

Scientific brief information concerning the Magnetic Field Therapy, the Quantum Therapy and the QRS-System

Rainer B. Pelka¹

1	History and basic principles of the magnetic field therapy	4
	1.1 Classical antiquity and new beginning in the modern age	4
	1.2 Development of magnetic field systems with a therapeutic objective	5
2	The product QRS	6
	2.1 QRS – development and application	6
	2.2 Company development and state of the technological development of QRS	7
	2.3 Perspectives of the further development of QRS	9
3	Proof of effectiveness of the QRS system	10
	3.1 General effects	10
	3.2 Special Effects	11
	3.3 Controlling the side-effects	13
4	The basis theory of the QRS	13
	4.1 The effect of pulsating magnetic fields	13
	4.2 The effect of the quantum therapy	13
	4.3 Comparison of QRS with other magnetic field systems	15
5	Proof, sources	16
	5.1 Selected personal experiences	16
	5.2 Experimental proof and controlled studies	18
	5.3 Further scientific publications	18
	5.4 Further references	19
	5.5 Developer	19
6	Illustrations (Illustr. 1 – 9)	20 ff

¹ file:qdoc \Q_SciBrifInfo32_031119

Summary

Magnetic fields – employed therapeutically as early as in the classical antiquity - were rediscovered in the last century. Being regarded rather critically by the broad public (The opinions vary between the assertion of their ineffectiveness and dangerous harmfulness), it has yet been possible to furnish conclusive proof of their effectiveness and its freedom from side-effects in the meantime. In this case, not only the field strength and the frequency, but also the wave type is of importance (no sinus waves).

Fundamental connections have been discovered in the last 20 years, which explain not only the mode of action of the magnetic fields, in particular of QRS, but also their therapeutical meaning. In the sense of external additive regulation - in the case of restricted functions - the cells are opened and supplied with vital ions. Especially the mitochondria, the “power stations” of the body cells, absorb those and produce new energy molecules (=ATP). Simultaneously, waste products that are deposited in the cells are removed. For this purpose, merely extremely minor amounts of energy are required.

This explains the unusual wide range of the possibly suitable indication groups, such as allergies, arthroses, asthma, skin diseases, migraine, morbus Parkinson, rheumatic diseases and even tumour formations respond to QRS. The number of the scientific studies is, at the same time, hitherto still insufficient, there is still a high research requirement.

It can be established, however, even now on the basis of the present results, that regardless of the respective validity or generalization level of the respective statements, the available and for the most part repeatedly confirmed results suffice to examine the pulsating low-frequency magnetic field therapy in general and the QRS therapy (~ quantum medicine) in particular on the part of the science to an increased extent. Taking into consideration the extremely minor side-effects, even the practical user, be it as therapist or as the affected person, is– if the need arises, that is to say based upon a possibly relevant diagnosis, in a position to employ the QRS therapy at least on a test basis.

The further development perspectives are as well interesting. A development, that has just been completed, the QRS 301, allows the doctor to store the QRS therapy, which is optimal for each of his patients on a programmed smart card and to follow the therapy development, and to improve it if necessary. There are already prototypes of the so-called NIRP-system exist already, which permits a partly automated adaptation of the therapy system to the current needs of the organism – measured by several clinical parameters. □

*“For the practice, the mode of action
of the quantum medicine is a real blessing”
Winner of two Nobel-prizes, Prof. Linus Pauling*

1 Introduction: History and basic principles of the magnetic field therapy

1.1 Classical antiquity and new beginning in the modern age

Presumption of the classical antiquity: Magnetic fields help curing: The curative power of magnetic fields has been presumed already in ancient very advanced civilisations and has therefore been regarded then as an important integral part of the art of healing. As many forms of therapy, it has fallen into oblivion over the centuries. In recent times, it has been almost completely pushed into the shadows by our modern, traditional medicine that focuses upon the alleviation of the illness symptoms. Since the eighties of the last century, we experience – although still being smiled pityingly at by a lot of people as charlatanism – a partial recollection of the proven methods, since in the meantime numerous doctors do as well not want to come to terms merely with the allopathic medicine that is for the most part oriented towards short-range effects and that is working mostly with chemical preparations.

The new beginning: From the basic research to proof of effectiveness: Magnetic fields have made – similar to the electrical fields - rather negative headlines in the media in particular recently. The concern that they might in a similar way as ionised rays lead to illnesses, in particular to tumour diseases, is hitherto not to be ruled out reliably. However, it would only be justified – should the situation arise - beginning from certain field strengths, frequencies and above all in the case of so-called sinus-waves. For this reason, limits have been established by the majority of the states as well as by the World Health Organisation, which – as potential risk limits – may not be exceeded (**see fig. 1**).

On the other hand, magnetic fields below these thresholds are regarded as insignificant or even ineffective. As it has, however, been proven, inter alia by the German-Russian research team DEITINGER\KRUGLIKOV, even smallest pulsating fields have considerable biological effects, if they control and bundle the existing energies of the organism (**fig. 2**).

The origin of the modern “quantum medicine” as granddaughter of the ancient art of healing with magnetic fields dates also back to the eighties of the 20th century, when a group of internationally well-known and highly regarded scientists began to get to the bottom of the matter of the astonishing effect of electromagnetic fields with the methods of the modern research. As very often in the medical research, the quality of the findings as well as the practice rele-

vance of the achieved results was very different, however, astonishing discoveries have been made in this context that are of importance for a therapeutical use.

