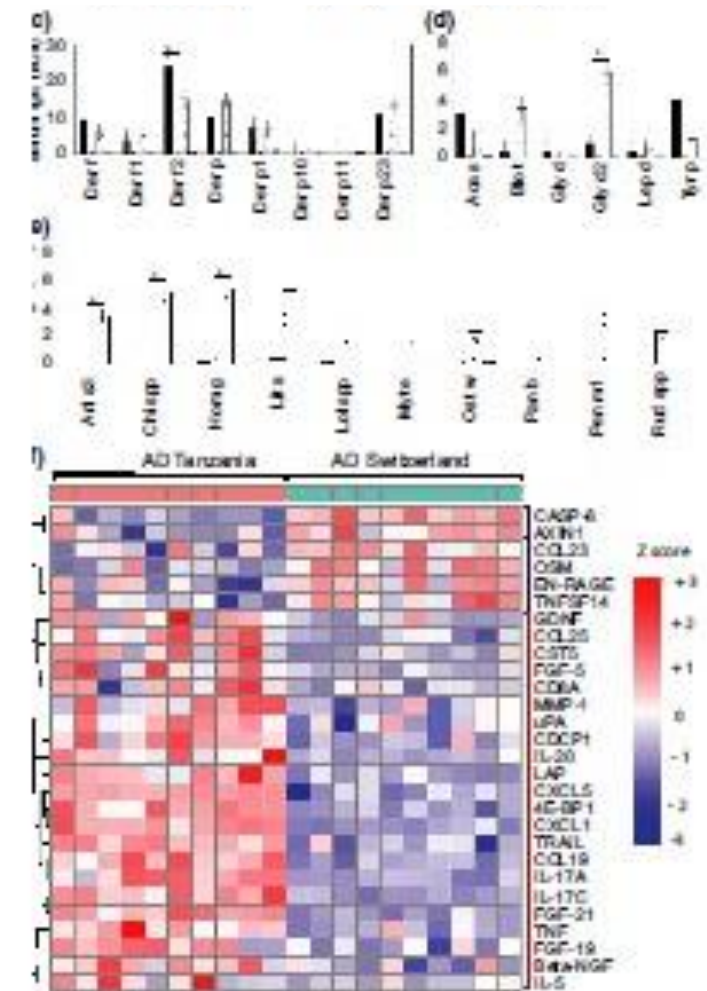
Preliminary findings

Pro-inflammatory, Th17-related mediators

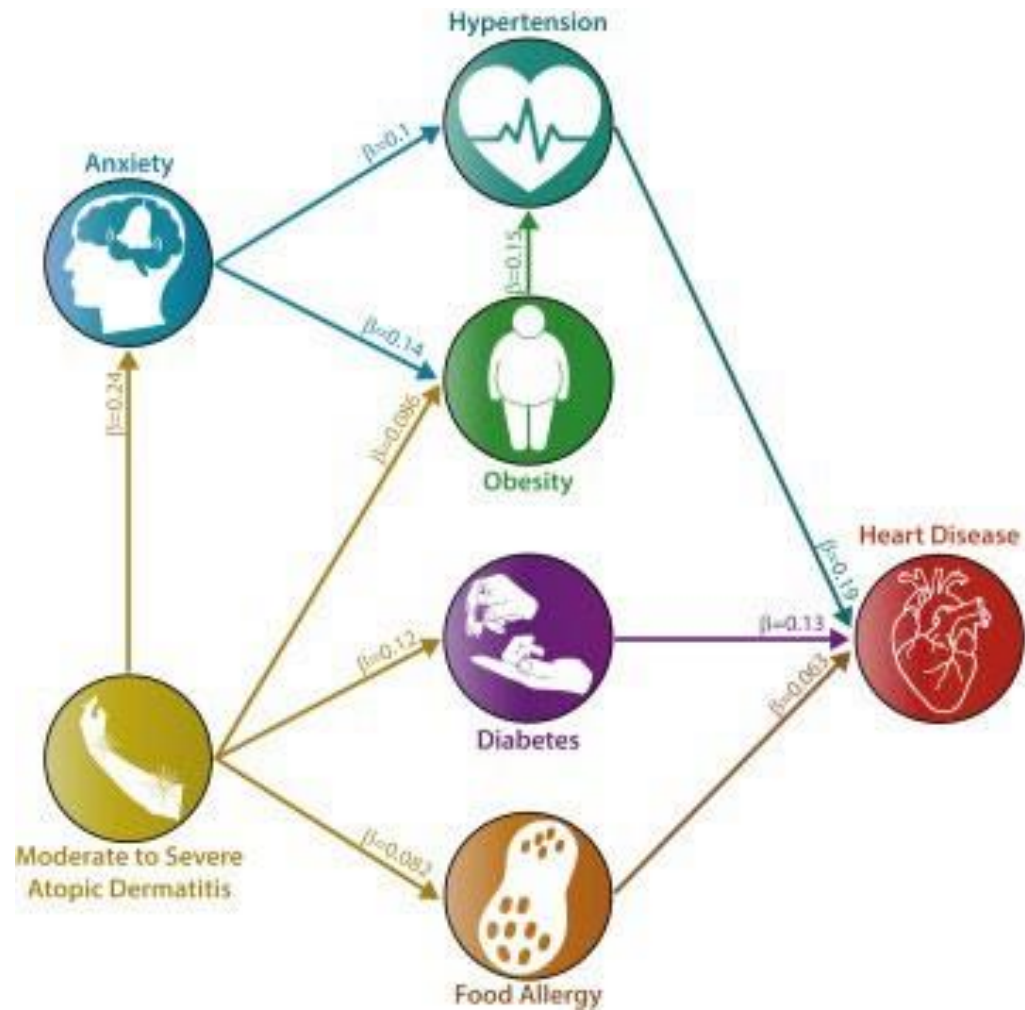
dominate in the serum of TZ AD patients compared to CH AD patients

- exhibiting dominant T_H2 and T_H22 skewing
- attenuation of lipid metabolism-related products

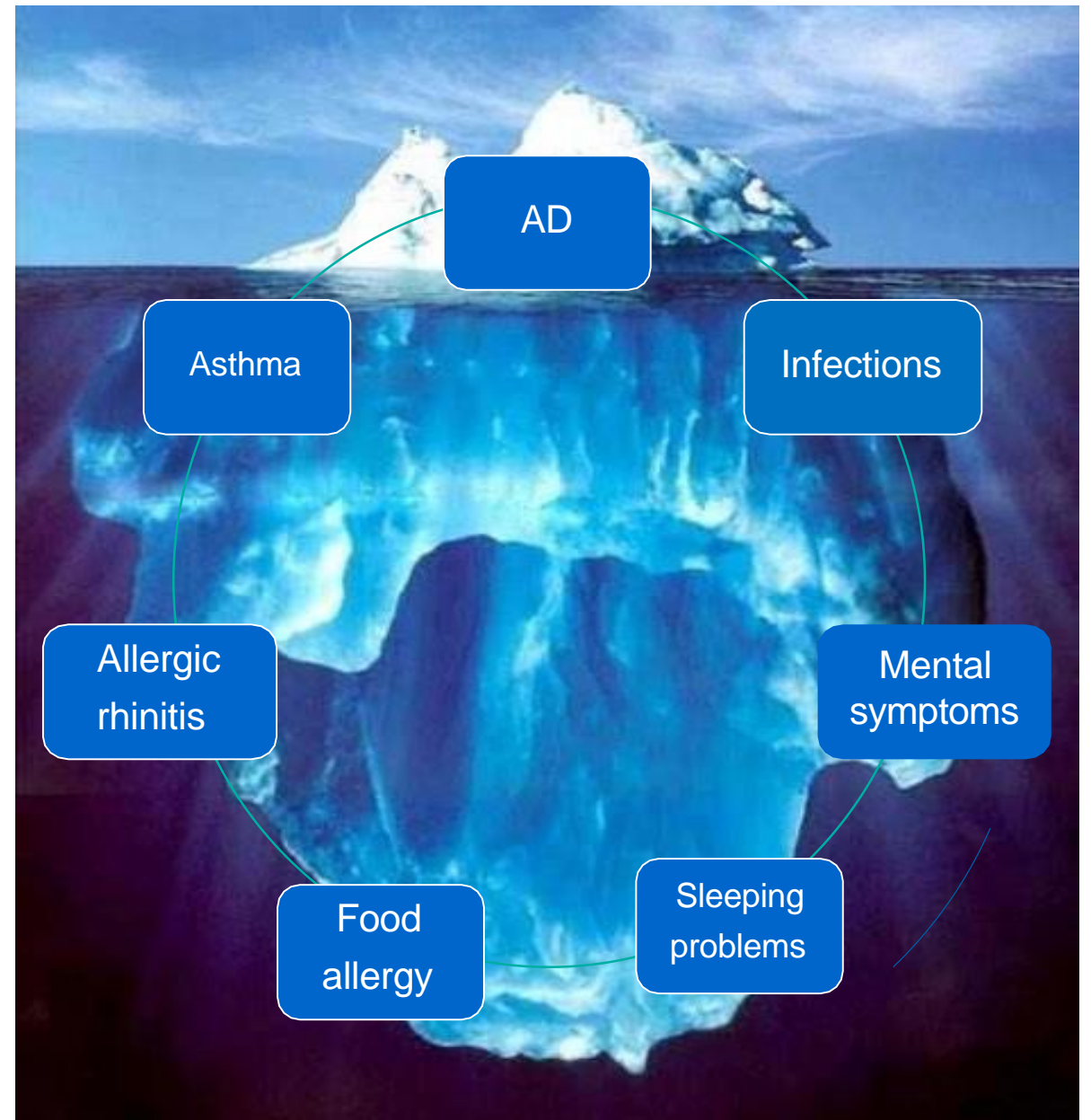
Lang CCV et al. Ann Allergy Asthma Immunol. 2021 Sep;127(3):334-341
 Lang CCV et al. J Eur Acad Dermatol Venereol. 2021 Feb;35(2):e140-e142



