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NEW NATURAL ANTIOXIDANTS

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ABSTRACT

Antioxidants are, no doubt, an essential part of an optimal health and even traditional doctors support the importance of an appropriate contribution of antioxidants taken through food. Antioxidants are a category of molecules able to inhibit the oxidation of other molecules. The body distributes various nutrients in the body due to their antioxidant properties and also factory antioxidant enzymes to keep under control the reaction in the chain of free radicals. Some antioxidants are produced by the body, but others don't. In addition, the body's natural ability to produce antioxidants decreases with age. Antioxidants play a significant role for health as it may influence the aging by fighting free radicals. There are antioxidants which can't be produced in the human body, and to be taken through antioxidant-rich foods, or supplements powerful antioxidant. The paper aims to present some natural sources of oxidants that can be obtained through diet.

Keywords: Biotechnology; Bioengineering; Antioxidants; Vegetable Antioxidants; Nutrients; Resveratrol; Carotenoids; Astaxanthin; Aging; Human body; Fighting free radicals; Enzymatic antioxidants; Genetics; Human body; Physiopathology; Anti-aging.

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1. INTRODUCTION

An antioxidant is a molecule which decreases or prevents oxidation other chemicals.

Oxidation is part of a reaction of oxido-reduction electron transfer of a substance with a surface oxidation. This reaction may produce radicals causing chain reactions destructive tests. Antioxidants are able to stop these chain reactions by reducing the radicals and thus annihilating their action. These properties can be found in the families etantioli and phenols contents.

With all that the reactions of oxidation are necessary for life, which may be destructive: plants and animals use and to produce many antioxidants to protect such as reduced glutathione, vitamin C and vitamin E, or enzymes as well as catalaza, superoxide dismutaza and certain peroxidaze. A deficiency or absence of the production of antioxidant enzymes lead to oxidative stress, which may damage or destroy the cells. In the same way, our body is able to produce, from the amino acid CYSTINE, a strong antioxidant, acid α-lipoic, also called lipoate (BLOT et al., 1993).

Oxidative stress is involved in the pathogenesis of several human disease, antioxidants use in pharmacology is therefore much more studied to treat in particular stroke and diseases neurodegenerative. However, it is not known yet whether oxidative stress is the cause or consequence of these diseases. Antioxidants are also important ingredients of food supplements, in order to maintain the health and to prevent certain diseases such as cancer or heart diseases coronary artery disease. With all that studies suggest that antioxidant supplements are beneficial for health, clinical studies does not have found any kind of special benefits and even have discovered that food supplements in excess (antioxidant or supplements), adverse effects (VAGHARI et al., 2016).

Antioxidants are also widely used by the industry as preservation agents for food products, cosmetics, or to keep the rubber or oil. Antioxidants are, no doubt, an essential part of an optimal health; and even traditional doctors support the importance of an appropriate contribution of antioxidants taken through food (BJELAKOVIC et al., 2013; VIRGILIO; MARINO, 2008).

The term "antioxidant" (sometimes called as anti-oxidant) was initially used to refer to the chemical agents that prevent the reactions to oxygen. At the end of the 19th century and the beginning of the XX century, properties of antioxidants have been studied in detail for their use in industrial processes to reduce, for example, Corrosion of metals, vulcanization rubber

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and polymerization of fuels in engines explosions. In biology, the first research on the antioxidants reduction in question the oxidation of the fatty acids unsaturated alcohols, causing rancidity.

The antioxidant activity was readily measured by incorporation of fat in hermetically sealed containers with oxygen, and then checked the rate of absorption of the latter.

However, it was only with the identification of vitamins A, C and E as antioxidants importance has occurred in the biochemistry of living organisms.

Possible mechanisms of antioxidants have been studied from the moment in which it is understood that an antioxidant itself must be easily oxidizable impurities. Research on the action of vitamin E in limiting the oxidation of lipids and has demonstrated its role in the elimination of molecules containing an atom of active oxygen before it to attack the cells.

