MAVENHEALTH

The Metabolic Health Company

Augustus 2025

Distributed by

FutureMedics

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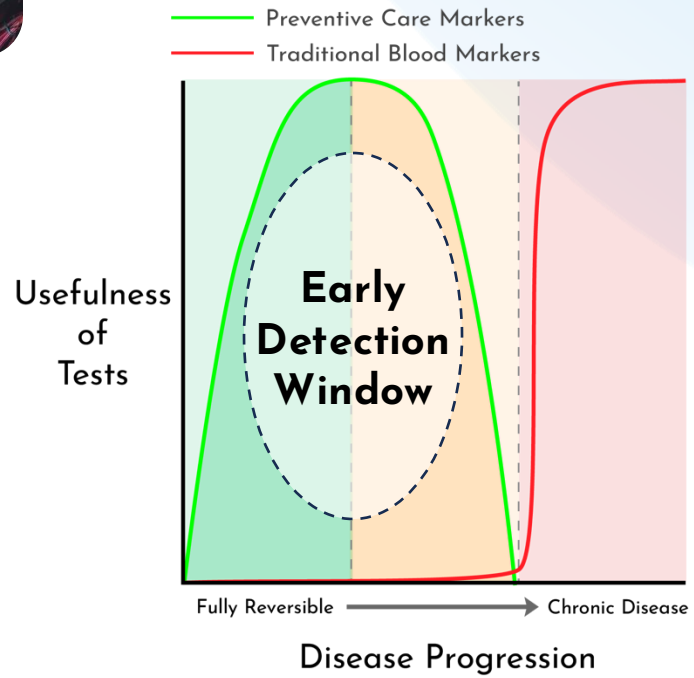
info@mavenhealth.ch

The future of preventative care

Your clients want to optimize their health and need personalized support

Our **metabolism** gives us the early warning signs and causes



Early Screening and Tracking for metabolism is Key

Metabolic Health can now be tracked

Classical tests

Limited Information

- Glucose
- Cholesterol
- Blood Pressure

Holistic and preventive tests

Comprehensive & Personalised

Metabolomics - MAVENHEALTH

The modern toolbox to track metabolism

	Current Status	Relevant Insights	Tracking
Genetic testing	✗	✗	✗
Epigenetic testing	✗	✗	~
Metabolomics	✓	✓	✓

A new way to look at our metabolism

Non-Invasive

Easy to use saliva test.
Pain free.

