Intranasal tPBMT: The BLOOD - BRAIN Connection

BIOquant devices
Blood/Brain photobiomodulation
BIOQUANT NS device for intranasal laser blood irradiation by laser light for

- improvement of blood rheology,
- viscosity,
- elasticity
- deformability of red blood cells

(improvement of blood circulation and microcirculation)
BIOQUANT LED is a device for intranasal brainwave modulation using:

- 1 or 2 applicators red-red, red-NIR, NIR-NIR,
- Using frequencies 0-99Hz
- RCP electromagnetic waves
Brain - blood are connected in that fact, that blood takes care for brain and nerve cells.

Blood brings oxygen and nutrition and takes away carbon dioxide and other metabolites.

Blood with bad viscosity and rheology ------>>>>>

The lack of oxygen comes, ------>>>>>

Acidosis comes too, ------>>>>>

Oxidative stress grows, pains, tiredness, ------>>>>>

Depressions, migrenas start to bother us.------>>>>>
In such conditions waste is not removed ordinary and has to be deposited among cells, later in cells.

Waste depositions grow with age and waste represents just that part which thick blood was not able to take away.

Thick blood is causing changes in vessels and this is worsening the blood perfusion more.

What else can we get if it takes too long time? Dementia, Alzheimer, Parkinson all is connected with waste. And waste is connected with bad blood flow properties.
But mechanism I described is connected to plenty other diseases.

For example: **diabetes** can be developed from bad pancreas blood perfusion and next it acts as the disease which is worsening blood viscosity and rheology further with influence and consequences on **eyes**, **nerves** including **brain**, **kidneys** or **legs** and **ulcers** development, all caused by bad blood viscosity and rheology.

It is because bad blood viscosity and rheology always creates positive feedback loops.
Imagine - bad blood viscosity, rigid RBCs and 5l blood is circulating via 100,000 km vessels, most of them are very fine capillaries. Every one minute all the volume makes one circle.

Friction in capillaries cause inflammation, inflammation produces reactive proteins, and increase of ESR, which are worsening blood viscosity and rheology. Friction in capillaries grows, inflammation grows, platelets aggregate and are pushed to walls, plaque is created... Vicious circle.

That lead to development of vascular diseases.

Also brain vessels are influenced because of plaque deposited is increasing resistance against blood flow.
SOLUTION:

TAKE CARE FOR CONDITIONS OF CHEMICAL REACTIONS

HOW???
Only one way exists how to live long, healthy life.

Conditions for chemical reactions are the key. Health is the way of controlling conditions.

To cut off above described processes with bad blood viscosity and rheology, you have to push your blood viscosity and rheology to normal conditions and keep it there by everyday care.

People have to start to control main conditions in their bodies.

If we care for blood, we care also for brain and for every cell in our body.
First laser blood irradiation made in Russia and followed plenty of clinical trials using HeNe laser intravascularly.

Bioquant NS medical device
Designed for non-invasive intranasal laser blood irradiation brings all known effects for overall improvement of the health intranasaly.
Laser blood irradiation

Invasive method

versus

Non-invasive method
Laser optic fibre is putted into canyle irradiating directly blood flowing around fibre. Fibre is thin relatively long and causes some power is lost in optic with possible influence on laser light properties. Quantity of applications is limited.

Laser source is close to target, nasal mucosa and capillaries in nasal mucosa are well irradiated. People can improve their blood viscosity everyday in the year. Mucosa contains no fat, no melanin so light is passing directly into blood in capillaries.
Physical irradiation of blood at wavelength of 650-660nm through nasal cavity is improving rheological properties of the blood.
Improved blood rheology

- Improved viscosity of blood
- Improved elasticity of red blood cells
- Improved deformability of red blood cells
- Lowered rigidity of RBCs

Improved blood rheology brings overall improvement of your health
Why do we use intranasal application for blood PBMT?