1.2 Development of technical magnetic field systems with a therapeutic effect

A machine-builder - interested in the art of healing and equipped with considerable research means - himself an engineer with a doctor's degree, succeeded in proving in an interdisciplinary joining together of doctors, physicists, electricians and biologists and in a period of development lasting several years in meticulously precise scientific work, the essentials of what our ancestors thought to know, but were not able to give reasons for:

Electromagnetic fields, especially if they range in the area of the natural magnetic fields can have an extremely positive influence upon the human organism and upon numerous clinical pictures.

Further years passed by with the clinically testing and the more and more comprehensive documentation of the progress achieved. It was as early as in the beginning of this phase that more and more doctors of different disciplines became aware of this project and offered their co-operation. Thus, even at an early stage, it has been possible to produce important proof of the fact that even in the practice by clinical studies and other examinations, how comprehensive the curative effect of the quantum therapy is. The name of the therapy is derived in this context from the "quantum", the smallest identifiable energy particle in the magnetic spectrum that is designed to paraphrase the mode of action of this encouraging form of therapy.

Thus, in running the research project it was discovered and proven that a pulsating magnetic field is in the position to "open" the body cell of the human being on certain preconditions and to supply them with vital ions (H^+ , Na^+ , Ca^+ , K^+). The mitochondria, the power stations of the body cells, absorb those and produce new energy molecules (ATP = AdenoTriPhosphat). Waste products deposited in the cells are removed. The metabolism is activated persistently. The well-being of the human beings is increased.

In order to open the so-called *amplitude-window* of the body cell, the magnetic field and electrical pulse, however, probably have to exhibit an exactly defined strength or form, respectively. This way only, the energy can be transported into the cell and can make the therapy to have an effect. This decisive mode of action is an essential part of the basic quantum-medicine patent (Patent 2: "Transport of ions ...", see **fig. 3 + 8**).

2 The product QRS

2.1 QRS development and application

The origin of a effect-optimising therapy family: For this reason, the main emphasis of the research team has been placed on the optimisation of the therapy in the following years. Numerous indication groups such as allergies, arthrosis, asthma, diabetes, skin diseases, migraine, morbus Alzheimer, morbus Parkinson, tumour diseases, rheumatism and many more were tested in the clinical experiment concerning their response behaviour to the quantum-therapy. The results have been in most of the areas researched into, significantly positive, and even the otherwise rather reserved University medicine expressed its impression (**fig. 5**).

The gained therapy findings have been collected, documented as well as analysed and evaluated scientifically. Based upon them, it has then been attempted to develop an individual and effect-optimised therapy program with rather narrowly-defined field strengths and frequency patterns for each of the diseases.

The very broad range of the effectiveness of the quantum therapy was thereby one of the most remarkable findings of the research, it confused, however, the medically informed public in particular as well because of the insinuated requirement of being a universal remedy. This broad range reflects in an impressing way the credo of the quantum doctors: *The traditional medicine talks about hundreds of various clinical pictures, the symptoms of which it combats. The quantum-medicine only knows one thing: sick cells.* Since, in their opinion, most of them, above all the chronic diseases are always based upon body cells that are impaired in their function. And it can be precisely this root where the quantum-medicine starts at.

The ability of the QRS, to activate the metabolism of the cells, does not only achieve probably good results in the case of illness. Also in the healthy human being, the QRS therapy can be used sensibly. Applied at a high therapy level in the morning, it initiates the waking cycle, in activating not only the cells, but also the production of serotonin of the body and in increasing the oxygen content of the blood clearly. Employed at a low level in the evening, it fosters the production of melatonin of the body, thus eliminating stress factors and initiating the sleeping cycle. The whole organism can regenerate and the life energy comes back (**see fig. 4**).

It is remarkable that as a rule only two applications for eight minutes per day seem to suffice in the case of a healthy human being for this purpose, one in the morning and one in the evening. QRS is almost free of undesired (side-) effects and it seems no need of an additional medication. Since the QRS application increases the mineral salt utilisation of the body enormously, it is then, however, also recommended to observe a mineral salt- and vitamin-rich diet or to take the corresponding multi-mineral preparations. Besides, one should drink a lot of water.

Anti-ageing factor? Even the process of premature ageing perhaps can be slowed down by a regular application of quantum therapy (see 4.2). The body cells are provided continuously with ions, the production of free radicals is repressed, energy-giving ATP-molecules are formed in a large amount. This should have a favourable effect upon the process of ageing.

2.2 Company development and the state of technological development of the QRS

The product QRS (Quantron Resonance System): As early as 1990, the contemporary Quantum Medicine Inc. was founded, under the management of which the first quantum medicine therapy appliance with the designation “QRS Salut 1” was put on the market in 1993. QRS continues to be even today the official designation of the product series, which is patented world-wide and approved as a medical product.