Relevant Biomarkers

Measure directly the cellular output
& detect areas of metabolic decline

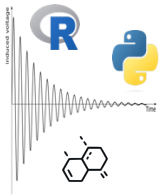
Actionable Advice

Clear dietary and nutritional recommendations
Directly implementable

Innovative technology all developed in-house

Novel saliva approach

Minimally invasive

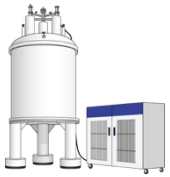


Automated data processing

Accurate identification & quantification

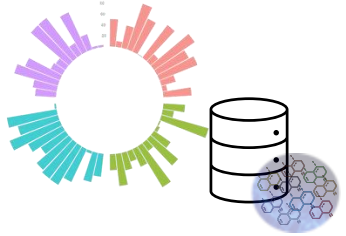
Report Generation

Delivering results in a comprehensive format



47 saliva metabolites in one measurement

Custom NMR configuration for maximal signal



Data Interpretation

To empower maximal interpretation of metabolic health

PCT-patent pending technology

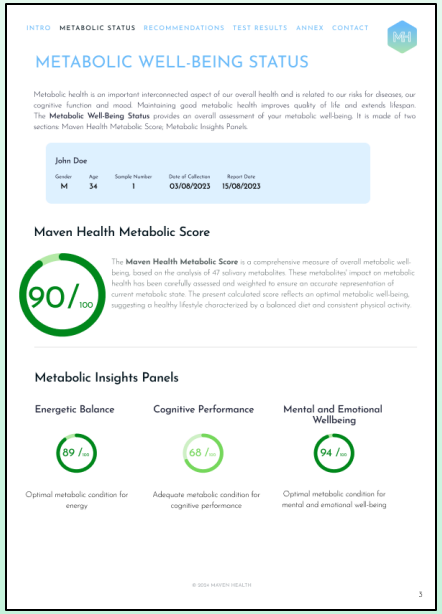
info@mavenhealth.ch

The Metabolic Insights Report

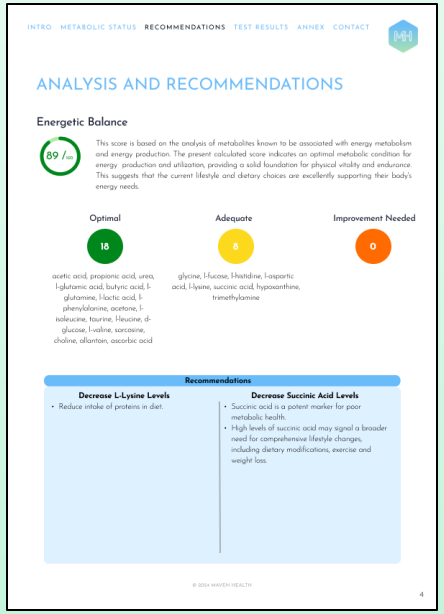
level of information

Quick Insights → Detailed Exploration

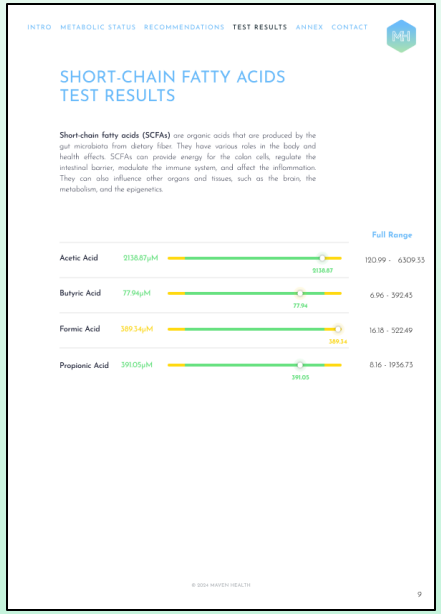
The Report Sections



The overview

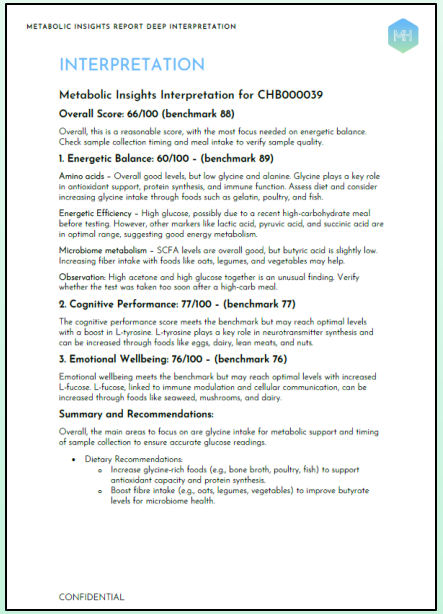


The Insights Panels



All Measured Values

The Metabolite Deep Dive



The Interpretation Guide

Functional Interpretations On System and Pathway Level

System/Macro-level

- ✓Carbohydrate management (glucose, lactate, succinate , …)
- ✓Protein intake (total amino acids, specific amino acids, …)
- ✓Gut Health (acetate, butyrate, propionate, fucose, …)

