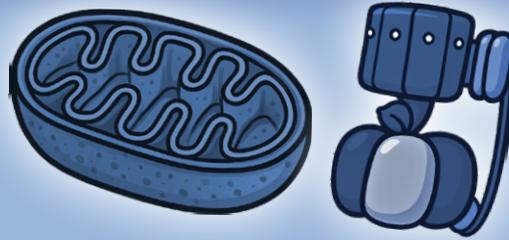


# FOOD DEUTENOMICS DATA

## UNIVERSAL NANOMOTOR USER GUIDE

(empirical cutoff value – non-product related, non-medical assessments)



# DEUTENOMICS OF FOOD

JAMES C. LECH  
LÁSZLÓ G. BOROS

# FOOD DEUTENOMICS DATA

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**We can work when ATPase is at work.**

Deuterium content of nutrients determines the same of matrix water, produced by mitochondrial nanomotor related proton influx and oxygen, upon complete substrate oxidation in the Krebs-Szent-Györgyi cycle. ☼ ☼

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**Nutrient deutenomics – is the basics of ATPase functions, mitochondrial health and quality of life.**

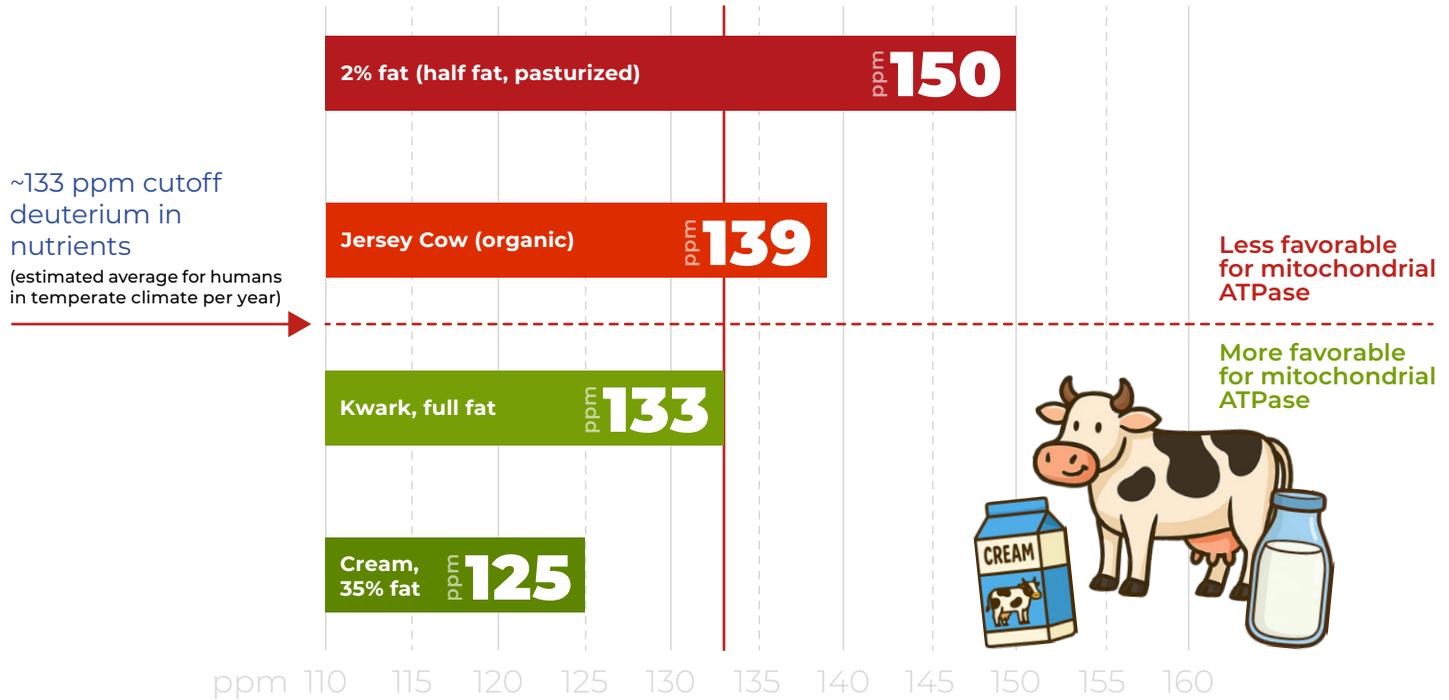
Nutrients profoundly influence mitochondrial ATPase functions and thus health as the prime source of deuterium during life.

# FOOD DEUTENOMICS DATA

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### Deuterium content comparison IN COW MILK RELATED DAIRY

