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# "Intelligent Matter" in Book Form is Able to Influence Cellular Activity

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**ABSTRACT**

Quantum entanglement is a phenomenon that happens when pairs or groups of particles are generated in such a way that the quantum state of each particle cannot be described independently of the others – even when the particles are separated by a large distance. Intelligent matter is a material or substance that reacts to external conditions and can even trigger them. Intelligent matter which has been achieved through quantum entanglement should be able to interact with the environment by receiving and responding to external stimuli while adapting its inner structure.

In this present in vitro study we investigated the cellular effects of the world's first intelligent matter in book form, which has been achieved through the process of 90.10. quantum entanglement with a quantum processor, the 90.10.-CUBE. The book "The MedBed Effect: Self-healing with Quantum Energy" by Anne Hild and Oliver Schacke was the matter used. From the cube and through the quantum entanglement it got transferred information developed for the 90.10. MedBed, but in a slightly modified form serving the purpose of the book. A book of the same size and thickness was used as the control, but its matter was regular, i.e. not intelligent. The experiments were conducted with connective tissue fibroblasts and functional neutrophils as they belong to a major cell type of the innate, non-specific immune system.

For connective tissue fibroblasts, not only metabolic activity and vitality, but also regeneration and viability after exposure to exogenous oxidative stress was significantly improved. The observed improvement in basal cell activity stimulated by the intelligent matter of the book could result in an improved activity and well-being of an organism. In cells of the innate immune defense in the blood, the generation of superoxide anion radicals was stimulated significantly in the course of an oxidative burst suggesting that improved defenses against unwanted microbial pathogens entering the blood may be the result in vivo.

Taken together, we were able to demonstrate that the world's first intelligent matter in book form, achieved through the process of 90.10. quantum entanglement with a quantum processor, had a significant impact on cell activity, which could promote human's well-being.

**Keywords:** Intelligent matter; 90.10. MedBed; Quantum Entanglement; Fibroblasts; L-929; Cell Viability; Cell Regeneration; Functional Neutrophils; HL-60; Oxidative Burst; Cell Culture

## Introduction

Einstein, Podolsky and Rosen (EPR) as well as Schrödinger [1-2] were the first who recognized and described a physical phenomenon that occurs when a group of particles interacts in such a way that the quantum state of each particle in that group cannot be described independently of the state of the others. This also includes a state in which the particles are separated by a long distance. The term for this phenomenon is "quantum entanglement" and was originally called "Verschränkung" by Schrödinger, et al. [3-6]. Quantum entanglement has also been described in condensed matter systems [7]. Intelligent matter is a material or substance that reacts to external conditions and could even trigger them [8-10]. Intelligent matter which has been achieved through quantum entanglement is able to interact with the environment by receiving and responding to external stimuli while adapting its inner structure [11].

Our previous findings of the 90.10 quantum entanglement and the 90.10. Med Bed have demonstrated beneficial cellular effects [12,13]. The 90.10. MedBed is a virtual bed that is quantum entangled with a 90.10.-CUBE, the quantum processor. This MedBed runs the operation system 9010MedBedOS and has the cube's basic potential, which means it can teleport quantum energy and frequencies into matter.

In the present study we investigated whether the world's first intelligent matter in book form, achieved through the process of 90.10. quantum entanglement, can also have cellular effects.

## Material and Methods

### Activation and Exposure of Cells to the Intelligent Matter

The world's first intelligent matter in book form was examined. The book "The MedBed Effect: Self-healing with Quantum Energy" by Anne Hild and Oliver Schacke was used as matter for the 90.10. quantum entanglement. Due to the quantum entanglement, the copy of the book provided should have intelligence that should enable it to generate energetic reactions. To activate its abilities, the intelligent matter in form of a book was picked up and the command "Ninety Ten Energy" was spoken. With this, the energy output of the book was retrieved to the level of the start value of 10 QEPPs (Quantum Energy Power Points) as specified in the configuration. Right afterwards, a second command "Enable All Frequencies" was spoken. For energy enhancement, the command "Double the Energy" was spoken 10 times. This doubled the starting value tenfold and led to a final output of 10,240 QEPPs. Before each following new test series, the energy was first switched off with the command "Stop the Energy" and then switched on again as described above. The cells had direct contact with the intelligent matter of the book for the duration of the experiment. A book of the same size and thickness was used as a control, but its matter was not intelligent. At a distance of at least 30 cm, the test book and the control book were incubated directly with the cells.