«Common» comorbidities in AD



(Silverberg J, J Ann All Asthma Immunol, 2019)



Staphylococci and other bacteria in AD

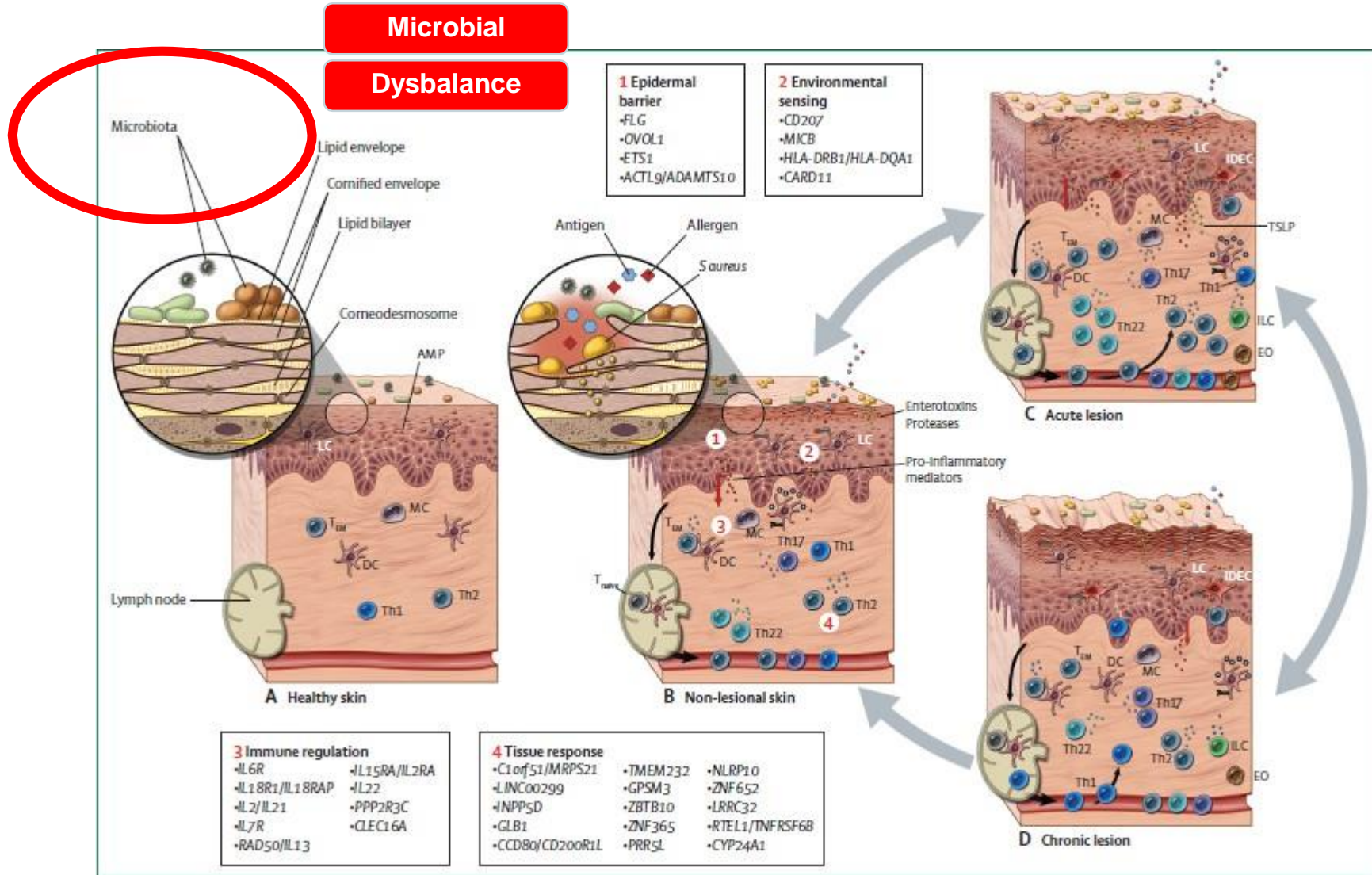
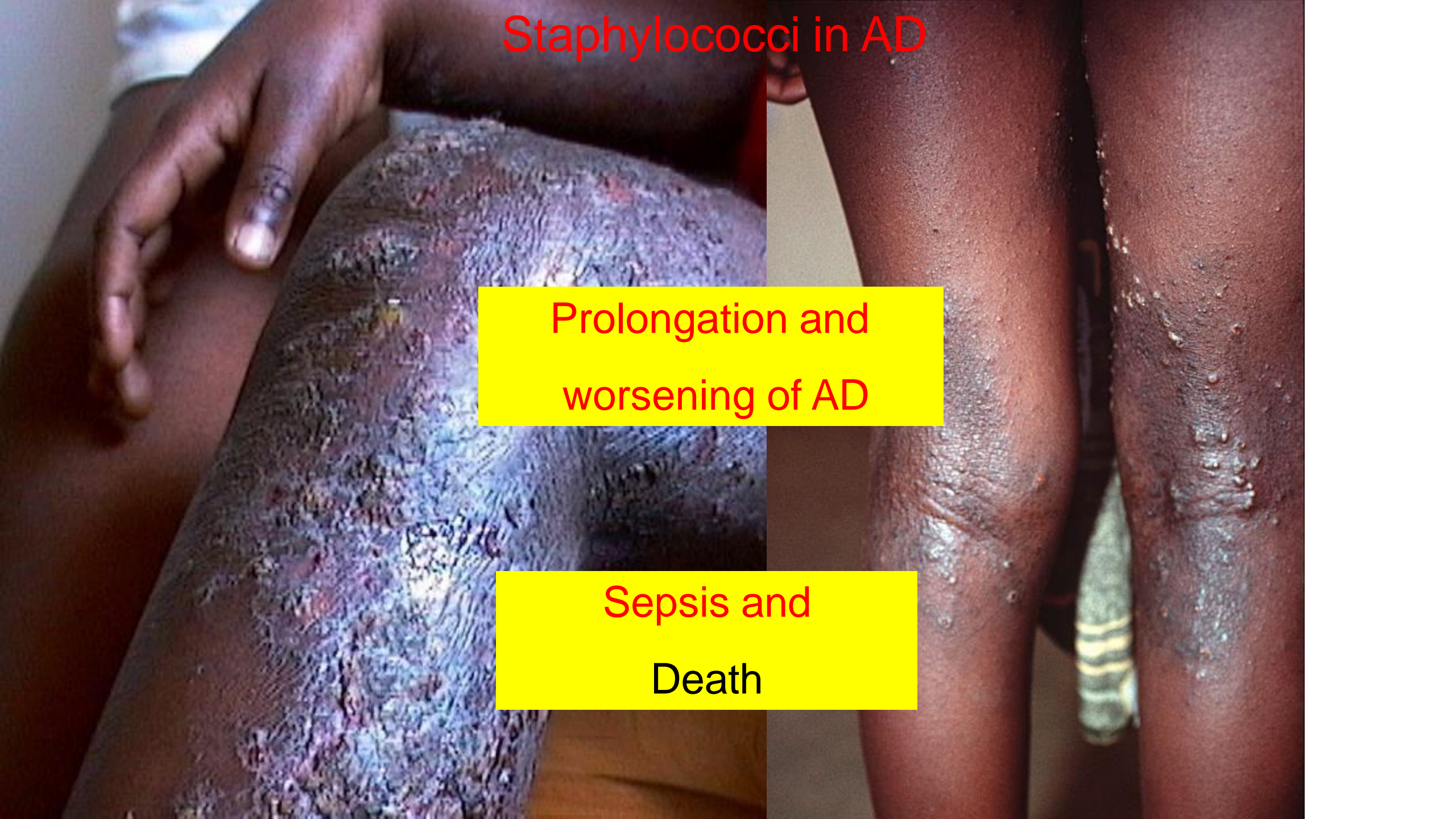


