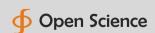


## he Endosymbiotic Archaea and Human Stem Cell Transformation



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## 1

### Glycolysis, Global Warming and Human Stem Cell Transformation

The Neanderthals are symbiotic life form due to archaeal endosymbiosis. The archaea induces the Warburg phenotype with increased glycolysis and the blockade of the TCA cycle and mitochondrial oxidative phosphorylation. The Warburg phenotype is seen in autoimmune disease, schizophrenia, autism, cancer, degeneration and metabolic syndrome x. The Neanderthals ate a ketogenic diet of fat and protein to suppress the glycolytic pathway. The Neanderthal hybrids formed by homo sapien mating had a high carbohydrate diet due to grain cultivation in settled colonies. This tends to increased glycolysis and accentuates the Warburg phenotype and associated disorders. The glycolytic pathway is upregulated and the mitochondrial oxidative phosphorylation is inhibited. To counteract this certain disease patterns developed in the hybrid population as a adaptive mechanism. These groups of disorders develop autoantibodies against glycolytic enzymes. The cell envelope is of archaeal origin and the glycolytic enzymes are cytosolic. This is opposed to the mitochondrial oxidative phosphorylation scheme which is rickettsial in origin. The primitive parts of the brain the cerebellum functions as an archaeal colony network and promotes the Warburg phenotype and glycolysis. The cerebellar brain is dominant in Neanderthals. The HLA genes are neanderthalic in origin and modulate lymphocytic function. The lymphocytes depend on glycolysis for its energy needs. The neocortex functions as a retroviral colony and promotes mitochondrial oxidative phosphorylation. The HERV genes functions as jumping genes and they can jump and insert themselves in between glycolytic enzyme genetic sequences producing mutations and mutated glycolytic enzymes. The glycolytic pathway becomes dysfunctional. Antibodies are formed against the mutated glycolytic proteins. Thus glycolysis and energy metabolism comes to a halt due to the inhibitory effect of the selfish HERV genes which needs mitochondrial function and ROS generation for its

replicatory function and communicating with the cell. The Warburg phenotype results in conversion of the somatic cell to a stem cell phenotype.

autoimmune disease, schizophrenia, Disorders like autism, cancer, degeneration and metabolic syndrome x are disorders of glycolysis and have an autoimmune component against glycolytic enzymes. Glycolytic inhibition and ketogenic diet is one way to treat autoimmune disease, schizophrenia, autism, cancer, degeneration and metabolic syndrome x. All autoimmune diseases develop to suppress the Warburg phenotype in Neanderthal hybrids. The increased glycolysis contributes to oncogenesis via the mitochondrial PT pore hexokinase. The increased glycolysis produces nuclear cell death via the GAPDH pathway. The phosphoglycerate gets converted to phosphoserine and glycine which can modulate NMDA. Fructose 1,6 diphosphate enters the pentose phosphate pathway generating NADPH which activates NOX modulating NMDA function. Thus the glycolytic pathway can modulate the NMDA pathway contributing to schizophrenia and autism due to dysfunction of consciousness. The PDH inhibition accumulates pyruvate which enters the GABA shunt generating succinyl CoA and glycine as well as GABA. Succinyl CoA and glycine are substrates for porphyrin synthesis and contributes to quantal perception important in schizophrenia and autism. The increased lymphocytic glycolysis and glycolytic antigens contribute to autoimmune disease. Glycolytic antigens also contribute to neurodegeneration, neuropsychiatric disorders and metabolic syndrome x. GAD antibodies are involved in metabolic syndrome x. Autoimmunity is a part of antibody mediated attempt to inhibit glycolysis and Warburg phenotype in Neanderthal hybrids who consume a high carbohydrate diet. This as a by-product generates neurodegeneration, autoimmune disease, schizophrenia, autism, cancer and civilisational disease. All these can be controlled by glycolytic inhibitors and ketogenic diet.



The Warburg phenotype and increased glycolysis and stem cell transformation results in civilisational disease. The increase in glycolysis and mitochondrial PT pore hexokinase results in cell growth, proliferation and cancer. The increase in GAPDH and its polyribosylation by PARP enzymes results in nuclear cell death and neurodegeneration. The increase in the glycolytic intermediate phosphoglycerate results in increased serine and glycine contributing to NMDA excitotoxicity the basis of neurodegeneration and neuropsychiatric disorders. The suppression of mitochondrial oxidative phosphorylation as well as changes in pancreatic glutamatergic transmission can contribute to metabolic syndrome x.

Global warming leads to increase in endosymbiotic actinidic archaeal growth. Archaea are extremophiles. The actinidic archaea survive by catabolizing cholesterol. The archaea and its antigens induce HIF alpha and activate the glycolytic pathway. The glycolytic pathway activation induces increased conversion of glucose to fructose by activation of the sorbitol pathway. Glucose is converted to sorbitol by the enzyme aldose reductase and sorbitol is converted to fructose by the action of sorbitol dehydrogenase. Fructose is phosphorylated by hexokinase or fructokinase to fructose phosphate. Hexokinase has a low km value for fructose and minimal amounts of fructose will be converted to fructose phosphate depleting the cellular ATP. ATP is converted to AMP and by the action of AMP deaminase is converted to uric acid. Thus there is resultant hyperuricemia and the depletion of ATP also produces membrane sodium potassium ATPase inhibition. Inhibition of membrane sodium potassium ATPase increases intracellular calcium and depletes magnesium. This produces cell death by opening up the mitochondrial PT pore, NFKB activation and immune activation, glutamate excitotoxicity and oncogene activation leading to systemic disorders. The depletion of ATP finally inhibits hexokinase as such and glucose phosphorylation stops blocking the glycolytic pathway and its

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coupling to the mitochondrial oxidative phosphorylation by the action of PT pore hexokinase. The cell is depleted of energy by glycolysis and the oxidative phosphorylation scheme and dies. Thus global warming via induction of glycolysis and Warburg phenotype and the increased conversion of glucose to fructose and the resultant cellular depletion of ATP can produce systemic disorders and cell dysfunction as well as death. This can produce the global warming related systemic syndrome.

Global warming leads to neanderthalisation of the human species consequent to growth of actinidic archaea. The Neanderthals were accustomed to a ketogenic high fat, high protein diet. The ketone bodies were oxidised to generate ATP in the mitochondria. The neanderthalised humans due to actinidic archaeal growth due to consumption of a glucogenic diet leads to induction of glycolytic enzymes. The glycolytic enzymes are cytosolic. The glycolytic enzymes are antigenic in the neanderthalised humans. The glycolytic enzymes were suppressed in homo neanderthalis who ate ketogenic diet. This results in suppression of induced glycolytic enzymes by antibody formation in homo neoneanderthalis which arises due to archaeal growth consequent to global warming. The blockade of glycolysis results in blockade of cell energetics. This results in hyperglycemia and metabolic syndrome x. The glucose is converted to sorbitol by aldose reductase and sorbitol is converted to fructose by fructokinase. Fructokinase enzyme is native to Neanderthals as they consumed fruits along with fat and protein from meat. Fructose is phosphorylated to fructose phosphate which depletes the cell of ATP. This inhibits membrane sodium potassium ATPase leading onto increase in intracellular calcium and reduction in intracellular magnesium. This produces glutamate excitotoxicity and neurodegeneration, oncogene activation and malignancy, NFKB activation and autoimmune disease, release of mono amine neurotransmitters from presynaptic vesicles and schizophrenia and all systemic diseases. The increased glucose gets



metabolised by archaeal glycolysis and citric acid cycle. The pyruvate generated by archaeal glycolysis enters the GABA shunt scheme generating succinyl CoA and glycine which are substrates for porphyrin synthesis. The archaeal citric acid cycle can be reductive generating carbon dioxide fixation akin to the Calvin cycle of photosynthesis or oxidative generating acetyl CoA which is used for cholesterol synthesis by the archaeal mevalonate pathway. The archaeal glycolysis also generates fructose 1,6 diphosphate which enters the pentose phosphate pathway producing D xylulose phosphate which is a substrate for DXP pathway of archaeal cholesterol synthesis. The archaea synthesizes cholesterol by both the mevalonate pathway and DXB pathway. The archaea can use cholesterol for energetics by catabolizing it. The cholesterol ring is oxidised to pyruvate which enters the GABA shunt which provides substrates for the citric acid cycle. The pyruvate is converted to glutamate and ammonia. The archaea can oxidise ammonia for energy. The side chain of cholesterol is oxidised to butyrate and propionate which can also be further utilised for energy purposes. The archaeal energetics depends on glycolysis, citric acid cycle, ammonia oxidation and cholesterol catabolism. The antibodies against the glycolytic enzymes aldolase, enolase, GAPDH and pyruvic kinase contributes to metabolic syndrome x, schizophrenia, mood disorders, autism, multiple sclerosis, lupus, Alzheimer's disease and Parkinson's disease. The upregulation of glycolysis contributes to neoplastic state. The antibodies are produced against induced glycolytic enzymes as well as archaeal glycolytic enzymes. The blockade of glycolysis leads to a secondary mitochondrial dysfunction. The glycolytic scheme is coupled to mitochondrial oxidative phosphorylation by mitochondrial PT pore hexokinase. The antibodies against glycolysis blocks glycolysis and produce secondary mitochondrial dysfunction. The cell uses all its energetics. The depletion of ATP by phosphorylation of fructose produces membrane sodium potassium ATPase inhibition and cell

hibernation as well as stem cell transformation. The human tissue systems come to a halt and form a framework for archaeal colonies to thrive. The human body becomes a zombie for archaeal colonies which are eternal. This affects the function of organ systems like the liver producing cirrhosis, the lung producing interstitial lung disease, renal fibrosis and CRF, cardiomyopathy and Alzheimer's disease. This can be called as the zombie syndrome. The depletion of ATP by phosphorylation of fructose generates ADP and AMP which by action of AMP deaminase produces uric acid and hyperuricemia. The zombie syndrome converts the human body to a framework for an archaeal colony network. The archaea can secrete RNA and DNA viroids which can recombine with human endogenous retroviral sequences and human DNA sequences generating new RNA viruses, DNA viruses and bacteria. Thus the zombie

syndrome results in the generation of new bacteria and viruses. The zombie syndrome can be treated by suppression of glycolysis. This can be done by giving a ketogenic diet derived from fibre short chain fatty acids - butyrate and acetate, polyunsaturated fatty acids and short chain fatty acids like lauric acid.

