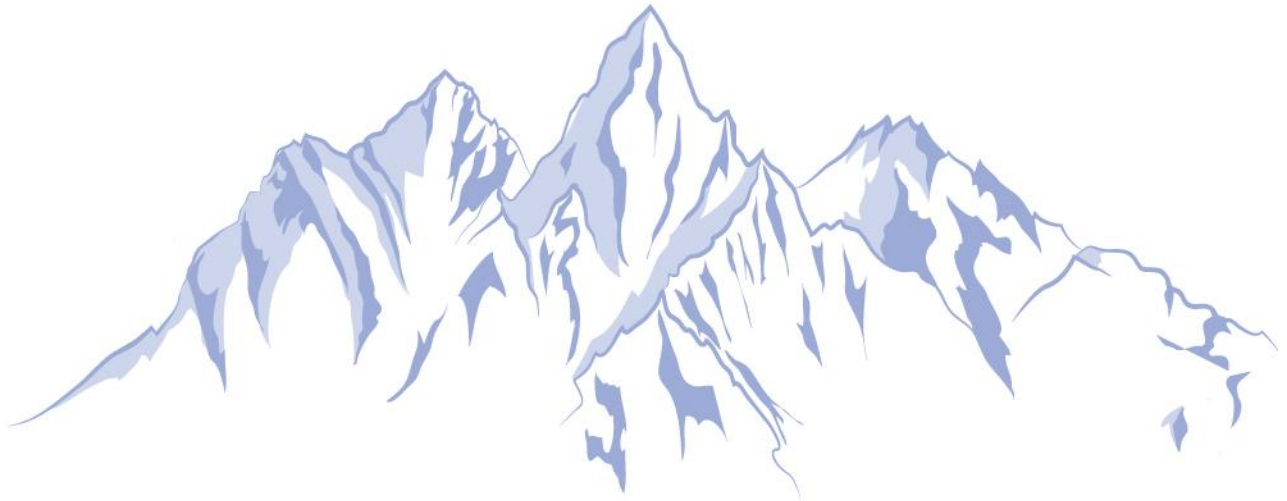




Ultraqua DDW (Deuterium Depleted Water)



 **DDW—Secret of longevity**



Brand unscramble

Aqua means water in Latin, ultraqua means Top water, who will reveal the water secret from atom , and lead the revolution of drinking water.

Company introduction

Suzhou Ultraqua DDW Co. is the first DDW manufacturer in China. They own 11 DDW related patents. There are more than 10 PhDs, Masters and professors in the R&D team.

企业简介



Hunza

Although more UV light in Hunza, less cutaneous carcinoma happened. Age more than 100 is 10 times than average level.



Yakutia

Longevity of centenarians in Yakutia is 353/million, much higher than 8 people for 1 million in Russia.