Figure 4: Key pathophysiological changes in atopic dermatitis




Staphylococci in AD

Prolongation and
worsening of AD

Sepsis and
Death



Trigger factors in AD according to age

		Infancy	Childhood	Puberty	Adulthood	
Food	Food hypersensitivity	[Shaded]				 
	Type IV allergy		[Shaded]			
	Inhalant allergy		[Shaded]			
M i c r o b e s	Bacterial infections	[Shaded]				
	Viral infections	[Shaded]				
	Malassezia			[Shaded]		

Practall position paper AAAACI / EAACI
 Akdis CA et al Allergy 2006
 Akdis CA et al J Allergy Clin Immunol 2006

Malassezia specific IgE in head and neck dermatitis of eczema: A systematic review & meta-analysis

Hui Xin See Tow¹ | Yik Weng Yew^{2,3}



Malassezia specific IgE in head and neck dermatitis of eczema: A systematic review & meta-analysis

Hui Xin See Tow¹ | Yik Weng Ye

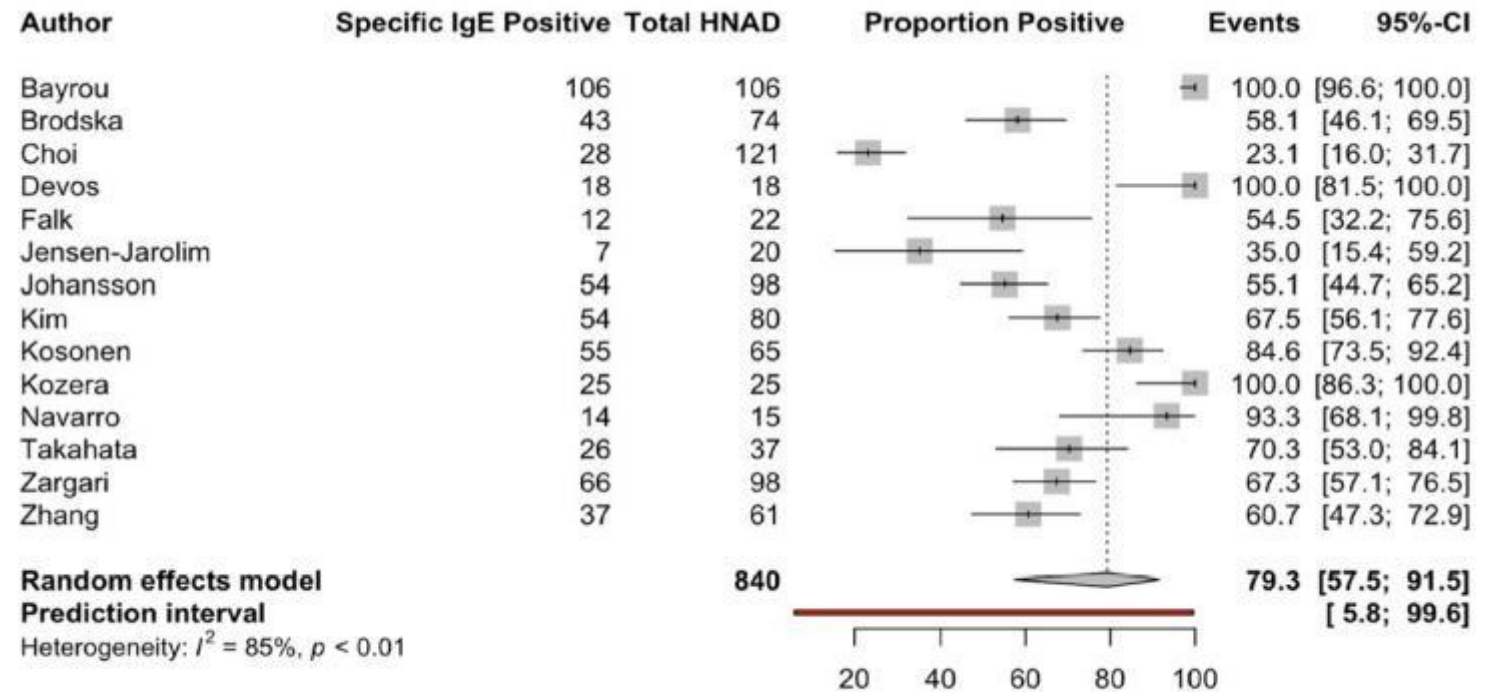
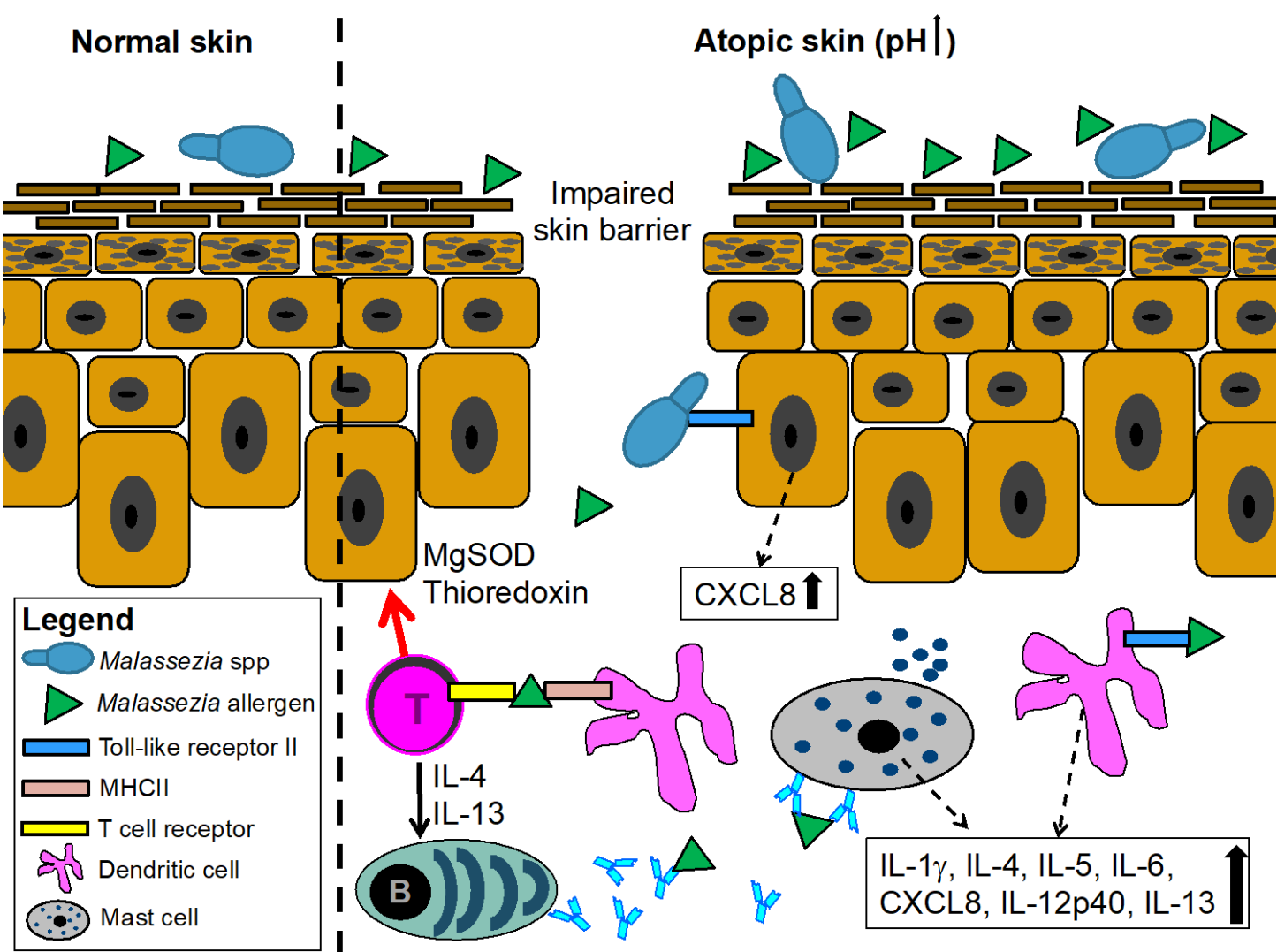


