SATURDAY 8 JUNE 2024 QEII CENTRE LONDON UK

# **Dr Radka Toms**

Medical Doctor / Ophthalmologist / Functional Medicine Practitioner / Integrative Nutrition Health Coach, UK

PRESENTING:

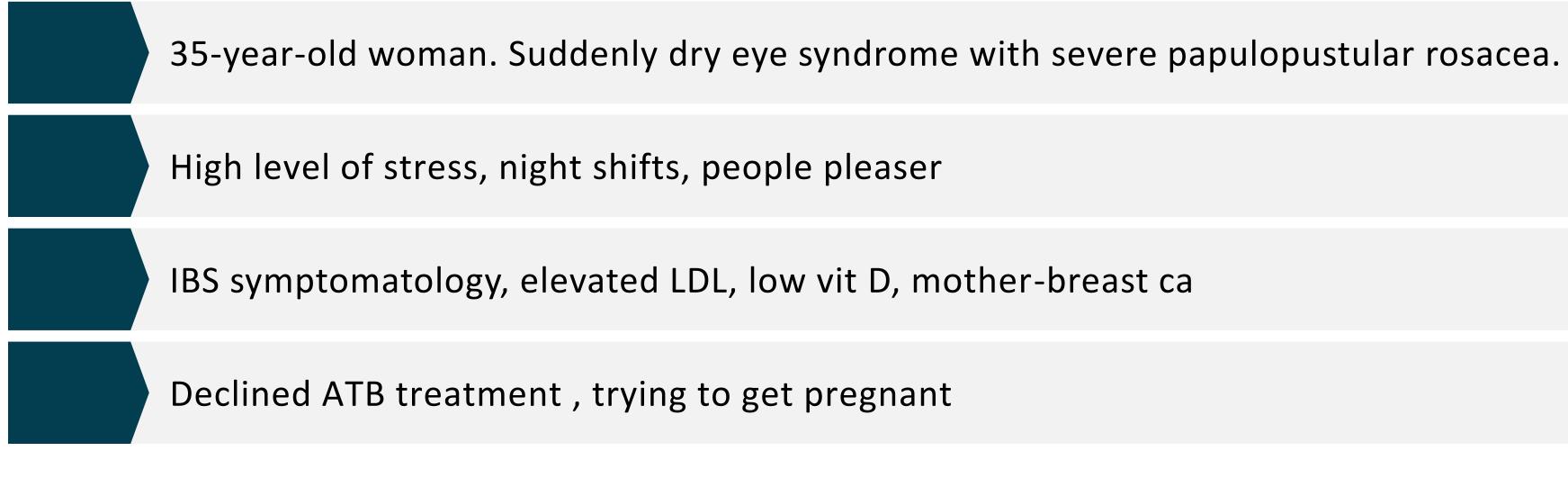
Gut Health - the key to Rosacea healing

ipmcongress.com



food on prescription CONFERENCE 24





### Patient "Zero"



Papules, Pustules, severe erythema, telangiectasia, blepharits

### What I do now?







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nature > comment > article

Comment | Published: 01 February 2012

### The toxic truth about sugar

Robert H. Lustig D, Laura A. Schmidt & Claire D. Brindis

Nature 482, 27–29 (2012) Cite this article

204k Accesses | 548 Citations | 1562 Altmetric | Metrics

Added sweeteners pose dangers to health that justify controlling them like alcohol, argue Robert H. Lustig, Laura A. Schmidt and Claire D. Brindis.

### NIH Human Microbiome Project



Characterization of the microbiomes of healthy human subjects at five major body sites, using 16S and metagenomic shotgun sequencing.

Enter HMP1



Characterization of microbiome and human host from three cohorts of microbiome-associated conditions, using multiple 'omics technologies.

**Enter iHMP** 

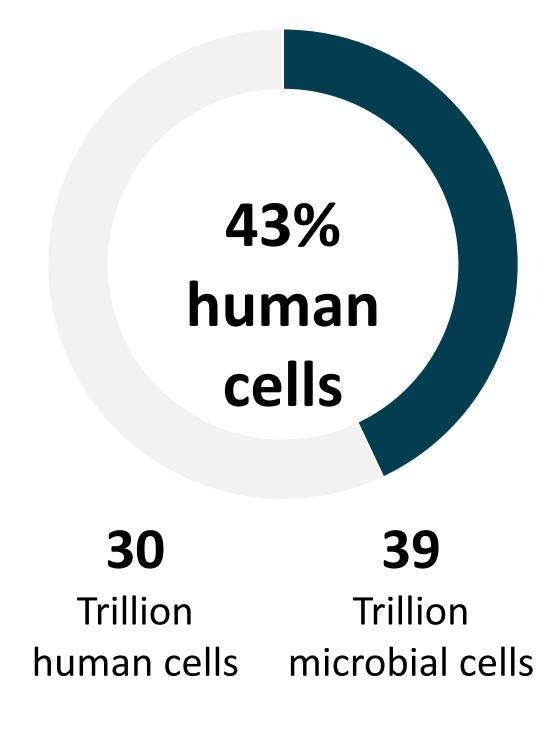
### Enter HMP Integrated Portal

THE HUMAN MICROBIOME PROJECT Peter J. Turnbaugh,



# We see an organism that is 43% human







We ignore 99% of our genes.. the ones we can change!