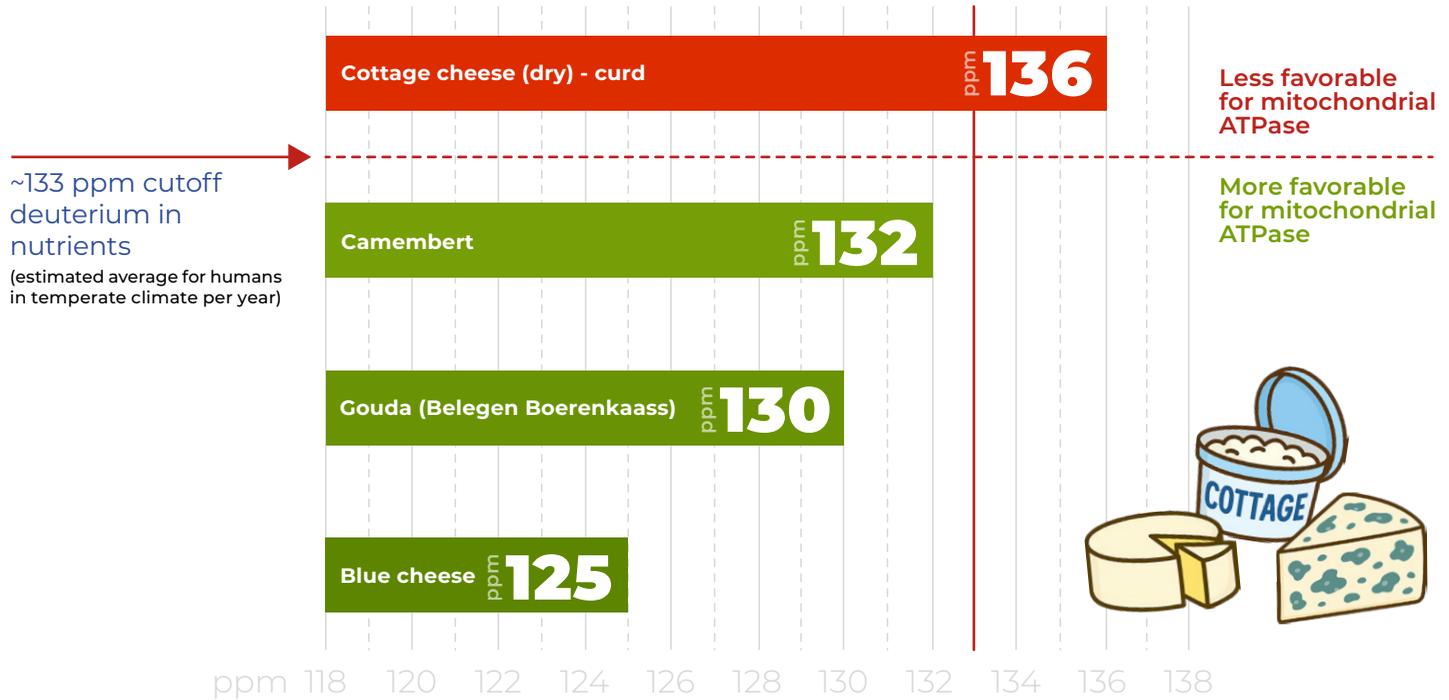


# FOOD DEUTENOMICS DATA

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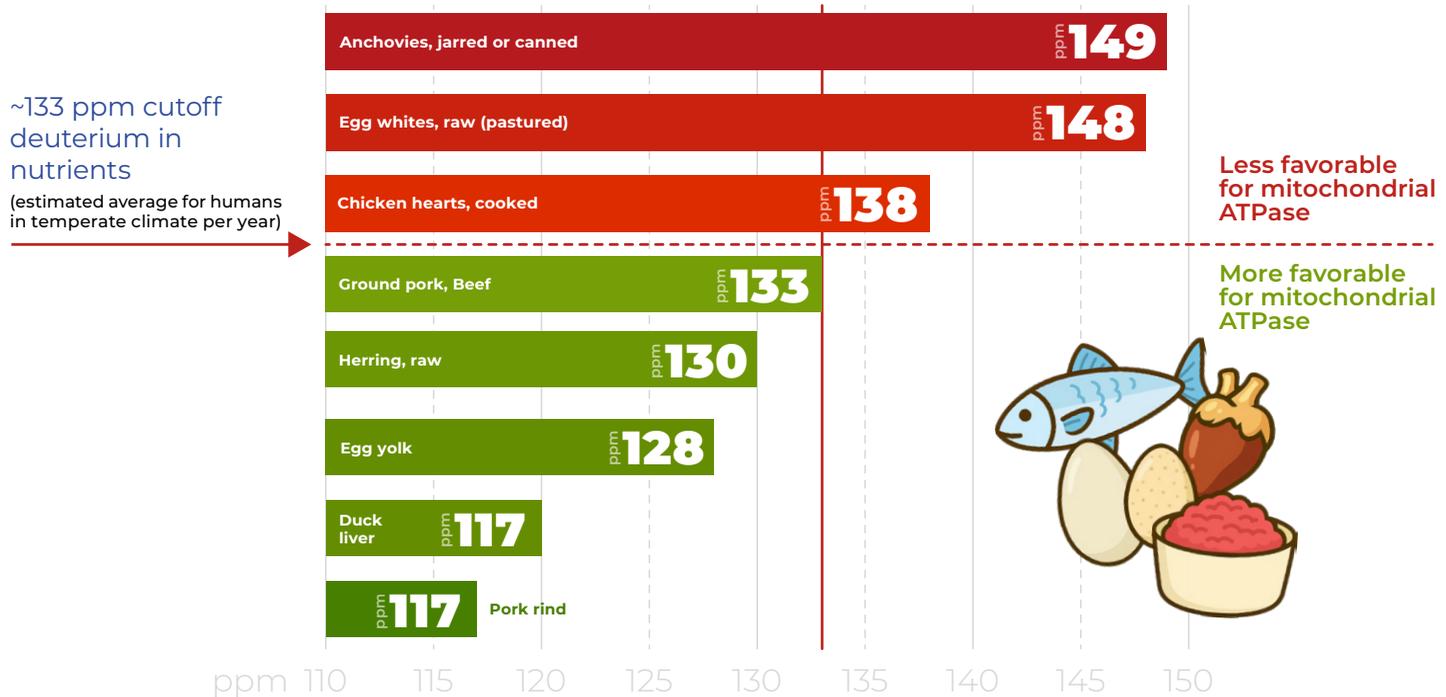
### Deuterium content comparison IN CHEESES