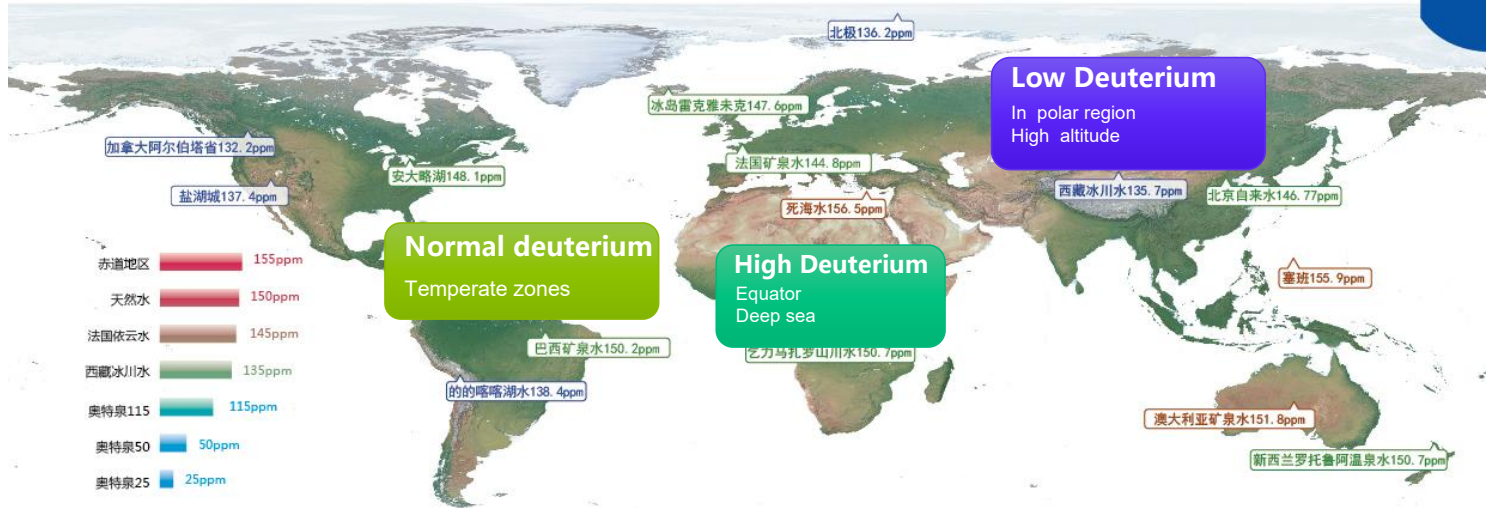


Secret of Longevity

The secret is from the depleted deuterium in their drinking water and foods, which is 133 ppm in longevity district, lower than normal 150-155ppm in other place.

Deuterium in nature

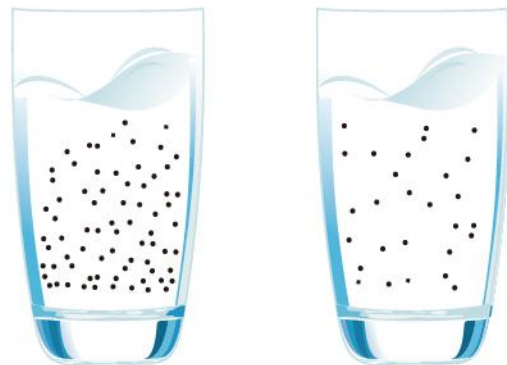
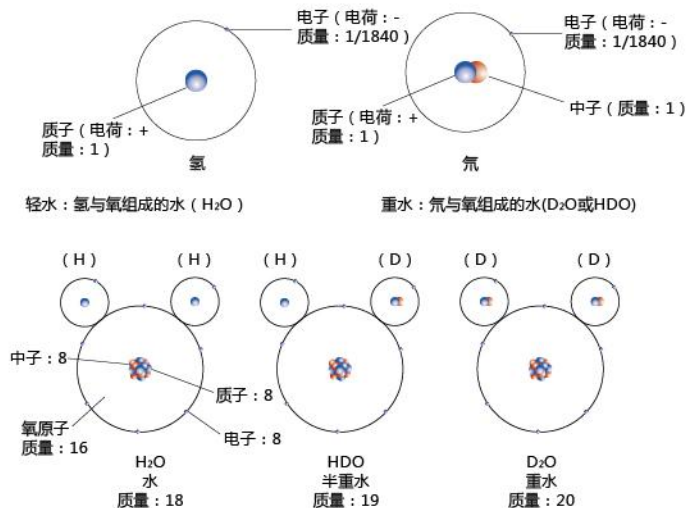
Generally it can be stated that the D-content of precipitation decreases when nearing the poles, when moving inland and in proportion to height above sea level.



Nature itself can produce limited DDW based on the altitude difference. Our mission is using similar technology to get more purified and more quantity of DDW.

◆ About Deuterium Depleted Water

Deuterium is the simplest element, a variation of hydrogen (i.e. its stable, not radiating isotope). The nucleus of deuterium contains a proton just like that of hydrogen but also has a neutron of equal mass (Figure I.7). Thus the mass of deuterium is the double that of hydrogen. This is significant because the 100 percent mass difference leads to differences in the physical and chemical behavior of the two isotopes, a phenomenon called isotope-effect. In our climatic zone the D-content of surface waters is about 150 ppm.