A paradox of the metabolism of the life on Earth is the fact that the majority of living beings they need to ensure dioxygen their existence while dioxygen is a molecule extremely of the reagent that produces a defect on living organisms. However, have a system of antioxidants and enzymes that work together to prevent damage to the components of the cellular, such as the DNA, fat and protein (DEBENEDETTI; STILLINGER, 2001; KLEMENT et al., 1960).

Antioxidants prevent the formation of molecules very reactive or may cause the elimination of these species before the damage to the components of the cell (AVERSA et al., 2016a; AVERSA et al., 2016b; AVERSA et al., 2016c; AVERSA et al., 2016d; AVERSA et al., 2016e; AVERSA et al., 2016f; AVERSA et al., 2016g; AVERSA et al., 2016h; AVERSA et al., 2016i).

From the point of view of chemical, an antioxidant is only a compound of reduction: therefore, you will be able to react with an oxidant to neutralize. Antioxidants will reduce, thus, the radicals so dangerous for the body because of their power of oxidation very high. Thus, antioxidants from food, protects the organic molecules, for example fats or DNA, of oxidation and appear to play a role safeguards against carcinogenicity (AVERSA et al., 2018a; AVERSA et al., 2018b; AVERSA et al., 2017a; AVERSA et al., 2017b; AVERSA et al., 2016a; AVERSA et al., 2016b; AVERSA et al., 2016c; AVERSA et al., 2016d; AVERSA et al., 2016e; AVERSA et al., 2016f; AVERSA et al., 2016g; AVERSA et al., 2016h; AVERSA et al., 2016i; AVERSA et al., 2016j; AVERSA et al., 2016k; AVERSA et al., 2016l; AVERSA et al., 2016m; AVERSA et al., 2016n; ALJOHANI; DESAI, 2018; ALEXANDER; WANG, 2018; APICELLA et al., 2018a; APICELLA et al., 2018b; APICELLA et al., 2018c; MARQUETTI; DESAI, 2018;

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ARMAH, 2018; TAMBURRINO et al., 2018; WILK et al., 2017; BABAEV et al., 2010; BUZEA et al., 2015; PETRESCU et al., 2015; ABDUL-RAZZAK et al., 2012; Ajith et al., 2009; ATASAYAR et al., 2009; AHMED et al., 2011; COVIC et al., 2007; WILLIS, 1953; WILLIS, 1954; WILLIS, 1957; HA, 2010; EL-GENDY, 2009; ENSTROM, 2014; HANSEN, 2014; RATH, 1990, 2003; YILMAZ, 2006; RAVNSKOV, 2009; BLOCK, 2016; HICKEY, 2007; CHOUDHURY; GREENE, 2018; CHOUDHURY, 2018).

2. METHODS AND MATERIALS

Antioxidants are a category of molecules able to inhibit the oxidation of other molecules. The body distributes various nutrients in the body due to their antioxidant properties. Also factory antioxidant enzymes to keep under control the reaction in the chain of free radicals. Some antioxidants are produced by the body, but others don't. In addition, the body's natural ability to produce antioxidants decreases with age. Antioxidants play a significant role for health as it may influence the aging by fighting free radicals.

The most well-known antioxidants are beta-carotene provitamin (A), ascorbic acid (vitamin C), tocopherol (vitamin E), polyphenols and licopen. These include flavonoids (equally distributed on a large scale in the row of plants), the tannins (in cocoa, coffee, tea, grapes, etc), antociani (fruits of the forest and in particular red) and phenolic acids (from cereals and fruit and vegetables), (BJELAKOVIC et al., 2012).

Denhan Harman was the first to discover the concept of free radicals in 1954, while doing research to explain the aging process. Free radicals are a type of metabolites with high level of reaction produced by the body as a result of normal metabolism and energy production. They are the body's biological response to environmental toxins such as cigarette smoke, sunlight, chemicals, cosmic radiation and man-made, and even some elements of medicines (HERCBERG et al., 1998).

The body can produce free radicals when do sports and occurs some inflammation in the body. Free radical molecules missing one or more electrons and these electrons are responsible for the biological oxidation missing. Incomplete molecules aggressive attack other molecules in order to complete the missing parts. Free radicals steal electrons from proteins in the body, which seriously damages the DNA and other cell structures.