FIGURE 2 Proportion of *Malassezia* specific IgE in HNAD patients. HNAD, head and neck dermatitis.

Sensitization to Malassezia in AD



IgE-mediated and T cell-mediated autoimmunity against manganese superoxide dismutase in atopic dermatitis

Peter Schmid-Grandelmeier, MD,^{1,2*} Sabine Fückiger, PhD,³ Rainer Diach, MD,⁴ Axel Trautwein, MD,⁵ Brunella Wittlich, MD,⁶ Karl Blaser, PhD,⁷ Anika Scheybal, MD,⁸ and Reto Granel, PhD⁹ Derm und Zentr, Storzlied, and Storzlied, Storzlied

IgE-mediated and T cell-mediated autoimmunity against manganese superoxide dismutase in atopic dermatitis

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Journal of Allergy and Clinical Immunology
Volume 115, Issue 5, Pages 999-1005, May 2005
DOI: 10.1093/allergy/115.5.999



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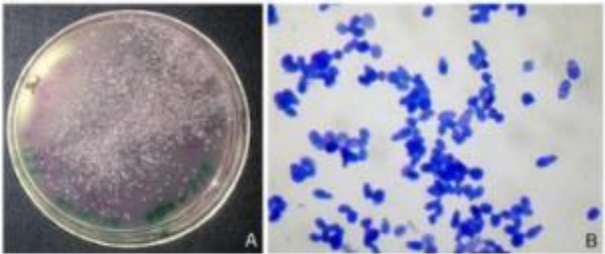


Figure 1. (A) Malassezia symyodialis on Malassezia ChromAgar. Growth after 48h of incubation at 34 °C. (B) Methylene blue staining of M. symyodialis culture

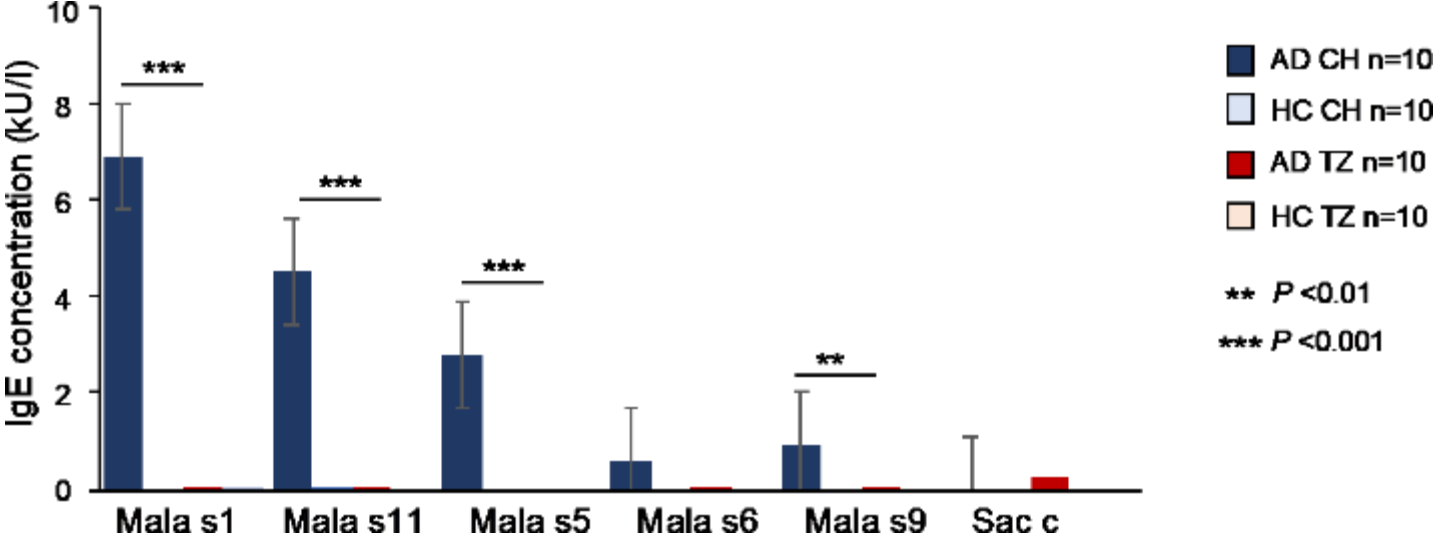
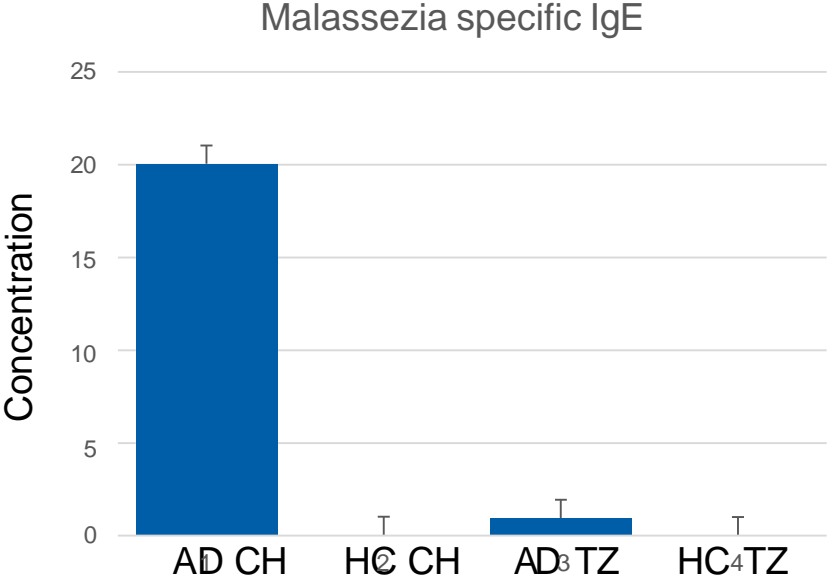
Pityriasis versicolor/Colonization with Malassezia is common in Tanzania