### 2

The Archaeal Induced Stem Cell Conversion Produces an Epidemic Benjamin Buttons Reverse Aging Syndrome Leading to Systemic & Neuropsychiatric Diseases and a Spiritual, Surrealistic Evil Brain

#### Introduction

The global warming produces increased acidity and atmospheric carbon dioxide resulting in extremophilic archaeal symbiosis in humans. The archaeal symbiosis results in neanderthalisation of humans. The archaea induced uncoupling proteins producing the primitive Warburg phenotype and stem cell metabolonomics. The archaeal metabolites of cholesterol digoxin, bile acids and short chain fatty acids induce uncoupling proteins. The lysosomal enzymes a marker of stem cell conversion are markedly increased along with genesis of the archaeal phenotype in metabolic syndrome x, degenerations, autoimmune diseases, cancer, schizophrenia and autism. In all these systemic diseases there is somatic cell transformation to stem cell and lose of function. The neurons become immature and lose their dendritic spines and connectivity. This results in loss of neuronal function and reversion to archaeal magnetite mediated extrasensory perception of low level of EMF. Exposure to low level of EMF results in brain changes. This results in prefrontal cortex atrophy. The primitive brain areas of cerebellum and brain stem become hypertrophic. The somatic and neuronal cell proliferates and there is neanderthalisation of the brain and body. 1-17

The idea of goodness is based on reason and logic. Reason judgment and logic is a function of the cerebral cortex especially the prefrontal lobe. Prefrontal lobe function needs dynamic synaptic connectivity which is produced by jumping genes mediated by human endogenous retroviral sequences. Goodness is correlated with heaven. The idea of evil is based on the unconscious and the impulsive behavior related to subcortical areas especially the cerebellum. The cerebellum is the site of impulsive behavior and the unconscious behavior. The cerebellar and subcortical brain connections are predominantly archaeal colony networks. The idea of evil is related to hell. The



idea of conscious judgmental acts and unconscious impulsive acts, heaven and hell, goodness and evil are juxtapositions. The global warming and exposure to low level of EMF leads to actinidic archaeal growth in the brain and increased archaeal magnetite mediated perception of low level of EMF. This leads to prefrontal cortex atrophy and cerebellar dominance. The conscious becomes minimal and unconscious brain takes over. The study assessed archaeal growth as assessed by cytochrome F420 activity and stem cell type metabolonomics in systemic diseases, neuropsychiatric disorders and normal individuals with differing psychological profile - prisoners, creative individuals and common sense modulated business men.<sup>1-17</sup> The results are presented in this paper.

#### **Materials and Methods**

The blood samples were drawn from four groups of psychological different population spiritually inclined, criminal prisoners, creative artists and business men. There were 15 members in each group. The blood samples were also drawn from 15 cases each of metabolic syndrome, degenerations - Alzheimer's disease, autoimmune disease - SLE, cancer - brain glioma, schizophrenia and autism. The estimations done in the blood samples collected include cytochrome F420 activity. Blood lactate, pyruvate, hexokinase, cytochrome C, cytochrome F420, digoxin, bile acids, butyrate and propionate were estimated.

#### **Results**

The results showed that the spiritual, artistic creative individuals and criminal prisoners had increased cytochrome F420 activity and RBC digoxin levels. The results showed that the businessmen had decreased cytochrome F420 activity and RBC digoxin levels. The blood samples of Alzheimer's disease, autoimmune



disease - SLE, cancer - brain glioma, schizophrenia and autism had increased blood lactate and pyruvate, increased RBC hexokinase, increased serum cytochrome C and serum cytochrome F420, increased serum digoxin, bile acids, butyrate and propionate. The disease state had increased cytochrome F420 activity. The serum cytochrome C levels in the blood were increased. This suggested mitochondrial dysfunction. There was an increased in glycolysis as suggested by increased RBC hexokinase activity and lactic acidosis. Owing to the mitochondrial dysfunction and pyruvate dehydrogenase inhibition there was pyruvate accumulation. The pyruvate was converted to lactate by the Cori cycle and also to glutamate and ammonia. This metabolism is suggestive of the Warburg phenotype and stem cell conversion. The stem cells depend on Warburg anaerobic glycolysis for energetics and have a mitochondrial dysfunction. The lysosomal enzyme beta galactosidase activity was increased in the disease group and in creative artists and criminals suggesting stem cell conversion. This suggests that artistic creative, criminal prisoners as well as spiritual individuals tend to have stem cell metabolonomics and stem cell conversion.

Table 1

Group	Cytochrome F420		Serum Cyto C (ng/ml)		Lactate (mg/dl)		Pyruvate (umol/l)		RBC Hexokinase (ug glu phos / hr/mgpro)	
	Mean	±SD	Mean	±SD	Mean	±SD	Mean	±SD	Mean	±SD
Normal population	1.00	0.00	2.79	0.28	7.38	0.31	40.51	1.42	1.66	0.45
Spiritual	4.00	0.00	12.39	1.23	25.99	8.10	100.51	12.32	5.46	2.83
Acquisitive capitalist	0.00	0.00	1.21	0.38	2.75	0.41	23.79	2.51	0.68	0.23
Artistic	4.00	0.00	12.84	0.74	23.64	1.43	96.19	12.15	10.12	1.75
Criminality	4.00	0.00	12.72	0.92	25.35	5.52	103.32	13.04	9.44	3.40
Schizo	4.00	0.00	11.58	0.90	22.07	1.06	96.54	9.96	7.69	3.40
Seizure	4.00	0.00	12.06	1.09	21.78	0.58	90.46	8.30	6.29	1.73
HD	4.00	0.00	12.65	1.06	24.28	1.69	95.44	12.04	9.30	3.98
AD	4.00	0.00	11.94	0.86	22.04	0.64	97.26	8.26	8.46	3.63
MS	4.00	0.00	11.81	0.67	23.32	1.10	102.48	13.20	8.56	4.75
SLE	4.00	0.00	11.73	0.56	23.06	1.49	100.51	9.79	8.02	3.01
NHL	4.00	0.00	11.91	0.49	22.83	1.24	95.81	12.18	7.41	4.22
Glio	4.00	0.00	13.00	0.42	22.20	0.85	96.58	8.75	7.82	3.51
DM	4.00	0.00	12.95	0.56	25.56	7.93	96.30	10.33	7.05	1.86
CAD	4.00	0.00	11.51	0.47	22.83	0.82	97.29	12.45	8.88	3.09
CVA	4.00	0.00	12.74	0.80	23.03	1.26	103.25	9.49	7.87	2.72
AIDS	4.00	0.00	12.29	0.89	24.87	4.14	95.55	7.20	9.84	2.43
CJD	4.00	0.00	12.19	1.22	23.02	1.61	96.50	5.93	8.81	4.26
Autism	4.00	0.00	12.48	0.79	21.95	0.65	92.71	8.43	6.95	2.02
DS	4.00	0.00	12.79	1.15	23.69	2.19	91.81	4.12	8.68	2.60
Cerebral Palsy	4.00	0.00	12.14	1.30	23.12	1.81	95.33	11.78	7.92	3.32
CRF	4.00	0.00	12.66	1.01	23.42	1.20	97.38	10.76	7.75	3.08
Cirr/Hep Fail	4.00	0.00	12.81	0.90	26.20	5.29	97.77	13.24	8.99	3.27
Low level background radiation	4.00	0.00	12.26	1.00	23.31	1.46	103.28	11.47	7.58	3.09
F value	0.001		445.772	2	162.94	5	154.701	1	18.187	
P value	< 0.001		< 0.001		< 0.001		< 0.001		< 0.001	