They create a snowball effect of as the molecules steal from one to another each becomes a new free radical leaving a biological carnage. Free radicals tend to gather in cell membranes (lipid peroxidation) which cause fat to be prone to oxidative destruction. Free

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radicals seriously influence preventing duplication of its DNA, interfering with maintenance of causing cracks or deterioration of the structure by reacting with DNA's bases. Free radicals are associated with more than 60 different diseases, including: cancer, cataracts, Parkinson, Alzheimer's, Atherosclerosis (YONG, 2014; CAI et al., 2016; JIANG et al., 2010; CSEPREGI et al., 2016; AGGARWAL; SISODIA, 2006).

All studies have already confirmed the great benefits of antioxidants and their important role in maintaining health and reducing the risk of diseases: Parkinson's, Alzheimer's.

If the body does not have adequate protection, free radicals become unstoppable, leading to poor functioning of cells. This can lead to tissue degeneration and increase the risk of disease. This is where antioxidants. Antioxidants can be divided into enzymatic and non-enzymatic (ANNUNZIATA et al., 2006; DEKKERS et al., 1996).

a) enzymatic antioxidants are beneficial because apart and eliminates free radicals. They can remove harmful oxidative produced by the transformation of hydrogen peroxide in them, then water. Enzymatic antioxidants can be found in supplements, but can be produced by the body.

b) b) non enzymatic antioxidants are beneficial Since there interrupt the chain reaction of free radicals. Some examples: Carotenoids, plant polyphenols, antioxidants in food supplements and foods are enzymatic and non-enzymatic antioxidants supports cleaning and dismantling by free radicals.

There are antioxidants that can’t be produced inside the body, and need to be taken of antioxidant-rich foods or supplements powerful antioxidant.

1) ***Resveratrol*** (a polyphenol compound found in certain plants and in red wine that has antioxidant properties and has been investigated for possible anti carcinogenic effects; present in certain fruits like grapes, vegetables, cocoa and red wine) is an antioxidant able to cross the blood brain barrier, providing protection brain and nervous system.

   Grapes contain high levels of resveratrol. Resveratrol has been shown to be effective in preventing diseases related to aging, which means that it has brought the “fountain of youth”. Resveratrol may be found in fruit color indigo to black (but not only): dude black, black cherry, black grapes, wax cherry black, black currants, plums, blueberries, red cabbage, red onion, apple purple, black beans, Brussels sprouts, strawberries, peanuts, beets. Resveratrol exist in an amount of 50-100mg / g in the skin of grapes. Effects: -Why direct tumor destruction by acting against any type of tumor location,

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especially those hormone-dependent (breast, ovary, uterus, testis, prostate, liver, stomach) melanoma maling. Inhibits proliferation of malignant cells and induce their death; -Block metastasis of malignant cells; -Confer special protection to genetic material (DNA), protecting it from mutations; -It is so far the only known antioxidant that acts directly on Matusalem's gene (gene longevity) with the ability to increase the length and quality of life; -Does Alzheimer's protective effect against the disease (DI MATTEO; ESPOSITO, 2003; HARRISON, 2012); -Represents the strongest fixation of calcium in bones (along with exercise effectively preventing and combating osteoporosis), (AVERSA et al., 2016b-c).

2) ***Carotenoids*** - give the best color food full of vigor. Carotenoids are a class of natural pigments with powerful antioxidant. There are over 700 carotenoids natural and blood circulating in our system 10 kinds. Carotenoids are divided into two groups:

   - Carotenoids that do not contain oxygen atoms -example -Lycopene tomato and beta-carotene in carrots are converted in the body into vitamin A.
   - Carotenoids containing oxygen atoms -example-Lutein, Canthaxanthin (gold in Chanterella mushrooms), Zexantina and Astaxanthin. Zexantina is the most common carotenoid that occurs naturally in nature and is found in: peppers, green peppers, kiwi, corn, grapes, pumpkin pie, orange.