Pathway/Micro-level

- ✓Waste management (urea cycle, aspartate, glutamate, …)
- ✓Folate and vitamin B12 (formic acid, …)
- ✓Methylation pathways (choline, sarcosine, glycine, …)
- ✓Oxidative stress (allantoin, hypoxanthine, methylguanidine, …)
- ✓Neurotransmitter Synthesis (L-tyrosine, L-phenylalanine, …)

Maven Health's Core Team

Christopher Wall, PhD
Co-CEO & CSO
First to describe a link between cholesterol metabolism and mitochondria
Pharmacist | PhD Cellular metabolism

Kevin Hof, MSc
Co-CEO & CTO
Built data algos to scale RoomPriceGenie's product worldwide
MSc Med. biotechnology | 3+ yrs. data science

Key-opinion leaders

Hon. Prof Bernd Diehl
World leader quantitative Nuclear Magnetic Resonance

Prof Patrick Giraudeau
World leader NMR metabolomics

Advisors

Dr S. Anghel
Dir. regulatory affairs

Prof R. Gruetter
In-vivo metabolism expert

Ass. prof. Sofia Moco
Metabolomics expert

Our mission is to provide everyone with accessible, affordable and personalized metabolic health insights

MAVENHEALTH

We look forward working with Executive Health Management

Maven Health
Swiss engineering with Dutch roots

Proudly supported by

Microsoft Proud to partner with Microsoft for Startups

EPFL Swiss Healthcare Startups

Future of Health Grant

FIT fondation pour l'innovation technologique

Innovation Booster powered by Innosuisse

Founderful Campus

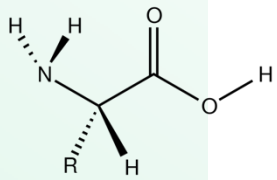
VENTURE KICK

S2S Ventures

DAYONE

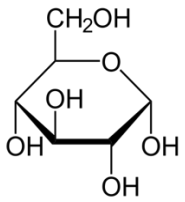
Our library covers several categories of metabolites

Amino acids (AA & BCAA)



alanine
aspartate
glutamate
glycine
histidine
isoleucine
leucine
lysine
phenylalanine
proline
sarcosine
taurine
threonine
tyrosine
valine

Sugars & glucose metabolism

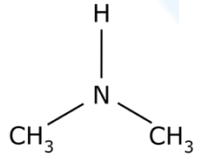


fucose
galactose
glucose
glutamine
lactate
pyruvate
succinate
sucrose
xylose

Miscellaneous

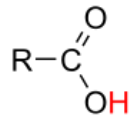
dimethyl sulfone
acetone
ethanol
methanol
urea

Amines



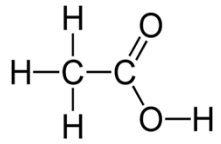
dimethylamine
hypoxanthine
methylamine
Trimethylamine

Organic Acids



4-hydroxyphenyllactate
5-aminopentanoate
Ascorbic acid

Short-Chain Fatty Acids



acetate
butyrate
formate
propionate

Use-case example

Maven Health Metabolic Score

The **Maven Health Metabolic Score** is a comprehensive measure of overall metabolic well-being, based on the analysis of 47 salivary metabolites. These metabolites' impact on metabolic health has been carefully assessed and weighted to ensure an accurate representation of current metabolic state. The present calculated score reflects an optimal metabolic well-being, suggesting a healthy lifestyle characterized by a balanced diet and consistent physical activity.