# Deuterium content comparison IN ANIMAL PROTEINS

~133 ppm cutoff  
deuterium in  
nutrients

(estimated average for humans  
in temperate climate per year)



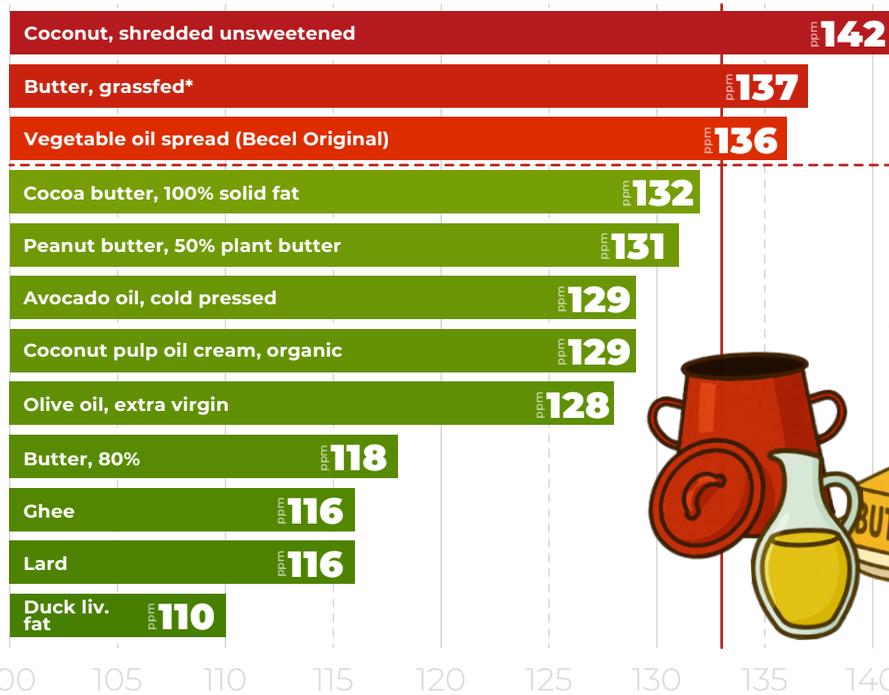
# FOOD DEUTENOMICS DATA

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### Deuterium content comparison IN ANIMAL & PLANT: FAT & OIL SOURCE

~133 ppm cutoff  
deuterium in  
nutrients  
(estimated average for humans  
in temperate climate per year)



Less favorable  
for mitochondrial  
ATPase

More favorable  
for mitochondrial  
ATPase

\* Butter from the Netherlands  
Cows eat non-fractionated  
cultivated perennial ryegrass  
below sea level in close vicinity