Table 2

Group	ACOA (mg/dl)		Glutamate (mg/dl)		Se. Am (ug/dl)	Se. Ammonia (ug/dl)		oigoxin RBC	Beta galactosidase activity in serum (IU/ml)	
	Mean	±SD	Mean	±SD	Mean	±SD	Mean	±SD	Mean	±SD
Normal population	8.75	0.38	0.65	0.03	50.60	1.42	0.58	0.07	17.75	0.72
Spiritual	2.51	0.36	3.19	0.32	93.43	4.85	1.41	0.23	55.17	5.85
Acquisitive capitalist	16.49	0.89	0.16	0.02	23.92	3.38	0.18	0.05	8.70	0.90
Artistic	2.51	0.42	3.11	0.36	92.40	4.34	1.40	0.32	46.37	4.87
Criminality	2.19	0.19	3.27	0.39	95.37	5.76	1.51	0.29	47.47	4.34
Schizo	2.51	0.57	3.41	0.41	94.72	3.28	1.38	0.26	51.17	3.65
Seizure	2.15	0.22	3.67	0.38	95.61	7.88	1.23	0.26	50.04	3.91
HD	1.95	0.06	3.14	0.32	94.60	8.52	1.34	0.31	51.16	7.78
AD	2.19	0.15	3.53	0.39	95.37	4.66	1.10	0.08	51.56	3.69
MS	2.03	0.09	3.58	0.36	93.42	3.69	1.21	0.21	47.90	6.99
SLE	2.54	0.38	3.37	0.38	101.18	17.06	1.50	0.33	48.20	5.53
NHL	2.30	0.26	3.48	0.46	91.62	3.24	1.26	0.23	51.08	5.24
Glio	2.34	0.43	3.28	0.39	93.20	4.46	1.27	0.24	51.57	2.66
DM	2.17	0.40	3.53	0.44	93.38	7.76	1.35	0.26	51.98	5.05
CAD	2.37	0.44	3.61	0.28	93.93	4.86	1.22	0.16	50.00	5.91
CVA	2.25	0.44	3.31	0.43	103.18	27.27	1.33	0.27	51.06	4.83
AIDS	2.11	0.19	3.45	0.49	92.47	3.97	1.31	0.24	50.15	6.96
CJD	2.10	0.27	3.94	0.22	93.13	5.79	1.48	0.27	49.85	6.40
Autism	2.42	0.41	3.30	0.32	94.01	5.00	1.19	0.24	52.87	7.04
DS	2.01	0.08	3.30	0.48	98.81	15.65	1.34	0.25	47.28	3.55
Cerebral Palsy	2.06	0.35	3.24	0.34	92.09	3.21	1.44	0.19	53.49	4.15
CRF	2.24	0.32	3.26	0.43	98.76	11.12	1.26	0.26	49.39	5.51
Cirr/Hep Fail	2.13	0.17	3.25	0.40	94.77	2.86	1.50	0.20	46.82	4.73
Low level background radiation	2.14	0.19	3.47	0.37	102.62	26.54	1.41	0.30	51.01	4.77
F value	1871.04		200.702	2	61.645		60.288		194.418	
P value	< 0.001		< 0.001		< 0.001		< 0.001		< 0.001	



#### **Discussion**

The systemic diseases and neuropsychiatric disorders tend to have a predominant anaerobic glycolytic metabolism and mitochondrial oxidative phosphorylation is suppressed. The metabolism is similar to the metabolism of the stem cell. The pyruvate and lactate levels are increased with a decrease in acetyl coenzyme A and ATP. The glycolytic pathway and hexokinase is increased. This indicates a Warburg phenotype depending upon anaerobic glycolysis for energetics. The lysosomal enzymes beta galactosidase a stem cell marker is increased. The cytochrome F420 is also increased as well as the archaeal catabolite digoxin which suppresses sodium potassium ATPase. Bacteria and archaea are supposed to induce stem cell transformation. The induction of uncoupling proteins leads to stem cell transformation. The uncoupling proteins inhibit oxidative phosphorylation and the substrates are directed to anaerobic glycolysis. Digoxin by inhibiting sodium potassium ATPase can increase intracellular calcium, induce mitochondrial permeability transient pore function and uncouple oxidative phosphorylation. The side chain of cholesterol is catabolized by archaea to butyric acid and propionic acid which uncouple oxidative phosphorylation. The archaeal side chain hydroxylase convert cholesterol to bile acids which uncouple oxidative phosphorylation. Thus archaeal symbiosis in the cell results in cholesterol catabolism and the catabolites digoxin, bile acids and short chain fatty acids uncouple oxidative phosphorylation, inhibit mitochondrial function and promote anaerobic glycolysis. The conversion of somatic cells to stem cell helps in archaeal persistence within the cell and symbiosis. Mycobacterium leprae infection can convert Schwann cells to stem cells. Archaeal infection produces somatic cell conversion to stem cells for archaeal persistence. The conversion to stem cell results in proliferation and loss of function resulting in systemic disease and



neuropsychiatric disorders. Stem cell conversion of neurons and loss of function results in development of a new psychological phenotype. <sup>1-17</sup>

The systemic and neuronal cell in metabolic syndrome x, cancer, autoimmune disease, degenerations, schizophrenia and autism behaves like the stem cell. It is plausible to hypothesize a somatic cell conversion to stem cell in these disorders. The differentiated cells by archaeal induction get converted to stem cell. The stem cell is a immature cell with loss of function. The neurons lose their dendritic spines and loss of connectivity. The brain function becomes primitive. The neurons are adendritic and disconnected. This results in complex brain structures like the modern cerebral cortex and prefrontal cortex atrophy. The primitive parts of the brain the brain stem and cerebellum hypertrophies. This results in neanderthalisation of the brain with a prominent occipital bun and atrophied prefrontal cortex. The prefrontal cortex atrophy results in loss of logic, judgment, reasoning and executive functions. The hypertrophy of the cerebellum and brain stem results in dominance of impulsive behavior. The difference between reality and dreams is lost. The brain is ruled by the senses and impulses. The brain becomes dysfunctional with more of violent, aggressive and cannibalistic behavior. The art becomes more abstract and related to the unconscious. The world of the unconscious brain with its archetypes takes over. There is loss of the world of reasoning, logic and judgment. It is a world of impulsiveness in which primitive tendencies with relation to the unconscious becomes dominant. This produces more of ritualized behavior, violent and aggressive tendencies, terrorism, war, sexual obscenities and alternate sexuality. It is a world of the senses. It is also intensely evil as well as spiritual. The inhibition of the conscious due to loss of cortical functions and the dominance of the unconscious leads to mystical experience. There is a overflowing of spirituality. The paradoxical side of this behavior also dominates. The violence, aggression, obsessive sexuality, magic realism in literature,



abstract painting, rock music and dance and modern poetry as well as literature produces transcedence of a different kind. This results in surrealism and syntheism. The loss of function of the neurons results in schizophrenia, autism and degenerations. The increased archaeal induced proliferation of stem cells results in a big sized brain and trunk as in Neanderthals. This archaeal symbiosis produces neanderthalisation and a stem cell syndrome. This produces reverse aging which can be called as an epidemic Benjamin Button syndrome. The lymphocytic stem cells have uncontrolled proliferation and results in autoimmune diseases. The stem cell proliferation results in oncogenesis. The stem cell metabolonomics with inhibited mitochondrial function and anaerobic glycolysis results in metabolic syndrome x. Stem cell markers are increased in schizophrenia and autism and the neurons lack dendritic spines. Stem cell markers are also increased in autoimmune disease. The diabetic metabolism is akin to stem cell metabolism. The cancer cell behaves like the stem cell. 1-17

In the metaphysics of evil the unconscious dominates and the behavior is impulsive dictated by primitive thoughts. The unconscious modulated by the cerebellum is responsible for automatic acts producing what is called as psychic automatism. The unconscious parallels what Jung described as the archetypes of the collective unconscious. The metaphysics of evil leads to a syntheistic brain with the dominance of the willpower. The primitive archetypes produce concepts of abstract painting, psychedelic music and dance and postmodern literature or magical realism. All these are modes of connecting with the unconscious. The unconscious produces primitive selfish tendencies leading to individualism and capitalism. The unconscious helps to transcend taboos and creates the surrealistic world. The collective unconscious also produces a sense of spirituality and oneness. It is an impulsive brain with fixations and primitive obsessions. There is cerebellar psychic automatism. This leads to ritualized behaviours. The dominance of the collective unconscious results in ritualized



behaviors characteristic of religious worship. The collective unconscious also leads to the creation of obscene art and literature as well as violence which is a form of trancedence. Coprolalic religious ritual ceremonies had been described in some parts of the world. Terrorism and acts of violence are also a type of trancedence. The same phenomena occur in ritual sacrifices in religion, the violence of war and the acquisitiveness of capitalism. The primitive unconscious leads to the will to power. This produces greedy capitalism, dictatorship and fascism. The will to power results in worship of the powerful. It is an individualistic, anarchic, selfish world. The cerebellar world is the primitive world of archetypes in the collective unconscious. The abstract paintings have links with the collective unconscious. The rock music or modern music contains rhythmic primitive chaotic sounds coming out the collective unconscious. The primitive collective unconscious links up post modern literature or magic realism with violence, love, hate, evil, obscenities and death. Thus literature, music, dance and painting helps to overcome reality and rationality producing transcendence. The unconscious brain is formed of an archaeal colony network and is adynamic and inflexible. There is an epidemic of autism and schizophrenia. The loss of function of neurons leads to increased extrasensory perception via archaeal magnetite. This can lead to the lack of development of speech and ritualized behaviours of autism. This also produces the thought disorder, hallucinations and delusions of schizophrenia. It looks like an epidemic cerebellar cognitive, affective disorder. 1-17

The goodness is related to conscious brain localized in the cortical areas. The cortical areas mediate moralistic, functionally atheistic, civil society behavior. The civil society depends upon common good. The cortical world is a world of morality, rationality, altruism, civility and decencies. This needs inhibitory power of the cerebral cortex. Such a society is non-capitalistic and works for the common good. It tends to be non creative. The primitive collective spirituality



and oneness is lost. It is replaced by goodness based on judgment, reasoning and morality. It is a moralistic world where taboos are banned. This requires synaptic plasticity and is modulated by HERV mediated jumping genes. This needs a dynamic brain and the human cerebral cortex evolved due to the jumping genes generated from human endogenous retroviral sequences. The cerebellar world comparatively is impulsive, criminal, violent, terroristic with love of war, selfish, acquisitive, spiritual, autistic, obsessive, schizophrenic, obscene, evil, ritualized, artistic, illogical and cruel. It is mediated by the archaeal colony network. The stem cell transformation of somatic cells results in HERV resistance and retroviral resistance. Archaeal digoxin inhibits reverse transcriptase by producing magnesium deficiency as well as modulates RNA viral editing inhibiting retroviral replication. This produces lack of HERV jumping genes in this stem cell brain and lack of synaptic plasticity and dynamicity. The stem cell syndrome is characterized by retroviral resistance. Archaeal symbiosis inhibits retroviral infection. The homo sapiens with less of archaeal symbiosis becomes susceptible to retroviral and other RNA viral infection and gets wiped out. The homo neoneanderthalis are resistance to and other RNA viral infection and persists. retroviral The homo neoneanderthalis dominates all over the world. But the homo neoneanderthalis are prone to civilisational disease like malignancy, autoimmune disease, neurodegeneration, metabolic syndrome and neuropsychiatric disorders. The homo neoneanderthalis becomes extinct after a period of time. 1-17