Patents: The fundamental principles of the – world-wide protected – 3 patents of the Dr. Fischer Inc. is the discovery of the so-called amplitude window (**fig. 3**). This facilitates an individual response of the cellular energy centres, that is to say the amplitude window (the correct field strength and frequency pattern) permits the optimal energy transport into the cell. It is to be noted that it is not the technology of the therapy appliance for which a patent was applied for, but its mode of action irrespective of the frequencies and field strengths. This has not been done without reason. Since this concerns a basic patent, namely the discovery of the biological amplitude window and not a technique that can easily be avoided, the appliance can not be copied legally by competitors.

Marketing: In marketing this development one followed the path via the patients for some reasons. Indeed, more than 500 doctors participated world-wide in the QRS project in the

meantime; the research team, however, realised that a large number of the traditionally orientated medical physicians regards the new therapies critically. The difficult march, which has been slowed down by many opinion-formers in the sphere of medicine, of the acupuncture that has in the meantime been highly regarded everywhere, was an admonishing example.

Thus, the QRS has step by step successfully become public knowledge in patient circles in Europe, America, Asia and Australia. This has certainly been an arduous path; the growing success, however, seems to prove the selected marketing strategy is right (**fig. 7**). In the meantime, 50.000 QRS- therapy systems with approximately 30 million applications are said to be in use world-wide without major side-effects. They have their place in private households, but more and more in hospitals and doctor's practices too. Renowned doctors, such as the Italian cancer specialist, Prof. Dr. GRANDI, Torino, employ QRS as well as the medical team of the Russian space research centre under leadership of Prof. Dr. BARANOV.

The next milestone – doctors demand a QRS-doctor-system: Convinced by the unquestionable success of the QRS-system, the medical profession was set in motion with the turn of the millennium. At the first QRS symposium in Darmstadt in 2001, a call for a specific QRS therapy system for doctors and therapists was voiced for the first time. The meanwhile experienced QRS research team took up the development work at once and presented at the end of 2002 the model series QRS 301, which - as a doctor system – supplements the QRS product family consisting of the patient appliance QRS 101 and the mobile appliance QRS 201.

The QRS 301 enables the doctor to store the respective QRS therapy, which is optimal for each of his patients, on a programmable smart card. The patient appliance QRS 101 is able to read this smart card, so that the therapy can be carried out comfortably at home also in absence of the doctor without the possibility of errors and without interruptions. Besides, the doctor treating the patient, is in a position to check on the basis of the smart card at any time, whether the patient has followed the therapy instructions.

Thus, the QRS 301 in conjunction with the patient appliance offers an integrated therapy system to the doctor, which guarantees the therapy success by regular application even without continuous visits to the doctor's practice. Since on the part of the patients, more cost saving rental appliances are available as well, the QRS therapy may really be offered to all patient groups and not only to the exclusive segment of the privately insured patients.

For the doctor himself, possibly a new and simultaneously sensible additional income source opens up with the QRS 301, which could be welcome, especially in the tense financial situation of the health sector. At least two QRS applications daily in the doctor's practice cover the costs of the acquisition or rental of the system. Each patient setting and smart card programming can be invoiced. The regular treatment of the patients with appliances on loan or with purchased appliances of the model series QRS 101 permits a further income. Besides, every QRS doctor has the chance to support the further QRS research work by contributing therapy protocols, for which he shall receive an appropriate fee from the Quantum-Medicine Inc.

2.3 Perspectives of the QRS development

The delivery of the QRS 301 systems to doctors, clinics and non-medical practitioners began in August 2003. In the opinion of GE Fischer, it becomes apparent that the success of the QRS 301 will in the medium-term even eclipse that of the patient appliance QRS 101.

The successful application of QRS within the framework of the (Russian) space research – the system has already been used at the platform ISS – provides hints to the fact that the possibilities of the quantum therapy have by far not been fathomed out completely. In overall charge is hereby the medical leader of the Russian space research, Prof. BARONOV.

A further highly interesting development lies in the so-called NIRP-systems, that is to say the *feed-back-systems*, which allow – under the control of the doctor - a automatic control of frequency patters and field strength depending upon the state of the organism. Pilot experiments have already been completed successfully, so that in the not-too-distant future such systems could be available for the market.

The success of the quantum therapy is as well underlined by a growing appreciation also in the field of the Universities. An American and an European University intend to include the quantum-medicine within the framework of the system-oriented health control into the curriculum of their teaching still in the course of the years 2003/04. In the further course of time, the establishment of the corresponding chairs is proposed.

3. Effectiveness of QR

3.1 General effects

The modes of action generally set off by the QRS are essentially:

- (1) *Elimination of electronic smog* [a frequency is sent along with the QRS, which neutralizes the most common frequency of the electronic smog (=50 Hz) by destructive interference = kill oscillation, smog is eliminated].
- (2) *Floating ions* [experimental proof: ions proceed from food, water and the air; via lungs and stomach into circulation, via blood and tissue water to cell. They help to overcome the barriers of the stomach wall, lungs, vascular walls and cell walls, so that O₂, food and water can be metabolised and as a result this, ATP emerges in large amounts]. This fosters above all the normalisation of the tension of the cell membrane (standard area: 70 – 110 mV, sick persons often: 40 – 50 mV, s. **fig.8**).
- (3) *Vascular nitrogen monoxide (= NO) release* by stimulation of the receptors in the endothelia cells, which in turn cause a rise the calcium-ion concentration, which leads to a pH subsidence. This sensitizes the baroreceptors, the sympathetic nerve is restricted, the vascular dilitation is intensified. The result is an intensified NO-release [experimental proof]. NO, a labile link with a short half-life has a central meaning in controlling the vascular resistance and it controls many central functions such as the neuro-transmitters, the macrophages-cytotoxin, and finally hinders the platelet aggregation.
- (4) *Direct influence of the electromagnetic tension at the vascular membrane* leads in connection with (2) and (3) to a vascular widening, to an improved perfusion of the tissue (microcirculation!), an improved O₂ supply and removal of waste products, an increased cell metabolism and an increased thermal radiation.