Dr. Rob Knight presentation, University of California

### 1% Human genes

# 20,0002-20 millionHumanMicrobialgenesgenes

# Growing evidence that repairing the microbiome "can actually lead to remission" in diseases.

We are **losing microbiome diversity** through industrialization, including diet.

-Dr. Rob Knight



### Two reviews were published looking at the impact of ultra-processed foods on our health

Ultra-processed foods are associated with increased risk of diseases including obesity, cancer, T2D, depression and IBD. For every 10% increase in UPF there's a 15% increase in all-cause mortality.

Research Ultra-processed food exposure and adverse health outcomes: umbrella review of epidemiological meta-analyses				nature reviews (	
				Explore content 🖌 Abou	
<i>BMJ</i> 2024 ; 384 doi: https://doi: Cite this as: <i>BMJ</i> 2024;384:e07		-077310 (Published 28 Fe	bruary 2024)	<u>nature</u> > <u>nature reviews gas</u>	
Linked Editorial Reasons to avoid ultra-proces	ed foods			Review Article Published: 2	
Article Related conten	t Metrics Respo	onses Peer review		Ultra-processe and disease	
Melissa M Lane (D), associate resea Shutong Du (D), doctor of philosop Amelia J McGuinness (D), associate	hy candidate <sup>2</sup> <sup>3</sup> , Deborah N	Ashtree ២, associate resea	rch fellow <sup>1</sup> ,	Kevin Whelan <sup>™</sup> , Aaron S. Ba	
Phillip Baker, senior research fellow Bernard Srour, junior professor <sup>7</sup> , M Toby Segasby, doctor of philosophy	thilde Touvier, research diree	ctor <sup>7</sup> , Felice N Jacka, professo	professor, core faculty <sup>2 3</sup> , or <sup>1 8 9</sup> , Adrienne O'Neil, professor <sup>1</sup> ,	Nature Reviews Gastroenter	

- **nature reviews** gastroenterology & hepatology

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astroenterology & hepatology > review articles > article