Adamo Trop Doct 2016

Results: Prominent Malassezia sensitization in Switzerland but **not** in Tanzania

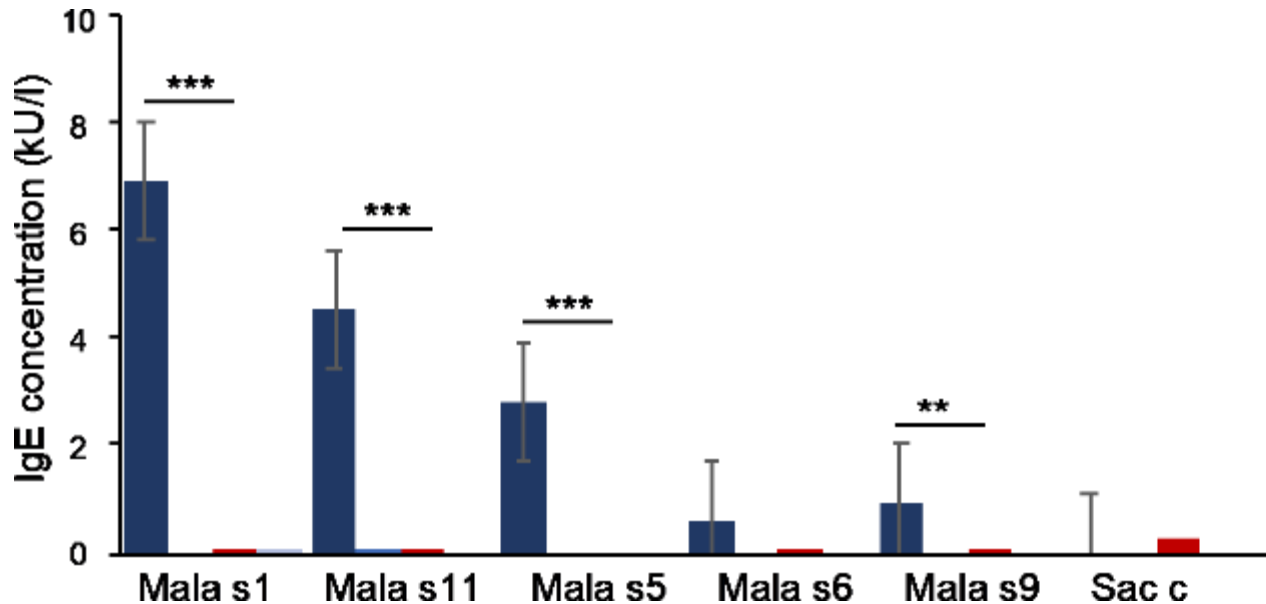
Malassezia antigen-specific IgE



Lang CCV et al. J Eur Acad Dermatol Venereol. 2021 Feb;35(2):e140-e142

Results: Prominent *Malassezia* sensitization in Switzerland but **not** in Tanzania due to different IL-17 response?

Malassezia antigen-specific IgE

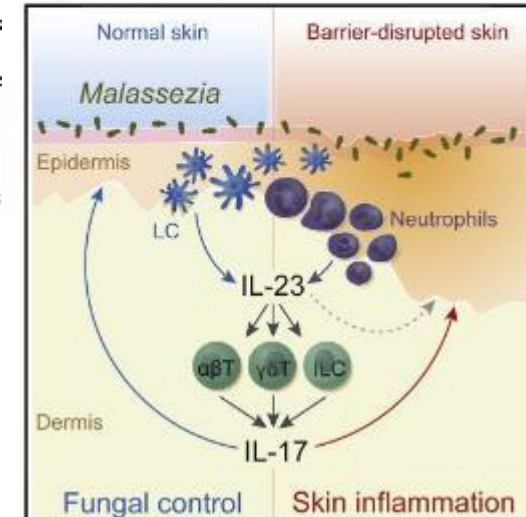


Cell Host & Microbe

The Skin Commensal Yeast *Malassezia* Triggers a Type 17 Response that Coordinates Anti-fungal Immunity and Exacerbates Skin Inflammation

Graphical Abstract

- AD CH n=
 - HC CH n=
 - AD TZ n=
 - HC TZ n=
- ** $P < 0.01$
 *** $P < 0.001$



Authors

Florian Sparber, Corinne De Gregorio, Simone Steckholzer, ..., Martin Glatz, Federica Sallusto, Salomé LeibundGut-Landmann

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salome.leibundgut-landmann@uzh.ch

In Brief

The skin commensal yeast *Malassezia* is associated with common skin disorders like atopic dermatitis, but how the mammalian host responds to *Malassezia* remains unclear. Using an epicutaneous infection model in mice, Sparber et al. demonstrate that the IL-23-IL-17 pathway controls fungal colonization and also drives *Malassezia*-induced inflammation in atopy-like skin.

Sparber F, et al. Cell Host Microbe. 2019; 13;25(3):389-403

Lang CCV et al JEADV 2021

Malassezia specific IgE in head and neck dermatitis of eczema: A systematic review & meta-analysis

Hui Xin See Tow¹ | Yik Weng Yew^{2,3}



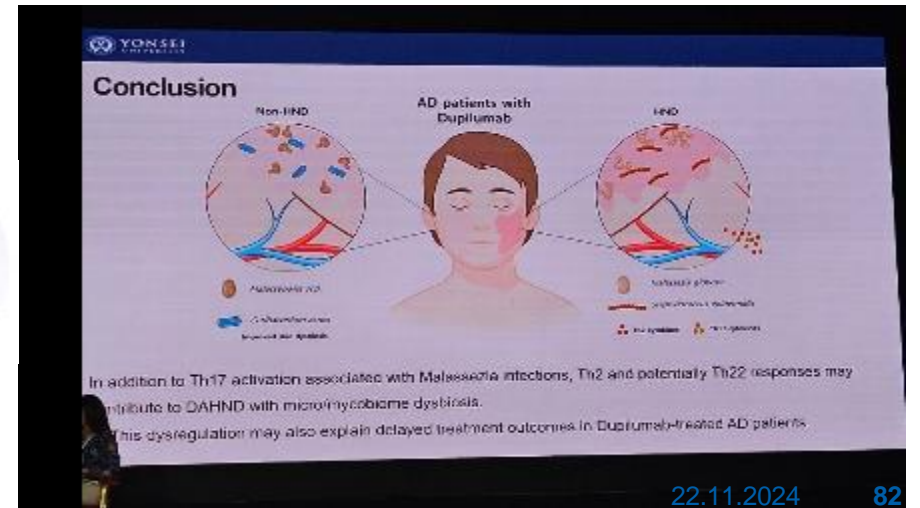
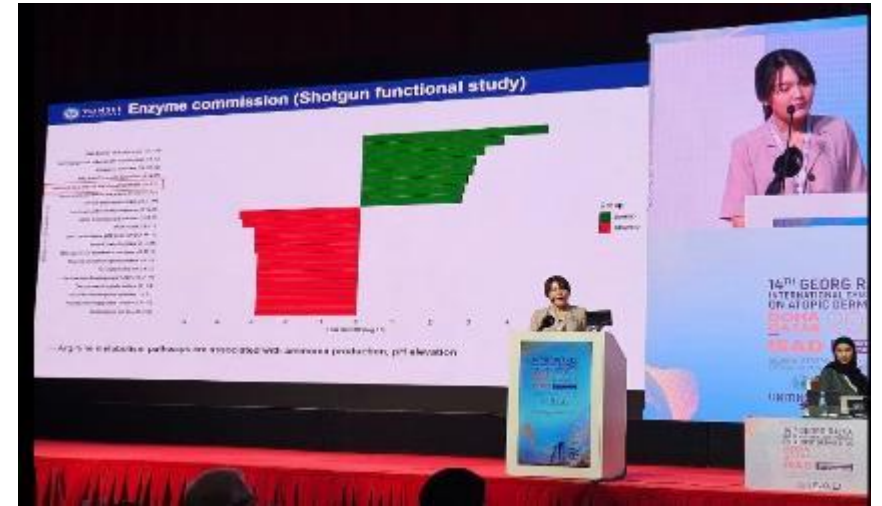
Development or Exacerbation of Head and Neck Dermatitis in Patients Treated for Atopic Dermatitis With Dupilumab. [Soira A et JAMA Dermatology](#) 2019-11-01