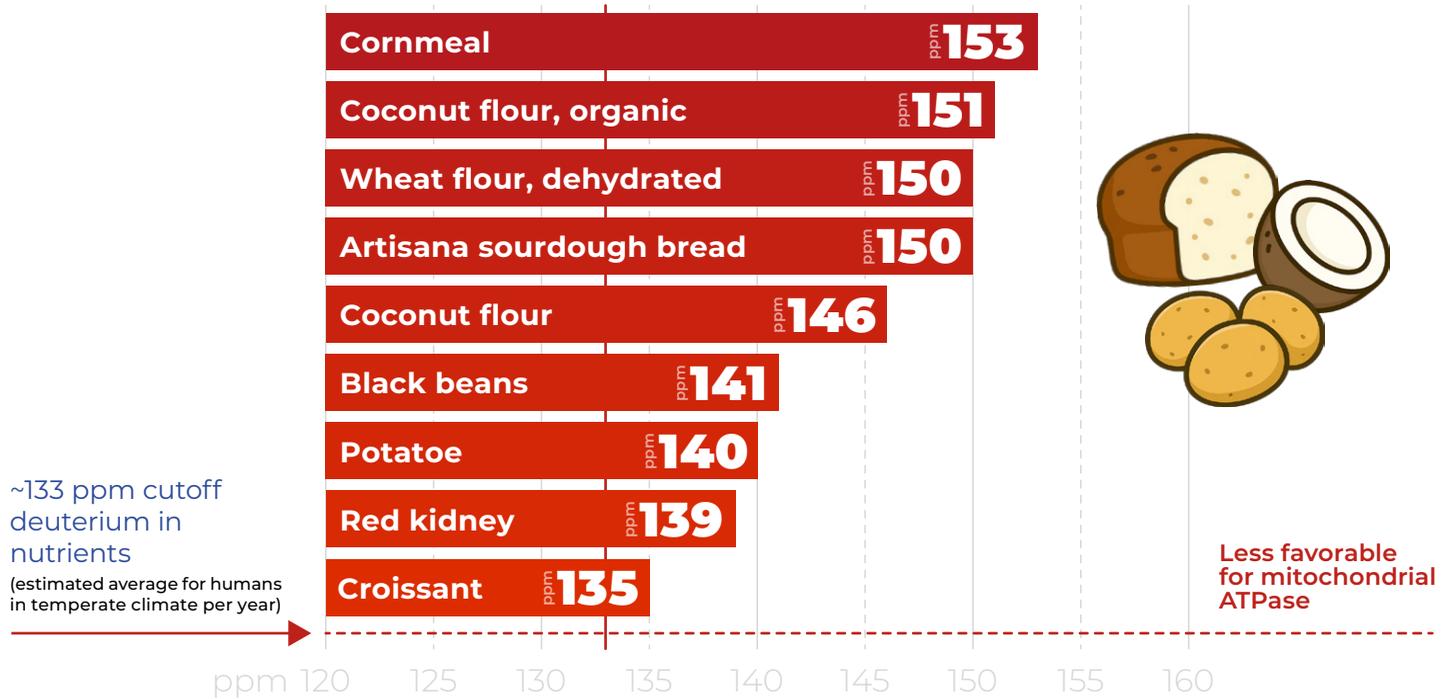


# FOOD DEUTENOMICS DATA

## UNIVERSAL NANOMOTOR USER GUIDE

(empirical cutoff value – non-product related, non-medical assessments)

### Deuterium content comparison IN CARBS

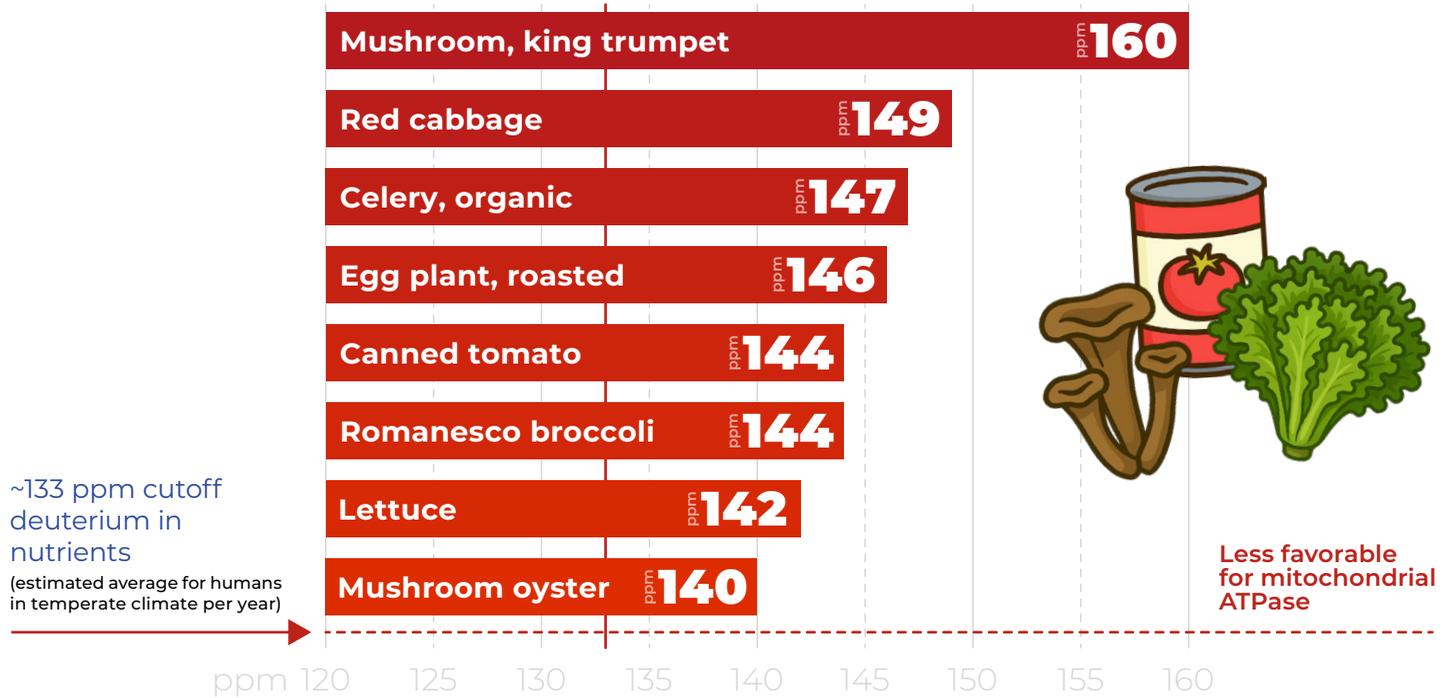


# FOOD DEUTENOMICS DATA

## UNIVERSAL NANOMOTOR USER GUIDE

(empirical cutoff value – non-product related, non-medical assessments)