- Absorption of photons in the irradiated mucous membrane and in blood flowing in that mucous membrane (mechanism of main effect).
- The mucous membrane of nasal cavity has numerous blood vessels with rich and relatively slow blood flow.
- Method is safe, non invasive and effective and can be used at home comfortably.
How do people react on application?

- The first changes in blood start after 4 minutes.
- Improvements continue to maximum in second half of application.
- Followingly body reacts to improved blood viscosity and rheology and follows vasoconstriction in areas where is blood flow too high. This is accompanied by better perfusion of areas which had microcirculatory problems before application.
Blood- EM waves absorption in the range 650nm - 950nm
Why do we use intranasal application for BRIANWAVE MODULATION?

- Absorption of photons in the irradiated mucous membrane and in nerve cells in irradiated area.
- Around nose are many nerves and points connected to 6 meridians.
- The light from device is irradiating the retina from back side and optic nerve, 1-99Hz can enter into brain via optical cortex.
Vessels of nasal cavity (without capillary network)
Red light irradiated area
Nerves of the eye
Nerves in nasal cavity
Olfactory nerve is stimulated and can be regenerated.
NIR with night vision camera
How are BIOquant devices used?

Intranasal application. Simple, non-invasive, safe.

Used comfortably everywhere, including home use.
BIOquant devices and FLIR

Application red and also NIR is causing increase of thermal radiated energy in wavelengths behind visible light. Each application with small energy controls and causes changes in huge energy. Each photon can activate ATP increase in irradiated cells, also in white blood cells and in connection to improved circulation and microcirculation bring necessary oxygen to each part of the body and removes waste effectively from each cell of the body. Changes include also brain tissue.
2 NIR RCP applicators after 9 minutes

13:42:38

13:51:34
2 NIR RCP applicators

After 9 minutes

OUR EXPERIENCE

Live Blood Analysis

We made plenty of live blood analysis before and after application of BIOquant of non-users as well as of regular long-term users.
Live Blood Analysis

Bad state.

Good state.
Borreliosis - Bioquant 10 min (red LED + NIR Bioquant, program 1)
Left picture bad blood rheology, rouleaux fibrin fibres, platelets coagulation, close state to thrombus formation and following complications - thrombosis, ischaemic issue, heart or brain infarction

Right picture good blood, clean serum, very mild adhesiveness of RBCs
BIOFIELD TESTS - different light qualities or parameters give different biofield reaction - tests were performed to optimise light properties and treatment parameters during last 8 years

series 1 CW
series 2 10Hz
Series 3 CW and RCP
Series 4 10Hz and RCP
The clinical study is conducted at the EEG Institute Prague, which is not completed.

15 people have been trained for 14 days.

After the training, everyone achieved a significant improvement.

1 workout equals up to a few neurofeedback workouts to reduce anxiety, improve sleep and relax.

Improved anxiety, ADD, increased cognitivity, improved sleep, mood and integration, reduced fatigue, high focus managers.

Exercise with neurofeedback equipment yielded the best results and synergies of both methods.

The study continues and gives answers to some open questions.

BIOquant LED
Used for brainwave / blood PBMT
Symptoms of worsened blood rheology

1. if you feel regularly tired and have lack of energy
2. if you have cardiovascular, cerebrovascular, diabetes or any other diagnosis which are worsening blood rheology or are caused by worsened blood rheology....
3. Any pains are signal of acidosis which is connected with ischaemia and oxidative stress, it is important warning signal of worsened blood viscosity and rheology...... Please do something!!!!
Importance of keeping blood rheology in a good state

Longevity, Good Health, Increased physical and mental Performance, Prevention, Detox
Who needs to improve rheological properties of blood?

Everybody with worsened blood rheology, healthy people need to keep it good, who wants to stay healthy and reach longevity
Examples of diagnoses that make the blood rheology worse or that could be caused by bad blood rheology:

- Cardiovascular diseases
- Cerebrovascular diseases
- Metabolic diseases
- Diabetes
- Heart diseases
- Neurological diseases
- Sources have evidence about more than 130 diseases
Which development has worsened blood rheology?