3.2 Special Effects

Experimental studies with magnetic fields: Controlled examinations on a laboratory animal with significant results were carried out to prove the *alteration of the floating balance in electrolyte measurements, immunizations of white mice, regression of artificially generated inflammations, reduction of a paw oedema on a rat, as well as an accelerated healing of a bone fracture on a rabbit* (G. Fischer, AU).

With the *vital blood examinations in the dark field*, it was possible to proof positive effects of QRS in the case of serious chronic diseases (mamma-carcinoma, diabetes, depression, etc.) on the human being (Mittelbach, D). An existing “money role formation” at the erythrocytes disappeared, the leucocytes reached again a healthy size (**fig. 6**).

Controlled studies on human beings: Two separately carried out randomized double-blind studies revealed ELF-fields as an effective therapy instrument in the areas of *sensitivity to changes in the weather / headache* (Pelka, D., Fischer, AU s. as well **fig. 9a**); *Polytraumatic injuries* could be treated most significantly better with ELF fields (G. Fischer, AU). The application in *hip-joint near fractures* did not only reduce the complication risk, but also has lead to a noticeable reduction of the stays in hospital (Fischer, AU).

Application and pilot studies with QRS: In using the QRS on *23 cancer patients*, it had been possible to show a beneficial influence on accompanying/iatrogenous diseases (Grandi, I). A *registered doctor having his own independent practice* treated 130 patients in 2000 /2001, primarily with diagnoses of the area of “stroma and connective tissue” with QRS and achieved good response rates at 90 % of cases. Some developments had been “inspiring” for him (Haas, D). At the adjuvant QRS treatment of slipped discs clear advantages turned out soon with respect to the standard therapy (Palme, D).

Within the framework of a *retrospective customer field study* (n = 74), it had been possible to establish that QRS was applied too after one year of long-term use by the customers and that it exhibited emphatic advantages in the treatment of complaints [primarily in the sphere of the movement apparatus and calliper] (Pelka, D; see as well **fig. 9b**). In a *Parkinson-case study*, it was possible to improve with the help of **NIRP** objectively the peripheral micro-circulation-coefficient as well as the motor activity and the condition (Bissessarsingh, Trinidad).

Controlled studies with QRS: In a controlled *tumour-crossover-trial* with 10 patients, it has been possible to show that the oxydative stress [as indicator of the disease progression] developed under therapy significantly better than under placebo (Benjamin AUS; **fig. 9c**). In a comprehensive *gonarthrosis study* (n = 71), not only the pain [and the related laboratory parameters] decreased significantly, but the functionality improved (Barovic, SLO; **fig. 9e**).

In a randomized double-blind *osteoporosis study* ($n = 20$), cross laps [as indicator of the bone reduction rate] developed under verum significantly better than under placebo (Funk, D; **fig. 9f**). In a *fitness study* [$n = 76$] – only under verum – a decelerated rise in the lactate was proven below the anaerobic threshold (Neumann/Pelka D; **fig 9d**).

Numerous further application studies verified the effectiveness of QRS in manifold diagnostical fields (see for example **fig.7**). Naturally, they have still to be supplemented by further clinically-controlled studies and experimental examinations.

3.3 Control of the side-effects

When applying the magnetic fields correctly – as this is always the case in QRS in accordance with the preliminary settings – maximally minor side-effects occur. An eventually at the beginning of the therapy arising accompanying reaction is the so-called cure-reaction (= removal of waste products, alteration of hitherto taken unphysiological forms of posture, etc.). In rare cases, unpleasant feelings, tensenesses arise in the so-called cave-magnetic-sensitive persons, which disappear, when the appliance is switched off. In most of these cases, a cautious habituation is possible.

Absolute contra-indications are [purely as a precaution] pregnancy, implants, disturbances of the cardiac rhythm, serious infections with fever. Relative contra-indications are untreated hyperfunction of the thyroid gland, unclarified pain, cardiac pacemakers, which are older than 10 years as well as epilepsy (except for a vital program).

4 The basis theory of QRS

4.1. Effect of pulsating electromagnetic magnetic fields

Electromagnetic fields are – on the basis of the terrestrial magnetic field that existed already prior to the creation of life – an elementary energy, of which the entire life of the organism is dependent upon. The entire human body with all of its life functions is an open system of energy accumulations, which is affected by a constant, varying influence of energetic fields.

4.2 Effect of the quantum therapy

“Quantum” is the smallest amount of energy of electromagnetic radiation. The basic frequency of the basic current impulses is in the QRS above all tuned to the (mechanical) resonance of the blood- and lymph-vessels as well as the cell membranes. In parallel with this, QRS induces tensions and electrical fields. The basic impulse is followed by a break in order to prevent an habituation process (ratio of 2:3 and 8 minutes duration).