The archaeal induced stem cell syndrome or neanderthalisation is due to global warming and acid rains resulting in increased extremophilic archaeal symbiosis. The archaea catabolizes cholesterol and generates digoxin, bile acids and short chain fatty acids which produce induction of uncoupling proteins. This produces mitochondrial dysfunction and the cell obtains its energetics from glycolysis. Archaeal digoxin produces membrane sodium potassium ATPase inhibition



which also contributes to stem cell conversion. The whole body somatic and brain undergoes stem cell conversion and becomes a stem cell phenotype with Warburg metabolic phenotype. The generalized acidity due to global warming and increased atmospheric carbon dioxide also facilitates archaeal growth and stem cell transformation. The acidic pH due to the Warburg phenotype and increased atmospheric carbon dioxide also results in stem cell conversion. The somatic differentiated cell getting converted to stem cells lose their function and become dysfunctional metabolically, neurologically, immunologically and endocrine-wise. This produces the epidemic Benjamin button syndrome and the human species becomes neanderthalic and a collection of immature stem cells. This results in epidemic metabolic syndrome x, degenerations, cancer, autoimmune disease, autism and schizophrenia. The brain becomes converted to a collection of stem cells which are dedifferentiated with loss of function and is like an archaeal colony network. The perception becomes extrasensory and quantal depending on archaeal magnetite. The increased amount of low level EMF perception results in prefrontal cortical atrophy. It also produces cerebellar hypertrophy and the cerebellar cognitive function takes over. This also results in societal changes where evil and spirituality dominates. The world of the logical civil society of the Christian world comes to end and paganistic behavior takes over. The society becomes selfish and dominated by impulsive consumerism and acquisitive capitalism. The world becomes cruel, violent, aggressive and terroristic. Art becomes chaotic and abstract in line with the senses and unconscious. There is a predominance of obsessive and alternate sexuality. Criminal behavior and cruelty dominates. The world is impulsive psychopathic, creative autistic with features of idiotic savants, ritualistic, chaotic, sexual, ugly, anarchic, violent, evil, paganistic, obscene, atheistically spiritual as well as selfish. It mimics the Niezteschean world, the deconstructed world of Derrida, the surrealistic world of Bataille and the nihilistic, anarchic world. There is the death of the individual and life becomes

a social value. It is an acephalistic world of Freud and Jung. The art is abstract, the literature is magically real, the music is rock and the dance chaotic. All these results from the extinction of rationality and the dominance of primitive impulsive behavior. A civilization of the senses dominated by the unconscious takes over. The will to goodness given by the cerebral cortex is lost. This results in development of a new homo neoneanderthal human species with its dominant evilly spiritual cerebellar brain. It produces a surrealistic evil brain with realm of the senses, archetypes, evil spirituality and impulsiveness taking over. It is a kingdom of the collective unconscious and selfish capitalism with the will to power and the realm of the senses. 1-17

#### References

- [1] Weaver TD, Hublin JJ. Neandertal Birth Canal Shape and the Evolution of Human Childbirth. Proc. Natl. Acad. Sci. USA 2009; 106: 8151-8156.
- [2] Kurup RA, Kurup PA. Endosymbiotic Actinidic Archaeal Mediated Warburg Phenotype Mediates Human Disease State. Advances in Natural Science 2012; 5(1): 81-84.
- [3] Morgan E. The Neanderthal theory of autism, Asperger and ADHD; 2007, www.rdos.net/eng/asperger.htm.
- [4] Graves P. New Models and Metaphors for the Neanderthal Debate. Current Anthropology 1991; 32(5): 513-541.
- [5] Sawyer GJ, Maley B. Neanderthal Reconstructed. The Anatomical Record Part B: *The New Anatomist* 2005; 283B(1): 23-31.
- [6] Bastir M, O'Higgins P, Rosas A. Facial Ontogeny in Neanderthals and Modern Humans. Proc. Biol. Sci. 2007; 274: 1125-1132.
- [7] Neubauer S, Gunz P, Hublin JJ. Endocranial Shape Changes during Growth in Chimpanzees and Humans: A Morphometric Analysis of Unique and Shared Aspects. J. Hum. Evol. 2010; 59: 555-566.



- [8] Courchesne E, Pierce K. Brain Overgrowth in Autism during a Critical Time in Development: Implications for Frontal Pyramidal Neuron and Interneuron Development and Connectivity. *Int. J. Dev. Neurosci.* 2005; 23: 153-170.
- [9] Green RE, Krause J, Briggs AW, Maricic T, Stenzel U, Kircher M, Patterson N, Li H, Zhai W, et al. A Draft Sequence of the Neandertal Genome. Science 2010; 328: 710-722.
- [10] Mithen SJ. The Singing Neanderthals: The Origins of Music, Language, Mind and Body; 2005, ISBN 0-297-64317-7.
- [11] Bruner E, Manzi G, Arsuaga JL. Encephalization and Allometric Trajectories in the Genus Homo: Evidence from the Neandertal and Modern Lineages. *Proc. Natl. Acad. Sci. USA* 2003: 100: 15335-15340.
- [12] Gooch S. The Dream Culture of the Neanderthals: Guardians of the Ancient Wisdom. Inner Traditions, Wildwood House, London; 2006.
- [13] Gooch S. *The Neanderthal Legacy: Reawakening Our Genetic and Cultural Origins.* Inner Traditions, Wildwood House, London; 2008.
- [14] Kurt én B. Den Svarta Tigern, ALBA Publishing, Stockholm, Sweden; 1978.
- [15] Spikins P. Autism, the Integrations of 'Difference' and the Origins of Modern Human Behaviour. *Cambridge Archaeological Journal* 2009; 19(2): 179-201.
- [16] Eswaran V, Harpending H, Rogers AR. Genomics Refutes an Exclusively African Origin of Humans. *Journal of Human Evolution* 2005; 49(1): 1-18.
- [17] Ramachandran V. S. The Reith lectures, BBC London. 2012.



## 3

# Neanderthal Hybrids: Climate Change Mediated Actinidic Archaeal Endosymbiosis Generates Neanderthal Hybrids and Cancer

#### Introduction

Actinidic archaea has been related to global warming and human diseases especially neoplasm. The growth of endosymbiotic actinidic archaea in relation to climate change and global warming leads to neanderthalisation of the human mind-body system. Neanderthal anthropometry and metabolonomics has been described in neoplasm. This includes the Warburg phenotype and hyperdigoxinemia. Digoxin produced by archaeal cholesterol catabolism produces Neanderthalisation. Prefrontal cortical atrophy and cerebellar hyperplasia has been related to cancer. This leads on to dysautonomia with sympathetic hyperactivity and parasympathetic neuropathy in these disorders. Actinidic archaeal related cerebellar dominance leads to changes in brain function. <sup>1-16</sup> The data is described in this paper.

#### **Materials and Methods**

Fifteen cases, each of neoplasm and internet addicts were selected for the study. Each case had an age and sex matched control. Neanderthal anthropometric and phenotypic measurements which included protruding supra-orbital ridges, dolichocephalic skull, small mandible, prominent mid face and nose, short upper and lower limbs, prominent trunk, low index finger-ring finger ratio and fair complexion were evaluated in the cases study. Autonomic function tests were done to assess the sympathetic and parasympathetic system in each case. CT scan of the head was done to have a volumetric assessment of the prefrontal cortex and cerebellum. Blood cytochrome F420 activity was assessed by spectrophotometric measurement.



#### **Results**

All the case groups studied had higher percentage of Neanderthal anthropometric and phenotypic measurements. There was low index finger-ring finger ratio suggestive of high testosterone levels in all the patient population studied. In all the case groups studied, there also was prefrontal cortex atrophy and cerebellar hyperplasia. Similarly in the all the case groups studied, there was dysautonomia with sympathetic overactivity and parasympathetic neuropathy. Cytochrome F420 was detected in the entire case group studied showing endosymbiotic archaeal overgrowth.

**Table 1.** Neanderthal phenotype and systemic disease.

Disease	Cyt F420	Neanderthal phenotype	Low index finger-ring finger ratio
Non-Hodgkin's lymphoma	72%	60%	69%
Multiple myeloma	70%	68%	74%
Internet users	65%	72%	69%

Table 2. Neanderthal phenotype and brain dysfunction.

Disease	Dysautonomia	Prefrontal cortex atrophy	Cerebellar hypertrophy
Non-Hodgkin's lymphoma	79%	65%	75%
Multiple myeloma	69%	72%	80%
Internet users	74%	84%	82%

#### **Discussion**

Neanderthal metabolonomics contribute to the pathogenesis of these disorders. There were Neanderthal phenotypic features in all the case groups studied as well as low index finger-ring finger ratios suggestive of increased testosterone levels. Neanderthalisation of the mind-body system occurs due to increased growth of actinidic archaea as a consequence of global warming.