Murphy MJ et al Paradoxical eruptions to targeted therapies in dermatology: A systematic review and analysis. *J Am Acad Dermatol.* 2022 May;86(5):1080-1091

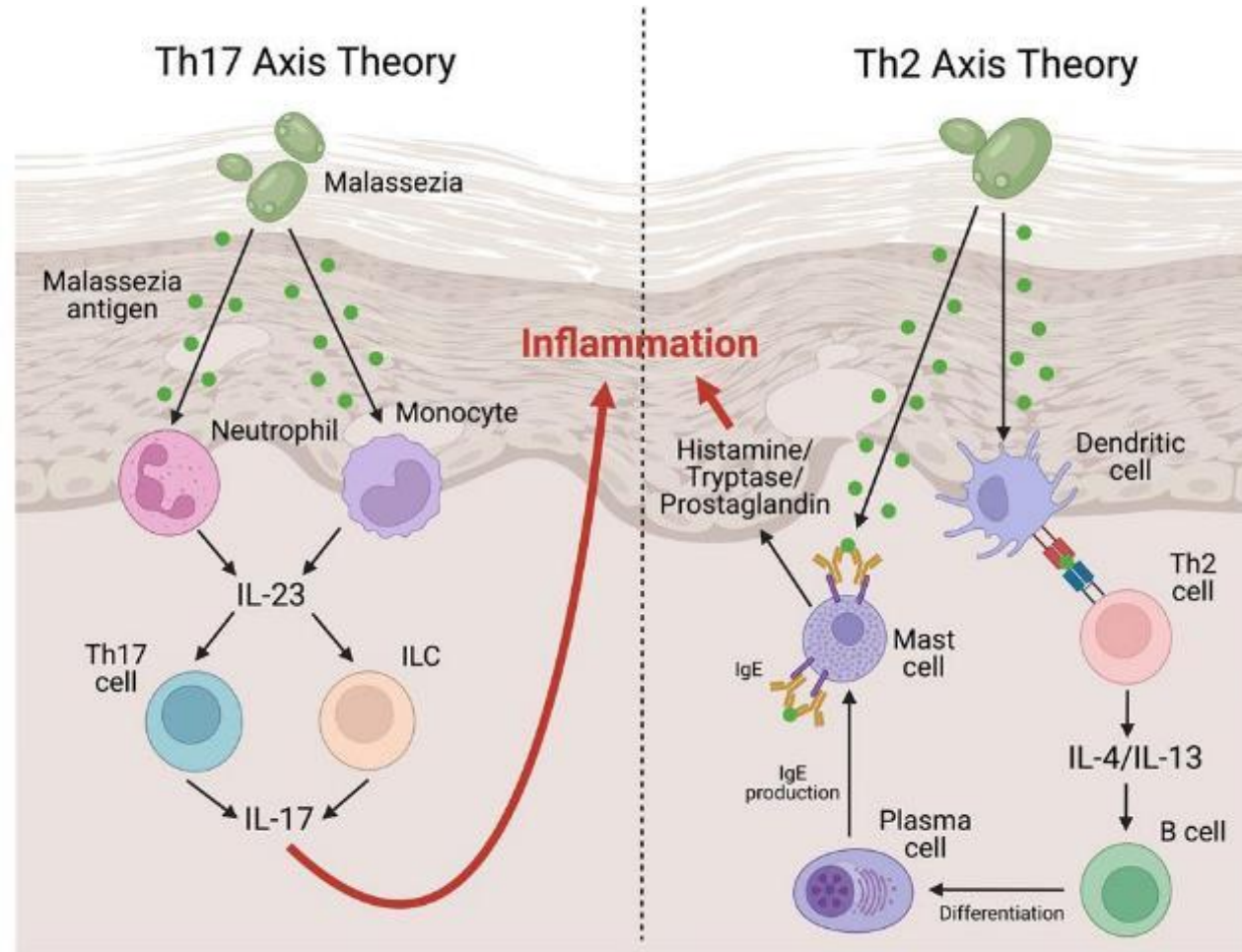
de Wijs LEM et al. Clinical and histopathological characterization of paradoxical head and neck erythema in patients with atopic dermatitis treated with dupilumab: a case series. *Br J Dermatol.* 2020 Oct;183(4):745-749

Shotgun Metagenomics Reveals Microbiome Dysbiosis in Dupilumab-Associated Head and Neck Dermatitis

Wanjin KIM, South Korea



Th17 Axis /IL-17 and Th2 axis /IL-4/13 in Head & Neck Dermatitis



Chong AC, Navarro-Triviño FJ, Su M, Park CO. Fungal Head and Neck Dermatitis: Current Understanding and Management. Clin Rev Allergy Immunol. 2024 Jun;66(3):363-375



Dupilumab-associated head and neck dermatitis shows a pronounced type 22 immune signature mediated by oligoclonally expanded T cells

Received: 3 July 2023

Accepted: 1 March 2024

Published online: 02 April 2024

Check for updates

Christine Banger t^{1,5}, Natalia Alkon^{1,5}, Sumanth Chennareddy²,
Tamara Arnoldner¹, Jasmine P. Levine^{2,2}, Magdalena Pilz¹, Marco A. Medjimorec¹,
John Ruggiero², Emry R. Cohenour², Constanze Jonak¹, William Damsky⁴,
Johannes Griss¹ & Patrick M. Brunner² ✉

Malassezia in Atopic Dermatitis (A) in Tanzania (TZ) in comparison with Switzerland (CH)

- AD is also very common in SubSaharan Africa/TZ
- Immunologic signatures are different in AD patients between CH and SsA: IL17 is a dominant cytokine TZ
- Colonization with Malassezia spp. Is common in both places but
- Sensitization to Malassezia spp. Is very low in SsA compared to CH

CORRESPONDENCE



Atopic dermatitis: The importance of future research in Africa

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Claudia Lang^{1,2,3}

John Masenga⁴

Daudi Mavura⁴

Peter Schmid-Grendelmeier^{1,2,3}

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Zurich, Zurich, Switzerland

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³Christine Kühne-Center for Allergy Research and Education,
Davos, Switzerland

⁴Regional Dermatology Training Centre, Kilimanjaro Christian
Medical Centre, Moshi, Tanzania

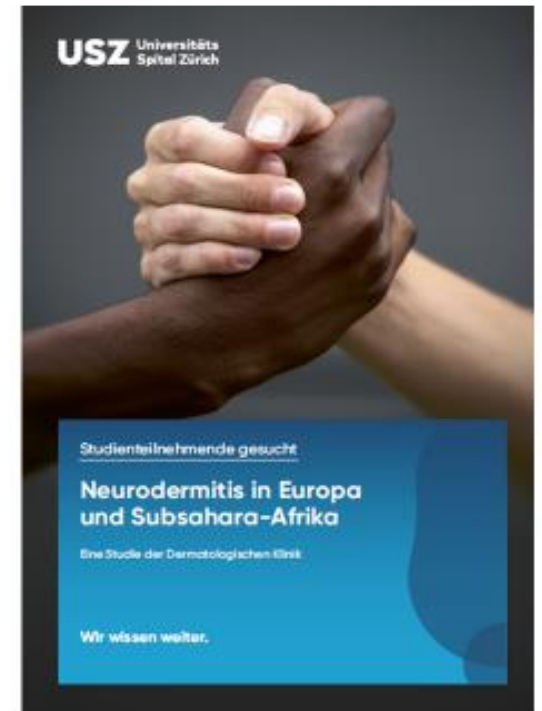
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Atopic dermatitis: The importance of future research in Africa