### Cultivation of connective tissue fibroblasts

The investigations were performed with connective tissue fibroblasts (cell line L-929, ACC-2, Leibniz Institute DSMZ, Braunschweig, Germany). Cells were routinely cultured in RPMI 1640 with 10% growth mixture and 1% penicillin/streptomycin in a gassed incubator at 37°C in an atmosphere of 5% $CO_2$ and 95% air at approximately 100% humidity. For the investigations presented here, the cells were taken from 80 to 90% confluent mass cultures.

### Examination of Cell Vitality After A 24-Hour Exposure

The connective tissue fibroblasts were seeded at different cell densities in 8 wells of two 96-well culture plates. After the cells had attached and spread within 24 hours after seeding, one plate was exposed to the book of intelligent matter. The other was cultured with the control book. After 24 hours of exposure, the culture medium was replaced by a culture medium containing 10% of the water-soluble tetrazolium dye XTT (= sodium-3'-[1-phenyl-aminocarbonyl)-3,4-tetrazolium]-bis(4-methoxy-6-nitro) benzenesulfonic acid hydrate; Xenometrix, Switzerland). The cells were further incubated in the incubator and the optical density (= color change) at ΔOD = 450 – 690 nm was measured with the Elisareader (BioTek ELx808 with Software Gen 5 Version 3.00) at definite time points. Due to the activity of the mitochondrial enzymes in metabolically active cells, the initially slightly yellowish dye was cleaved, and an orange color developed. The extent of the color change was proportional to cell vitality. A total of four experiments was carried out.

### Examination of Cell Viability After Exposure to Exogenous Oxidative Stress

In order to investigate the ability of connective tissue fibroblasts to survive oxidative stress with and without the support of the book's intelligent matter, the cells were seeded at a density of 50,000 cells/ml into 96-well multiwell culture plates. After complete attachment and spreading of the cells within 48 hours after seeding, they were incubated with the two books. A concentration of hydrogen peroxide in the culture medium of 250 µmol/l was applied for 24 hours. Cell cultures without hydrogen peroxide served as corresponding internal controls. Thereafter, the cells were washed with phosphate-buffered saline. To determine cell viability, fresh phosphate-buffered saline containing calcium and magnesium and the water-soluble dye XTT (see above) were added. The subsequent incubation time in the incubator was 90 minutes. After the 90-minute reaction time, the color change of each well was measured at ΔOD = 450 – 690 nm with the Elisareader (BioTek ELx808 with Software Gen 5 Version 3.00) and compared

with each other. A total of two experimental series, each with quadruplicate parallel experiments, was performed.

**Examination of Cell Regeneration**

In these test series, the effect of the intelligent matter of the book on the granulation phase was examined. This stage is characterized by an increased proliferation and migration of connective tissue cells to fill up a defect within the skin. The connective tissue fibroblasts were seeded at a density of 200,000 cells/ml in the four compartments of a silicon frame (4 well-culture inserts; ibidi, Graefelfing). The individual compartments were separated from each other by a 500 µm thick silicone strip. Because of the special adhesion area of the silicone frame, it adhered firmly to the bottom of a culture dish, thus forming a cell-free space that the cells could recolonize by proliferation and migration after the frame was removed. When reaching confluency 24 hours after cell seeding, the silicone frames were carefully removed with tweezers. A sharp cell border between the compartments was obtained. The cells that had contact with the book of intelligent matter as well as those which had remained with the control book were now able to colonize the cell-free area. After 14 hours they were fixed with 100 % methanol, stained with Giemsa's azure eosin methylene blue solution (Merck, Darmstadt, Germany) and air-dried. After micrographic documentation, the extent of the residual cell-free area was analyzed by a specialized software working with artificial intelligence (Ikosa AI, KLM Vision, Graz, Austria). The data were evaluated using Microsoft Excel. Three experiments were performed and colonization was determined at four sites per sample in each experiment.