Neanderthalisation of the mind leads to cerebellar dominance and prefrontal cortex atrophy. This leads to dysautonomia with parasympathetic neuropathy and sympathetic hyperactivity. This is the basis of oncogenesis.

Global warming and the ice age produces increased growth of extremophiles. This leads to increased growth of actinidic archaeal endosymbiosis in humans. There is archaeal proliferation in the gut which enters the cerebellum and brain stem by reverse axonal transport via the vagus. The cerebellum and brain stem can be considered as an archaeal colony. The archaea are cholesterol catabolizing and use cholesterol as a carbon and energy source. The actinidic archaea activates the toll receptor HIF alpha inducing the Warburg phenotype resulting in increased glycolysis with generation of glycine as well as pyruvate dehydrogenase suppression. The accumulated pyruvate enters the GABA shunt generating of succinyl CoA and glycine. The archaeal catabolism of cholesterol produces ring oxidation and generation of pyruvate which also enters the GABA shunt scheme producing glycine and succinyl CoA. This leads to increased synthesis of porphyrins. In the setting of digoxin induced sodium potassium ATPase inhibition the dipolar porphyrins produce a pumped phonon system resulting in the Frohlich model Bose-Einstein condensate and quantal perception of low level EMF. Low level EMF pollution is common with internet usage. Perception of low level of EMF leads to neanderthalisation of the brain with prefrontal cortex atrophy and cerebellar hyperplasia. The archaea which reaches the cerebellum from the gut via the vagus nerve proliferates and makes the cerebellum dominant with resultant suppression and atrophy of the prefrontal cortex. This leads to wide spread autistic and schizophrenic traits in population. The actinidic archaea induces the Warburg phenotype with increased glycolysis, PDH inhibition and mitochondrial suppression. This produces neanderthalisation of the mind-body system. The actinidic archaea secretes RNA viroids which block HERV expression by RNA interference. The HERV suppression contributes to the inhibition of prefrontal



cortex development in Neanderthals and cerebellar dominance. Archaeal digoxin produces sodium potassium ATPase inhibition and magnesium depletion causing reverse transcriptase inhibition and decreased generation of HERV. The HERV contributes to the dynamicity of the genome and are required for the development of the prefrontal cortex. The HERV suppression contributes to retroviral resistance in Neanderthals. The actinidic archaea catabolizes cholesterol leading to cholesterol depleted state. Cholesterol depletion also leads to poor synaptic connectivity and decreased development of prefrontal cortex. This is not genetic change but a form of symbiotic change with endosymbiotic actinidic archaeal growth in the body and brain. These changes lead to oncogenesis.

Internet use and low level EMF pollution is common in this century. This results in increased low level EMF perception by the brain by the digoxin-porphyrin mediated pumped phonon system created Bose-Einstein condensates contributing to prefrontal cortex atrophy and cerebellar dominance. Cerebellar dominance leads to cancer. There is an epidemic of cancer in the present day community. The porphyrin mediated extrasensory perception can contribute to communication among Neanderthals. Neanderthals did not have a language and used extrasensory perception as a form of group communication. Because of dominant extrasensory quantal perception, the Neanderthals did not have individual identity but only group identity. Cerebellar dominance results in creativity consequent to quantal perception and group perception. The neanderthalic traits contribute to innovation and creativity. Cerebellar dominance results in development of a symbolic language. The Neanderthals used dance and music as a form of communication. Painting as a form of communication was also common in Neanderthals. Neanderthal behaviour was robotic. Robotic behaviour is characteristic of cerebellar dominance. Robotic, symbolic and ritualistic behaviour is common with cerebellar dominance. The cerebellar dominance in Neanderthals leads to intuitive intelligence and a



hypnotic quality to communication. The increased extrasensory quantal perception leads to more communion with nature and a form of eco-spirituality. The increasing use of dance and music as a form of communication and eco-spirituality is common in the modern century. The cholesterol depletion leads to bile acid deficiency and generation of small social groups in Neanderthals. Bile acid binds to olfactory receptors and contributes to group identity. These features of cerebellar dominance lead to the genesis of cancer.

The modern population is a hybrid of homo sapiens and homo neanderthalis. This contributes to 10 to 20 per cent dominant hybrids who tend to contribute to creativity of civilisation. The Neanderthals tend to be innovative and chaotic. They tend to be creative in art, literature, dance, spirituality and science. Eighty per cent of less dominant hybrids are stable and contribute to a stabilizing influence leading to growth of civilisation. The homo sapiens were stable and non-creative over a long period of their existence. There was a burst of creativity with generation of music, dance, painting, ornaments, the creation of concept of God and compassionate group behaviour around 10,000 years ago in the homo sapiens community. This correlated with the generation of Neanderthal hybrids when the Eurasian Neanderthal male mated with homo sapiens African females. The extrasensory/quantal perception due to dipolar porphyrins and digoxin induced sodium potassium ATPase inhibition and the generated pumped phonon system mediated quantal perception leads to the globalisation phenomena and feeling of the world being a global village. The archaeal cholesterol catabolism leads to increased synthesis of digoxin. Digoxin promotes tryptophan transport over tyrosine. Tyrosine deficiency leads to dopamine deficiency and morphine deficiency. This leads to a morphine deficiency syndrome in Neanderthals. This contributes to addiction traits and creativity. The increased tryptophan levels produce increased alkaloids like LSD contributing to ecstasy and spirituality of Neanderthal population. The



ketogenic diet consumed by the meat eating Neanderthals leads on to increased generation of hydroxy butyric acid which produces ecstasy and a dissociative type of anaesthesia contributing to the Neanderthal psychology. The dopamine deficiency leads to decreased melanin synthesis and fairness of the population. This was responsible for the fair colour of the Neanderthals. These psychedelic features lead to cancer

The Neanderthals were essentially meat eaters taking a ketogenic diet. The acetoacetic acid is converted to acetyl CoA which enters the TCA cycle. When the Neanderthal hybrids consume a glucogenic diet owing to the spread of settled civilisation it produces pyruvate accumulation owing to PDH suppression in Neanderthals. The increased archaeal growth activates the toll receptor and induces HIF alpha resulting in increased glycolysis, PDH suppression and mitochondrial dysfunction - the Warburg phenotype. The pyruvate enters the GABA shunt pathway producing glutamate, ammonia and porphyrins. Neanderthals consuming a ketogenic diet produces more of GABA an inhibitory neurotransmitter resulting in the docile quiet nature of the Neanderthals. There is less production of glutamate the predominant excitatory neurotransmitter of the prefrontal cortex and consciousness pathways. This leads onto dominance of cerebellar function. The Neanderthal hybrids have cerebellar dominance and less of conscious behaviour. Cerebellum is responsible for intuitive, unconscious behaviour as well as creativity and spirituality. The cerebellum is the site of extrasensory perception, magical acts and hypnosis. The predominant homo sapiens had prefrontal cortex dominance over the cerebellum resulting in more of conscious behaviour. This brain dysfunction can lead to oncogenesis.

The Neanderthals consuming a glucogenic diet produces increased glycolysis in the setting of PDH inhibition. This produces the Warburg phenotype. There



is increased lymphocytic glycolysis producing immune activation and lymphoproliferative disorders. The predominance of glycolysis and suppression of mitochondrial function results in glycemia. The increased mitochondrial PT pore hexokinase leads to cell proliferation and oncogenesis. Cerebellar dominance produces cancer.

The cerebellar hyperplasia results in sympathetic hyperactivity parasympathetic neuropathy. This contributes to cell proliferation and results oncogenesis. Vagal neuropathy in immune activation and lymphoproliferative diseases. Vagal neuropathy and sympathetic overactivity can contribute to glycogenolysis and lipolysis. This increases tumour cell growth. Cerebellar dominance and cerebellar cognitive affective dysfunction can contribute to cancer. The increased porphyrin synthesis resulting from succinyl CoA generated by GABA shunt and glycine generated by glycolysis contributes to increased extrasensory perception. Low level EMF perception can lead to cancer.

The archaeal cholesterol catabolism generates digoxin which produces sodium potassium ATPase inhibition and increase in intracellular calcium and decrease in intracellular magnesium. The increase in intracellular calcium produces oncogene activation and NFKB activation resulting in malignancies. The increase in intracellular calcium opens the mitochondrial PT pore resulting in oncogenesis. Digoxin induced magnesium depletion can remove the magnesium block on the NMDA receptor resulting in NMDA excitotoxicity. This can increase tumour cell load. Digoxin induced magnesium depletion can inhibit reverse transcriptase activity and HERV generation modulating the dynamicity of the genome. Digoxin induced intracellular calcium accumulation and magnesium depletion can modulate G-protein and protein tyrosine kinase dependent neurotransmitter and endocrine receptors. This can produce digoxin



induced neuro-immuno-endocrine integration. Digoxin functions as a Neanderthal master hormone. The interruption of this neuro-immuno-endocrine integration leads to cancer.

The actinidic archaea are cholesterol catabolizing and leads to low levels of testosterone and estrogen. This leads on to asexual features and low reproductive rates of the Neanderthal population. The Neanderthals consume a low fibre diet with low lignan content. The actinidic archaea has cholesterol catabolizing enzymes generating more of testosterone than estrogens. This contributes to estrogen deficiency and testosterone overactivity. Neanderthal population are hypermales with concommitant right hemispheric dominance and cerebellar dominance. Testosterone suppresses left hemispheric function. The high testosterone levels in Neanderthals contribute to a bigger brain. The Neanderthals males as well as females had a higher level of testosterone contributing to gender equality and gender neutral states. There was group identity and group motherhood with no differences between roles of both males and females. This also resulted in matrilinearity. The higher testosterone levels in males as well as females led to alternate type of sexuality and aberrant behaviour. The homo sapiens eat a high fibre diet with low cholesterol and high lignan content contributing to estrogen dominance, left hemispheric dominance and cerebellar hypoplasia. Homo sapiens had higher reproductive rates and overtook the Neanderthal population resulting in its extinction. The homo sapien population was conservative with normal sexual mores, family values and patriarchal type of behaviour. The role of females the homo sapien community was inferior to males. The increasing generation of Neanderthal hybrids due to climate change mediated archaeal overgrowth leads to gender equality and equidominance of male and female in this century. These endocrine and gender alterations can lead to cancer.



