

CHARACTERISTICS TO BE COMPARED	US-PATENT US-A-5 690 109 (GOVIND RAKESH ET AL) NOVEMBER 25, 1997	PENDING PATENT PCT/MX 2003/000105 NOVEMBER 28, 2003
Principal Proposal of the Patent	Method	Apparatus and corresponding Method
Utilized Physical Principle	Nuclear Magnetic Resonance.	Nuclear Magnetic Resonance
Utilized Device	A modified conventional Nuclear Magnetic Resonance Device Sub-utilized, since neither Field Gradients nor Emitting/Receiving Radio Frequency Antennas of the Device are used.	A modified conventional Nuclear Magnetic Resonance Device Field Gradients and Receiving Radio Frequency Antennas of the Device are <u>only</u> used for applications on a Microscopic Level
Used Radiation Types	Electromagnetic Non-Ionizing Radiation	Electromagnetic Non-Ionizing Radiation
Hardware created	No	No
Hardware added to the Device	1) Emitting Radio Frequency Antennas denominated selective Radio Frequency Generators 2) Electronic High Velocity Interrupter	1) Manually Controlled Digital Selector/ Filter 2) Frequency Matrix Monitor 3) Frequency Images Monitor 4) Control Panel 5) For applications on a Microscopic Level we would provide new Emitting Radio Frequency Antennas.
Selective Use of Resonance Frequencies	Yes	Yes
Described Application Profile	Only on a Microscopic Level and with a very limited application profile	On both a Microscopic Level and a Macroscopic Level and with an extended application profile
Method of the proposal	Only for Therapy	For Diagnosis and Therapy
Selective Energy Release within the Modality of Therapy	Yes, but with a Low Efficiency , since there is NO Specialization of the Radiation	Yes, but with a Large Efficiency , since there is a Very High Specialization of the Radiation
Specialization of the Application/Radiation for the Modality of Therapy	No	Yes, very high , due to the Selective Manipulation of the Internal Parameters of the Radiation

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Emitting Radio Frequency Antenna	Within this proposal denominated Selective Radio Frequency Generator; one or another is included depending on the Resonance Frequency Value which is needed to treat the selected “target” cells	We utilize the antennas of the Apparatus with its respective Radio Frequency Emission Ranges for both the Diagnosis and the Therapy within the applications on a Macroscopic Level. Nevertheless, for the Modality of Therapy we selectively manipulate some of the Internal Parameters of the selected Resonance Frequencies, such as Power and Polarity in order to destroy or provoke dysfunctions – according to the therapeutic requirements– on viruses, bacteria, tumors and other biological “target” structures. We avoid the Excessive Heating (Hyperthermia) with the aid of Physical Mediums and resolve different types of therapeutic problems For the Modality of Therapy and only within the application on a Microscopic Level, we provide new Emitting Radio Frequency Antennas
Receiving Radio Frequency Antenna	Its use is not specified	Only used for the Modality of Diagnosis on a Macroscopic Level
Modality of Diagnosis Specified Method applied	On a Macroscopic Level No specification On a Microscopic Level There is only an imprecise description of an experimental and/or a test procedure for the Quantification of the Resonance Frequency which is compatible with the "target" cells within a group of values of pre-established Resonance Frequencies with their respective Emitting Radio Frequency Antennas	On a Macroscopic Level We utilize the Emitting/Receiving Radio Frequency Antennas of the Apparatus with its respective Radio Frequency Emission Ranges and due to the incorporated Hardware we are able to quantify the Diagnosis On a Microscopic Level For the biological structures of therapeutic interest, a determination of their respective Resonance Frequencies can be achieved due to the use of the External Hardware of the Apparatus (used for the Quantification of the Diagnosis)
Modality of Diagnosis utilized Hardware	1) including various Emitting Radio Frequency Antennas which denominate Selective Radio Frequency Generators for experimental tests; and on the basis of the results obtained, a selection of the Resonance Frequency is carried out	1) Manually Controlled Digital Selector/ Filter 2) Frequency Matrix Monitor 3) Frequency Images Monitor 4) Control Panel

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Externally utilized Hardware of the Apparatus	<ol style="list-style-type: none"> 1) Emitting Radio Frequency Antennas 2) Thermo pairs 	<ol style="list-style-type: none"> 1) Oscilloscope 2) Spectrum Analyzer 3) Spectroscopy via Nuclear Magnetic Resonance
Modality of Therapy Specified Method applied	<p>On a Macroscopic Level No Specification; even though, they mention – without giving fundamental reasons– that the results obtained within the experiments on a Microscopic Level can be extrapolate to this Level</p> <p>On a Microscopic Level Including an Emitting Radio Frequency Antenna which is denominated Selective Radio Frequency Generator with the specific value of the Resonance Frequency which is needed in order to treat the “target” cells, may they be within a culture medium or within a living organism.</p> <p>The time for the application (which is cyclic and contains three steps) is the so called Relaxation Time T₁</p> <p>There is no Manipulation of the Internal Parameters like Power and Polarity of the selected Resonance Frequency. These parameters are maintained as they were designed for the Modality of Diagnosis</p>	<p>On a Macroscopic Level We utilize the Emitting Radio Frequency Antennas of the Apparatus with its respective Radio Frequency Emission Ranges, but additionally, we selectively manipulate some of its Internal Parameters like Power and/or Polarity in order to specialize the selected radiation. By this means, we increase its efficiency. We do not depend on the specific time range of the Relaxation Time T₁</p> <p>On a Microscopic Level We propose to provide new Emitting Radio Frequency Antennas. The rest of the procedure would be the same as described above. But we want to point out that we utilize External Hardware regarding the aforementioned Apparatus in order to obtain the Quantification of the Diagnosis</p>
Modality of Therapy utilized Hardware	<ol style="list-style-type: none"> 1) Selective Radio Frequency Generators (Emitting Radio Frequency Antennas) 2) Electronic High Velocity Interrupter 	<ol style="list-style-type: none"> 1) For the applications on a Microscopic Level, we propose to provide new Emitting Radio Frequency Antennas 2) Low Frequency Signal Processor/Modulator 3) Radio Frequency Pulse Amplifier 4) Central Pulse Control
Hyperthermia created during the Application	<p>Yes Only monitored. Provokes Harmful Side Effects</p>	<p>Yes Evacuated and/or Eliminated with the aid of Physical Mediums. Without Harmful Side Effects</p>
Use of complementary Therapies	<p>Ionizing Radiation. Chemotherapy (without specifying the type). Use of Fluorocarbons as Contrast Substance Surgical Operation</p>	<p>Without excluding them, we are able to prescind of the existing Therapies</p>