From bad is worse, then more worse and more, health state is worsening and diseases are being developed. Diseases are followingly worsening blood rheology more and more. At present it is to see on the development of the disease COVID19.

- Worsened blood circulation and microcirculation
- Worsened blood tissue perfusion
- Worsened tissue oxygenation
- Worsened platelets and RBCs aggregation
- Worsened ischaemia and metabolites removal
- Worsened acidosis and free radicals activity
- Worsened waste removal and energy production
How the process of worsened blood rheology starts?

Repeating bad situations is slowly worsening the state of health to side of disease. Until diseases are not developed we can come back to health side. Just we need to return blood rheology to normal state as we were young and healthy.

- Infections, viruses, bacterias, candida, toxins..
- Trauma, burns, cold, injury..
- Abnormal forms of RBCs - sickle cell anemia..
- Stress, smoking occupation..
- Metabolic, diabetes, thrombophilia, low S protein..
- Over exercising, dehydration, occupation..
- Obesity, sex, altitude, geographic conditions..
- Many others..
Does brain need good blood rheology or bad?

When we young we are healthy. When we have 60, we can have Alzheimer, Parkinson, dementia.... Reason? Waste in brain. And why is waste there deposited ????

Good blood rheology is the key to health and to keep it good is the way to longevity and health, physically or mentally.

Brain needs ⅓ of circulating blood

Brain has huge metabolism in small volume

A lot of acids and waste are produced in small volume

If blood is not able to remove waste, problems start.
What happens in the body if blood rheology is good?

Each our cell and tissues are happy, then

Our brain is happy, also nerve cells are happy

We are healthy, full of energy, physically, mentally, we have no pains

Our immunity works perfectly

There are much more effects described in literature regarding laser blood irradiation or positive benefits of good blood rheology.
Non-users:

There is usually worsened blood rheology in most of non-users with certain diagnosis. Mostly that people think they are healthy, they have no problem. Just the problem is still and developing slowly.

After BIOquant application, we can see on microscope a slight, mild or remarkable blood rheology improvement (the longer the problem lasts, the more applications and time the user needs to get good blood rheology)
Regular users:

People are using Bioquant to improve a worsened blood rheology and viscosity or keep themselves healthy.

Regular users have improved blood rheology so they experience other beneficial effects:

- Better blood parameters during check-up
- Overall improvement of health
- Increase in energy...
Other effects of laser blood irradiation from the world and importance of good blood rheology

- Blood rheology in pathogenesis of the coronary heart disease
- The hearth rate, life expectancy and the cardiovascular system - therapeutic considerations.
- Ist the Laserblutbestrahlung doping?
- The use of intravenous laser blood irradiation at 630-640nm to prevent vascular diseases and to increase life expectancy
Other effects of laser blood irradiation from world and importance of good blood rheology

- Development Clinical Applications of intravenous laser blood irradiation
- Effects of acidosis, alkalosis, hyperthermia and hypothermia on haemostasis: results of point of care testing with thromboelastography analyser
- Acidosis induced by lactate, pyruvate, or HCL increases blood viscosity
- Cognitive function and blood rheology: results from the Caerphilly cohort of older men
Complementary use of BIOquant NS

Laser blood irradiation with intermittent light may be used for brainwave modulation
Brainwave modulation

- Mental acuity
- Concentration
- Problem solving
- Multitasking
- Resource management
- Decision making
- Logic
- Pattern recognition
- Eye-hand coordination
- Reduction of migraine headache, anxiety
- Maintenance of physical fitness, endurance, strength, coordination.
- Increasing one’s energy level.
- Improvement of blood circulation.
The BIOQUANT NS is a medical device for intranasal laser blood irradiation manufactured in EU, BIOQUANT LED device is listed by FDA.
BIOquant NS