22 February 2024

### ed foods and food additives in gut health

Bancil, James O. Lindsay & Benoit Chassaing

erology & Hepatology **21**, 406–427 (2024) Cite this article







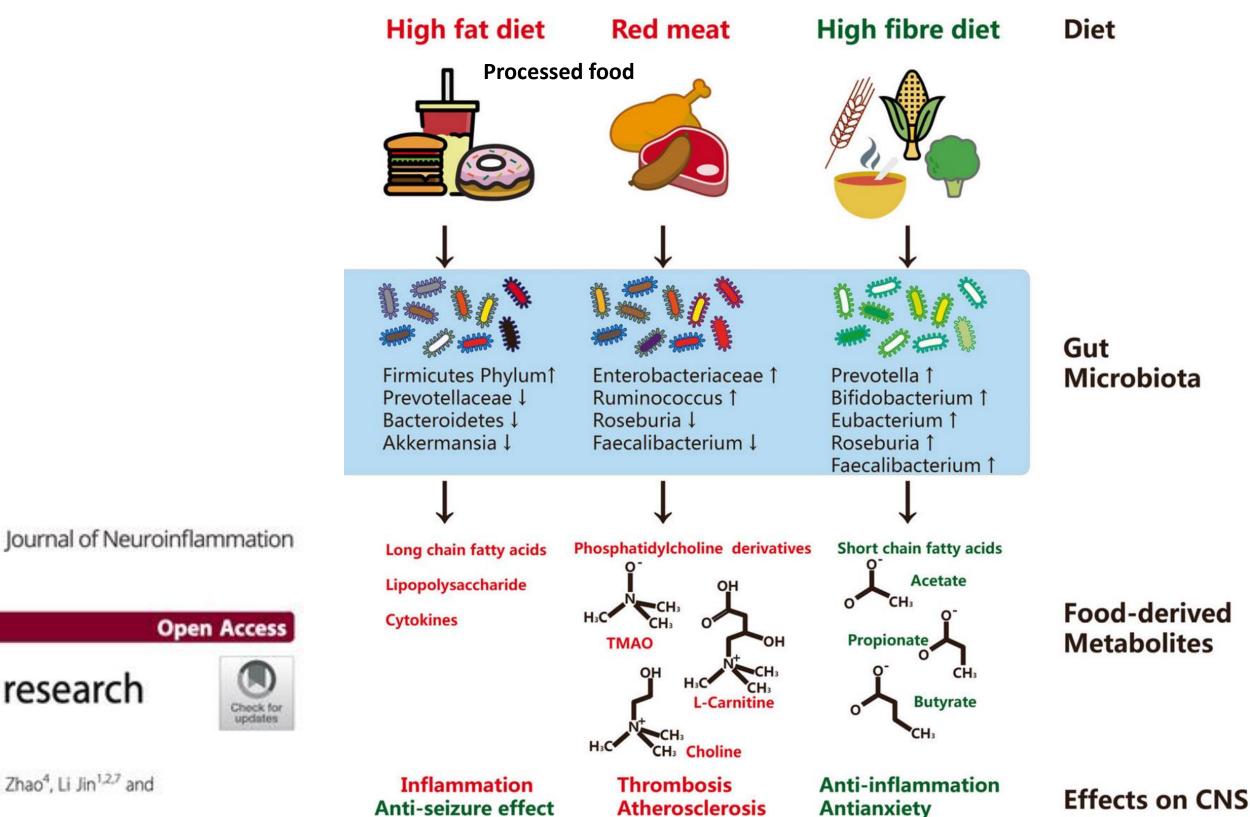
- Jeff Bland

### "Food is a language that speaks to our genes"

# Founder of Institute of **Functional Medicine**

### We are what we eat

### **Diet influences the Gut Microbiome**



Zhu et al, Journal of Neuroinflammation (2020) 17:25 https://doi.org/10.1186/s12974-020-1705-z

### REVIEW

### The progress of gut microbiome research related to brain disorders



### Short-Chain Fatty Acids (SCFA) Production in Colon

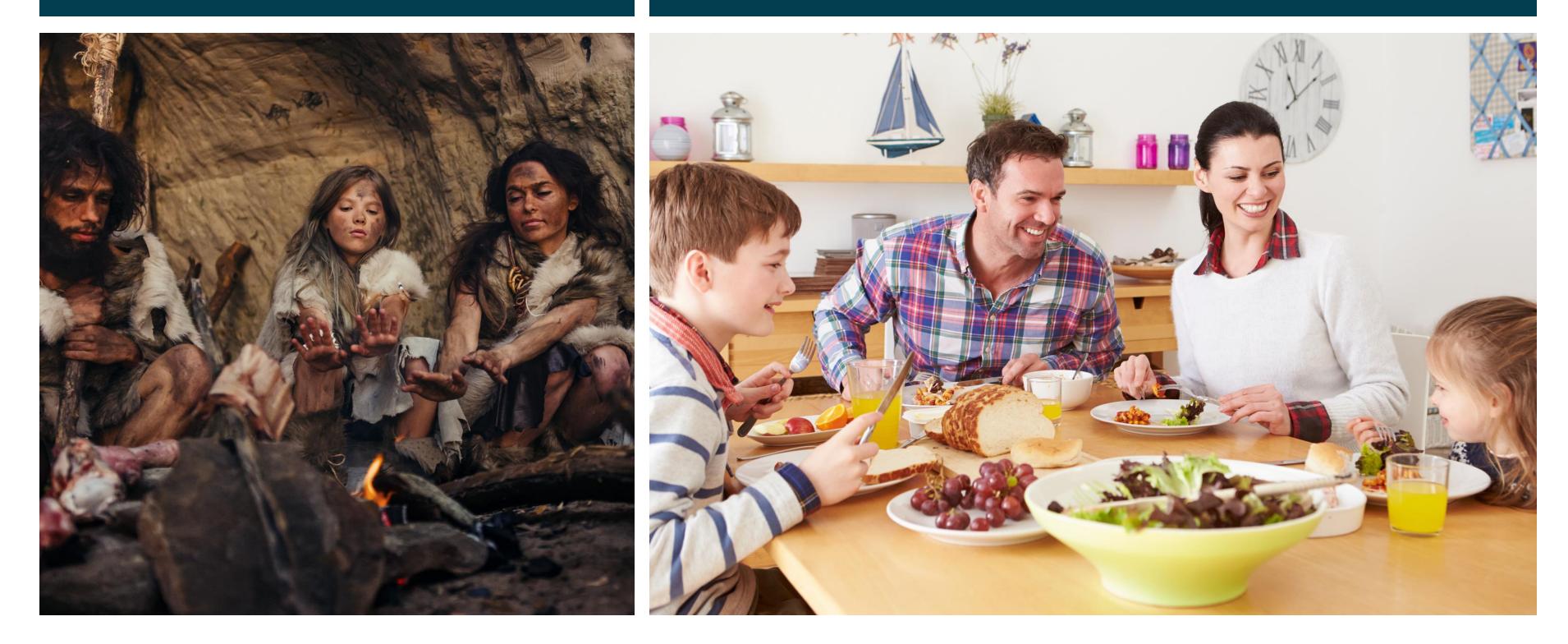
Starch +Non – starch Polysaccharides

### **Bacterial Enzymes**

SCFA-Butyrate Acetate Propionate

### We are Fiber Deficient

### 150g



### 10g

### Gut symbiosis/gut dysbiosis

The prevalence of SIBO was higher in rosacea patients than controls (52/113 vs 3/60, P < .001).