自来水中的氢和氘原子之比为
6600:1, 水和重水分子的
比例为100万 : 150 (150ppm)

25ppm的低氘水中的氢和氘原子
之比为40000:1, 水和重水分子
的比例为: 100万 : 25 (25ppm)

Physical property

	D%	viscosity, mm ² /s	surface tension	Density
DDW	41.3ppm	1.4900	77.34	0.99989
Nature	144.7ppm	1.5746	75.49	1.00027
Semi heavy water	53%	1.6514	74.87	1.05850
Heavy water	99.96%	1.7500	9.93.	1.1040

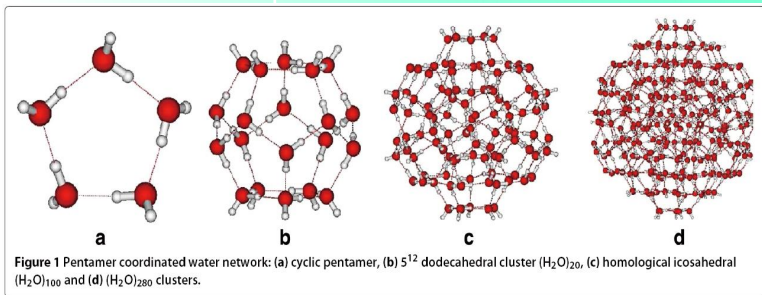
Density

As per study by National Academy of Ukraine in , comparing with nature water, DDW has low viscosity and density, while high surface tension, which could be helpful for cutaneous absorption. .

低氘水的性质

Size/nm	Size of cluster in different water		
	4ppm DDW	Big size	Natural water
20nm	25±5nm		10000±500nm
40nm	50±7nm		10100±200nm
80nm	85±7nm	30100±900nm	

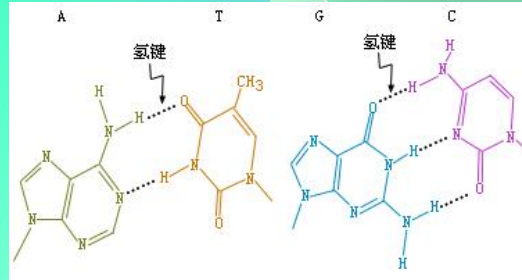
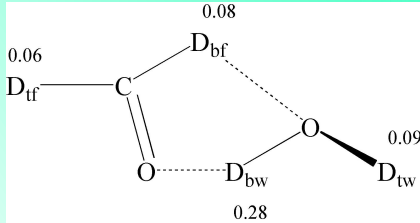
In 2011, Russian scientist also noticed nano particles could be more easily for dispersing in DDW, which could be helpful for the nutrients absorption and utilization.



In 2013, Dumansky Institute of Colloid and chemistry of water has proved less Deuterium could make the cluster smaller, which is similar to the 0-17 NMR Spectra results. It means DDW can get small subset cluster.

◆ Chemical Property

Bond strength will increase when Deuterium concentration increased.

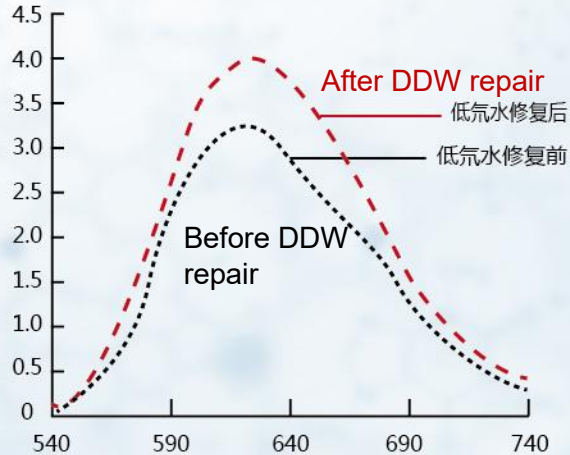


Bond strength when D is replaced by H

If D_{tf} and D_{bf} is replaced by H, bond strength will decrease by 3.75%	If D_{bw} is replaced by H, bond strength will decrease by 17.5%	If all D are replaced by H, bond strength will decrease by 31.25%

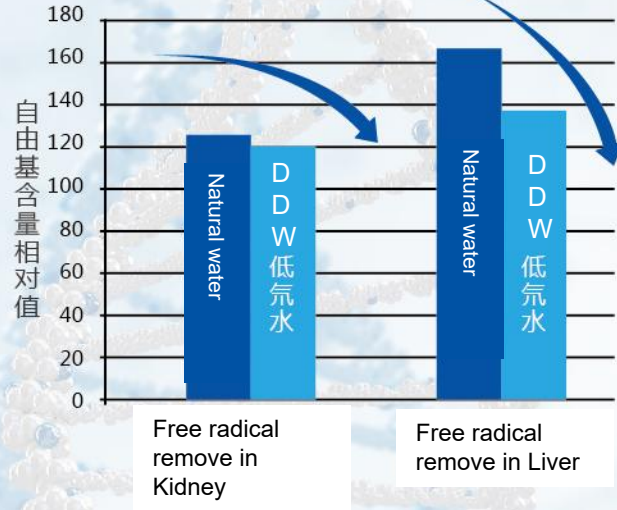
Independent scholar from MIT has reported, less deuterium means lower bond strength and higher molecular activity.