Manufactured in Slovakia

- ISO 13485 certificate (design, development and distribution of medical device)
- In database Eudamed
- Registered in State Institute for drugs and medical device in Slovakia
- Medical Certificate CE
- Bio-compatibility tests
- Performance, safety, EMC tests
- Intellectual property (patent, registered trademark)
BIOquant NS

Statistics

- First BIOquant released in 2008.
- About 40,000 BIOquants sold
- BIOquant has been with you for 12 years.
- Users experience improvements in many different areas.
- Never no accident occurred
- We made more than 1,000 live blood analysis.
- Post-market survey
- More than 90% satisfaction of regular users.
First BIOquant LED released in 2019.

From 2012 plenty of tests with light quality and influence on Biofield of users were performed as well as live blood microscopy tests.

The best light we ever had in our hands are implemented in the device BIOQUANT LED with RCP electromagnetic waves.
Experience – the device Bioquant are using people with many different disorders for example:

- Hypertension
- Parkinson disease
- Alzheimer disease
- Bipolar disease
- Dementia
- Lowe’s syndrome
- ADHD
- Hypertension
- Diabetes
- Healthy people for diseases prevention
- Cardio and cerebrovascular diseases

NOTE: They are not indication for device, indication is improvement of blood rheology
Experience
(Hypertension)

Hypertension user

Age: 58
Sept 2001: 150/80
DVT: 2005
BIOquant user since: 2008
Sept 2019: 130/80

Diagnosis:
● Hypertension
● S-Protein, thrombophilia,

Treatment:
● BIOquant NS 2xdaily
● Accel 10mg

Result:
● Stabilized blood pressure
● No recidive of DVT or thrombophlebitis or thromboembolism
Experience

(Lowe's Syndrome)

Lowe's syndrome user TM

Age: 5 years old
BIOquant LED user since: 2018

Diagnoses:
● oculo-cerebro-renal syndrome

Treatment:
● BIOquant LED 2xdaily
● Physiotherapy
● Supplements

Progress:
● Improved concentration, memory, orientation, cognitive functions, performance cognitive and physical endurance....

This development is probably the fastest and most visible over the years, his mum said.
Experience (Bipolar disease)

Bipolar disease user F

BIOquant user since: JAN 2019
Age: 64 years old

Diagnosis:
- bipolar disease

Overall Treatment before:
- Hospitalized over 100 times in psychiatry
- received about 40-50 electro shocks during her life
- Heavy thrombosis
- Prescribed medicines for 50 years

Actual treatment since JAN 2019:
- BIOquant NS
- No medication for last 3 months

Results:
She was not hospitalized for one full year. Sleep has improved, blood pressure has become normal, blood vessels have been improved, physical condition has been improved, the mania and hallucinations have been stabilized.
Experience (After brain stroke)

User: After ischaemic brain stroke AK

BIOquant user since: 2009
BIOquant user: user on wheelchair, eating probe, tube feeding

Diagnosis:
- right-sided hemiparesis of severe grade, arterial hypertension, diabetes mellitus, thrombosis

Actual treatment:
- BIOquant NS
- Reduced medication since 2014
- No medication since 2016
- Supplements

Results:
He has started to walk, eat and do everything without assistance of family members. He has been in a good health without medication recently.
Experience
(Diabetes Mellitus)

Diabetes Mellitus
BIOquant user since: 2019

Diagnosis:
● Diabetes, prescribed medicine

● Actual treatment:
● BIOquant NS

Results:
Repeated blood tests for blood sugar still in normal range so no medication required. BIOquant NS used regularly.
Experience (Chronic rhinitis)

Chronic rhinitis, lost sense of smell for 29 years M

BIOquant user since: 2017
Age: 51 years old

Diagnosis:
● Chronic rhinitis

Treatment before:
● Prescribed medicine (ATB, antihistamines, for allergy prescribed)