Metabolic Insights Panels

Energetic Balance

Adequate metabolic condition for energy

Cognitive Performance

Optimal metabolic condition for cognitive performance

Mental and Emotional Wellbeing

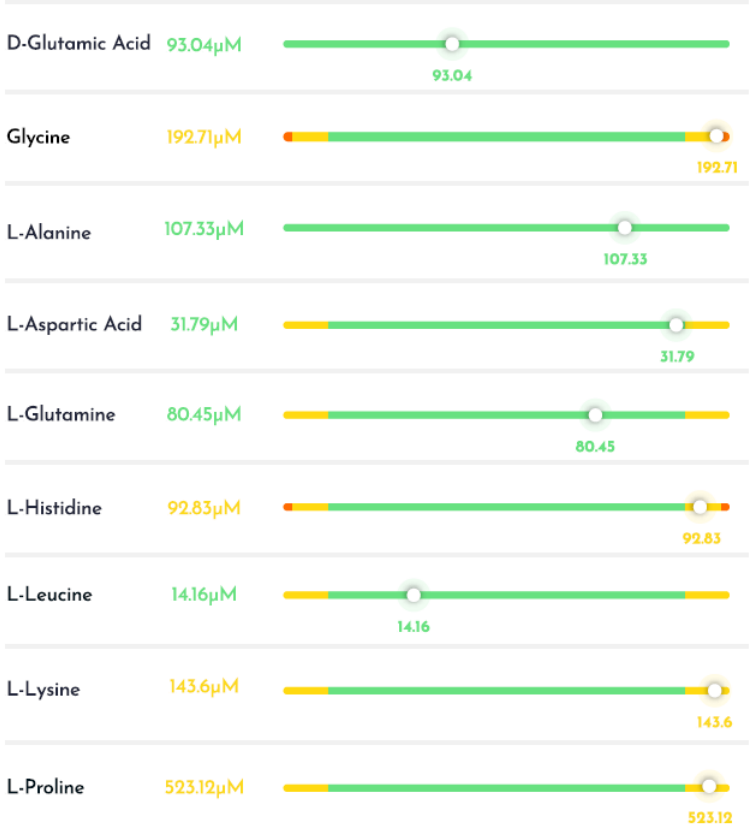
Optimal metabolic condition for mental and emotional well-being

- 53 year-old male.
- Low amount of activity.
- High protein diet.
- Period of high stress and high workload.

1. Energetic balance score room for improvement.
2. Cognitive Performance good.
3. Mental & Emotional Wellbeing good.

Look into the metabolic profile

High load of amino acids.



Good levels of SCFA

Very high lactate/pyruvate ratio

Interpretations & Recommendations

Recommend lower GI foods.

High glucose indicates high GI diet or suboptimal energy utilisation.
More efficient mitochondria, through exercise

Recommendations

Decrease Glucose Levels

- Elevated fasting glucose may signal poor metabolic health.
- Overall metabolic health improvement via comprehensive lifestyle changes including, weight loss, exercise and dietary modifications.

Decrease Succinic Acid Levels

- Succinic acid is a potent marker for poor metabolic health.
- High levels of succinic acid may signal a broader need for comprehensive lifestyle changes, including dietary modifications, exercise and weight loss.

Decrease L-Isoleucine Levels

- Reduce intake of protein in diet and use of protein supplements.
- BCAAs (l-isoleucine, l-leucine, l-valine) are important indicators of metabolic health. High levels of multiple BCAAs may signal a broader need for comprehensive lifestyle changes beyond merely reducing protein consumption including, weight loss, exercise and dietary modifications.

Decrease L-Valine Levels

- Reduce protein intake.
- BCAAs (l-isoleucine, l-leucine, l-valine) serve as important indicators of metabolic health. High levels of multiple BCAAs may signal a broader need for comprehensive lifestyle changes beyond merely reducing protein consumption including, weight loss, exercise and dietary modifications.