### Deuterium content comparison IN VEGETABLES

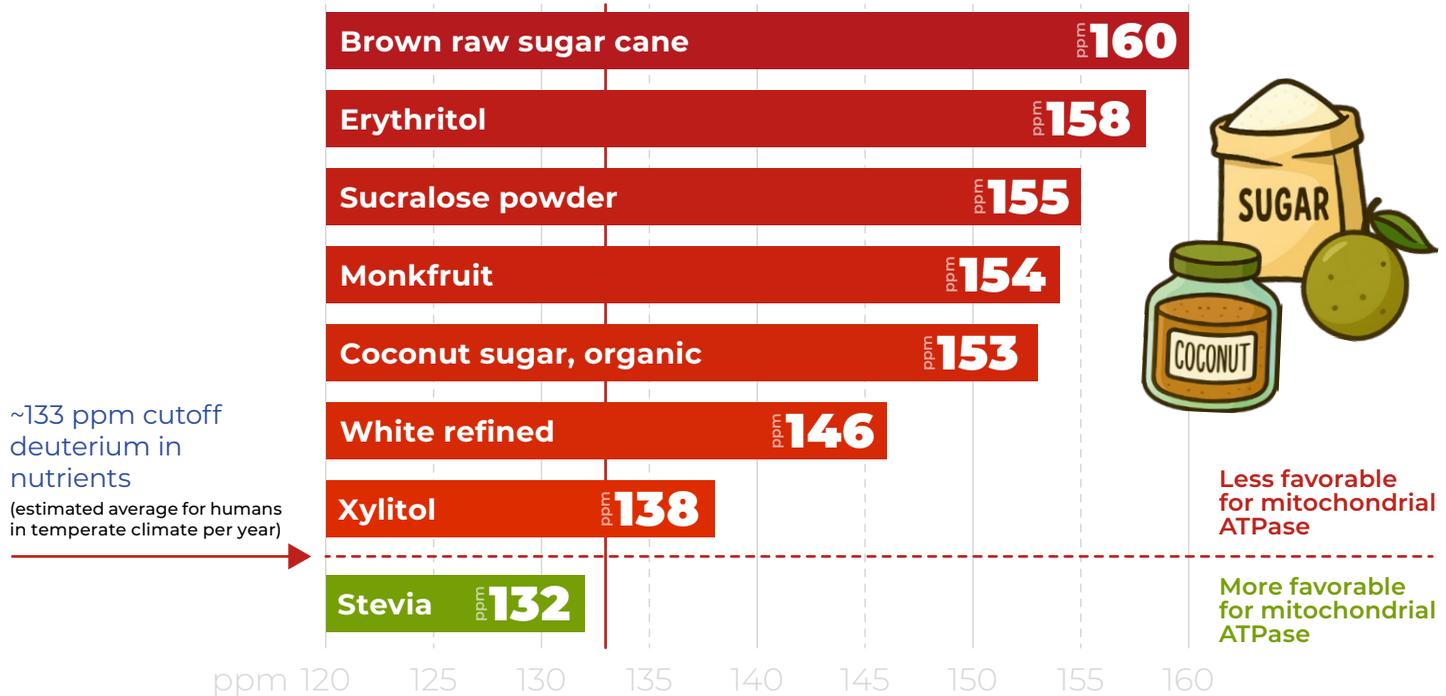


# FOOD DEUTENOMICS DATA

## UNIVERSAL NANOMOTOR USER GUIDE

(empirical cutoff value – non-product related, non-medical assessments)