● Actual treatment:
● BIOquant NS

Results:
The chronic rhinitis has gone after 4 months of use and the sense of smell returned after 29 years. The fatigue has gone.
Experience (ADHD, hyperactivity)

ADHD

BIOquant user since: 2018
Age: 6

Diagnosis:
● Hyperactivity, behavior problems

Treatment before:
● Supplements, behavioral therapy, keto diet

Actual treatment:
● BIOquant LED every day
● Supplements Esprico from time to time

Results:
At the beginning this BIOquant user combined application for 30 minutes as well as frequencies of 10Hz for 10 minutes. At present he uses Bioquant LED RCP light for 10 minutes continuous light before going to sleep every day. Behavior problems have got to normal. Cognitive functions have improved – concentration and memory. Social interaction has improved since the behavior is without problems.
Experience (Parkinson disease I)

Parkinson disease

BIOquant user since: 2017
Parkinson disease diagnosed 6 years ago.

Diagnosis:
- Parkinson disease, eating problems, sleeping problems

Treatment before:
- just prescribed medicine

Actual treatment:
- BIOquant NS
- Prescribed medicine

Results:
Food can eat and swallow properly. His memory has also improved. The quality of sleep has improved compared to the state before using BIOquant.
Experience (Parkinson disease II)

Parkinson disease user 2

BIOquant user since: 2018

Diagnosis:
- Parkinson disease

Actual treatment:
- BIOquant NS
- Prescribed medicine

Results:
The user declared that he stopped using BIOquant for one week. His health remarkably worsened. He had problems with orientation and he got lost outside. He applied BIOquant NS for one day again and his health returned to the state before.
If we want to have higher chances of surviving during this epidemic, we shall not only take care of our lungs but also of our blood.
Any flu virus is causing worsened blood viscosity and rheology, with positive feedback loops.

- First step is worsened blood viscosity and rheology. (increase of ESR, CRP, fibrin formations, platelets aggregation...)

- Worsened blood viscosity and rheology is always accompanied by rigid RBCs covered by lipido protein layers, creating rouleaux and affinity of gases is worsened.
Coronavirus (COVID-19) and other viruses

A worse state is causing lower oxygen in the body known as hypoxia.

- A Lack of oxygen and bad blood viscosity and rheology including lowered lungs function causes acidosis with increased oxidative stress, which is additionally worsening blood rheology and viscosity again.

Bad blood viscosity and rheology always creates positive feedback loops and from bad is worse and worse.

Behind some border the body can not regulate blood tissue perfusion, because vasodilation reached myaximal values and blood is still too thick, tissue perfusion is lowered.
Coronavirus (COVID-19) and other viruses

If we push the blood viscosity and rheology to good state, we cut off vicious circle and process of continuous worsening blood rheology will stop.

It will bring change, chance to improvements, shorter recovery, higher efficiency of medicaments and ventilation, better cells permeability, better functionality of immune system
What to do against coronavirus

1. Keep perfect blood viscosity and rheology. Use Bioquant every day to create perfect condition for each cell in your body.

2. Stay warm

3. You can take anti-virus remedies

4. Stay alkaline: check out your urine pH and set it close to 7.4 value

6. Decrease oxidative stress: check your urine and set your ORP to minus range of milliVolts.

7. Eat vitamins A, D, C and support immunity.
Blood is creating conditions for chemical reactions. Main conditions to stay healthy and live long are:

- Blood viscosity and rheology
- pH
- and ORP
- of urine.

Adjust conditions in the body as blood needs to make blood ready to bind acids and to avoid redundant oxidative stress.

Measure it and so you can control it and keep on desired values. You will feel the difference if you had bad blood rheology, your urine was acidic and ORP positive.
Where you can find us and learn

About Bioquant LED: https://www.bioquant-us.com/

About Bioquant NS: https://www.bioquant.eu/