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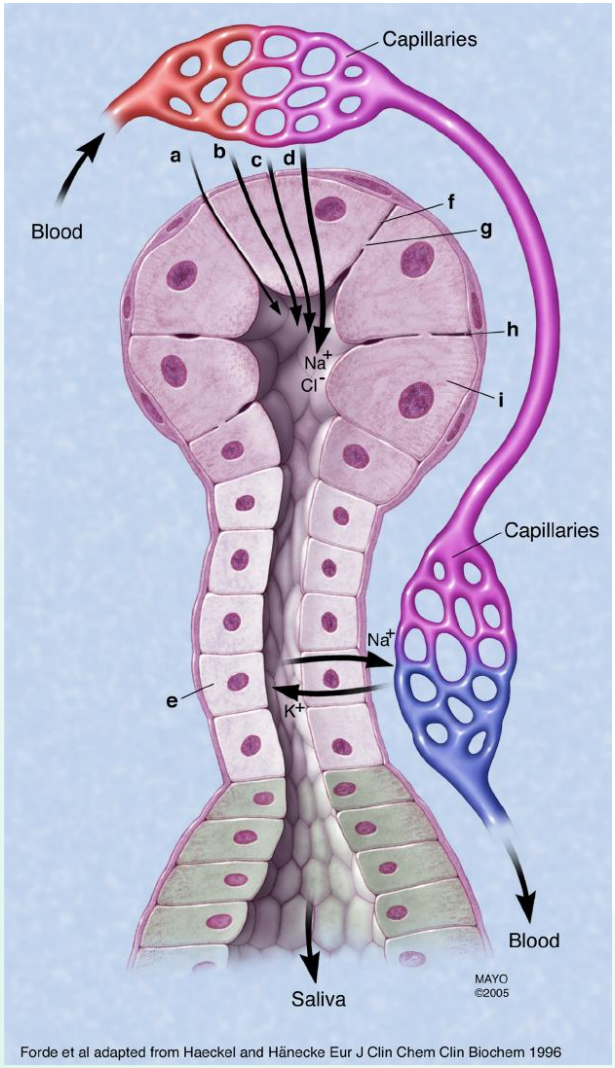
Increase activity levels

High succinic acid indicates poor metabolic health. Could indicate sub-optimal mitochondrial functioning. Confirmed by high lactate/pyruvate ratio.

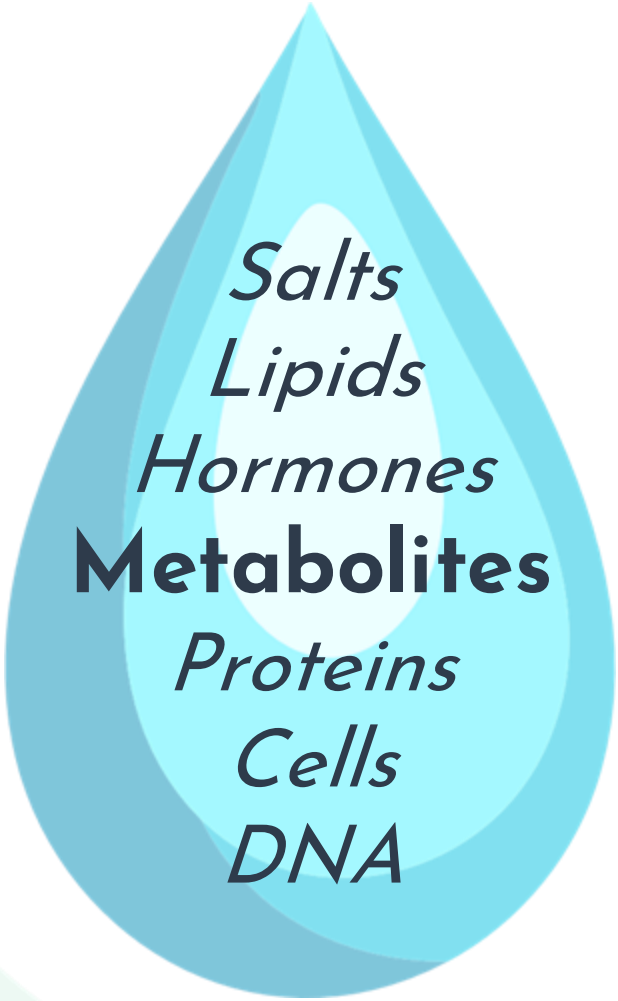
Consider reducing protein supplementation.