◆ Biological property



In 2014, , < *Biophysics* > reported that after drinking the DDW, breakage of DNA could be repaired.

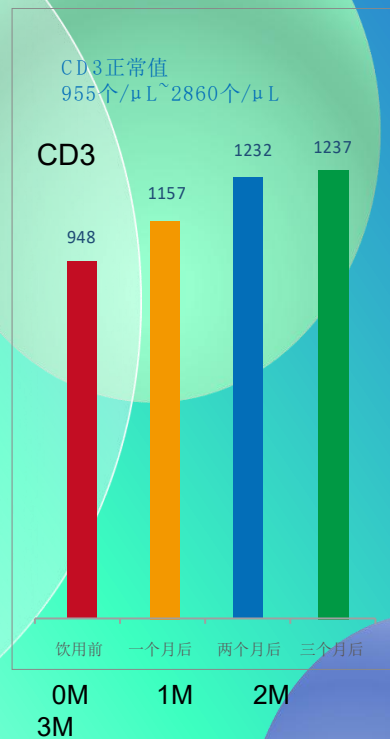
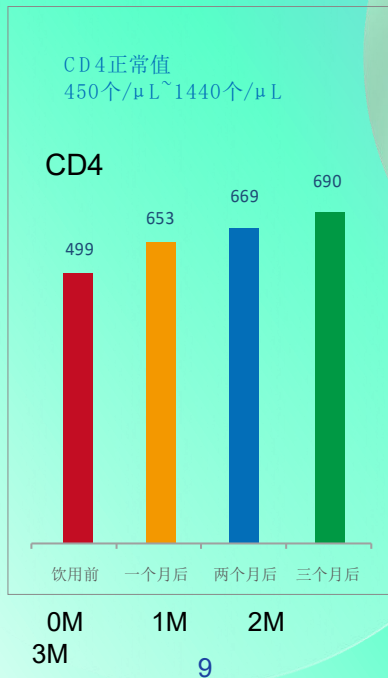
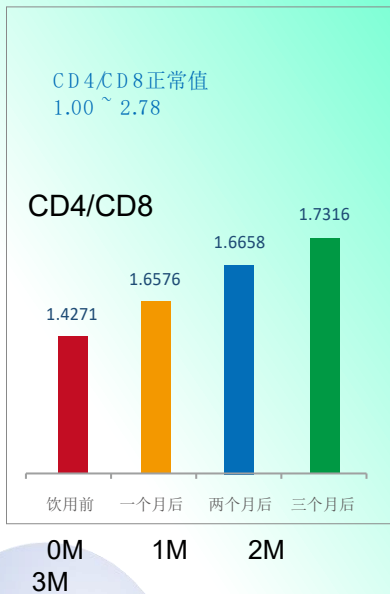
Radical oxidation



Radical oxidation will be obviously decreased after drinking DDW, especially in Liver.

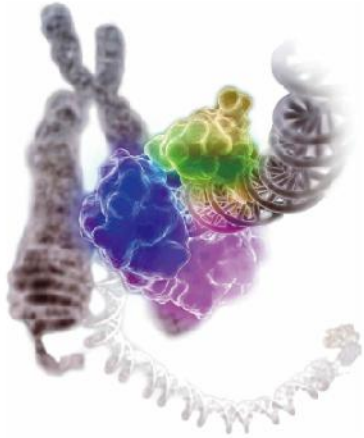
Immunity

After drinking DDW for 3 months, all the immunity index will increase a lot continuously, such as CD3, CD4 and CD4/CD8.

