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RESEARCH ARTICLE

THE SOME PARAMETERS OF FULL 9 STEPPED CYCLE OF PROTON CONDUCTANCE AND THE QUANTITY OF HYDROGEN, CARBON, OXYGEN ATOMS IN DONATOR MOLECULES

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ABSTRACT

We revealed the following lawfull relationship existed between the full 9 stepped cycle of proton conductance inside human body and $C_xH_yO_z + (x + y/4 - z/2)\ O_2 \rightarrow x\ CO_2 + (y/2)\ H_2O$ formula: The quantity of the released CO_2 in the 2-th stage of the full 9 stepped cycle of proton conductance inside human body is equal to C_x existed in the donator molecules as $C_xH_yO_z$. The quantity of the O_2 participated in the 7-th stage of the full 9 stepped cycle of proton conductance inside human body directed to the formation of metabolic water in the mitochondrian matrix as oxidation of proton by molecular oxygens i.e, protonatized by matrix proton is existed in close dependence with the quantity of C_xH_y in reverse dependence with the quantity O_z contained in the donator molecules as $C_xH_yO_z$. The quantity of the metabolic H_2O formed by oxidation of proton by molecular oxygens and by protonation of molecular oxygen by matrix proton in the 7- th stage of the full 9 stepped cycle of proton conductance inside human is existed in close dependence with the quantity of H_y contained in the donator molecules as $C_xH_yO_z$. The quantity of the CO_2 entered from all cells and excaleted from body through alveoli (the release carbon dioxide during exhalation) in the 9- th stage of the full 9 stepped cycle of proton conductance inside human body is existed in close correlation with C_x existed in the donator molecules as $C_xH_yO_z$. The quantity of the diffused protons from mitochondrial matrix of all cells and metabolic water entered to plasma membrane of red blood cells with participation of aquaporin protein channels is existed in close dependence with the quantity of H_y contained in the donator molecules as $C_xH_yO_z$. The quantity of protons combined with hemoglobin (generation of HbH) which promotes the release of oxygen from hemoglobin, oxygen diffusion to all cells conditioning the release of proton, electron from food substrates in the 9-th stage of the full 9 stepped cycle of proton conductance inside human body is existed in close dependence with the quantity of H_y contained in the donator molecules as $C_xH_yO_z$.

INTRODUCTION

In world literature we can see more about $C_xH_yO_z + (x + y/4 - z/2)\ O_2 \rightarrow x\ CO_2 + (y/2)\ H_2O$ formula, but what about relationship between the full 9 stepped cycle of proton conductance inside human body and $C_xH_yO_z + (x + y/4 - z/2)\ O_2 \rightarrow x\ CO_2 + (y/2)\ H_2O$ formula so few materials in world literature. According to the full 9 stepped cycle of proton conductance inside human body proposed by Ambaga and Tumen-Ulzii (2015) all stages of the full 9 stepped cycle of proton conductance inside human body are existed in close connection with $C_xH_yO_z + (x + y/4 - z/2)\ O_2 \rightarrow x\ CO_2 + (y/2)\ H_2O$ formula. But until now no any literature publications, relating to the relationship between $C_xH_yO_z + (x + y/4 - z/2)\ O_2 \rightarrow x\ CO_2 + (y/2)\ H_2O$ formula and respiratory quotient and the content of hydrogen atoms in donators molecules in framework of the full 9 stepped cycle of proton conductance inside human body.