High BCAA's are good in an active lifestyle.
In sedentary lifestyle produces radical waste products.
In general, all amino acids are high.

Saliva is a great diagnostic matrix



Forde et al adapted from Haeckel and Hänecke Eur J Clin Chem Clin Biochem 1996



Constituents
Water (99%)
Slightly acidic (pH 6.0 to 7.0)
Proteins (0.3%)
Inorganic substances (0.2%)

Abundant biofluid
Production in range of 1 to 1.5 liters daily

Highly vascularized glands
876 metabolites in saliva
“mirror of the blood”

Metabolomics has proven predictive potential

nature medicine

Metabolite profiles and the risk of developing diabetes

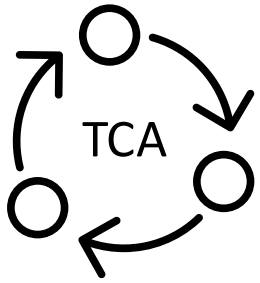
Thomas J Wang[1–3], Martin G Larson[3,4], Ramachandran S Vasan[3,5], Susan Cheng[2,3,6], Eugene P Rhee[1,7,8], Elizabeth McCabe[2,3], Gregory D Lewis[1,2,8], Caroline S Fox[3,9,10], Paul F Jacques[11], Céline Fernandez[12], Christopher J O'Donnell[2,3,8], Stephen A Carr[8], Vamsi K Mootha[8,13,14], Jose C Florez[8,13], Amanda Souza[8], Olle Melander[15], Clary B Clish[8] & Robert E Gerszten[1,2,8]

AMINO ACID

- Isoleucine
- Leucine
- Valine
- Tyrosine
- Phenylalanine

Prediction of Gestational Diabetes through NMR Metabolomics of Maternal Blood

Joana Pinto,[†] Lara M. Almeida,[†] Ana S. Martins,[†] Daniela Duarte,[†] António S. Barros,[‡] Eulália Galhano,[§] Cristina Pita,[§] Maria do Céu Almeida,[§] Isabel M. Carreira,[∥] and Ana M. Gil*[,†]



- Pyruvate
- Glucose
- Lactate
- Alanine
- Proline

Saliva contains relevant biomarkers

Research evidence on salivary metabolites clinical value	Investigated metabolites as biomarkers

Changes in Salivary Amino Acid Composition During Aging

SHOJI TANAKA[1], MAMORU MACHINO[1], SAYOKO AKITA[1], YOSHIKO YOKOTE[2] and HIROSHI SAKAGAMI[3]

Glycine
Lysine
Glutamate

NMR analysis of the human saliva metabolome distinguishes dementia patients from matched controls†

João Figueira,[a] Pär Jonsson,[b] Annelie Nordin Adolfsson,[c] Rolf Adolfsson,[c] Lars Nyberg[d] and Anders Öhman*[a]