**Cultivation of Promyelocytes and Differentiation to Functional Neutrophils**

The investigations were carried out with human promyelocytes (cell line HL-60; ACC-3; ECACC 98070106; Leibniz Institute DSMZ - German Collection for Microorganisms and Cell Cultures, Braunschweig, Germany). Cells were cultured in RPMI 1640 culture medium containing 10% growth mixture and 1% penicillin/streptomycin and incubated in an incubator at 37°C in an atmosphere of 5% $CO_2$, 95% air and near 100% humidity. The non-adherent cells were routinely cultured as suspension cultures and subcultured regularly twice a week. The differentiation of these cells into cells capable of initiating an oxidative burst upon stimulation was done by adding 1.5% dimethyl sulfoxide to the culture medium for six days.

**Examination of Oxidative Burst**

An in vitro model was used to investigate whether the intelligent matter of the book can influence the generation of endogenous superoxide anion radicals by functional neutrophils. Throughout the differentiation period, the cells were exposed to the intelligent matter of the book. Cells that were kept with the control book served as appropriate controls. Finally, the cells were collected and washed in several centrifugation steps at 190 x g. By adding a phorbol ester (phorbol-12-myristate-13-acetate, Sigma-Aldrich, Taufkirchen, Germany) to the reaction mixture, the differentiated cells were stimulated to undergo an oxidative burst in which superoxide anion radicals were generated. The radicals caused a cleavage of the tetrazolium dye WST-1 (Sigma-Aldrich, Taufkirchen, Germany), which was also added to the reaction mixture. The cleavage of the dye was directly related to the amount of oxygen radicals, i.e., the more reactive radicals were present in the reaction mixture, the more pronounced was the cleavage of the dye and the change in optical density (= color). The optical density was recorded at t = 0 and definite time points with the Elisa reader (BioTek ELx808 with software Gen 5 version 3.00) and calculated with Microsoft Excel.

**Statistical Analysis**

Statistical analysis of the test results was done using the non-parametric two-tailed Wilcoxon-Mann-Whitney test.

## Results

**Vitality of Connective Tissue Fibroblasts**

The intelligent matter of the book stimulated cell vitality by 17.6 ± 8.8 % (mean value ± standard deviation) when compared to the control book. Despite the large standard deviation, the increase was statistically significant ($p \leq 0.05$). The peak value in one experiment was almost 28 % stimulation of cell vitality.

**Regeneration of Connective Tissue Fibroblasts**

In the cell regeneration study, the remaining cell-free area in the cells that had been exposed to the intelligent matter of the book was only 11.1 ± 2.5% of the total area (mean value ± standard deviation). In the case of the cells that had stayed with the control book, this remaining cell-free area was 18.1 ± 1.5% (mean ± standard deviation). Both values were statistically significantly different from each other ($p \leq 0.01$). The result showed that the area colonized through cell proliferation and migration under the influence of the book's intelligent matter was significantly larger than the area colonized by cells that had contact with the control book. Thus, cell regeneration was significantly stimulated by the intelligent matter of the book. This fact is also documented in the comparative micrographs in Olympus IX 50 inverted microscope with an Olympus planachromate 10x and an Olympus E-10 digital camera with 4-megapixel resolution and bright-field illumination (Figure 1).