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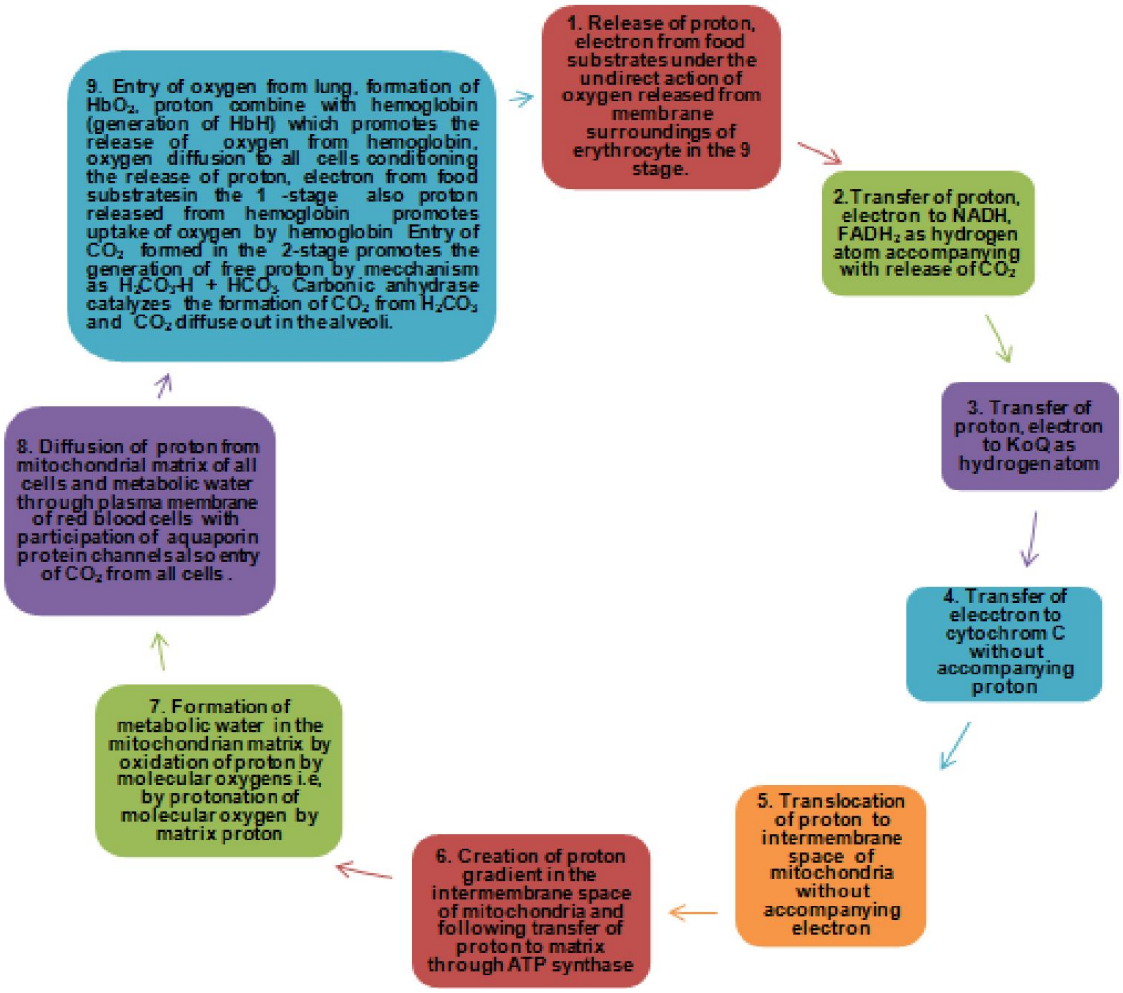
RESULTS AND CONCLUSION

- 2-th stage of the full 9 stepped cycle of proton conductance inside human body is distinguished by transfer of proton, electron to NADH, $FADH_2$ as hydrogen atom accompanying with release of CO_2, in this connection the quantity of hydrogen atom transferred to NADH, $FADH_2$ is correlated with H_y within $C_xH_yO_z + (x + y/4 - z/2)\ O_2 \rightarrow x\ CO_2 + (y/2)\ H_2O$ formula.
- 3-th stage of the full 9 stepped cycle of proton conductance inside human body is distinguished by transfer of proton, electron to KoQ as hydrogen atom, $FADH_2$ the quantity of hydrogen atom transferred to

KoQ is existed in correlation with H_y within $C_xH_yO_z + (x + y/4 - z/2)\ O_2 \rightarrow x\ CO_2 + (y/2)\ H_2O$ formula.

- 4-th stage of the full 9 stepped cycle of proton conductance inside human body is distinguished by transfer of electron to cytochrom C without accompanying proton, the quantity of electron transferred to cytochrom C KoQ is existed in correlation with H_y within $C_xH_yO_z + (x + y/4 - z/2)\ O_2 \rightarrow x\ CO_2 + (y/2)\ H_2O$ formula.
- **5**-th stage of the full 9 stepped cycle of proton conductance inside human body is distinguished by translocation of proton to intermembrane space of mitochondria without accompanying electron, the quantity of proton transferred to intermembrane space of mitochondria KoQ is existed in correlation with H_y within $C_xH_yO_z + (x + y/4 - z/2)\ O_2 \rightarrow x\ CO_2 + (y/2)\ H_2O$ formula.
- 6-th stage of the full 9 stepped cycle of proton conductance inside human body is distinguished by creation of proton gradient in the intermembrane space of mitochondria and following transfer of proton to matrix through ATP synthase the creation of proton gradient in this stage is existed in correlation with H_y within $C_xH_yO_z + (x + y/4 - z/2)\ O_2 \rightarrow x\ CO_2 + (y/2)\ H_2O$ formula.