CLINICAL GASTROENTEROLOGY AND HEPATOLOGY 2008;6:759-764

### **Small Intestinal Bacterial Overgrowth in Rosacea: Clinical Effectiveness** of Its Eradication

ANDREA PARODI,\* STEFANIA PAOLINO,<sup>‡</sup> ALFREDO GRECO,\* FRANCESCO DRAGO,<sup>‡</sup> CARLO MANSI,\* ALFREDO REBORA,<sup>‡</sup> AURORA PARODI,<sup>‡</sup> and VINCENZO SAVARINO,<sup>\*</sup>

\*Department of Internal Medicine, Gastroenterology Unit, and ‡Department of Endocrine and Medical Sciences, Dermatology Unit, University of Genoa, Genoa, Italy

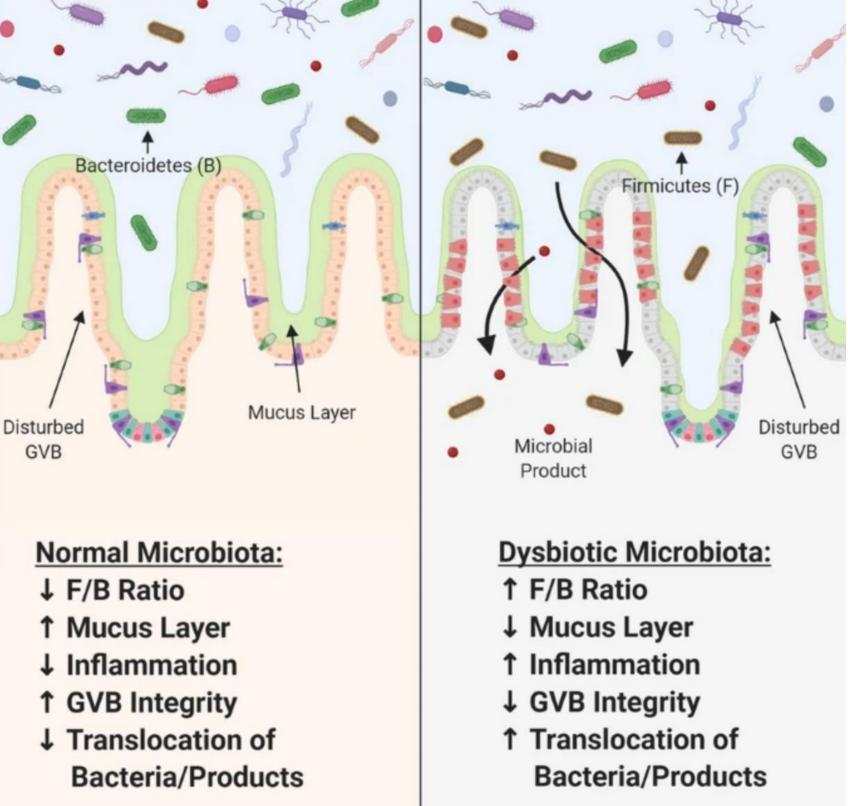
Ophthalmol Ther (2020) 9:499-513 https://doi.org/10.1007/s40123-020-00278-2

REVIEW

### The Gut–Eye Axis: Lessons Learned from Murine Models

Jason L. Floyd · Maria B. Grant





# THEGUT IS NOT



What happens in the gut doesn't stay in the gut.

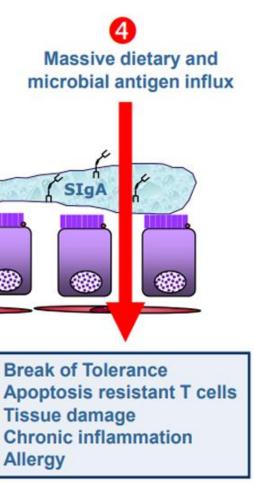
### Leaky Gut – Increased Intestinal Permeability

### Healthy gut lining

- An extensive intestinal lining covering more than 4,000 square feet of surface area.
- ✓ A tight barrier that controls what gets absorbed into the bloodstream.