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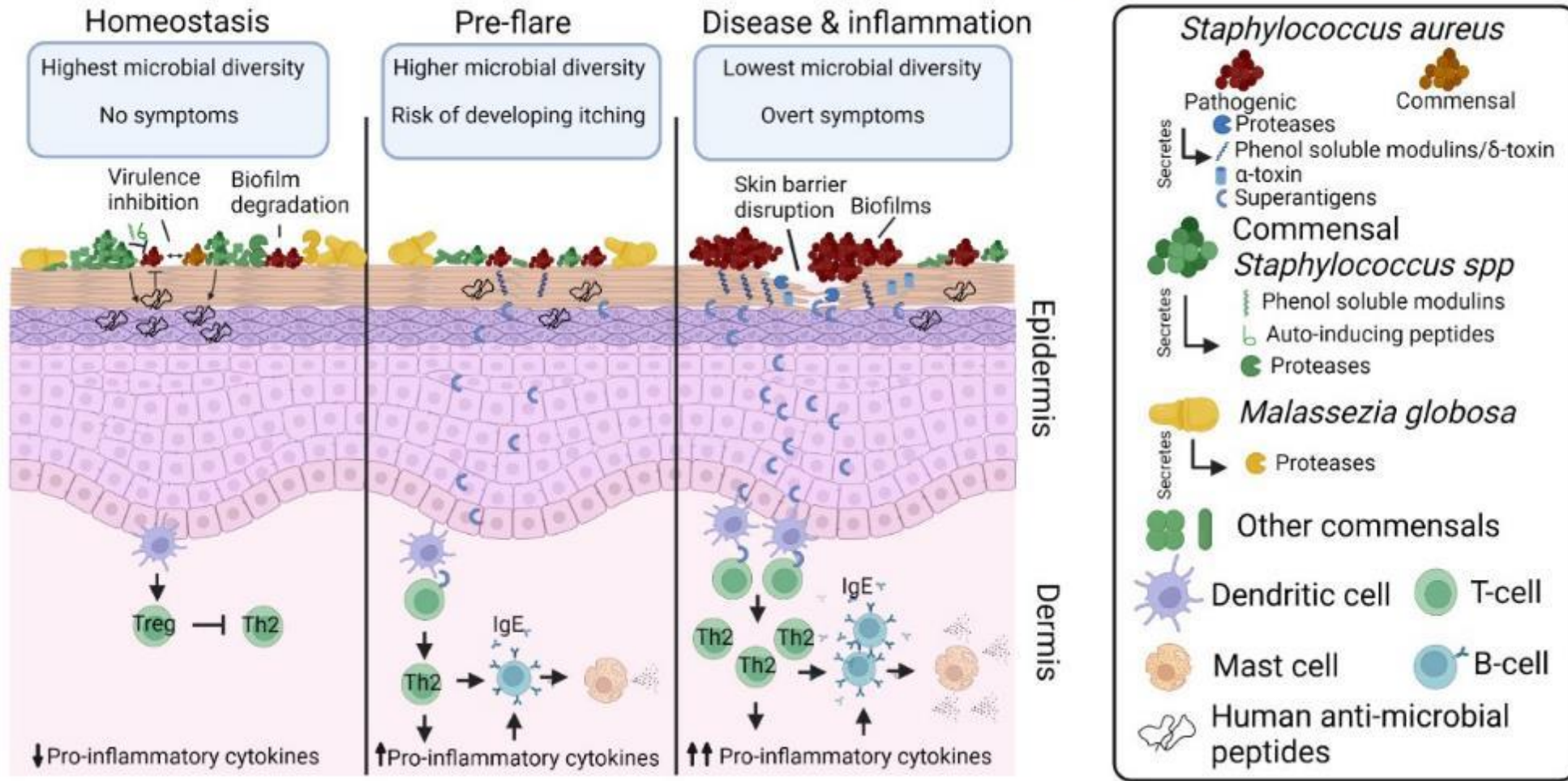
³Christine Kühne-Center for Allergy Research and Education, Davos, Switzerland

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Supported by LEO Foundation

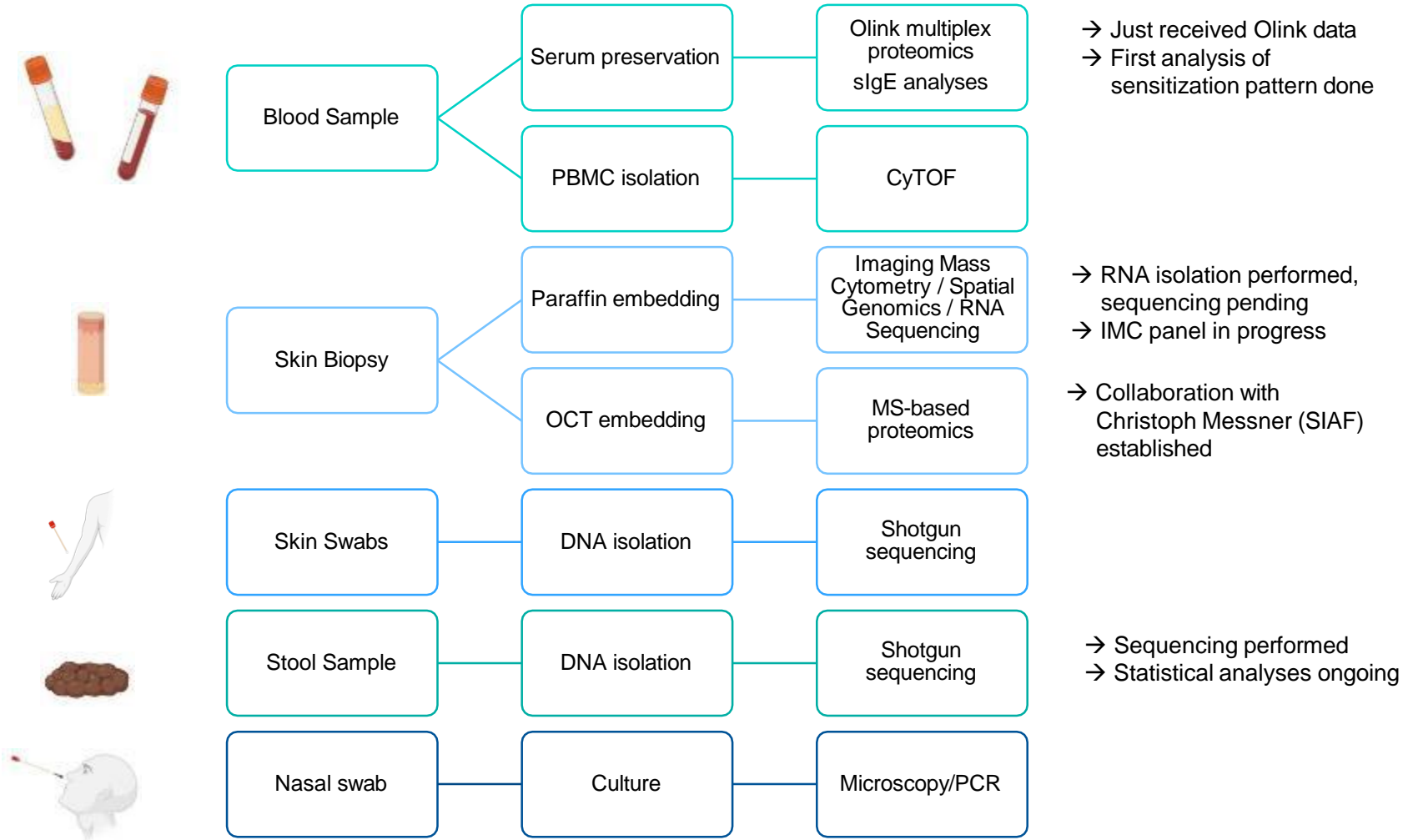
The skin microbiome in pediatric atopic dermatitis and food allergy

THAM ET AL.