In principle, a healthy organism has stored sufficient energy in order to defend itself against external stress factors or to shield itself from them. But already in the weakened, and even more in the sick organism, the energy reserves are impaired, and in the advanced stage in fact entirely blocked.

The QRS exerts an influence on the electromagnetic body fields (for example in the appliance type QRS 101) and helps in many cases to diminish or to clear disturbances by counter-regulation. Thus, in the case of existing restrictions, it can be accomplished to reestablish the vitality, well being and joie de vivre entirely or partly in many cases.

For the practice, the mode of action of the quantum-medicine could become a blessing (Prof. Linus Pauling, double Nobel-prize laureate). Because the wrong diet, consumption of alcohol and tobacco and a lack of exercise as well as factors that can hardly be influenced, such as the pollution of the environment and the pollution by the omnipresent electronic smog, causes numerous so-called diseases of modern civilization, which impair the health of the cell directly. The traditional medicine puts its trust here in a quick relief, which is absolutely sensible and necessary. The quantum medicine, however, goes a step further. It reactivates persistently the metabolism of the cell very often, as the granted basic patents and numerous scientific examinations – which include as well several double-blind studies – verify impressively.

The fundamental mode of action of the quantum medicine, namely the activation of the cell-metabolism produces, however, impressive results not only in the event of illness. As well in a healthy human being, the quantum medicine seems to be a highly effective protection against pollution of the environment and electronic smog and is capable of compensating a lack of exercise and stress factors. Naturally, the quantum medicine never can and never should be a replacement for a healthy way of life; it, however, helps wherever stress, envi-

ronmental influence, nicotine, alcohol and the wrong diet impair the quality of life and the capability.

More than a side-effect: the anti-ageing factor: The natural ageing of the human organism results from a chronic energy deficiency in the cells (reduction of the metabolism owing to the lack of ion transport). Because of this, too many free radicals arise. Such highly reactive molecules harm the mitochondrial hereditary substance in particular and have otherwise a destructive effect in the cells. Thus, a vicious circle is initiated, the consequence of which is that still many more vital processes can no longer develop optimally. Because of this, the cells keep on having less energy at their disposal, the metabolism becomes weaker, the tissue and organs are ageing and fall chronically ill.

This disastrous process of premature ageing may possibly be slowed down by a regular application of the quantum therapy. The body cells are supplied continuously with ions, the production of free radicals is repressed, energy-giving ATP-molecules are formed in a high number, the ageing process is slowed down. So, with the help of the quantum therapy, at least some of the obstacles towards the goal of healthy age could be dispelled (**fig. 8**).

5. Reference (selected)

5.1. Selected personal experiences

Prof. Dr. med. G. Bothmann, head of the *Fachklinik (specialist clinic) Wolfsburg*, main focus: *Perinatal centre and oncology with oncoplastical operation*: Several individual observations on patients that have been treated with QRS. Impressions, partly confirmed objectively: improvement of the psychological and physical sense of well-being, better coping with stress, less up to no pain, better vascular circulation, better peripheral oxygen supply, shorter stays in hospital after operations, less complications, remedying of sleeping disorders and depressions.

Prof. Dr. G. Fischer, *Hygiene Institute of the University of Graz*, research department for *bioclimatology*: Experimental, pilot and controlled clinical studies on animals and human beings with different diagnoses. Strengthening of the immune response, accelerated reduction of induced oedema, accelerated fracture healing (animal examinations), reduction of sleeping disorders, sensitivity to changes in the weather, acute and chronic rheumatism, polytrauma, acceleration of the healing process in hip-joint-near fractures, increase of the mobility and

pain relief in diseases of the movement apparatus and calliper, improvement of the condition and reduction of the medicine requirements in geriatric illnesses (human studies, partly randomised double-blind).

Prof. Dr. med M. Grandi, *oncologist, University clinic Torino /Italia*: pilot study with 23 oncological patients (18 of which with mamma carcinoma) with different prehistory (Mastectomy, chemotherapy, radiation), which have been treated with QRS. This has been preceded by extensive morphological and functional experiments with tissue cultures. Results: All patients have reacted positively to the treatment. The symptoms “pain reduction, accelerated healing of wounds, increased inflammation reduction (as far as relevant)” were significantly and obviously better than with the customary therapy.

Dr. med. W. Haas, *Internist and general medicine, practice Frankfurt/Main*: Over 150 specific QRS therapies on patients of various diagnoses. Essential experiences: Exceptionally high response rate with negligible side-effects in expert and individual application in many cases that have elsewhere not been treated any more or not been treated successfully, primarily on the following diagnoses: illnesses of the movement apparatus such as arthrosis, degenerative damages of the vertebral column, rheumatic arthritis, fibromyalgies, sports injuries, neuropathies, in addition, circulation illnesses such as cervical syndrome, hypertension, arterial occlusion disease, KHK, diabetic gangrene, neuronal illnesses such as neuropathy, multiple sclerosis, morbus Parkinson, diseases of the respiratory tract such as chronic bronchitis, asthma bronchiale; skin diseases such as neurodermitis, rosazea and psoriasis; other like primary headache, sleeping disorders, depressive syndrome. The most striking findings were (to a large degree concurrent): medicine savings, pain reduction; function improvement, relatively rapid onset of taking effect, nearly free of side-effects.