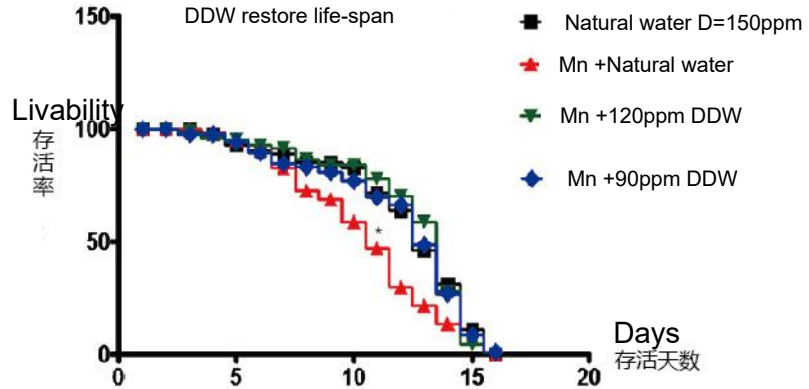


◆ Anti Aging

? Anti aging by DDW?



In 1974, scientist has proved deuterium could be an essential factor for aging. Low deuterium can activate the cell and postpone old.



In 2012, Vanderbilt University and Kennedy Center for Research on Human Development have proved that Treatment of Mn exposed worms with DDW (90 ppm) restored life-span, DAF-16 and SOD-3 levels to control levels, strongly suggesting that low D concentrations can protect against Mn toxic effects.

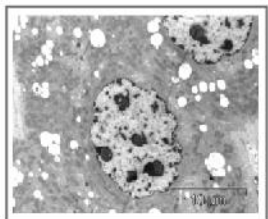
◆ Radioprotective effect



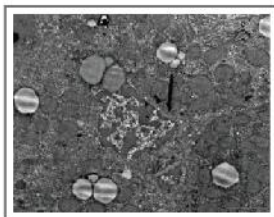
Russian scientist has announced that DDW is helpful for space radiation.

In 2010, *Environmental Engineering and Management Journal* also reported The X-irradiation of the animals treated independently or combined with DDW and polyphenols extract, manifest a radioprotective effect, especially in the combined action of the two factors.

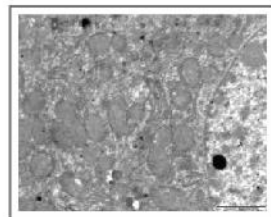
CCTV 10 channel also reported DDW is helpful for radioprotective effect



辐照损伤的肝细胞
Liver cells with radiation



低氘水修复
After repair with DDW



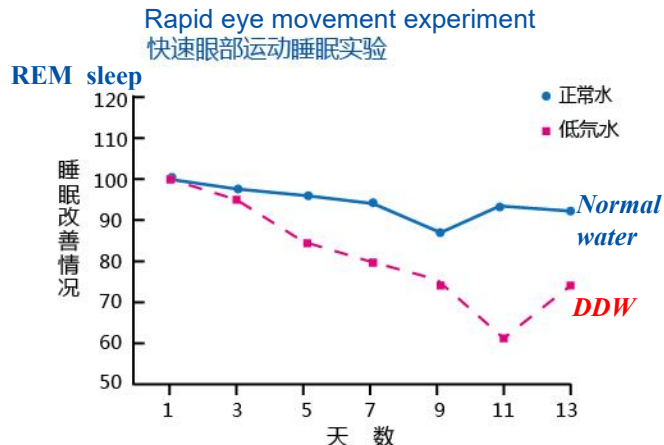
低氘水与多酚联合修复
After repair with DDW and polyphenol

◆ Improve Sleep Quality

Ahypnosis is more and more popular

Sleepless can cause a lot of health problem., such as heart disease, fat, etc.

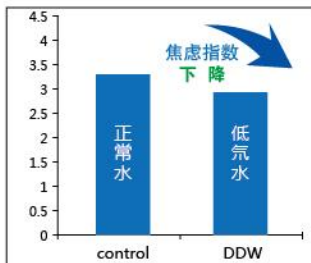
Sleep well is very good for health.



A significant decrease of the duration of the REM sleep in DDW treated mice in comparison normal water, which proves DDW is good for sleep quality.

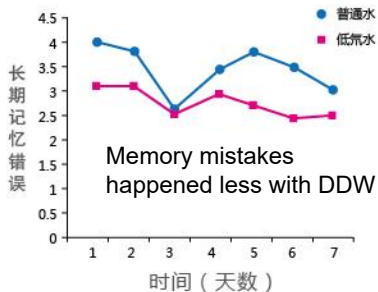
由上述实验可见：饮用低氘水可使大脑的副交感神经兴奋，提高睡眠质量，对长期失眠的人具有很好的效果。