Tham EH, Chia M, Riggioni C, Nagarajan N, Common JEA, Kong HH. The skin microbiome in pediatric atopic dermatitis and food allergy. Allergy. 2024

Planned analyses



Survey of used treatments in AD in SubSaharan Africa

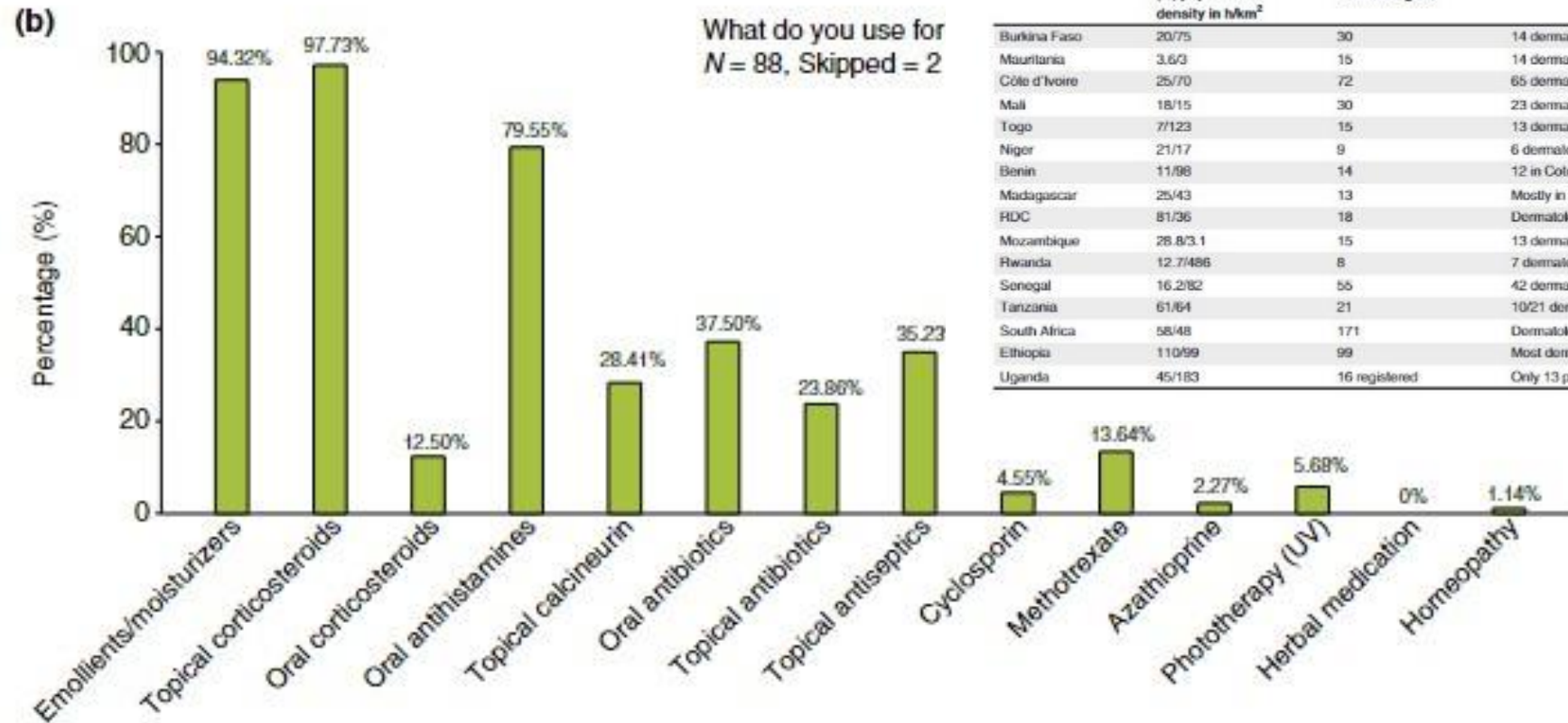


Table 1 Countries represented at the meeting and the number of trained dermatologists

Country	Population (M)/population density in h/km ²	Number of dermatologists	Comments on organization of dermatology in health system
Burkina Faso	20/75	30	14 dermatologists in Ouagadougou, 4 in Bobo-Dioulasso
Mauritania	3.6/3	15	14 dermatologists in Nouakchott
Côte d'Ivoire	25/70	72	65 dermatologists in Abidjan
Mali	18/15	30	23 dermatologists in Bamako
Togo	7/123	15	13 dermatologists in Lome
Niger	21/17	9	6 dermatologists in Niamey
Benin	11/98	14	12 in Cotonou 2 in Parakou
Madagascar	25/43	13	Mostly in Antananarivo
RDC	81/36	18	Dermatologists mostly in Kinshasa
Mozambique	28.8/3.1	15	13 dermatologists in Maputo, 1 in Beira and 1 in Nampula
Rwanda	12.7/486	8	7 dermatologists in Kigali
Senegal	16.2/82	55	42 dermatologists in Dakar
Tanzania	61/64	21	10/21 dermatologists in the two major cities Dar es Salaam and Mwanza
South Africa	58/48	171	Dermatologist in urban areas
Ethiopia	110/99	99	Most dermatologist in Addis Ababa and few in other cities
Uganda	45/183	16 registered	Only 13 practicing dermatologists

Figure 2 (a) survey responses by country and (b) treatments used by survey responders.

A report on the accessibility of emollients in AD in SSA- to ISAD-WHO Meeting in Doha, Qatar

Erere OtofanoWei (Nigeria) for African AD Working Group.

MINIMUM WAGE IN PARTICIPATING COUNTRIES

	TANZANIA	MAURITIANA	BURKINAFASO	SENEGAL	MADAGASCAR	COTE D'IVOIRE	CONGO BRAZZAVILLE	NIGERIA	TUNISIA	RD CONGO	MALI	ETHIOPIA	CAMEROON	BENIN	RWANDA
Minimum wage	TZS 140,000	MRU 45,000	FCFA 45,000	FCFA 237/Hr 40,000/month	MGA 262,680	FCFA 39,960 FCFA 75,000	FCFA 120,000	NGN 65,000	TND 417.558	CDF 7,075	FCFA 40,000	ETB 420	FCFA 43,969	FCFA 52,000	RWF100/day 56,000 averag
1 dollar/currency	1/2725	1/39.52	1/603	1/603	1/4571	1/603	1/603	1/1,633	1/3.09	1/2,841	1/603	1/119	1/603	1/603	1/1,355
Salary in dollar	51.4	1,138	74	66	57	124	199	39	135.132	2.4	74	3.5	72.9	86	41
% cost of Vaseline/salary	9.7%	0.4%	6.7%	7.6%	8.75%	4.02%	2.5%	12.8%	3.69%	207%	6.7%	140%	6.8%	5.8%	12.17%

WHO – ISAD Strategies for AD in SubSaharan Africa
6.-8. June 2022 **Antananarivo, Madagascar**



WHO-ISAD meeting Gdansk before the 13th Georg Rajka symposium on Atopic Dermatitis (AD)

Date August 30th, 2023, 09.00 h -15 h
Venue: Floor 1, conference level of Radisson Hotel & Suites, 10/25 Chmielna Street, 80-748 Gdansk.



WHO-0231746-1-0-1003

EML application « Moisturizers for AD » submitted
Nov 1st 2024

Inclusion of urea- and glycerol-based topical moisturizers on the EML and EMLc for the treatment of atopic dermatitis in adults and children

Applicants:
 International Society of Atopic Dermatitis

Co-Applicant:
 WHO Department of control of Neglected Tropical Diseases

Persons to contact: Prof Alain Faieb, ISAD Dr Jose Ruiz Postigo, WHO NTDs
 Email: alain.faieb@u-bordeaux.fr Email: postigoj@who.int
 Phone: + 33 647679795 Phone : + 41 795163882

Writing group: dermatologists, pharmacists, from academia or industry,

Support: GlobalSkin (Patient advocacy)
 ILDS (Int League Derm Soc)
 ASDV (African Soc Derm Vener)

Thank you. Misaotra betsaka. Asante sana. 😊



**With best regards from the staff and study team
of the Allergy Unit in Switzerland**



And you are most welcome at the Rajka meeting



Rajka 2026: Beijing, China



Thank you

謝謝