### Loss of Mucosal Immune Homeostasis Chronic Inflammation-Allergy 2 Normal/physiologically Minor barrier defect Increased controlled permeability dietary/microbial Ag influx permeability Defensins Mucus SIgA Synthesis & Quality Inflammation - Allergy **Mucosal Tolerance** -Homeostasis Anergy Vicious Tissue damage circle Innate or immuno-Regulatory DC's regulatory defect Macrophages Allergy Tregs Proinflammatory IL-10/TGF-8 Allergic cytokines

Adapted from P. Brandtzaeg, Beneficial Microbes 2010



### An unhealthy gut lining

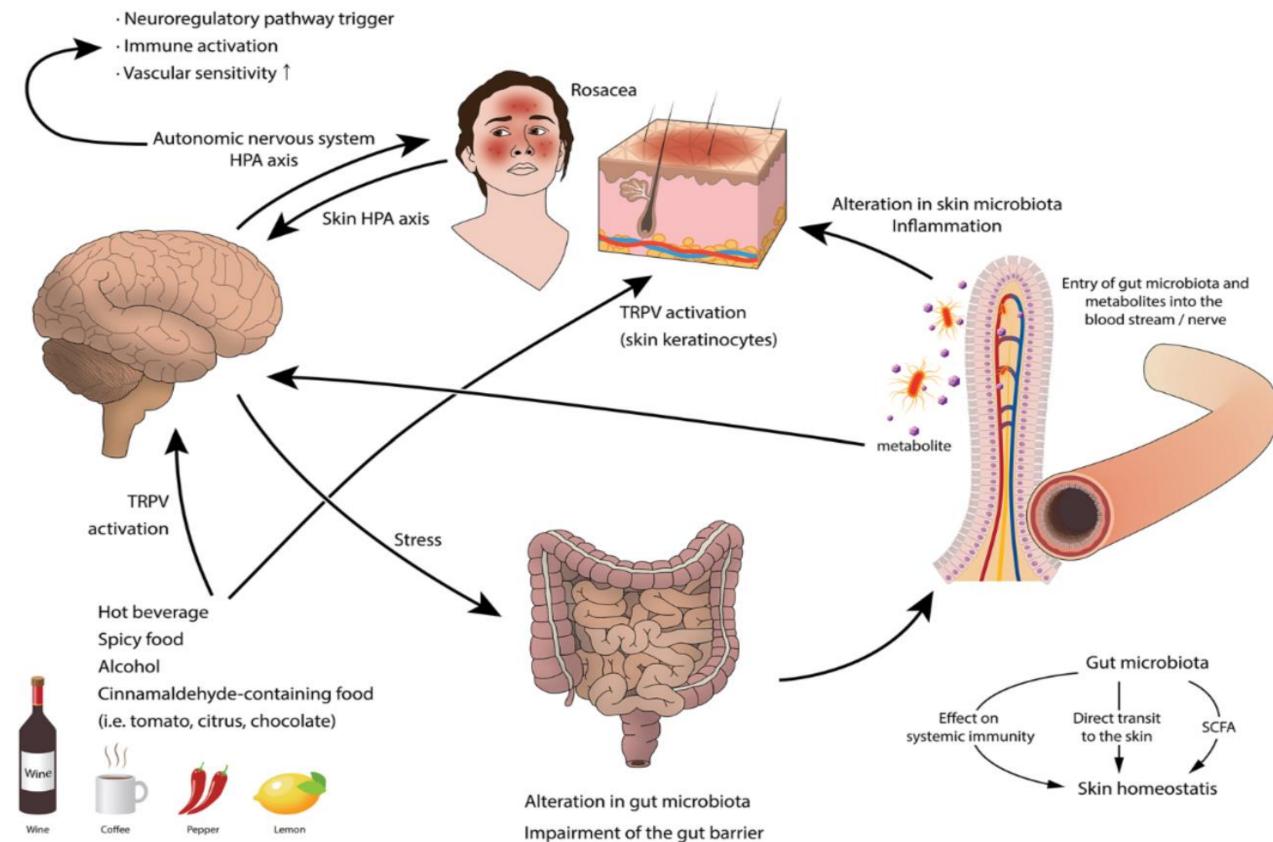
- X Large cracks or holes, allowing partially digested food, toxins, and bugs to penetrate the tissues beneath it
- X The tight junctions, or the proteins holding the intestinal walls together, are loosened --> sizable gaps for undigested food particles, digestive fluids, and toxins to enter the bloodstream.

