

Energy Generation, Flow and Transduction: Is it the Main Problem of the World Actually?

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Received date: Jan 21, 2017, Accepted date: Jan 27, 2017, Published date: Jan 30, 2017

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Editorial

Since early in courses of biological sciences studies are presented to the chair of biochemistry. Then, they can recognize an important function what mitochondria develop in living animal cells: convert electrical power generated in cells by the oxidation of foods into chemical energy, e.g., adenosine triphosphate (ATP). Likewise, in vegetal cells chloroplasts convert radiant energy, in the form of photons, to generate an electric power and, thereby, to produce chemical energy: ATP and reductive power (e.g., NADPH). Soon, they can understand that the two processes, i.e., cellular respiration in animal cells and photosynthesis in vegetal tissues, depend one on another and together comprises the carbon cycle. It is a very simple concept at cellular and molecular levels, and a very primordial process in the terrestrial atmosphere at a macroscopic scale.

Until second half of last century all appeared normal in the Earth's atmosphere, but today we are observing some signals of an imbalance in as primordial and simple mechanism: solar irradiation overtakes terrestrial capacity to dissipate heat and our atmosphere is warming. An excess of CO₂ was emitted to atmosphere without a compensatory fixation by photosynthesis. Two pivotal processes compete for this effect: firing of fossil fuels (a lot) and "the pioneer effect" (deforestation and new uses of earths).

Therefore, nowadays we need to look out of cells, around ourselves, and to think about and to nurse our world, i.e., our green house. It is

attempter to study mitochondria, chloroplasts, biomembranes/lipid bilayers, porins, membrane receptors, ionic channels, calcium homeostasis, apoptosis/necrosis, mitochondrial membrane potential, mitochondrial transition pores, futile cycles, heat generation, uncoupler protein, photons, water-lyses molecule centers, photosynthetic complexes, types of chlorophylls, and many others wonderful findings which were reported during last decades in the field of science. However, they will are, maybe, less useful if in the future, for example at middle of the 21th century, temperature of atmosphere up to 1.5–2.0 degree regard levels before industrialization due double up in CO₂ concentration; or if it will be reached 4 × CO₂ levels in the atmosphere at end of the 21th century. The biggest of all cells is sick because we went not able to produce, transfer and convert energy in our green house. We went unable to manage intelligently energetic flow in the biosphere and lead it to an unbalance. For alleviating such process we have not air-conditioning systems with power enough to cool this warming. Hence, we went good scientists concerning molecular and basic science, but bad energy transducers in the natural environment, and showed little capability to handle energy in our labor/economical activities. Unfortunately, this difficulty seems to be a hard and painful lesson out of the academic chairs for the mankind. Thus, we proof to be good theorists in the research, but unable biochemists in the life!