The cholesterol catabolism results in cholesterol depletion and bile acid deficiency. Bile acids bind to VDR and are immunomodulatory. Bile acid deficiency leads to immune activation and lymphomas. Bile acids bind to FXR, LXR and PXR modulating lipid and carbohydrate metabolism. This leads to hyperglycemia and hyperlipidemia in the presence of bile acid deficiency. This leads to cancer. Bile acid uncouples oxidative phosphorylation and its deficiency leads to cancer. Cholesterol depletion also leads to vitamin D deficiency. Vitamin D binds to VDR and produces immunomodulation. Vitamin D deficiency leads to immune activation and lymphoma. Vitamin D deficiency can also produce rickets and contribute to the phenotypic features of Neanderthals. Vitamin D deficiency can contribute to brain development resulting in macrocephaly. Vitamin D deficiency contributes to insulin resistance and truncal obesity of Neanderthals. Vitamin D deficiency contributes to the fairness of the Neanderthal skin as a phenotypic adaptation. The Neanderthal phenotypic features are due to vitamin D deficiency and insulin resistance. This leads to cancer.

Thus global warming and increased endosymbiotic actinidic archaeal growth leads to cholesterol catabolism and generation of the Warburg phenotype resulting in increased porphyrin synthesis, extrasensory low EMF perception, prefrontal cortex atrophy, insulin resistance and cerebellar dominance. This leads on to neanderthalisation of the body and brain and oncogenesis.

### References

- [1] Weaver TD, Hublin JJ. Neandertal Birth Canal Shape and the Evolution of Human Childbirth. *Proc. Natl. Acad. Sci. USA* 2009; 106: 8151-8156.
- [2] Kurup RA, Kurup PA. Endosymbiotic Actinidic Archaeal Mediated Warburg Phenotype Mediates Human Disease State. *Advances in Natural Science* 2012; 5(1): 81-84.



- [3] Morgan E. The Neanderthal theory of autism, Asperger and ADHD; 2007, www.rdos.net/eng/asperger.htm.
- [4] Graves P. New Models and Metaphors for the Neanderthal Debate. Current Anthropology 1991; 32(5): 513-541.
- [5] Sawyer GJ, Maley B. Neanderthal Reconstructed. The Anatomical Record Part B: The New Anatomist 2005; 283B(1): 23-31.
- [6] Bastir M, O'Higgins P, Rosas A. Facial Ontogeny in Neanderthals and Modern Humans. Proc. Biol. Sci. 2007; 274: 1125-1132.
- [7] Neubauer S, Gunz P, Hublin JJ. Endocranial Shape Changes during Growth in Chimpanzees and Humans: A Morphometric Analysis of Unique and Shared Aspects. J. Hum. Evol. 2010; 59: 555-566.
- [8] Courchesne E, Pierce K. Brain Overgrowth in Autism during a Critical Time in Development: Implications for Frontal Pyramidal Neuron and Interneuron Development and Connectivity. Int. J. Dev. Neurosci. 2005; 23: 153-170.
- [9] Green RE, Krause J, Briggs AW, Maricic T, Stenzel U, Kircher M, Patterson N, Li H, Zhai W, et al. A Draft Sequence of the Neandertal Genome. Science 2010; 328: 710-722.
- [10] Mithen SJ. The Singing Neanderthals: The Origins of Music, Language, Mind and Body; 2005, ISBN 0-297-64317-7.
- [11] Bruner E, Manzi G, Arsuaga JL. Encephalization and Allometric Trajectories in the Genus Homo: Evidence from the Neandertal and Modern Lineages. Proc. Natl. Acad. Sci. USA 2003; 100: 15335-15340.
- [12] Gooch S. The Dream Culture of the Neanderthals: Guardians of the Ancient Wisdom. Inner Traditions, Wildwood House, London; 2006.
- [13] Gooch S. The Neanderthal Legacy: Reawakening Our Genetic and Cultural Origins. Inner Traditions, Wildwood House, London; 2008.
- [14] Kurt én B. Den Svarta Tigern, ALBA Publishing, Stockholm, Sweden; 1978.
- [15] Spikins P. Autism, the Integrations of 'Difference' and the Origins of Modern Human Behaviour. Cambridge Archaeological Journal 2009; 19(2): 179-201.



[16] Eswaran V, Harpending H, Rogers AR. Genomics Refutes an Exclusively African Origin of Humans. *Journal of Human Evolution* 2005; 49(1): 1-18.

## 4

### Endosymbiotic Actinidic Archaeal Mediated Warburg Phenotype Mediates Cancer

### Introduction

Endomyocardial fibrosis along with the root wilt disease of coconut is endemic to Kerala with its radioactive actinide beach sands. Actinides like rutile as well as organisms like phytoplasmas and viroids have been implicated in the etiology of cancer. The Warburg phenotype has been related to the pathogenesis of malignancy. The possibility of Warburg phenotype induced by actinide based primitive organism like archaea with a mevalonate pathway and cholesterol catabolism was considered in this paper. An actinide dependent shadow biosphere of archaea and viroids in cancer is described.

### **Materials and Methods**

The following groups were included in the study: - non-Hodgkin's lymphoma and glioma. There were 10 patients in each group and each patient had an age and sex matched healthy control selected randomly from the general population. The blood samples were drawn in the fasting state before treatment was initiated. Plasma from fasting heparinised blood was used and the experimental protocol was as follows (I) Plasma+phosphate buffered saline, (II) same as I+cholesterol substrate, (III) same as II+rutile 0.1 mg/ml, (IV) same as II+ciprofloxacine and doxycycline each in a concentration of 1 mg/ml. Cholesterol substrate was prepared as described by Richmond. Aliquots were withdrawn at zero time immediately after mixing and after incubation at 37 °C for 1 hour. The following estimations were carried out: - Cytochrome F420 and hexokinase. Cytochrome F420 was estimated flourimetrically (excitation wavelength 420 nm and emission wavelength 520 nm). Informed consent of the subjects



and the approval of the ethics committee were obtained for the study. The statistical analysis was done by ANOVA.

#### **Results**

Plasma of control subjects showed increased levels of the above mentioned parameters with after incubation for 1 hour and addition of cholesterol substrate resulted in still further significant increase in these parameters. The plasma of patients showed similar results but the extent of increase was more. The addition of antibiotics to the control plasma caused a decrease in all the parameters while addition of rutile increased their levels. The addition of antibiotics to the patient's plasma caused a decrease in all the parameters while addition of rutile increased their levels but the extent of change was more in patient's sera as compared to controls. The results are expressed in tables 1-2 as percentage change in the parameters after 1 hour incubation as compared to the values at zero time.

**Table 1.** Effect of rutile and antibiotics on cytochrome F420.

Group	CYT F420 % (Increase with Rut	ile)	CYT F420 % (Decrease with Dox		
	Mean	±SD	Mean	±SD	
Normal	4.48	0.15	18.24	0.66	
NHL	22.79	2.13	55.90	7.29	
Glioma	22.70	1.87	60.46	8.06	
F value	306.749		130.054		
P value	< 0.001		< 0.001		

Group	Hexokinase (Increase wit	0	Hexokinase ( (Decrease wi	% change th Doxy+Cipro)
	Mean	±SD	Mean	±SD
Normal	4.21	0.16	18.56	0.76
NHL	22.53	2.41	64.29	5.44
Glioma	21.66	1.94	67.03	5.97
F value	292.065		317.966	
P value	< 0.001		< 0.001	

**Table 2.** Effect of rutile and antibiotics on hexokinase.

### **Discussion**

There was increase in cytochrome F420 indicating archaeal growth. The archaea can synthesize and use cholesterol as a carbon and energy source. 6, 14 The archaeal origin of the enzyme activities was indicated by antibiotic induced suppression. The study indicates the presence of actinide based archaea with an alternate actinide based enzymes or metalloenzymes in the system as indicated by rutile induced increase in enzyme activities. 15, 16 The archaeal glycolytic hexokinase activity were increased. The part of the increased glycolytic hexokinase activity detected is human. The archaea can undergo magnetite and calcium carbonate mineralization and can exist as calcified nanoforms.<sup>17</sup>

Archaea can induce the host AKT PI3K, AMPK, HIF alpha and NFKB producing the Warburg metabolic phenotype. 18 The increased glycolytic hexokinase activity indicates the generation of the Warburg phenotype. The generation of the Warburg phenotype is due to activation of HIF alpha. This stimulates anaerobic glycolysis, inhibits pyruvate dehydrogenase, inhibits mitochondrial oxidative phosphorylation, stimulates heme oxygenase, stimulates VEGF and activates nitric oxide synthase. This can lead to increased cell proliferation and malignant transformation. The mitochondrial PT pore hexokinase is increased leading onto cell proliferation. There is induction of



glycolysis, inhibition of PDH activity and mitochondrial dysfunction resulting in inefficient energetics and insulin resistance. Insulin resistance has been related to cancer. The archaea and viroid generated cytokines can lead to TNF alpha induced insulin resistance and cancer. The increase in the glycolytic enzyme fructose 1,6 diphosphatase increases the pentose phosphate pathway. This generates NADPH which activates NOX. NOX activation is related to NMDA activation and glutamate excitotoxicity. This leads onto oncogenesis. <sup>18</sup>