### **Leaky Gut Potential Causes**



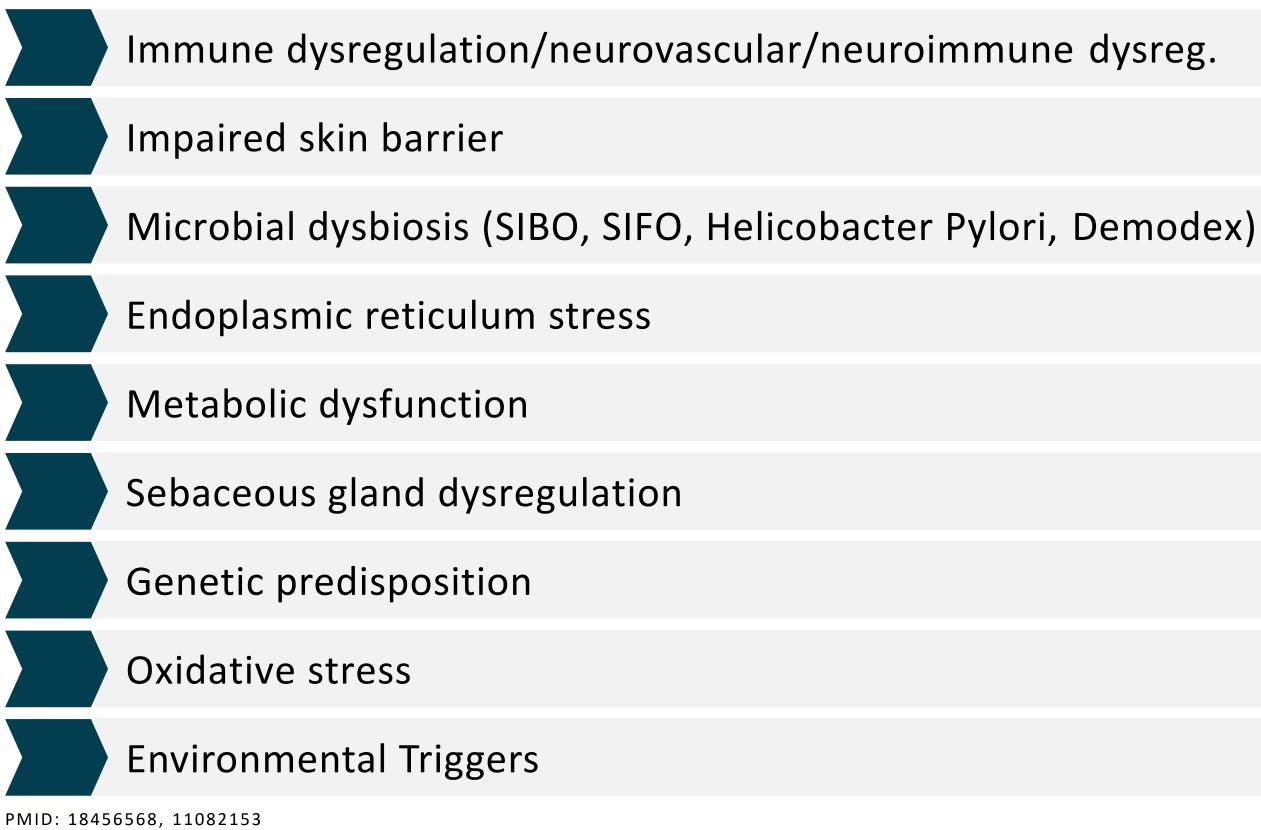
- Bacterial infections
- Oxidative stress
- Alcohol
- Dysbiosis
- Sugar, processed food
- Exposure to chemicals
- Gluten and other grains
- Food allergies
- Poorly managed stress

### A proposed model of the gut-brain-skin axis in rosacea



DOI:10.1007/s40257-020-00546-8,

### **Pathogenesis of Rosacea**



### What can we do about it TODAY?

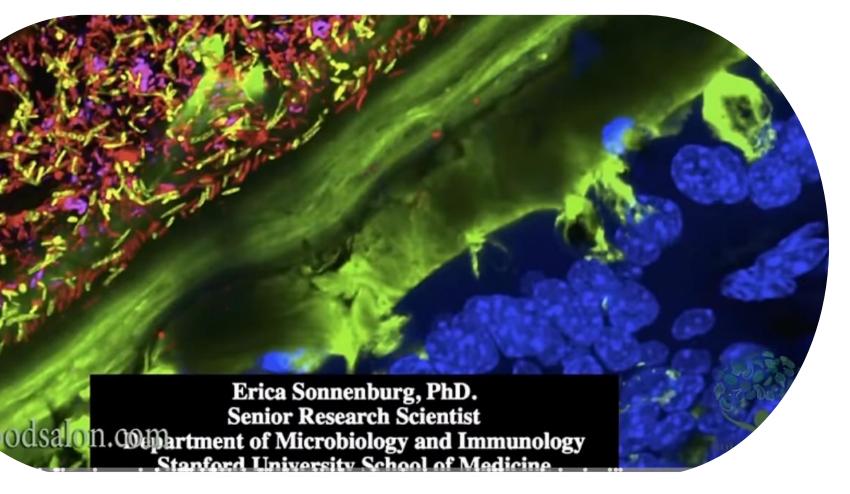
We harbor trillions of microbes

>100 times more genes in our microbial genome

Wired into all aspects of our biology

salon.com

The microbiota composition is linked to our diet. If we change what we eat today, our microbiota will be different tomorrow. We can measure it and see it.