◆ Relax for Nervous Disease

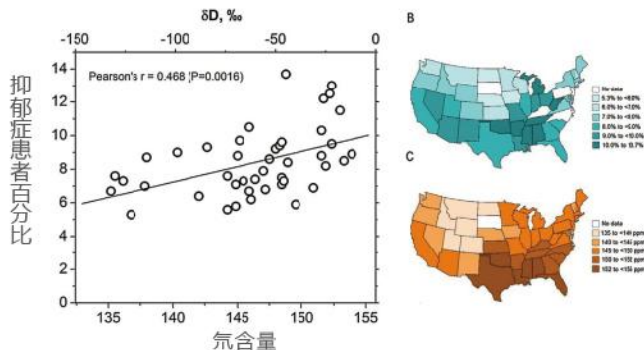


图A为进入开放臂次数

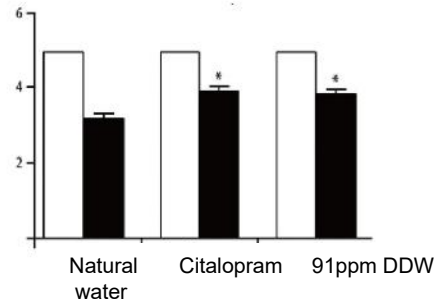
In 2014, <Arch. Biol. Sci> reported that A deuterium desaturation treatment with DDW is useful in anxiety disorders.



2014年, Neuroscience Letters reported Deuterium-depleted water has stimulating effects on long-term memory



Oxford University reported in 2015 that higher deuterium in water can cause higher depression rate. Deuterium content of water increases depression susceptibility,



Comparing with the classical depression treatment drugs(Citalopram), DDW shows almost the same curative effect;



Neoadjuvant Therapy of Cancer

After more than 20 years study and more than thousands patient treatment, Professor Gábor Somlyai and other teams have demonstrated that DDW is helpful for cancer treatment. Especially for the high sensitivity type.

Types with high sensitivity	Types with average sensitivity	Types with lesser sensitivity	Resistant types
Uterus	Colon	Gallbladder*	Pancreas*
Cervix	Rectum	Melanoma	
Tounge*	Lungs	glioblastoma	
Larynx*	Myeloma multiplex		
Thyroid glands*	Astrocytoma		
Leukaemia	Hodgkinlumphoma		
ALL	NH-lymphoma		
AML	Ovaries		
CLL	Bladder*		
CML	Liver*		
Breast			
Skin			
Testis*			
Stomach**			
Prostate			
Kidneys*			



中文版已经于2010年由人民卫生出版社在国内发行

Types with high sensitivity

-- In some cases, tumor regression became evident within a few weeks.

-- The effect was quick and obvious with some classes of tumors, -- Dd-water did not only prolong the life of the patients, but it resulted in obvious tumor regression and remission.

Types with average sensitivity

- the progression of the disease was halted with patients in a late stage of the illness.

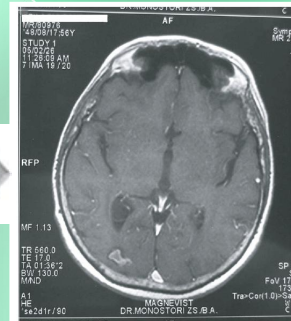
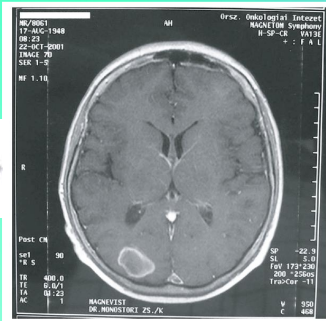
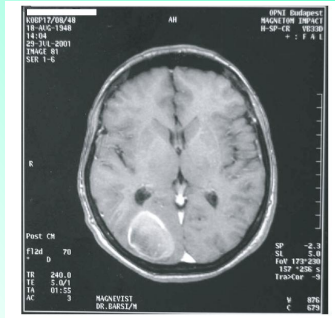
Types with less sensitivity

- From among several tumors of the same type only some patients showed a positive reaction.

- Regression did not occur; we only succeeded in stopping tumor growth.