Astaxanthin is a carotenoid which has the advantage of its exceptional nutritionist, being produced by microalgae - Haematococcus pluvialis - when water supplies are low to protect from the UV radiation. Astaxanthin is considered the most powerful carotenoid regarding cleaning of free radicals. It is 65 times more powerful than Vitamin C, 54 times stronger than beta-carotene and 14 times stronger than Vitamin E. Like resveratrol, can pass the blood-brain barrier, DNA and blood-retina barrier which beta-carotene and lycopene can't do it. Astaxanthin is also more efficient than carotenoids from extinction singlet oxygen oxidation state (a particular type of oxidation caused by sunlight and various organic minerals). Astaxanthin is 550 times more effective than Vitamin E and 11 times stronger than Beta-carotene regarding use of singlet oxygen. Astaxanthin (Astaxanthin, from Wikipedia) is an antioxidant with the wider benefits, such as:

- Supports immune function;
- Improves cardiovascular health by reducing reactive protein -by increasing beneficial HDL;

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- Protects eyes of cataract, macular degeneration;
- Protects brain blindness, dementia (CRICHTON et al., 2013), Alzheimer's, Parkinson's disease (TAKEDA et al., 2014);
- Reduces the risk of various cancers (HAIL, et al., 2008), and HIV (WESLEY et al., 2016).
- Help the recovery of injuries to the spine and nervous system;
- Reduces inflammation of any kind;
- Improves body strength and physical recovery;
- Reduces indigestion and gastric reflux;
- Stabilizes blood sugar protecting the kidneys;
- Help Prevent sunburn (STANNER et al., 2004).

Reduces the symptoms of diseases such as: pancreatitis, multiple sclerosis, carpal tunnel syndrome.

3. RESULTS AND DISCUSSION

A Sources of antioxidant-rich foods:

1. Fresh organic vegetables, in particular the leaves (photo parsley) -are full phytochemicals are potent plant compounds which act as antioxidants. Phytochemicals can reduce and eliminate carcinogens inflammation (Figure 1).

Figure 1: Parsley

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2. Raisins - produced from grapes ripe for proper sun kept losing water can be kept very long. Raisins contain polyphenolic phytonutrients with antioxidant properties. These phytonutrients are good for eye health because it protects the eyes from free radicals (oxidants), preventing various forms of cataract. Raisins contain sufficient amounts of other substances such as vitamin A, beta-carotene and a-carotenoid useful in eye health. (Photo raisins in Figure 2)

Figure 2: Raisins

- contains catechine which are polyphenolic antioxidants in the blood;

They're sources of potassium and magnesium, the most common being necessary for neutralizing acids antacids;

- contains calcium, main element of our bones;
- contains boron, useful in preventing menopausal women induced osteoporosis;
- contains oleanolic acid, that plays an important role in protecting against tooth decay.

Figure 3: Cranberry

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3. Fresh-Berries such as cranberries (Figure 3), blueberries (Figure 4), blackberries (Figure 5), raspberries (Figure 6) are the best antioxidants in fruits because they contain powerful phytochemicals that inhibit DNA binding of certain carcinogens.

Figure 4: Blueberries

Berries are rich in vitamin C, carotenes, and powerful nutrients such as zinc, potassium, iron, calcium, magnesium.

Figure 5: Blackberries

Figure 6: Raspberries

Figure 7: Walnuts

4. Nuts are antioxidant foods that can boost heart health and overall body health. They nourish and protect the human brain more than any other food (Figure 7).

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Figure 8: Clove

Figure 9: Ground cinnamon

Figure 10: Oregano

5. Herbs and spices are a rich source of antioxidants, they can fight cancer. They used thousands of years to flavor foods and treat diseases. The best options are: cloves ground (Figure 8), ground cinnamon (Figure 9), oregano (Figure 10), tumeric, ginger (Figure 11).

Figure 11: Ginger

Figure 12: Green tea

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6. Green tea is a drink rich in organic epigallocatechin-3-galli (EGCG), is beneficial in lowering the risk of heart attack, stroke, glaucoma, cholesterol reduction, fight against obesity (Figure 12).

Figure 13: Red apples

7. Apples red (Figure 13) bring a surplus of vitamins, minerals and antioxidants powerful health protectors. It recommends eating more apples because they contain the highest amount of antioxidants.

Romanian an old proverb says that an apple a day relieves doctor.