The increase in glycolysis activates the enzyme fructose 1,6 diphosphatase which activates the pentose phosphate pathway liberating NADPH. This increases NOX activity generating free radical stress and H<sub>2</sub>O<sub>2</sub>. Free radicals have been related to cancer. Free radical stress is also related to insulin resistance and cancer. Free radicals can activate NFKB producing immune activation and lymphoproliferative disorder. Free radicals can open the mitochondrial PT pore, produce release of cyto C and activate the caspase cascade. This produces mitochondrial dysfunction and oncogenesis. Free radicals can also produce oncogene activation and malignant transformation. Free radicals can produce HDAC inhibition and HERV generation. The encapsulation of HERV particles in phospholipids vesicles can mediate the generation of endogenous retroviral induced oncogenesis. <sup>18</sup>

The lymphocytes depend on glycolysis for its energy needs. The increase in glycolysis owing to the induction of Warburg phenotype can lead to immune activation. Immune activation can lead to lymphoproliferative disorder. TNF alpha can activate the NMDA receptor leading to glutamate excitotoxicity and oncogenesis. TNF alpha can induce expression of HERV particles contributing to generation of oncogenesis. Immune activation has also been related to malignant transformation mediated by NFKB. TNF alpha can also act upon the insulin receptor producing insulin resistance and oncogenesis. NOX activation



consequent to the generation of the Warburg phenotype also activates the insulin receptor. Thus there is a hyperinsulinemic state leading on to oncogenesis.<sup>18</sup>

Thus the induction of the Warburg phenotype can lead to malignancy. The Warburg phenotype leads to inhibition of pyruvate dehydrogenase and accumulation of pyruvate. The accumulated pyruvate enters the GABA shunt pathway and is converted to citrate which is acted upon by citrate lyase and converted to acetyl CoA, used for cholesterol synthesis. The pyruvate can be converted to glutamate and ammonia which is oxidised by archaea for energy needs. The increased cholesterol substrate leads to increased archaeal growth and further induction of the Warburg phenotype. <sup>18</sup>

### References

- [1] Hanold D., Randies, J. W. (1991). Coconut cadang-cadang disease and its viroid agent, *Plant Disease*, 75, 330-335.
- [2] Valiathan M. S., Somers, K., Kartha, C. C. (1993). *Endomyocardial Fibrosis*. Delhi: Oxford University Press.
- [3] Edwin B. T., Mohankumaran, C. (2007). Kerala wilt disease phytoplasma: Phylogenetic analysis and identification of a vector, *Proutista moesta*, *Physiological and Molecular Plant Pathology*, 71(1-3), 41-47.
- [4] Kurup R., Kurup, P. A. (2009). *Hypothalamic digoxin, cerebral dominance and brain function in health and diseases*. New York: Nova Science Publishers.
- [5] Eckburg P. B., Lepp, P. W., Relman, D. A. (2003). Archaea and their potential role in human disease, *Infect Immun*, 71, 591-596.
- [6] Smit A., Mushegian, A. (2000). Biosynthesis of isoprenoids via mevalonate in Archaea: the lost pathway, *Genome Res*, 10(10), 1468-84.
- [7] Adam Z. (2007). Actinides and Life's Origins, *Astrobiology*, 7, 6-10.



- [8] Schoner W. (2002). Endogenous cardiac glycosides, a new class of steroid hormones, *Eur J Biochem*, 269, 2440-2448.
- [9] Davies P. C. W., Benner, S. A., Cleland, C. E., Lineweaver, C. H., McKay, C. P., Wolfe-Simon, F. (2009). Signatures of a Shadow Biosphere, *Astrobiology*, 10, 241-249.
- [10] Richmond W. (1973). Preparation and properties of a cholesterol oxidase from nocardia species and its application to the enzymatic assay of total cholesterol in serum, *Clin Chem*, 19, 1350-1356.
- [11] Snell E. D., Snell, C. T. (1961). *Colorimetric Methods of Analysis*. Vol 3A. New York: Van Nostrand.
- [12] Glick D. (1971). *Methods of Biochemical Analysis*. Vol 5. New York: Interscience Publishers.
- [13] Colowick, Kaplan, N. O. (1955). *Methods in Enzymology*. Vol 2. New York: Academic Press.
- [14] Van der Geize R., Yam, K., Heuser, T., Wilbrink, M. H., Hara, H., Anderton, M. C. (2007). A gene cluster encoding cholesterol catabolism in a soil actinomycete provides insight into Mycobacterium tuberculosis survival in macrophages, *Proc Natl Acad Sci USA*, 104(6), 1947-52.
- [15] Francis A. J. (1998). Biotransformation of uranium and other actinides in radioactive wastes, *Journal of Alloys and Compounds*, 271(273), 78-84.
- [16] Probian C., Wülfing, A., Harder, J. (2003). Anaerobic mineralization of quaternary carbon atoms: Isolation of denitrifying bacteria on pivalic acid (2,2-Dimethylpropionic acid), *Applied and Environmental Microbiology*, 69(3), 1866-1870.
- [17] Vainshtein M., Suzina, N., Kudryashova, E., Ariskina, E. (2002). New Magnet-Sensitive Structures in Bacterial and Archaeal Cells, *Biol Cell*, 94(1), 29-35.
- [18] Wallace D. C. (2005). Mitochondria and Cancer: Warburg Addressed, *Cold Spring Harbor Symposia on Quantitative Biology*, 70, 363-374.



### 5

Archaea Induced Stem Cell Syndrome and Androgynous Creative Matriarchal Cannibalistic Capitalistic State

### Introduction

The global warming produces extremes of temperature and accumulation of atmospheric carbon dioxide resulting in growth of symbiotic extremophiles like archaea. Archaea can induce dedifferentiation of somatic cells to stem cells. This involves the process of reverse aging. The differentiated somatic cells lose their function as they become stem cells. The archaeal magnetite induces quantal extrasensory perception of low level of EMF as the somatic neuronal cells lose their function. This results in low level of EMF effect on the brain producing cortical atrophy especially the prefrontal cortex. The primitive parts of the brain dominate with cerebellum and brain stem undergoing hypertrophy. The atrophy of the cortex results in behavioural changes. The cortex has different hemispheric dominance in males and females. The right hemisphere is a creative hemisphere and is male. The left hemisphere is the practical hemisphere and is female. When the cortex atrophies the hemispheric differentiation and the effect on behavior is obliterated. The cortical effect on male and female behavior is lost. Behaviour becomes uniform and single and is dominated by the primitive brain stem and cerebellar cortex. It results in impulsive behavior dominated by the will to power and individuality. This forms the basis of the androgynous state and alternate forms of sexuality. This hypothesis was studied in this paper by checking the archaeal growth in population with alternate sexual traits. 1-17

### **Materials and Methods**

The blood samples were drawn from 15 normal individuals with alternate sexual traits and cytochrome F420 activity was studied. The estimations done in



the blood samples collected blood lactate, pyruvate, hexokinase, cytochrome C, digoxin, bile acids, butyrate and propionate were estimated.

### **Results**

The results showed that the individuals with alternate sexual traits had increased archaeal symbiosis and increased cytochrome F420 activity. They also had increased blood lactate and pyruvate, increased RBC hexokinase, increased serum cytochrome C and serum cytochrome F420, increased serum digoxin, bile acids, butyrate and propionate. The serum cytochrome C levels in the blood were increased. This suggested mitochondrial dysfunction. There was an increased in glycolysis as suggested by increased RBC hexokinase activity and lactic acidosis. Owing to the mitochondrial dysfunction and pyruvate dehydrogenase inhibition there was pyruvate accumulation. The pyruvate was converted to lactate by the Cori cycle and also to glutamate and ammonia. This metabolism is suggestive of the Warburg phenotype and stem cell conversion. The stem cells depend on Warburg anaerobic glycolysis for energetics and have a mitochondrial dysfunction. The lysosomal enzyme beta galactosidase activity was increased in the disease group and in creative artists and criminals suggesting stem cell conversion. This suggests that individuals with androgynous traits had stem cell metabolonomics and stem cell conversion.