- 7-th stage of the full 9 stepped cycle of proton conductance inside human body is distinguished by formation of metabolic water in the mitochondrian matrix by oxidation of proton by molecular oxygens i.e, by protonation of molecular oxygen by matrix proton, the quantity of metabolic water is existed in correlation with H_y within $C_xH_yO_z + (x + y/4 - z/2)\ O_2 \rightarrow x\ CO_2 + (y/2)\ H_2O$ formula.
- 8-th stage of the full 9 stepped cycle of proton conductance inside human body is distinguished by diffusion of proton from mitochondrial matrix of all cells and metabolic water through plasma membrane of red blood cells with participation of aquaporin protein channels also entry of CO_2 from all cells and the quantity of diffused protons from mitochondrial matrix of all cells and metabolic water through plasma membrane of red blood cells is existed in correlation with H_y within $C_xH_yO_z + (x + y/4 - z/2)\ O_2 \rightarrow x\ CO_2 + (y/2)\ H_2O$ formula.
- 9- th stage is distinguished by entry of oxygen from lung, formation of HbO_2, proton combine with hemoglobin (generation of HbH) which promotes the release of oxygen from hemoglobin, oxygen diffusion to all cells conditioning the release of proton, electron from food substrates, the quantity of H contained in the HbH is correlated with H_y within $C_xH_yO_z + (x + y/4 - z/2)\ O_2 \rightarrow x\ CO_2 + (y/2)\ H_2O$ formula.

The full 9 stepped cycle of electron and proton conductance inside the human body which includes well known metabolic pathways such as glycolysis, Krebs cycle, betta oxidation of fatty acids, amino acid oxidation have been connected with all

parameters of $C_xH_yO_z + (x + y/4 - z/2)\ O_2 \rightarrow x\ CO_2 + (y/2)\ H_2O$ formula.

We revealed the following lawfull relationship between the full 9 stepped cycle of proton conductance inside human body and $C_xH_yO_z + (x + y/4 - z/2)\ O_2 \rightarrow x\ CO_2 + (y/2)\ H_2O$ formula:

- The quantity of the released CO_2 in the 2-th stage of the full 9 stepped cycle of proton conductance inside human body is existed in correlation with C_x existed in the donator molecules as $C_xH_yO_z$.
- The quantity of the O_2 participated in the 7- th stage of the full 9 stepped cycle of proton conductance inside human body utilized for the formation of metabolic water in the mitochondrian matrix as oxidation of proton by molecular oxygens i.e, protonatized by matrix proton is existed in close correlation with the quantity of C_xH_y in reverse dependence with the quantity O_z contained in the donator molecules as $C_xH_yO_z$.
- The quantity of the metabolic H_2O formed by oxidation of proton by molecular oxygens and by protonation of molecular oxygen by matrix proton in the 7- th stage of the full 9 stepped cycle of proton conductance inside human is existed in close correlation with the quantity of H_y contained in the donator molecules as $C_xH_yO_z$.
- The quantity of the CO_2 entered from all cells and excaleted from through alveoli (the release carbon dioxide during exhalation) in the 9- th stage of the full 9 stepped cycle of proton conductance inside human body is existed in correlation with C_x existed in the donator molecules as $C_xH_yO_z$.
- The quantity of the diffused protons from mitochondrial matrix of all cells and metabolic water entered to plasma membrane of red blood cells with participation of aquaporin protein channels is existed in close dependence with the quantity of H_y contained in the donator molecules as $C_xH_yO_z$.
- The quantity of the diffused protons from mitochondrial matrix of all cells and metabolic water entered to plasma membrane of red blood cells with participation of aquaporin protein channels is existed in close dependence with the quantity of H_y contained in the donator molecules as $C_xH_yO_z$.
- The quantity of protons combined with hemoglobin (generation of HbH) which promotes the release of oxygen from hemoglobin, oxygen diffusion to all cells conditioning the release of proton, electron from food substrates in the 9-th stage of the full 9 stepped cycle of proton conductance inside human body is existed in close dependence with the quantity of H_y contained in the donator molecules as $C_xH_yO_z$.
- The quantity of oxygen entered from lung, formed the HbO_2 in the 9- th stage of the full 9 stepped cycle of proton conductance inside human body is existed in close dependence with the quantity of C_xH_y, in reverse dependence with the quantity O_z contained in the donator molecules as $C_xH_yO_z$.
- The quantity of protons translocated to intermembrane space of mitochondria without accompanying electron in the 5-th stage of the full 9 stepped cycle of proton conductance inside human body is existed in close correlation with the quantity of H_y contained in the donator molecules as $C_xH_yO_z$.
- The quantity of protons participated in the creating of proton gradient in the intermembrane space of mitochondria and following transfer of proton to matrix through ATP synthase in the 6-th stage of the full 9 stepped cycle of proton conductance inside human body is existed in close correlation with the quantity of H_y contained in the donator molecules as $C_xH_yO_z$.
- The quantity of protons participated in the creating of proton gradient in the intermembrane space of mitochondria and following transfer of proton to matrix through ATP generation and heat energy formation in the 6-th stage of the full 9 stepped cycle of proton conductance inside human body is existed in close dependence with the quantity of H_y contained in the donator molecules as $C_xH_yO_z$.

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