# Long-term diet has a key role in shaping the microbiome

### Dr. Radka's Food Philosophy

## PFF + F

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PFF + F

P Protein	<b>F</b> Fat	<b>(F)</b> Fiber
Crucial for the growth, repair of tissues. Humanly raised meat, wild fish (SMASH), plant-based options	Essential fatty acids, minimally processed fats - avocado, nuts, seeds, olives	Supports dige health, regula sugar levels, f gut microbiot

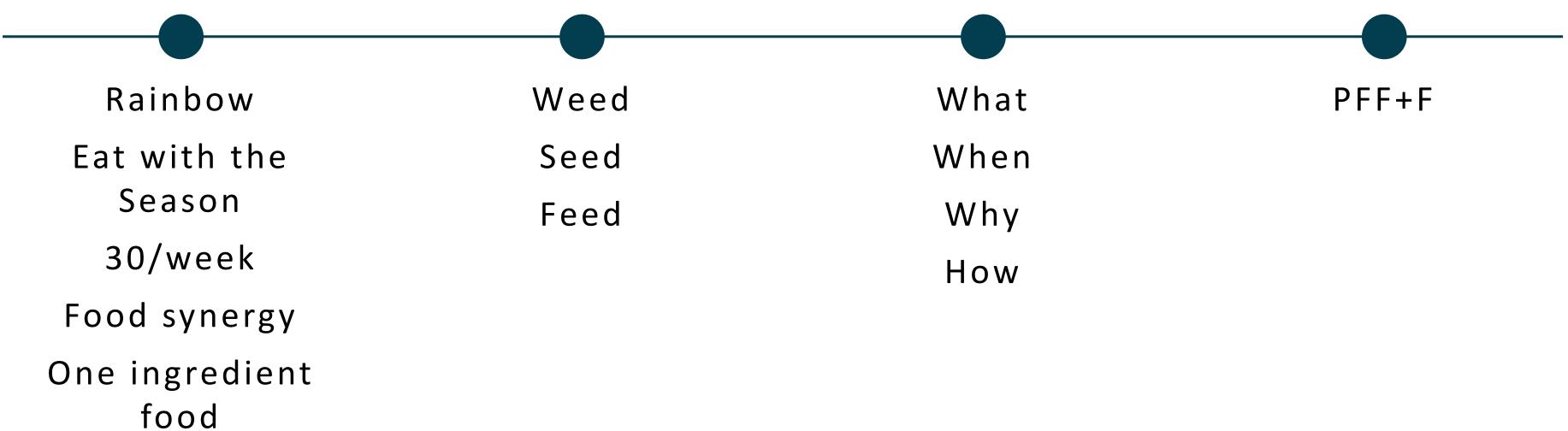
Vegan, Pegan, Paleo, Vegetarian, Ketogenic, Omnivore, Carnivore One Ingredient food, elimination diet, low FODMAPs, low-histamine

### (F) Fermented

estive lates blood food for ota

Start slowly. Crucial role in maintaining a healthy balance of gut microbiota

### Food as medicine



### **Leaky Gut Remedies**



### Herbs

- Camellia sinensis (Tea plant)
- Hibiscus sabdariffa
- Liquorice plant
- Marsh mallow plant
- Zingiber officinale (Ginger)
- Mentha piperita (Peppermint)
- Ribwort Plantain plant

### **Probiotics**

- Lactobacillus rhamnosus GG
- Lactobacillus acidophilus
- Lactobacillus plantarum
- Bifidobacterium infantis
- E. coli Nissle 1917
- Bifidobacterium animalis lactis BB-12