Apples contain almost all essential vitamins and minerals. Apple juice clean, maintain and mineralizes, liver, kidneys, heart, brain, stomach, digestive system, and helps improve vision.

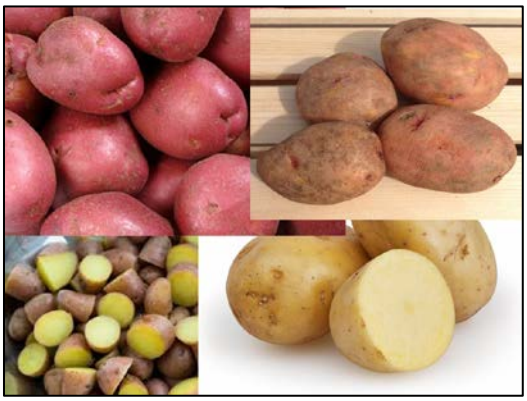

Figure 14: Potatoes

8. The potatoes are good sources of natural antioxidants; consuming is often doing his body a favor. Are healthier when eaten baked or boiled (Figure 14).

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Figure 15: Dark chocolate

9. Dark chocolate (70-90% cocoa) contains strong antioxidants that help lower blood pressure. However the chocolate must to be consumed with moderation (Figure 15).
10. The whey proteins from cows fed on pasture without hormone additives, sugars and chemicals are highly potent natural antioxidants.

Figure 16: Oranges

Figure 17: Lemons

Figure 18: Grapefruits

11. Oranges (Figure 16), lemons (Figure 17), grapefruits (Figure 18), contain potent natural antioxidants are number one in protecting the liver and kidneys, bring a high intake of vitamins and minerals essential for the human body. Contain large amounts of natural vitamin C, essential for human life.

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Figure 19: Pumpkin

Figure 20: Green peppers

Figure 21: Kiwi

12. Zexantina is the most common carotenoid which is naturally present in nature and can be found in: pumpkin pie (Figure 19), peppers green (Figure 20), kiwi (Figure 21), maize (Figure 22), grape (Figure 23), plums (Figure 24), onion (Figure 25), cabbage (Figure 26) and orange (Figure 16).

Figure 22: Maize

Figure 23: Grapes

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Figure 24: plums

Figure 25: Onion

Red onion and cabbage are stronger than the white.

Figure 26: Cabbage

Figure 27: Peanuts

Figure 28: Beets

Figure 29: Strawberries

Resveratrol found in fruit color indigo to black (but not only): dude black, black cherry, black grapes, black currants, plums, blueberries, red cabbage, red onion, apple purple, black beans, Brussels sprouts, peanuts (Figure 27), beets (Figure 28), strawberries (Figure 29).

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Figure 30: Tomatoes

Figure 31: Carrots

Carotenoids which do not contain oxygen atoms, are mainly lycopene from tomatoes (Figure 30), and beta-carotene in carrots (which is converted in the body into vitamin A, Figure 31). Carrots are a true miracle for the human body.

When eaten raw, as salad, restore youthful vision power. “Do not believe us? Think about this: even once have you seen a rabbit with glasses?”

Cocoa (Figure 32) is a powerful antioxidant, but must be administered in small quantities. Cocoa becomes drug in large quantities (ZHAO et al., 2016).

Figure 32: Cocoa

Lettuce (Figure 33), in addition to bring a high uptake of antioxidants, re-mineralizes and re-vitaminizes the body, and consumed in large quantities can regenerate a fatty liver, soaked in alcohol or tired, (BJELAKOVIC et al., 2011; HAN et al., 2016).

Flavonoids (any of a large class of plant pigments having a structure based on or similar to that of flavone); such chemicals as carotenoids, flavonoids and phenols are generally present in foods of plant rather than animal origin (WILLIAMS, et al., 2004; ZHANG et al., 2016)

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Figure 33: Lettuce

Resveratrol, present in certain fruits like grapes, vegetables, cocoa and red wine (Figure 34) is an antioxidant able to cross the blood brain barrier, providing protection brain and nervous system. Grapes contain high levels of resveratrol.

Resveratrol has been shown to be effective in preventing diseases related to aging, which means that it has brought the "fountain of youth".

