

Essay by the foundress

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What gives us energy?

Why are we here at all?

How did life come about?

And what does all this have to do with the primordial sea?

Essay by Christine Benguerel, foundress of Tethys Water AG

The Matrix just a movie? An analogy to reality

The 1999 film The Matrix, starring Keanu Reeves, played with our fear that man is a slave to megacomputers and serves them as a living battery. The world, nothing more than a virtual reality.

Reality

In reality, man is a slave to his mitochondria, also called the powerhouse of cells or energy factories, which produce almost all our energy. Man serves the mitochondria as a living battery.

But what are mitochondria?

The mitochondria, like small submarines floating in the cell, are something like biochemical battery chargers in our cells. Actually, they should be considered foreign bodies, because they do not originate from human beings and have their own DNA. What is interesting about them is that they were apparently once primordial bacteria that lived in the

primordial ocean.

LUCA, the primordial cell of life

This theory of the origin of mitochondria has been around for quite some time. It was confirmed in 2011 when it was discovered that an ordinary marine bacterium may have the same ancestor (LUCA = Last Universal Common/Cellular Ancestor) as our mitochondria. A gene comparison suggests that both originate from the same early bacterial form.

Bacteria, our ancestors

We are trillions of mitochondria that were once bacteria. They still work in every cell today and keep us alive.

Evolutionary biologists assume that two billion years ago, these primordial bacteria infiltrated the cells that make us up, and in the end, have become our cell's powerhouses. The mitochondria are responsible for the evolution of the entire complexity of life from which we humans also emerged. See the following link:

How did the evolution of complex life on Earth begin? – The Gene Code, Episode 1 – BBC Four: [View video](#)

Insights into the nanoworld of mitochondria

All the energy we need to live, is produced almost exclusively by the mitochondria. Hundreds to several thousand mitochondria work in each of our cells. The number of mitochondria varies depending on the cell type. The liver cells have the highest density with up to 6000 mitochondria per cell. In a typical cell, there are 1000 to 2000 mitochondria.

Mitochondria under the magnifying glass

Mitochondria are tiny. A grain of sand would hold one billion mitochondria. See the following link.

The power of ten and the relative size of things in the universe: [View video](#)

Mitochondria – where our life energy comes from

The best known task of mitochondria is to provide energy from our food. They need fat, sugar and proteins and combine them with oxygen to convert them into energy for our cells and tissues, such as the brain and muscles. The currency in which our body's energy is traded is called adenosine triphosphate or ATP for short. See the following link:

What are mitochondria? [View video](#)

Mitochondria, the most powerful power plants in the entire universe

The microscopically small mitochondria supply proportionally more energy than our sun and are producing energy for us day and night, but only as far as we let them rule. Let us remember that we own them, feed them and create the environment for them that allows them to decide whether they serve us or hinder us.

We cannot fool the mitochondria in their work. That would exceed our intelligence. We can only try to provide them with all the building blocks of life that keep their complex chemistry lab functioning.

How did life come to earth?

This is a question that so far can only be answered in part. This much is clear: before biological evolution, which created the diversity of life on the planet, there must have been a chemical evolution. Simple precursor molecules, which were readily available under the prebiotic conditions of the early Earth, were able to form by chance the first molecules that could store information and multiply themselves – and subsequently became the evolutionary success model.

The Milller-Urey Experiment – Recooking the primordial soup

In the early 1950s, the American chemist Miller simulated the primordial sea, also known as primordial soup, in his laboratory and was given an amino acid solution when he

exposed water to electric spark discharges in an atmosphere consisting of methane, ammonia and hydrogen. The resulting mixture is regarded as a model for the state of the primordial ocean, in which the first amino acids could have been produced in a similar way. See the following link:

What was the Miller-Urey Experiment? [View video](#)

The origin of life is said to have begun in the primordial ocean.

Well-known evolutionary biologists believe that life in the primeval ocean was created by using the initial chemical energy at the smoking underwater volcanoes, the so-called hydrothermal vents, also called “black or white smokers” or “life’s smoking gun”. See the following link:

View The Vital Question with Nick Lane [View video](#)

Follow the Water... (NASA – Follow the Water: Finding a Perfect Match for Life)

Is it therefore not obvious to supply our mitochondria in our cells with water, the basic substance of life, so that they function optimally and can supply our cells with the necessary energy? See the following link:

The key to life on earth – water. Ambition – a collaboration between Platige Image and ESA (European Space Agency): [View video](#)

The mitochondrial chemistry laboratory is urgently dependent on water and salt.

Our body cells do not function without mitochondria. And our mitochondria do not function without water and salt.

Mitochondria need redox signal molecules for their work. These are small molecules that consist of a combination of water and salt. These redox signal molecules are essential for cell communication, cell protection and the repair of cell damage.

If mineral salts are dissolved in water, electrically conductive solutions are formed, also known as electrolytes. An electrolyte facilitates chemical reactions and helps to transport nutrients and waste. Our body is electric and we need water and mineral salts as electrolytes to function. Every thought, every movement requires an electric charge. An electrolyte produces the electricity that drives life. And this for billions of years.

All of us would like to live as long as Methuselah.

Oxidative stress is one of the main factors that triggers aging processes and allows them to progress. Free oxygen radicals cause this stress, also called oxidation. Free radicals are formed as normal waste products in cell metabolism, for which mitochondria are responsible. However, free radicals also fulfil important health functions. In young cells the free radicals are kept in check by protective mechanisms, the antioxidants, but during the aging process the balance shifts in favour of the aggressive substances. Antioxidants protect the organism from the action of free radicals, which promote aging processes. Antioxidants are essential for the survival of all living beings. Antioxidants include molecules that can dissolve in water. Water is needed to improve microcirculation and fight free radicals. The aging process is closely related to the energy production of mitochondria. Healthy energy production, where there is a certain balance between free radicals and antioxidants, protects mitochondria, cells and the organism from aging.

See the following link:

The Role of Mitochondria in Aging | Dr. David Sinclair | Professor of Genetics, Harvard Medical School [View video](#)

Is there a «reset button» for aging cells?

The aging process is an energy crisis of the cell. The aging process seems to be a consequence of a lack of energy in the organism in which the mitochondria are involved. The mitochondria transform the inhaled oxygen into water, thereby

creating the driving energy of the cell. Our body cells consist of 85% water. Even if the cells lose ten percent of water, they age rapidly. This means that the mitochondria are degraded or no longer function as well. The result: the overall metabolism and cell respiration decrease, the cells shrink. The consequences of the decay of our mitochondria ultimately lead to death. That is why it is essential to keep your mitochondria fit with healthy food, water and salt, the basic substance of life. See the following link:

Water, Cells, and Life | Dr. Gerald Pollack | TEDxNewYorkSalon
[View video](#)

We come from the sea and still carry it in us today

Life on Earth began in the waters of the oceans. We ourselves begin our life in the amniotic fluid, which consists of 99% water. Water is part of our innermost life, we consist mostly of water. We can survive for a long time without food, but not without water. Water is life.

Conclusion

Isn't it therefore obvious to feed our cells and mitochondria with the primordial ocean in order to keep them fit? The primordial ocean is the basic substance from which our cells and mitochondria once originated, before they became part of us in the history of evolution. We still carry the sea within us today.

« Water is Life's Matter and Matrix, Mother and Medium. There is No Life Without Water. »

Albert Szent-Györgyi, physician, biochemist and Nobel Prize winner