Prof. Dr. R.B. Pelka, *Chair of Applied Statistics at the University of the Armed Forces in Munich, focus of his research: Biometry and Public Health*: 10 individual observations on patients that have been treated with QRS, several controlled clinical studies (see as well 5.2). Impressions, for the most part confirmed objectively: reduction or remedying of sleeping disorders, increase in the vitality in the case of sleep deficiency, overwork, reduction of the pain and improvement of the functionality in arthritical pain, tensenesses, continual distress; pain reduction and improvement of the functionality in the leg after (not operated) slipped discs; reduction of the pain and side-symptoms in headache of different genesis.

5.2 Experimental proof and controlled clinical studies

- Benjamin DJ et al. QRS-Therapie bei Krebspatienten. Ergebnisse einer Doppelblindstudie, QRS- Symposium, Weiterstadt 2001.
- Bissessarsingh R et al. Ergebnisse einer Fallstudie zur Therapie mit QRS bei einer 73jährigen Parkinson-Patientin. QRS- Symposium, Weiterstadt 2001.
- De Mattei, M et al: Correlation between pulsed electromagnetic fields exposure time and cell proliferation increase in human osteosarcoma cell lines and human normal osteoblast cells in vitro. *Bioelectromagnetics* 20 (3): 177-182, 1999.
- Dertinger, H.: Hochwirksame Elektrotherapie gegen Schuppenflechte. *Spektrum der Wissenschaft*. April 2000.
- Fischer G Gepulste Magnetfelder unterschiedlicher Intensität. Ausgewählte Ergebnisse in: Fischer GE / RB Pelka (Hrsg): QRS-Magnetfeld-Therapie; 1.Int. Symposium Quantenmedizin in Forschung und Praxis. Darmstadt/Weiterstadt (2001).
- Fischer G, RB Pelka Gonarthrose unter QRS: Ergebnisse einer Doppelblindstudie in Maribor bei 71Patienten, Weiterstadt 2001.
- Funk R, RB Pelka Osteoporosebehandlung unter QRS: Ergebnisse einer Doppelblindstudie an der Uniklinik Frankfurt. in: QRS-Symposium, Weiterstadt 2001
- Haas W QRS-Therapieergebnisse aus der Sicht eines niedergelassenen Arztes. 1.QRS-Symposium, Weiterstadt 2001.
- Kobinger W, G Fischer, J Barovic, Z Turk, N Sket: Schmerzlinderung und Steigerung der Bewegungsfähigkeit bei Erkrankungen des Bewegungsapparates durch Magnetfeldtherapie. *Acta Media Austria*, Jahrgang 22, Sonderheft 1, S. 65, 1995.
- Kruglikov, IL, H Dertinger Stochastic Resonance as a Possible Mechanism of Amplification of Weak Electric Signals in Living Cells. *Bioelectromagnetics* 15:539-547 (1994).
- Pelka RB et al. Impulse Magnetic-Field Therapy for Migraine and other Headaches: A double-blind, placebo-controlled Study. *Advances in Therapy* Vol.18, No. 3; 2001 :101-109.
- Pelka RB et al. Impulse Magnetic-Field Therapy for Insomnia: A double-blind, placebo-controlled Study. *Advances in Therapy* Vol.18, No. 4; 2001 :174-180.
- Pelka RB et al. Impulse Magnetic-Field Therapy for Erectile Dysfunction: A double-blind, placebo-controlled Study. *Advances in Therapy* Vol.19, No. 1; 2002 :174-180.
- Pelka RB Fitnesseffekte: Randomisierte Doppelblindstudie mit einmaliger QRS-Anwendung in Bad Neuenahr. QRS- Symposium, Weiterstadt 2001: 53-60.
- Richards, T. L. et al Double Blind Study of Magnetic Field Effects on Multiple Sclerosis. *The J. of Alternative + Complementary Medicine*. V. 3, Nr. 1, 1997, 21-29.
- Trock DH, AJ Bollet, et al A double-blind trial of the clinical effects of pulsed electromagnetic fields in osteoarthritis. *J. of Rheumatology*, 1-16 (1992).
- Zhadin, M N: Review of Russian Literature on Biological Action of DC and Low-Frequency AC Magnetic Fields. *Bioelectromagnetics* 22:27-45(2001).