From book <Defeating Cancer!—The Biological Effects of Deuterium Depletion>

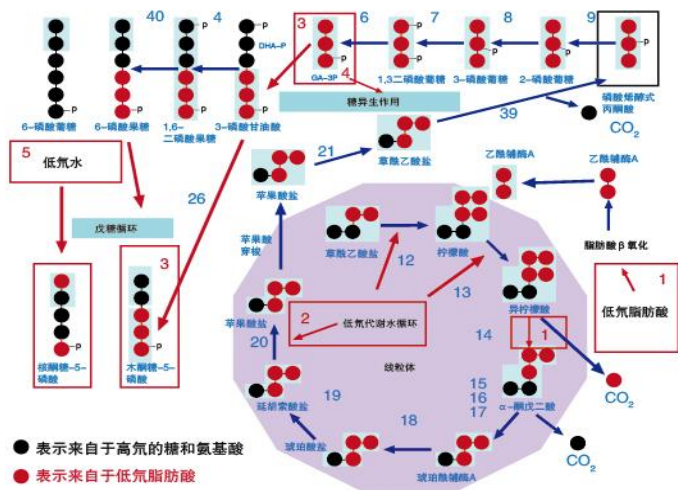
◆ Neoadjuvant Therapy of Cancer



Some Europe country has used DDW as adjuvant drug for prostatic carcinoma treatment.(Clinical study No. 5621/40/95 ;;

Sino-American Cancer Research Institute reported their recent studies had demonstrated that natural water that has 65% of the deuterium concentration depleted, can exhibit anti-tumor properties.