Figure 34: Red wine

Other foods rich in antioxidants are the next group: cauliflower, broccoli, zucchini, cucumbers, eggplant (Figure 35).

All five are really wonderful when consumed in big quantities.

Nourishes the brain, and cauliflower with walnuts, grapes, eggs, cheese and fish, it is a true elixir of youth for the human mind. Broccoli is equally effective cure for brain and liver.

Zucchini, cucumbers and eggplants contain powerful antioxidants (PANG et al., 2016). All three feed the basic unit of the human body (the human cell) but also the life microcell (mitochondria).

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Another important group is the format of: parsley root, celery, parsnip (Figure 36).

Figure 35: Cauliflower, broccoli, zucchini, cucumbers, eggplant

Figure 36: Parsley root, celery, parsnip

All three contain major antioxidants. All three, but especially parsley root, restore liver tired and clean sick kidneys.

In addition celery is a powerful aphrodisiac, especially for men, containing large quantities of vitamin E.

Vitamin E and many other vitamins and minerals are found and in bananas (Figure 37).

Vitamin E can prevent serious diseases such as cancer, and can treat and prevent heart attacks (SHEKELLE et al., 2004; AGGARWAL; SISODIA, 2006).

Bananas are a really complex of essential vitamins and minerals for human body.

In underdeveloped countries they were able to feed the poor and hungry.

Bananas feed the based human cell, including mitochondria. Together with zucchini, cucumbers, eggplants, tomatoes, and blueberries (cranberries), the bananas feed the human mitochondria (AVERSA et al., 2016a; SHENKIN, 2006; WOODSIDE et al., 2005).

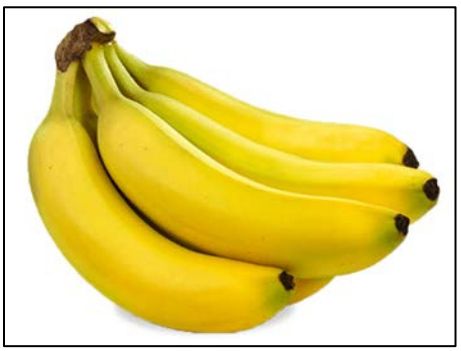

Figure 37: Bananas

There are other miraculous fruits that contain antioxidants in large amounts: apricots, peaches, watermelon, melons..., (Figure 38).

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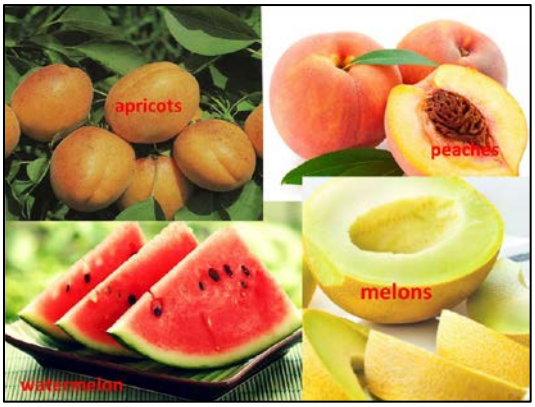

Figure 38: apricots, peaches, watermelon, melons

Apricots are a miracle for nervous system (RAO; BALACHANDRAN, 2002; GREEN; ASHWOOD, 2005). Peaches caring the human liver.

Watermelon can kidneys recover. Melon also contains vitamin E.

A special role it has beans of any type, to add natural antioxidants from food in human body Figure 39 (WANG et al., 2016). Beans play a crucial role in the smooth functioning of the kidneys.

Figure 39: Beans

Rice is also an essential food, full of natural antioxidants (Figure 40).

Figure 40: Rice

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Peas is a food full of vitamins, minerals and antioxidants (Figure 41). Peas is most commonly the small spherical seed or seed bag from “pisum sativum” fruit pod.

Each capsule contains more peas. sugar snap peas are botanical fruit, as they contain seeds and developed of the ovary a (peas) flower.

Peas is a very healthy food which can feed the human cells, including the mitochondria (through the substances that it contain).

Figure 41: Peas

Another very necessary food for the body is represented by the olives (black or green; Figure 42). Olives nourish the body cells, including the mitochondria. They contain natural antioxidants, very strong; as is recommended and olive oil.