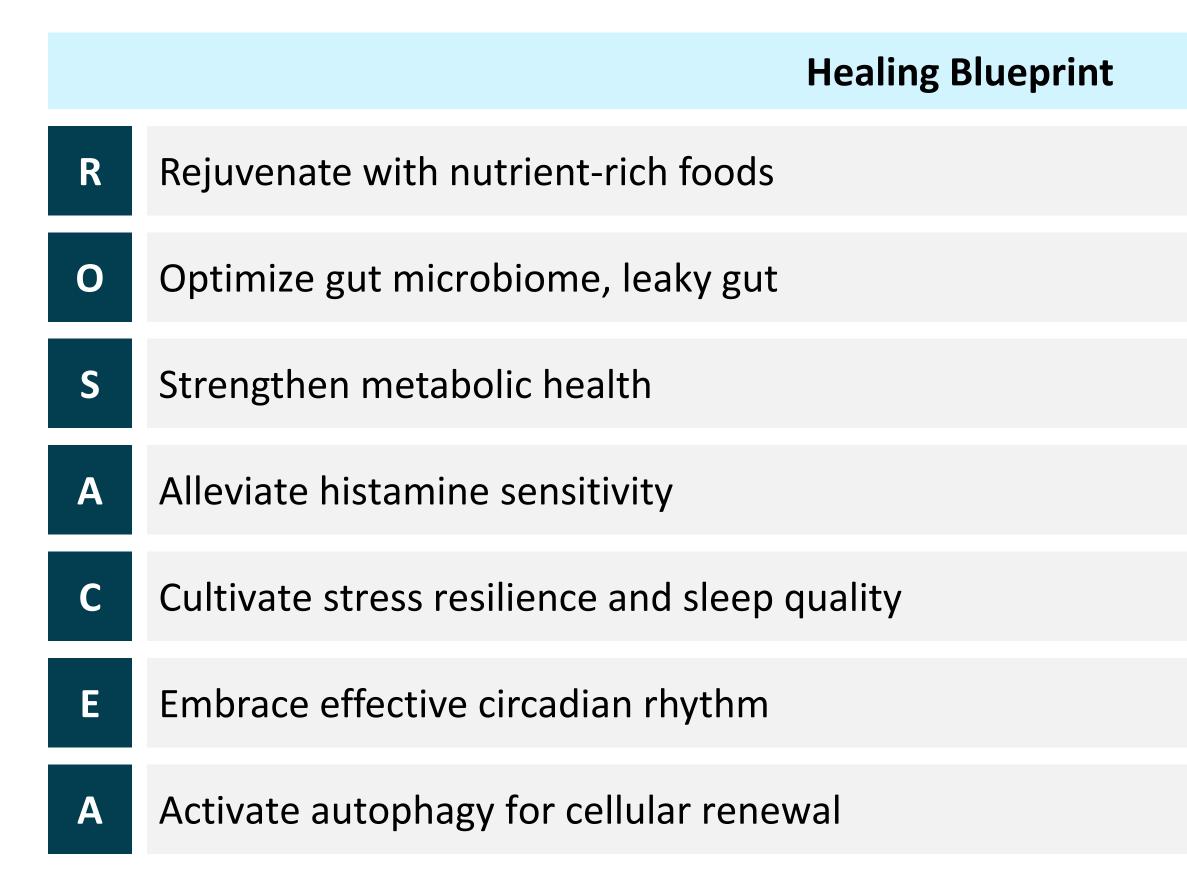


### Polyphenols

- Quercetin
- Epigallocatechin gallate ECGC
- Catechin
- Epicatechin
- Berberine
- Resveratrol
  - Curcumin

DR. RADKA TOMS

### R.O.S.A.C.E.A



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### OPEN Detecting potential causal relationship between inflammatory bowel disease and rosacea using bi-directional Mendelian randomization

Min Li, Si Xian He, Yuan Xiong He, Xiao Han Hu & Zhou Zhou⊠

The association between rosacea and inflammatory bowel disease (IBD) has been studied in previous observational studies. It is unclear, however, whether the association is causal or not. Independent genetic variants for IBD were chosen as instruments from published Genome-wide association studies (GWAS) studies involving 38,155 cases with an IBD diagnosis and 48,485 controls in order to investigate the causal effect of IBD on rosacea. Summarized data for rosacea were gathered from various GWAS studies that included 1195 cases and 211,139 controls without rosacea. Reversedirection Mendelian randomization (MR) analysis was done to investigate the relationship between genetically proxied rosacea and IBD. With the use of the inverse variance-weighted (IVW), MR-Egger, and weighted median approaches, a 2-sample Mendelian randomization study was carried out. Analysis of heterogeneity and sensitivity was performed to examine the pleiotropy and robustness of effect estimates. The forward-direction of the MR study was to reveal that genetic predisposition to IBD including its two main subtypes: Crohn's disease (CD) and ulcerative colitis (UC) was associated with an increased risk of rosacea. The reverse-direction MR analyses did not demonstrate that a genetic predisposition to rosacea was associated with total IBD, UC and CD. Our findings provided evidence for a causal impact of IBD, UC, and CD on rosacea, but not vice versa. The elevated incidence of rosacea in patients with IBD should be recognized by doctors to make an early diagnosis and initiate specialized therapy.

Result of the study: the genetic predisposition to IBD including (Crohn's disease and ulcerative colitis) was associated with an increased risk of rosacea.

The elevated incidence of rosacea in patients with IBD should be recognized by doctors to make an early diagnosis and initiate specialized therapy.

### Key messages

- Rosacea is not only skin disease.
- Rosacea patients often experience systemic comorbidities, including cardiometabolic and gastrointestinal diseases.
- Microbiological reverberations are not limited to the skin (Demodex folliculorum), as recently described the potential cutaneous effects of alterations in the gastrointestinal microbiome SIBO, Helicobacter pylori
- Testing is helpful: SIBO, Zonulin, GI stool test, micronutrient test, fatty acids.
- Rosacea patients are complex and need a comprehensive & compassionate approach.
- Integrative approach is the future of Rosacea treatment.

### **Transformation: Significant Alteration**





## Happiness is half health..



# Thank you





# Find out more about Matrix Eye Clinic





# Let's connect

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### guteyeaxis.com



### www.mysugarstop.com