5.3 Further scientific publication regarding the MF therapy and especially the QRS therapy

- Andrä, W. and H. Nowak: Magnetism in medicine. WILEY-VCH Berlin/ Weinheim /New York/ 1998(ISBN 3-527- 40221-7).
- Barovic J et al. QRS-Therapie bei Gonarthrose-Patienten. 1. QRS-Symposium Weiterstadt 2001.
- Becker, O. und G. Selden: *The Body Electric / Körperelektrizität. Elektromagnetismus und der Ursprung des Lebens*. Leben St. Gallen 1999
- Becker, RO: *Der Funke des Lebens*. Piper GmbH & Co. KG, München 1994.
- Fischer, GE Grundlagen der Quanten-Therapie. HECATAEUS-Verlagsanstalt 1996.
- Fischer GE Gepulste Magnetfelder unterschiedlicher Intensität. Ausgewählte Ergebnisse in: Fischer GE / RB Pelka (Hrsg): QRS-Magnetfeld-Therapie;- 1.Int. Symposium Quantenmedizin in Forschung und Praxis. Weiterstadt (02.Apr. 2001).
- Fischer GE, RB Pelka QRS-Magnetfeld-Therapie. 1.Int. Symposium zur Quantenmedizin am 2.4.2001 (Tagungsband). Weiterstadt, 2001.
- Gaube W, W Kobinger, G Fischer: (Adjuvante) Ganzkörpermagnetfeldtherapie bei ausgewählten Erkrankungen älterer Patienten einer Allgemeinpraxis – Erfahrungsbericht. *Öster.Z.Phys.Med.Rehabil.* H. 3, 9. Jahrgang 1999.
- Grandi M ELF-Felder in den begleitenden/iatrogenen Krankheiten in der Onkologie, am Bsp. QRS. QRS-Symposium, Weiterstadt 2001.
- Haas W QRS-Therapieergebnisse aus der Sicht eines niedergelassenen Arztes. 1.QRS-Symposium, Weiterstadt 2001.
- Kobinger W, G Fischer, J Barovic, Z Turk, N Sket: Schmerzlinderung und Steigerung der Bewegungsfähigkeit bei Erkrankungen des Bewegungsapparates durch Magnetfeldtherapie. *Acta Media Austria*, Jahrgang 22, Sonderheft 1, S. 65, 1995.
- Pelka RB QRS-Kundenfeldstudie. 1. QRS-Symposium Weiterstadt 2001.
- Quittan M, O Schuhfried, GF Wiesinger et al. Klinische Wirksamkeit der Magnetfeldtherapie – eine Literaturübersicht. *Acta Medica Austriaca*. 27.Jahrgang, H.3 (2000), 61-68.
- Warnke, U.: *Der Mensch und die 3. Kraft*. Popular Academic Saarbrücken 1994 (ISBN 3-929929-03-1).

5.4 Further reference regarding in particular diagnosis, instruments, etc.

- Fischer GE, HL König Vorrichtung zum Transport von Ionen, insbesondere Protonen. Europäische Patentschrift EP 0 594 655 B1 (3.7.1992)
- Grohmann G, M Krauß, C Lindloh, G Pöhlmann, G Eidner: NIRP – eine nichtinvasive Methode zur Frühdiagnostik und Überwachung peripherer + zentraler Herz-Kreislauf-Parameter? Teil I: Theoretische Grundlagen und gerätetechnische Realisierung. *Perfusion* 1996; 7: 268-279.
- Grohmann G, M Krauß: NIRP- eine nichtinvasive Methode zur Frühdiagnostik und Überwachung peripherer + zentraler Herz-Kreislauf-Parameter. Studie. Klinik für Innere Medizin III des Klinikums der Friedrich-Schiller-Universität Jena 1998
- Grohmann G, M Krauß, P Pohl, G Pöhlmann, S Müller Die Autokorrelationsfunktion d. Herzperiodendauer z.Beschreibung der statistischen Abhängigkeit zwischen den Herzaktionen – eine mögliche Beschreibungsform zur Früherkennung kardiovaskulärer Erkrankungen? Teil I: Theoretische Grundlagen, *Perfusion* 9, 370-385 (1996). Teil II: Erste Messungen an Patienten, *Perfusion* 9, 395-410 (1996).
- Grohmann G, Krauß M, et al Zur Makro- und Mikrozirkulation am Vorfuß unter verschiedenen Kompressionsdrücken bei gesunden Probanden. *Phlebologie* 2000; 29: 114-23.