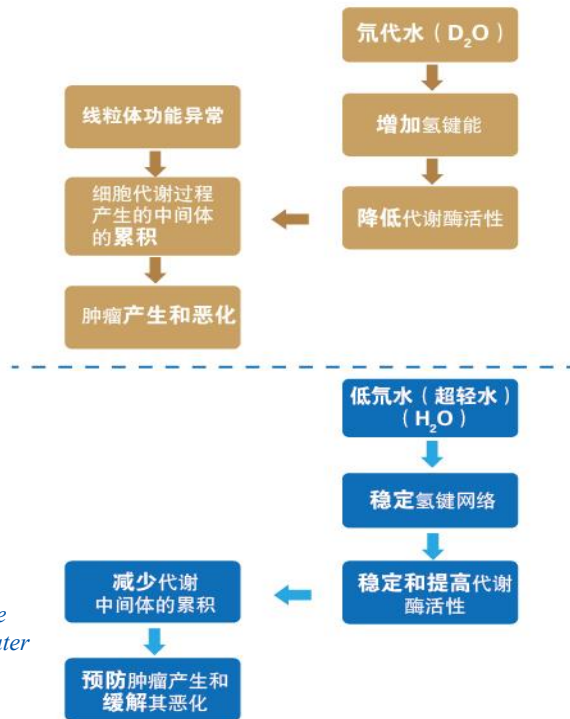
◆ Mechanism of DDW effect



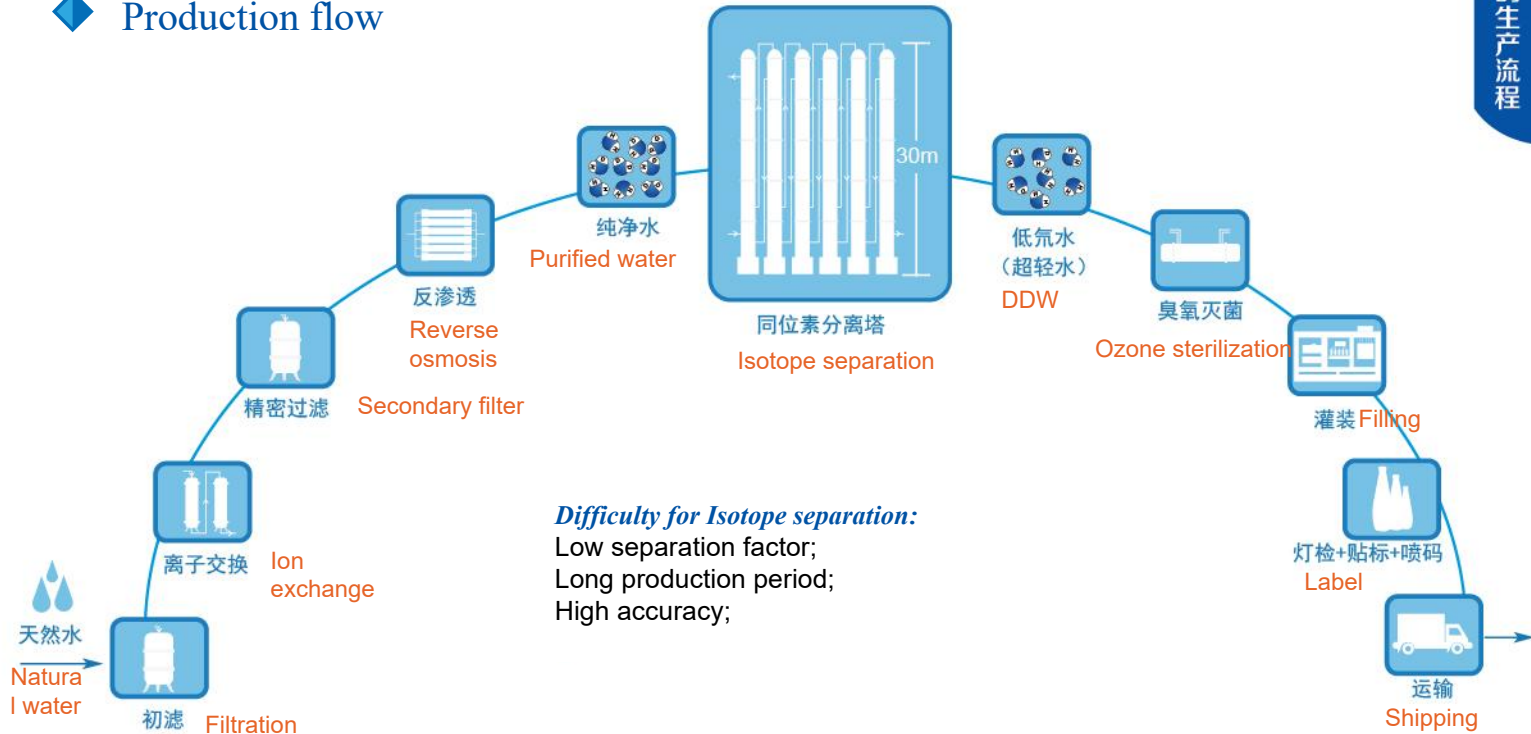
➤ In 2016, UCLA, University of South Florida, and Johns Hopkins University have reported Submolecular regulation of cell transformation by deuterium depleting water exchange reactions in the tricarboxylic acid substrate cycle.

➤ DDW is proposed here to link cancer prevention and treatment using natural ketogenic diets, low deuterium drinking water, as well as DDW production as the mitochondrial downstream mechanism of targeted anti-cancer drugs such as Avastin and Glivec.

➤ The role of 2H in biology is a potential missing link to the elusive cancer puzzle seemingly correlated with cancer epidemiology in western populations as a result of excessive 2H loading from processed carbohydrate intake in place of natural fat consumption.



◆ Production flow



品牌历程



2009

Founded in 2009

2010

International Food and Beverage Exhibition in Abu Dhabi

2014

Designated water in APEC

2014

Gold award in 5th international water exhibition

2014

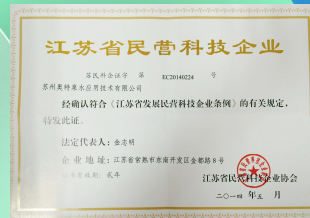
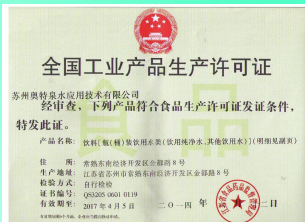
High-tec firm affirmation by Jiangsu Province

2016

Designated water in G20

Ultraqua was founded in 2009, and got the golden award in 2014 world drinking water exhibition, and designated for G20 meeting.

◆ Quality Assurance



It has passed GMP and ISO 22000 requirement, as well as QS certificate in China.

◆ Products

115ppm



Ultraqua DDW 115PPM

D conten: 115ppm \pm 10ppm

Vol: 500ml

Packing: 12 units/case

50ppm



Ultraqua DDW 50PPM

D conten: 50ppm \pm 5ppm

Vol: 500ml

Packing: 12 units/case

25ppm



Ultraqua DDW 25PPM

D conten: 25ppm \pm 5ppm

Vol: 500ml

Packing: 12 units/case

According the Deuterium content in the water, DDW has three specification, 115ppm, 50ppm and 25ppm.

◆ Deuterium Depleted Spray

Considering about the good physicochemical properties, such as low viscosity and density, while high surface tension, DDW could be helpful for cutaneous absorption. At the same time, the anti aging and anti radiation property could make DDW a good Beauty cosmetics