Figure 42: Olives

Figure 43: Garlic

Garlic is one of the most potent antioxidants. In addition it is also mineralizing, a natural antibiotic, an anti-parasitic and a general tonic for the body (Figure 43).

Horseradish is an important antioxidant (Figure 44).

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Figure 44: Horseradish

Coffee is an important antioxidant as well (Figure 45). But it must be consumed in moderation, as to chocolate or cocoa.

Figure 45: Coffee

Goji berries are some reddish originating in China and used in traditional medicine for a long time to improve eyesight, prevent diabetes, high blood pressure, strengthen the immune system and relieve symptoms of fatigue (Figure 46).

Although there are too few clinical studies in human subjects to prove efficiency, the fruit of the goji have proved uncontroversial evidence on the experiments carried out on the basis of animals.

Goji is noticed by the contents of the increased antioxidants, in particular carotenoid levels, which have the ability to reduce the risk of macular degeneration the main cause of decided to persons over 55 years.

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These antioxidants protect the oxidative stress, reduces fatigue and strengthens the ability of the protection of the organism in front of harmful agents, decreasing the risk of cancer.

Figure 46: Goji berries

The fruit of the goji may be consumed as such, cooked or dried (such as raisins), but also in the form of tea, juices or drinks medicinal products.

Also, goji has a high content of vitamin A, that protects the skin and help to keep the visual sensitivity of night side.

The complex of vitamin B of the goji it may have a beneficial effect and on the health of the cardio-vascular, dodging the flutter, cardiac arrhythmias or arterial hypertension.

In addition, goji fruits are a rich source of fibers (3 grams a portion of 28 grams of fruit), which helps in the processes of detoxification and only have 100 calories for a portion, which transform them into allies of hope for diabetics.

The increased amount of antioxidants from the fruit of the goji helps to prevent premature aging of the skin. Goji feeds in depth her complexion, strengthens the processes for the defense of the skin from free radicals and thoroughly clean the pores.

The stars are in love with these magical fruit, Christina Aguilera, Gisele Bundchen and Hayek also at the counting among the glitterati who adores to eat goji, but who resort to them and for masks cosmetic products.

Beta carotene of goji and can combat successfully the spots on the skin, acne and accelerates the healing process of dermatitis.

Is contra-indicated for the consumption of goji when you take a treatment for the way he curls blood, because these fruits may cancel the effect of the medicines. Also, are not

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recommended in the event of allergies to pollen. There have been some situations in which the fruit of the goji have caused photosensitive seizures and eczema at the skin surface after exposure to the sun. Persons with renal diseases may be advised not to consume large quantities of goji, because these fruits contain such small quantities large enough for oxalate, which prevents the absorption of calcium in bones and enhances the formation of kidney stones.

Catina is the most powerful antioxidant of the body (Figure 47).

Figure 47: Catina

Catina (Tamarix ramosissima), or "Romanian ginseng" contains the largest quantity of vitamin C, more than macesul and ten times more than the citrus fruit. It may be the best natural flu vaccine. It is an enemy for diseases such as those of the skin, stress, anemia, hepatitis and strengthens the heart.

The fruit of the Catina may be consumed as such, in their natural state, may be cooking with honey or their juices can be diluted with water. Catina has so many properties that can be done as a thousand drugs at a place.

Meet Catina white and red, both with a strong antioxidant effect for the body.

Of the Catina shall not be used only fruit, but also the buds, leaves and bark. Do not forget that during the time of the grandparents, the fruits of the earth, as this marvelous plant, acted medications that to feed the bodies with the vitality and health.

The Catina fruit contains vitamin A, C, the complex B, E, P, K, F and microelements as well as the phosphorus, potassium, magnesium, calcium, iron and sodium. Catina is rich and in beta-carotene (more than contains the carrot), but also pectins, sugars, essential amino acids and essential fatty acids.

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This fruit can be consumed as juice, jam, syrup or wine. To obtain catina juice, fresh fruit squeeze through a press grapes are released through a sieve steel.