- Grohmann, G, M Krauß, S Müller: Vergleichende Untersuchungen zur autonomen kardialen Neuropathie zwischen dem NIRP- und dem ProSciCard-Verfahren bei Patienten mit Diabetes mellitus. *Perfusion* 12; 1999: 392-408.
- Hellige G, PG Spieckermann: NO im Herz-Kreislauf-System. in: *Herz- Kreislauf Transparent*. Hoechst Marion Roussel 1998.
- Herrmann, WM, E. Schärer: Das Pharmako-EEG. Grundlagen, Methodik, Anwendung. Landsberg/Lech; ecomed 1987 (ISBN 3-609-64170-3).
- Itil, TM: Quantitative pharmaco-electroencephalography. Use of computerized cerebral biopotentials in psychotropic drug research. in: Itil, TM(Ed.): *Modern Problems of Pharmacopsychiatry*, Vol. 8: Psychotropic Drugs + the Human EEG. Karger, Basel 1974.
- Kelm, M.: Kardiovaskuläre Wirkungen v.Stickstoffmonoxid + ihre Bedeutung f. d.arterielle Hypertonie.Schattauer Stuttgart 1996.
- Krauß M, G Grohmann: Messung von peripheren Kreislaufparametern mit der nichtinvasiven NIRP-Methode bei pulsierender Magnetfeldtherapie mit dem Quantronic-Resonanz-System Salut 1. *Ärztzeitschrift für Naturheilverfahren* 38, 7 (1997), 491-502.
- Köhnlechner, M: Man stirbt nicht im August. Droemer-Knaur 1976.
- König, H. L. : Unsichtbare Umwelt. Der Mensch i.Spielfeld elektromagnetischer Kräfte.Verlag Herbert König, München 1986 (ISB 3-923819-04-8).
- König, HL, E Folkerts: Elektrischer Strom als Umweltfaktor. Pflaum München 1992. (ISBN 3-7905-0620-6).
- Kruglikov, IL, H Dertinger: Stochastic Resonance as a Possible Mechanism of Amplification of Weak Electric Signals in Living Cells. *Bioelectromagnetics* 15:539-547 (1994).
- Longo, F.M. et al: Electromagnetic fields influence NGF activity+levels following sciatic nerve transection.*J.Neurosci.Res.*55:230-237, 1999.
- Marino, AA: Modern Bioelectricity. Marcel Dekker New York and Basel 1988. (ISBN 0-8247-7788-3).
- Mittelbach J et al. Vitalblutuntersuchungen im Dunkelfeld unter der Therapie mit dem QRS. 1.QRS-Symposium, Weiterstadt 2001.
- Pitt B (Ann Arbor, USA) Symposium im Rahmen der 46. Jahrestagung des „Am. Coll. Of Cardiology“ in Anaheim/Calif. 1997.
- Schmidt HH: NO, endogener Botenstoff und Zellgift. *Med.Mo.Pharm.*, 17,6, 1994:168-85.
- Scriba PC, S Endres: NO. Mittler, Missetäter und Medikament. Sonderheft. *Internist* 1997. 38:405 Springer 1997
- Thews, G. und P. Vaupel: Vegetative Physiologie. 3. Aufl.. Springer Berlin 1997.
- Varga, A: Grundzüge der Elektro-Bio-Klimatologie. Fischer Heidelberg 1981
- Varga, A.: Elektromog. Varga 1995 (ISBN 3-88463-009-1).
- Warnke, U: Einrichtung zur Beeinflussung von elektrischen und magnetischen Feldern niedriger Frequenz. Europäische Patentschrift EP 0 621 795 B1.
- Warnke, U.: Der Mensch und die 3. Kraft. Popular Academic Saarbrücken 1994 (ISBN 3-929929-03-1).
- Zhadin, M N: Review of Russian Literature on Biological Action of DC and Low-Frequency AC Magnetic Fields. *Bioelectromagnetics* 22:27-45(2001).

5.5 Import developers and researchers on QRS from 1986 to 2000 (in alphabetical order)

Name	Location of activity	Project of development
Prof. Dr. V.M Baranov	Med. Fak. Moskau, RUS	Med. Ltg. Weltraumforschung; QRS unter Weltraumbedingungen
Prof. Dr. R.O Becker	University New York, USA	Grundlagenforschung, Pionier der Elektrobiologie
Prof. Dr. G. Fischer	Universität Graz, AU	Medizinische Prüfung, Klinische Tests
Dr. GE Fischer	Gf. der Prof. Dr. Fischer AG, D	Maschinenbauer, Patentinhaber QRS, Mitentwickler.
Prof. Dr. Ing. SD Javanovic	Uni Belgrad, YUG	Medizintechnik & Kybernetik, Miterfinder
Prof. Dr. H.L. König,	Technische Uni München, D	Elektrophysik, Miterfinder von QRS, Forscher über Magnetfeldwirkungen
Prof. Dr. M. Kraus	Technische Systemforschung, D	Mess-Systeme für QRS-Wirkungen, u.a. NIRP, Mitentwickler von 301
Prof. Dr. Saunders	Univ. of West Indians	Sichelzellenanämie, Med. Forschung mit QRS + NIRP
Prof. Dr. J. Waldmann	Chemnitz, D	Forschung: QRS-Diagnose, NIRP-Methode

6 Illustrations (Figures)

No.	explanation	page
1	Limit values for pulsating magnetic fields: medical, professional, population (WHO)	4
2	QRS- exposition: Temperature difference after 8 minutes as a first proof of its activity.	4
3	QRS: The 4-step-therapy – patented world-wide: 1 disruptive field shielding, 2 transport of ions, 3 resonance phenomenon, 4 bio-feedback	6 + 8
4	QRS- frequency spectrum in the three program variants Basis und Vital (for each intensity level 5), furthermore in Relax (intensity level 4).	7
5	Characteristic therapy frequencies in electromagnetic fields and their categorization within the QRS family (frequency range of the QRS family from 0.1 through 10.000 Hz).	6
6	Changes of the blood picture in a 62-year-old male cancer patient and a 45-year old female cancer patient after 1 or 8 minutes of QRS application, respectively (taken by the dark field camera).	11
7	Application examples of QRS within the framework of the Europe-wide doctor's study (intermediate state of 1998)	8+ 12
8	A possible mechanism of ageing (diminished ATP production and too many free radicals) and a positive effect of QRS on the supplying of the cell with nutrients and oxygen as well as an increased release of ATP and a decreased release of free radicals.	6+ 15
9	Important results of the study: headache, patient – success assessment, oxydative stress in tumour, lactate development in sport, knee pain in gonarthrosis, crosslaps in osteoporosis.	11+12