Table 1

Group	Cytochrome F420		Serum Cyto C (ng/ml)		Lactate (mg/dl)		Pyruvate (umol/l)		RBC Hexokinase (ug glu phos/hr/mgpro)	
	Mean	±SD	Mean	±SD	Mean	±SD	Mean	±SD	Mean	±SD
Normal population	1.00	0.00	2.79	0.28	7.38	0.31	40.51	1.42	1.66	0.45
Alternate sexual traits	4.00	0.00	12.39	1.23	25.99	8.10	100.51	12.32	5.46	2.83
Low level background radiation	4.00	0.00	12.26	1.00	23.31	1.46	103.28	11.47	7.58	3.09
F value	0.001		445.77	2	162.94	5	154.70	l	18.187	
P value	< 0.001		< 0.001		< 0.001	1	< 0.001		< 0.001	

Table 2

Group	ACOA (mg/dl)		Glutamate (mg/dl)		Se. Ammonia (ug/dl)		RBC digoxin (ng/ml RBC Susp)		Beta galactosidase activity in serum (IU/ml)	
	Mean	±SD	Mean	±SD	Mean	±SD	Mean	±SD	Mean	±SD
Normal population	8.75	0.38	0.65	0.03	50.60	1.42	0.58	0.07	17.75	0.72
Alternate sexual traits	2.51	0.36	3.19	0.32	93.43	4.85	1.41	0.23	55.17	5.85
Low level background radiation	2.14	0.19	3.47	0.37	102.62	26.54	1.41	0.30	51.01	4.77
F value	1871.0	4	200.702	2	61.645		60.288		194.418	
P value	< 0.001		< 0.001		< 0.001		< 0.001		< 0.001	

### **Discussion**

The cortical atrophy and cerebellar/brain stem dominance results in obliteration in hemispheric difference in sexual behavior. The right hemisphere is creative and male in outlook while left hemisphere is practical and female in outlook. The primitive parts of the brain take over the function of regulating sexual behavior. The cerebellum plays an important role and this results in



impulsive sexual traits. The difference between male and female sexual behaviours induced by cerebral cortical function is lost. The archaeal cholesterol catabolism results in depletion of sex steroids and deficiency of testosterone and estrogens. The archaeal induced conversion of ovarian and testicular cells into stem cells results in loss of function and decreased secretion of male and female hormones. Behaviour becomes unisexual. This becomes non-inhibitory and impulsive in nature. It transcends all taboos and has got a reflection in culture and society affecting all manners of social interaction. The predominant form of brain perception is extrasensory or quantal. The primitive human impulses become unleashed and this results in a flood of primitive behavioural traits with violent, aggressive and obscene traits in society. The increased incidence of violent sexual behavioural traits is related to the dominance of the primitive areas of the brain - the cerebellum and brain stem. The dress code of the society also changes and results in metrosexual and unisexual garments. The mode of grooming of male and female changes and both becomes equal and the same. This creates the metrosexual world. 1-17

The dominance of the primitive areas of the brain results in fear flight and fight response resulting in an epidemic of selfishness in society. Individualism takes over and there is no commitment to the society as such. Sexual behaviours were programmed for the benefit of the society so that the human population is replaced. The cortical atrophy and cerebellar dominance results in selfish sexual behavioural traits producing sexual behavior for individual pleasure and gratification in animalistic sense. This results in loss of family values and declining population as is seen in European countries. The cerebral cortical atrophy and dominance of cerebellum result in selfishness and individuality contributing to an anarchic society. The cerebral cortical atrophy results from perception of low level of EMF resulting from increased archaeal magnetite as well as EMF pollution resulting from internet exposure. Society becomes



globalized and anarchic fueled by the internet. This results in an acortical acephalic society with dominant primitive cerebellar function. There is no compassion, love, feeling of altruism or goodness. This is replaced by selfishness and individuality. The internet and social media becomes the common market place for interactions. The feeling of human touch and love is lost. Society becomes increasingly robotical and autistic. The realm of the senses takes over the kingdom of God. Everything becomes subsumed and sacrificed in the altar of selfishness, greed and pleasure. This produces an anarchic, unisexual and society of primitive impulses. The cortical atrophy and cerebellar dominance results in a play of primitive impulses resulting in violence and aggression. This results from a culture of selfishness. This produces terrorism and acts of war which are a form of transcedence. This also produces criminal behavior where individuality and selfishness dominates. Society becomes dominated by ritualized and in some cases obscene behavior. 1-17

The cortical atrophy and dominance of cerebellum result in loss of cortical neuronal function and increased extrasensory perception mediated by archaeal magnetite. This results in dominant spiritual behaviours where one comes into contact with the eternal and archetypes. This results in a literature of transcedence. This produces what is called as magic realism of writers like Gabriel Marquez. The literature explores the evil depths of the human soul. This results in a dominance of sexual, violent, obscene and evil in literature as seen in post modern literature. This has also a reflection in art of painting, dance and music. Painting, dance and music become surreal and the rationality of the cortex regulating it is lost. This results in psychedelic and rock music as well as the surrealistic abstract art of Picasso. Dance forms also take violent, obscene, chaotic forms. This is art of the surrealistic acephalic irrational world in the realm of senses driven by obscenity. This type of art and literature correlates with the androgynous creativity. 1-17



The prefrontal cortical atrophy and cerebellar dominance is due to archaeal growth which results in stem cell conversion. The stem cell syndrome can produce a proliferation of systemic diseases. The neuronal stem cell conversion results in loss of neuronal function and dominant extrasensory archaeal magnetite mediated perception. This produces an epidemic of schizophrenia and autism. The stem cells have the Warburg phenotype with mitochondrial dysfunction and glycolytic energetics. This results in metabolic syndrome x. The stem cells can proliferate resulting in cancer syndromes. The lymphocytic stem cells proliferate producing an autoimmune disease. The neuronal stem cells transformation and loss of function can lead to degenerations. Thus the systemic somatic and neuropsychiatric diseases correlate with alternate sexual traits and stem cell transformation <sup>1-17</sup>

The archaeal symbiosis mediated brain changes producing cerebellar dominance and cortical atrophy results in an individualistic selfish society. This is the kernel of capitalistic growth and models which tend to fail because of the individualistic will to power and dominate at all cost. The society becomes more dictatorial and fascism and nazistic behavior takes over. There is individualistic trait of selfishness and a primitive impulse to follow the leader. The civil society which is just, good, equal, socialistic, democratic and fair generated by cortical impulses becomes dead. The society which is governed by cerebellar function and unisexual tendencies becomes more matriarchal as men and women tend to have similar traits. Women also tend to be as aggressive if not more than men. The cortical hemispheric control over social and individual behavior is lost. It becomes the primitive world of selfishness and individuality uninhibited by sexual mores. 1-17

The archaeal overgrowth and digoxin synthesis can modulate retroviral growth. Digoxin can modulate RNA editing and retroviral replication. Digoxin can also



produce intracellular magnesium deficiency resulting in reverse transcriptase inhibition. Thus the archaeal induced stem cell syndrome is retroviral resistant. This results in changes in the human genome as such. HERV sequences in the human genome functions as jumping genes producing dynamicity and flexibility of the human genome. This is required for the changes in cortical synaptic connectivity, HLA gene flexibility and developmental changes. The archaeal induced stem cell syndrome produces a rigid adynamic genome not able to cope with the complexities of the cortical connectivity, HLA gene rearrangements for immune response and gene changes for complex development. This neanderthalisation of the human body due to archaeal symbiosis can spell the death of the human species. The new human species which may be transient consequent to archaeal symbiosis produced by extremophilic climatic changes consequent to global warming can be called the human homo neoneanderthalis. It is androgynous, creative, psychedelic, artistic, spiritual, aggressive, violent, selfish, impulsive, anarchic, chaotic and individualistic.<sup>1-17</sup>

### References

- [1] Weaver TD, Hublin JJ. Neandertal Birth Canal Shape and the Evolution of Human Childbirth. *Proc. Natl. Acad. Sci. USA* 2009; 106: 8151-8156.
- [2] Kurup RA, Kurup PA. Endosymbiotic Actinidic Archaeal Mediated Warburg Phenotype Mediates Human Disease State. *Advances in Natural Science* 2012; 5(1): 81-84.
- [3] Morgan E. The Neanderthal theory of autism, Asperger and ADHD; 2007, www.rdos.net/eng/asperger.htm.
- [4] Graves P. New Models and Metaphors for the Neanderthal Debate. *Current Anthropology* 1991; 32(5): 513-541.
- [5] Sawyer GJ, Maley B. Neanderthal Reconstructed. *The Anatomical Record Part B: The New Anatomist* 2005; 283B(1): 23-31.



- [6] Bastir M, O'Higgins P, Rosas A. Facial Ontogeny in Neanderthals and Modern Humans. *Proc. Biol. Sci.* 2007; 274: 1125-1132.
- [7] Neubauer S, Gunz P, Hublin JJ. Endocranial Shape Changes during Growth in Chimpanzees and Humans: A Morphometric Analysis of Unique and Shared Aspects. J. Hum. Evol. 2010; 59: 555-566.
- [8] Courchesne E, Pierce K. Brain Overgrowth in Autism during a Critical Time in Development: Implications for Frontal Pyramidal Neuron and Interneuron Development and Connectivity. *Int. J. Dev. Neurosci.* 2005; 23: 153-170.
- [9] Green RE, Krause J, Briggs AW, Maricic T, Stenzel U, Kircher M, Patterson N, Li H, Zhai W, et al. A Draft Sequence of the Neandertal Genome. Science 2010; 328: 710-722.
- [10] Mithen SJ. The Singing Neanderthals: The Origins of Music, Language, Mind and Body; 2005, ISBN 0-297-64317-7.
- [11] Bruner E, Manzi G, Arsuaga JL. Encephalization and Allometric Trajectories in the Genus Homo: Evidence from the Neandertal and Modern Lineages. *Proc. Natl. Acad. Sci. USA* 2003; 100: 15335-15340.
- [12] Gooch S. The Dream Culture of the Neanderthals: Guardians of the Ancient Wisdom. Inner Traditions, Wildwood House, London; 2006.
- [13] Gooch S. *The Neanderthal Legacy: Reawakening Our Genetic and Cultural Origins.* Inner Traditions, Wildwood House, London; 2008.
- [14] Kurt én B. Den Svarta Tigern, ALBA Publishing, Stockholm, Sweden; 1978.
- [15] Spikins P. Autism, the Integrations of 'Difference' and the Origins of Modern Human Behaviour. *Cambridge Archaeological Journal* 2009; 19(2): 179-201.
- [16] Eswaran V, Harpending H, Rogers AR. Genomics Refutes an Exclusively African Origin of Humans. *Journal of Human Evolution* 2005; 49(1): 1-18.
- [17] Ramachandran V. S. The Reith lectures, BBC London. 2012.



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