Ginseng is originally from China and is cultivated widely in Asia, not only in the country of origin, but also in Korea, Japan and Russia (Figure 48).

Figure 48: Ginseng (Panax Ginseng)

Ginseng roots are enjoying for over 2,000 years, an extraordinary reputation, being considered a panacea. This fact was reflected even in Latin plant name ("Panax" means universal medicine).

Starting probably in the form of ginseng roots, suggesting human body shape with hands and feet on both sides of the torso, was widespread popular belief that these roots would be best to treat diseases of any organ of the body.

The so-called white ginseng is obtained by simple drying, while red ginseng is obtained by drying after a preliminary steaming.

Very recent studies, conducted by researchers suggest that the Korean Ginseng can cut the risk of disease cancer by up to 85%.

Also, ginseng seems to have beneficial effects on carbohydrate metabolism in people with type II diabetes, administration of ginseng which resulted in a 20% decrease blood glucose test hyperglycemia provoked.

Based on the tradition of Oriental medicine, ginseng has been used as a general tonic and mentally, to prevent tracking prolonged stress, in case of mental fatigue and physical fatigue, to combat burnout in depressed mood, especially in the elderly, in the state anxiety disorders in memory, in neurosis, in states of malnutrition and debilitation in the state of debility.

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4. CONCLUSIONS

Antioxidants are, no doubt, an essential part of an optimal health; and even traditional doctors support the importance of an appropriate contribution of antioxidants taken through food.

Antioxidants are a category of molecules able to inhibit the oxidation of other molecules. The body distributes various nutrients in the body due to their antioxidant properties. Also factory antioxidant enzymes to keep under control the reaction in the chain of free radicals.

Some antioxidants are produced by the body, but others don't. In addition, the body's natural ability to produce antioxidants decreases with age. Antioxidants play a significant role for health as it may influence the aging by fighting free radicals. One can improve the bioavailability of nutrients in plant foods at the household level (GIBSON et al., 2006).

There are antioxidants which can’t be produced in the human body, and to be taken through antioxidant-rich foods, or supplements powerful antioxidant. The paper aims to present some natural sources of oxidants that can be obtained through diet.

All studies have already confirmed the great benefits of antioxidants and their important role in maintaining health and reducing the risk of diseases: Parkinson's, Alzheimer's, cancer (LEMMO, 2014). Use of antioxidants during chemotherapy and radiotherapy should be avoided (D'ANDREA, 2005).

If the body does not have adequate protection, free radicals become unstoppable, leading to poor functioning of cells. This can lead to tissue degeneration and increase the risk of disease. This is where antioxidants. Antioxidants can be divided into enzymatic and non-enzymatic.

a) enzymatic antioxidants are beneficial because apart and eliminates free radicals. They can remove harmful oxidative produced by the transformation of hydrogen peroxide in them, then water. Enzymatic antioxidants can be found in supplements, but can be produced by the body.

b) non enzymatic antioxidants are beneficial Since there interrupt the chain reaction of free radicals. Some examples: Carotenoids, plant polyphenols, antioxidants in food supplements and foods are enzymatic and non-enzymatic antioxidants supports cleaning and dismantling by free radicals.

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Resveratrol, present in certain fruits like grapes, vegetables, cocoa and red wine is an antioxidant able to cross the blood brain barrier, providing protection brain and nervous system. Grapes contain high levels of resveratrol. Resveratrol has been shown to be effective in preventing diseases related to aging, which means that it has brought the "fountain of youth".

Another important group is the format of: parsley root, celery, parsnip. All three contain major antioxidants. All three, but especially parsley root, restore liver tired and clean sick kidneys. In addition celery is a powerful aphrodisiac, especially for men, containing large quantities of vitamin E.

Vitamin E and many other vitamins and minerals are found and in bananas. Bananas feed the based human cell, including mitochondria. Together with zucchini, cucumbers, eggplants, tomatoes, and blueberries (cranberries), the bananas feed the human mitochondria.

5. NOTICE

The authors wanted to present the main elements of the work for everybody, as simple, direct and clear, but without sacrificing academic language. For this reason they have no names in Latin for the main elements presented.

Generally authors have chosen to present on this paper, only the elements that may easily to be procured.

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