### Deuterium content comparison IN SUGARS

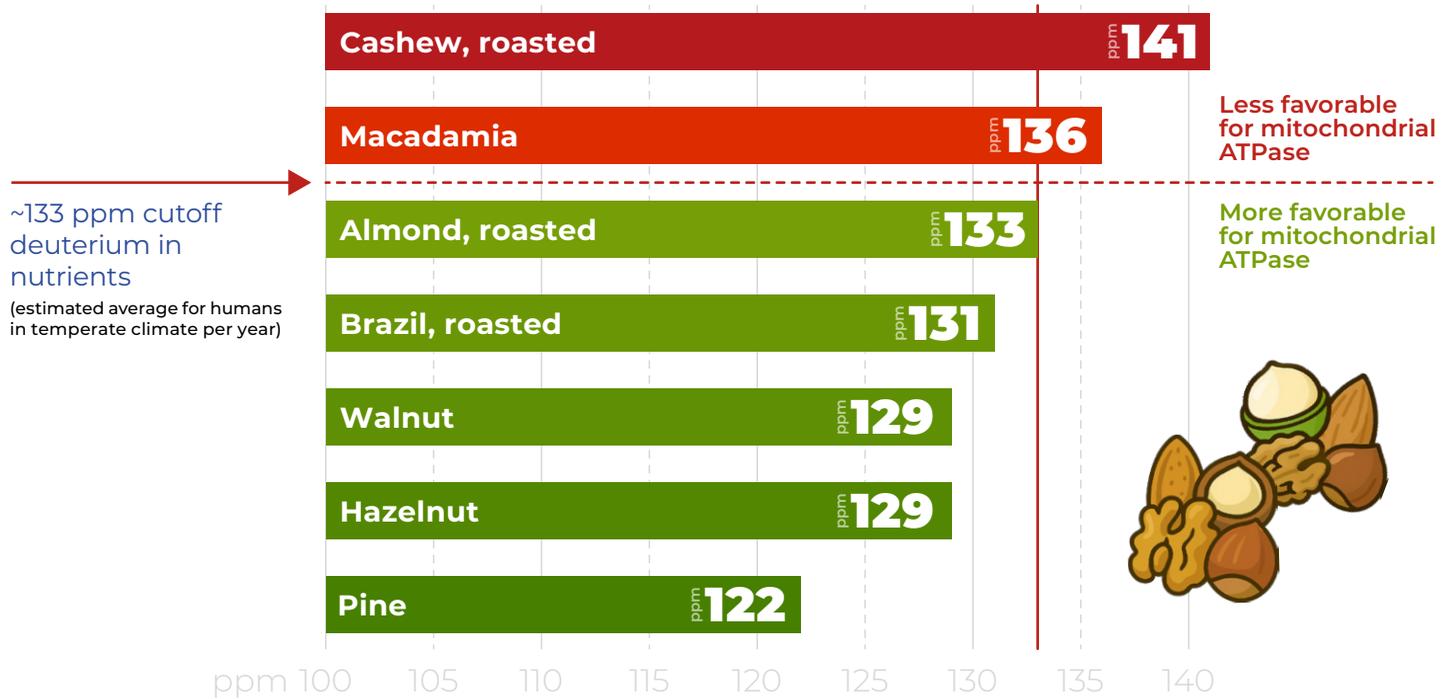


# FOOD DEUTENOMICS DATA

## UNIVERSAL NANOMOTOR USER GUIDE

(empirical cutoff value – non-product related, non-medical assessments)

### Deuterium content comparison IN NUTS

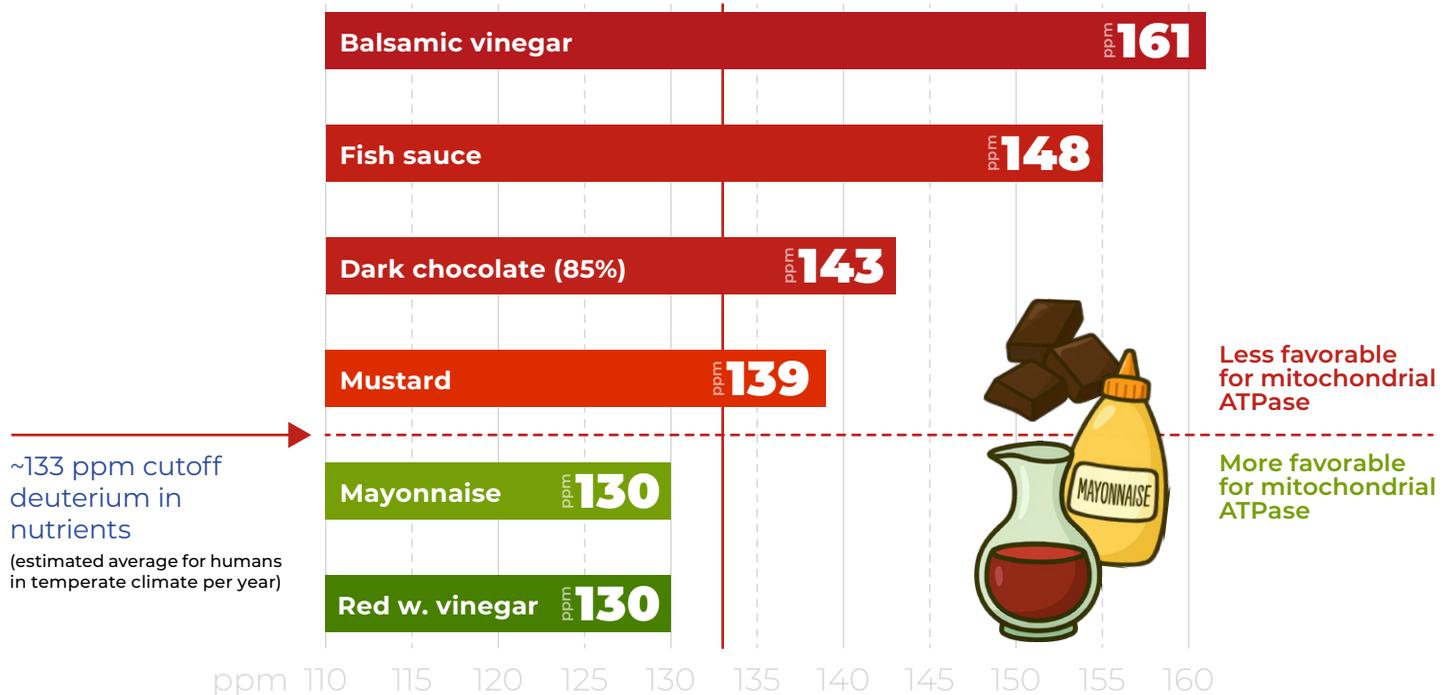


# FOOD DEUTENOMICS DATA

## UNIVERSAL NANOMOTOR USER GUIDE

(empirical cutoff value – non-product related, non-medical assessments)