Acetate
Dimethyl sulfone
Glycerol
Histamine
Proprionate

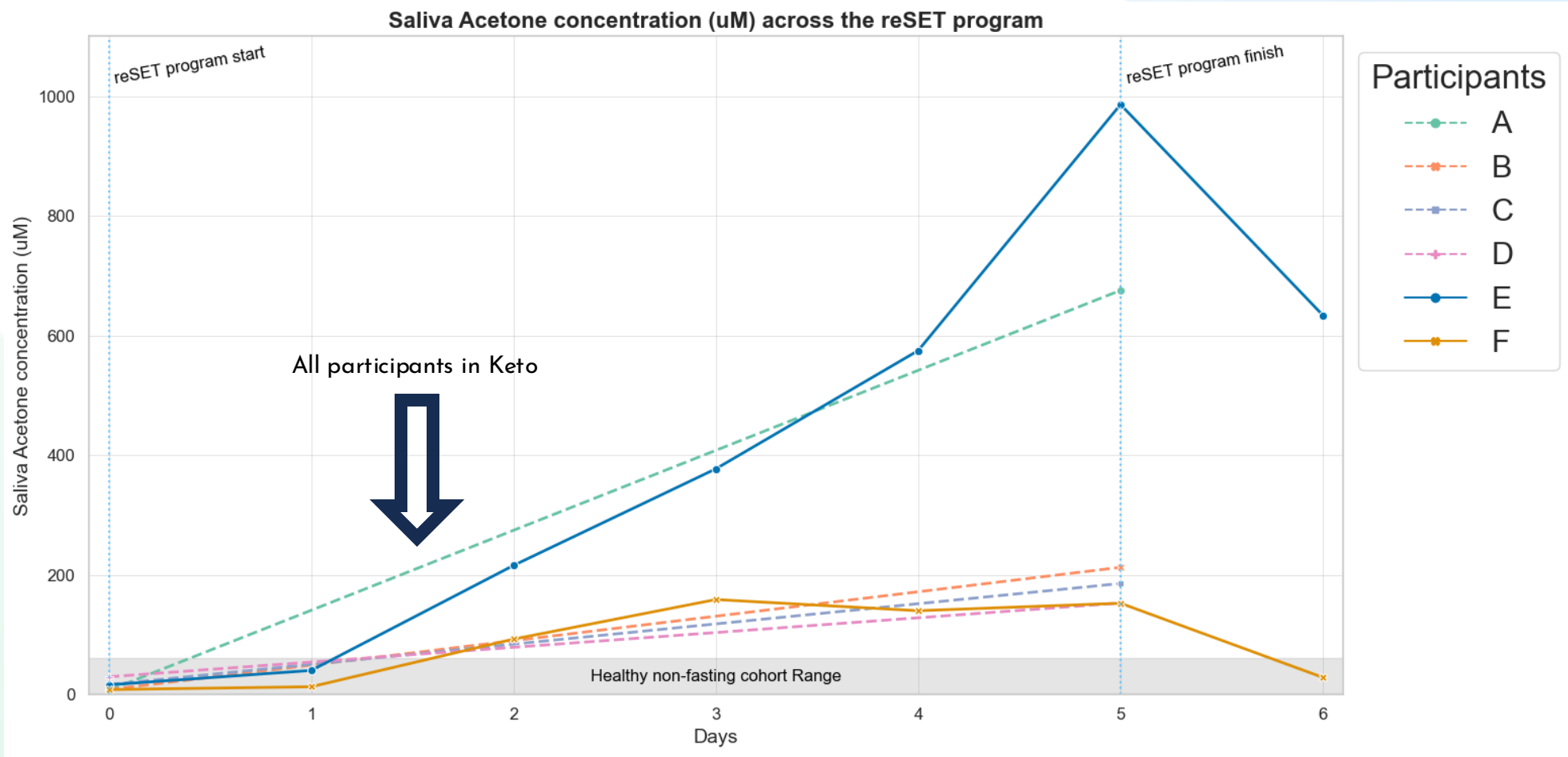
Global Metabolomic Analysis of Human Saliva and Plasma from Healthy and Diabetic Subjects, with and without Periodontal Disease

Virginia M. Barnes[1], Adam D. Kennedy[3], Fotinos Panagakos[1], William Devizio[1], Harsh M. Trivedi[1], Thomas Jönsson[3], Lining Guo[3], Shannon Cervi[2], Frank A. Scannapieco[2]*

1 Colgate Palmolive Technology Center, Piscataway, NJ, United States of America, 2 Metabolon, Durham, NC, United States of America, 3 Department of Oral Biology, School of Dental Medicine, University at Buffalo, State University of New York, Buffalo, NY, United States of America

1,5-anhydroglucitol
Glucose
α-hydroxybutyrate

Use cases - Ketogenesis & Acetone



*2024; White paper: https://www.biorxiv.org/content/10.1101/2024.12.29.630652v1