### Deuterium content comparison IN CONDIMENTS

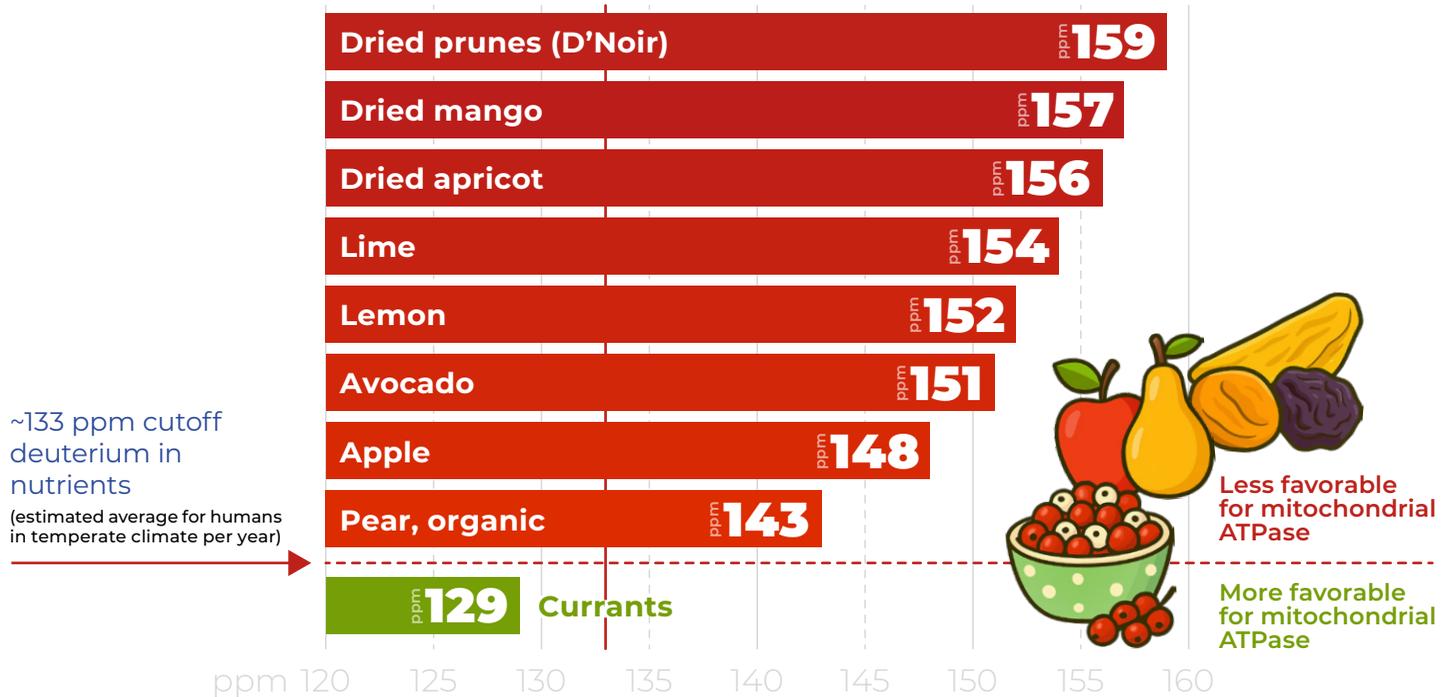


# FOOD DEUTENOMICS DATA

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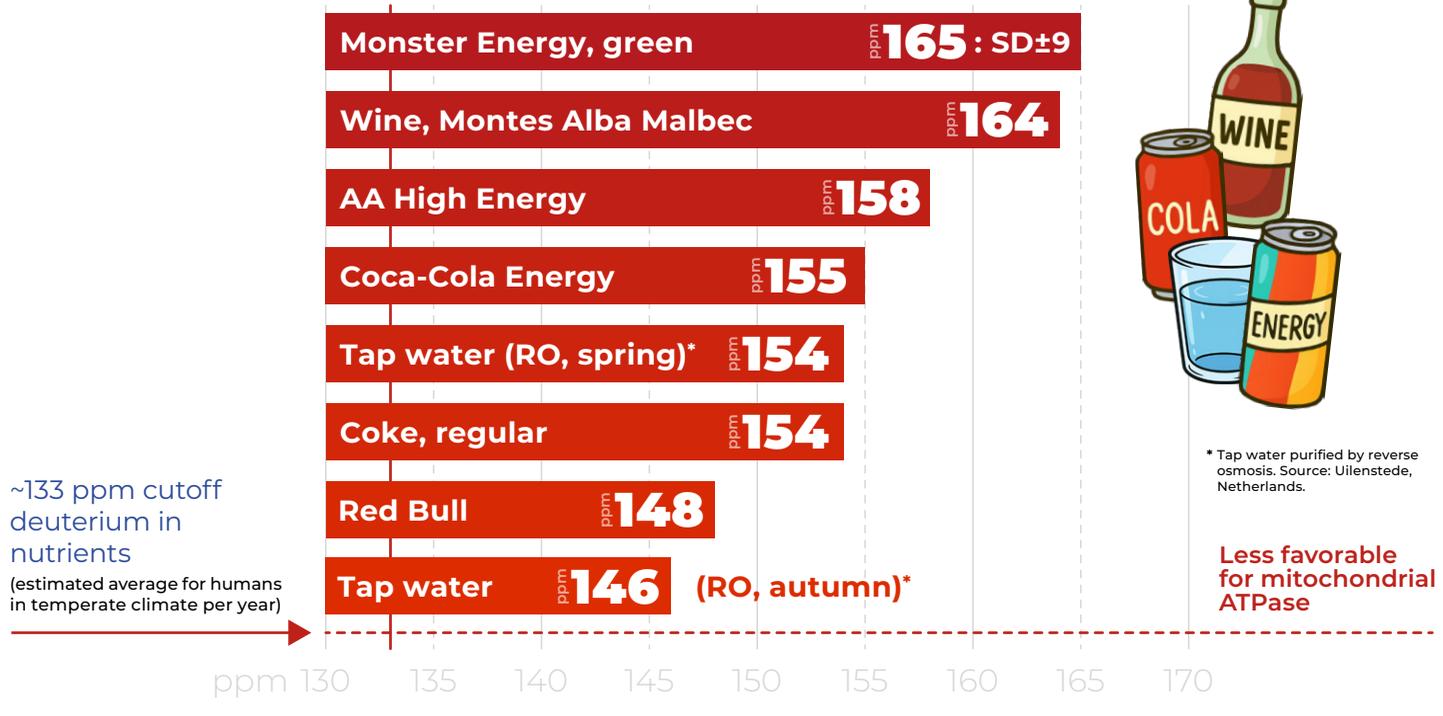
(empirical cutoff value – non-product related, non-medical assessments)

### Deuterium content comparison IN FRUITS: RAW & DRIED



# Deuterium content comparison IN BEVERAGES

~133 ppm cutoff  
deuterium in  
nutrients  
(estimated average for humans  
in temperate climate per year)



\* Tap water purified by reverse osmosis. Source: Uilenstede, Netherlands.

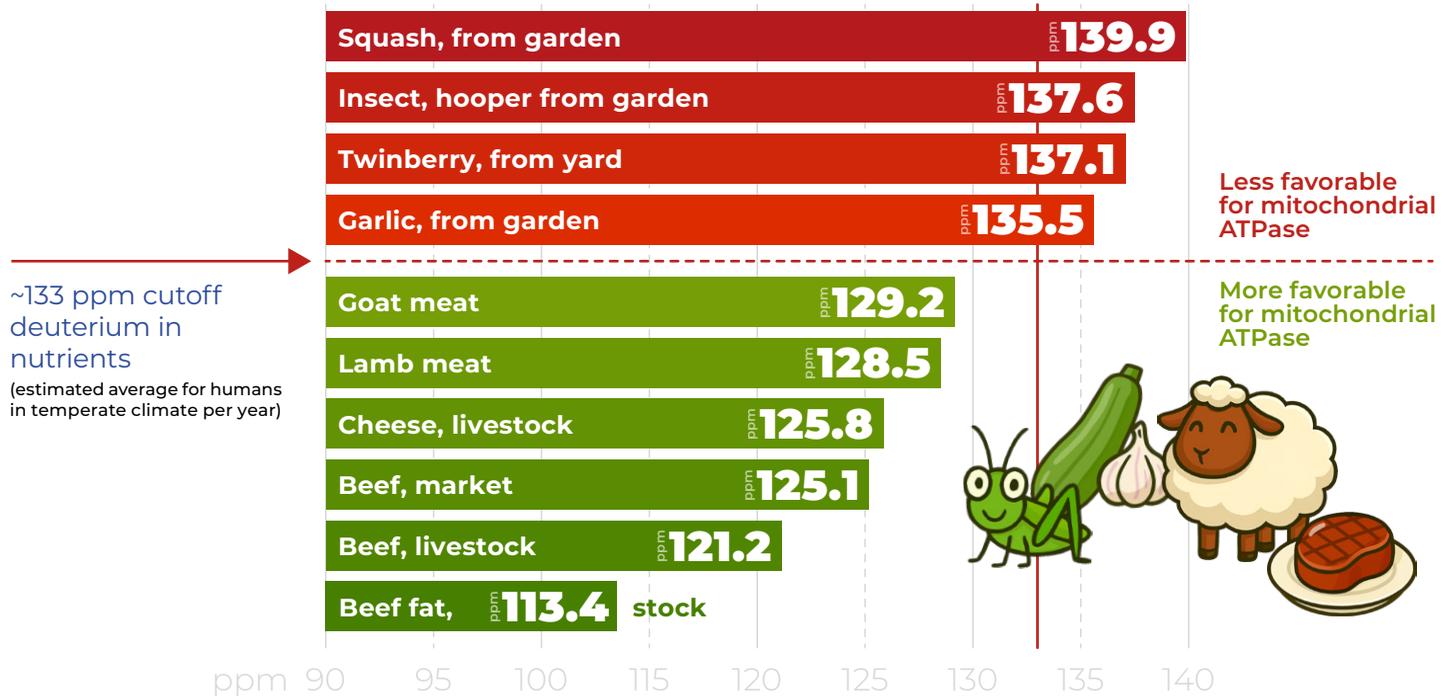
Less favorable  
for mitochondrial  
ATPase

# FOOD DEUTENOMICS DATA

## UNIVERSAL NANOMOTOR USER GUIDE

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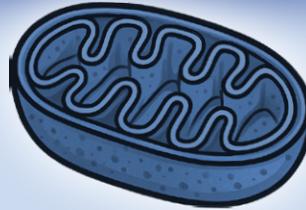
### Deuterium content comparison IN A BRITISH COLUMBIA LIVING HABITAT (CANADA)



# FOOD DEUTENOMICS DATA

## UNIVERSAL NANOMOTOR USER GUIDE

(empirical cutoff value – non-product related, non-medical assessments)



## TAKEHOME MESSAGE

Yearly average of deuterium intake, adjusted to geographical location, anthropological and microbiome related assessments, lifestyle and age may provide important guidelines to prevent and treat chronic diseases.

# FOOD DEUTENOMICS DATA

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## METHODS

Food and nutrient samples were selected and prepared by Sophia Dorfsman and Petra Davelaar, ND for deutenomics measurements, which were performed by James C. Lech at the Department of Physics and Astronomy, Physics of Living Systems, Vrije University Amsterdam, The Netherlands.

([jameslech@gmail.com](mailto:jameslech@gmail.com))

Dr. Anthony Chaffee: Deuterium Content Comparison in a British Columbia Living Habitat (Canada). 



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