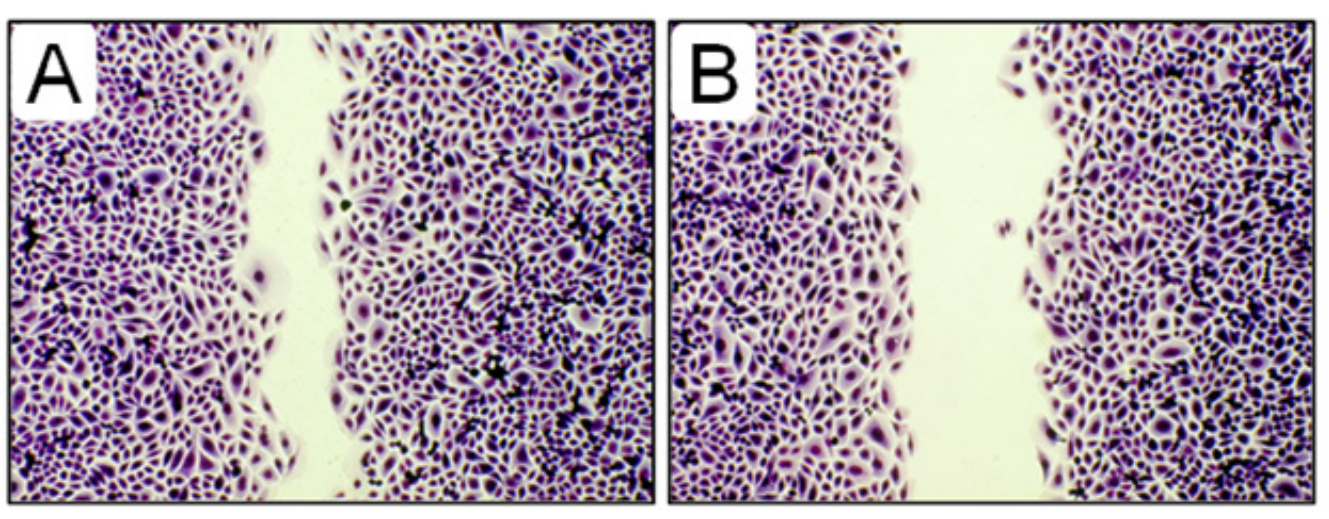


**Figure 1:** Microscopic images of the regeneration process after fixation and staining of connective tissue fibroblasts after a regeneration time of 14 hours. (A) Colonized area of a representative cell culture under the influence of the intelligent matter of the book. (B) Colonized area of a representative cell culture that was kept with the control book. Note the significantly higher colonization of the cell-free area in A.

**Viability of Connective Tissue Fibroblasts After Exposure to Oxidative Stress**

In comparison to the control without hydrogen peroxide, the viability of the cells that had been kept with the control book was only 73.6 ± 2.1% after 24 hours (mean value ± standard deviation). For the cells positively influenced by the intelligent matter of the book, the viability of the cells was 83.9 ± 2.9% (mean ± standard deviation). The difference was statistically significant ($p \leq 0.05$).

**Generation of Endogenous Radicals by Functional Neutrophils**

Cells of the primary innate immune defense that were exposed to the intelligent matter of the book, whose abilities were activated by the voice commands mentioned above, enhanced the generation of superoxide anion radicals during an oxidative burst by 24.6 ± 5.5% (mean ± standard deviation; $p \leq 0.01$) when compared to cells incubated with the control book.

## Discussion

Metabolic activity as an alternative for measuring proliferation is widely accepted to represent the physiological state of a cell. While cell number is an absolute measure of cell proliferation, metabolic activity is more a measurement of cell health and vitality. The observed stimulation of cell vitality caused by the intelligent matter of the book means that cell metabolism and energy production were improved, which in turn may cause improved activity and well-being of an organism.

In vivo, the cell regeneration/wound healing process can be divided into three distinct phases: cleaning phase, granulation phase and differentiation phase [14-16]. In this study, the granulation phase, characterized by the occurrence of migration and proliferation of fibroblasts for closing a skin defect [17], was simulated to examine the effect of the intelligent matter of the book. Cell regeneration was also significantly stimulated by the intelligent matter of the book demonstrating that the physiological state of the cells in respect to proliferation and migration has been positively influenced to colonize a cell-free area faster than the cells incubated with the control book.

Oxygen possesses two contradictory properties for biological systems, which are beneficial effects such as the generation of large amounts of adenosine-5-triphosphate (ATP) through oxidative phosphorylation [18] on the one hand and potentially damaging side-effects [19-20] on the other. Oxidative stress occurs when the balance between pro-oxidant and antioxidant situations in the organism causes an excess of reactive oxygen species and has been recognized to play a central role in the pathophysiology of many disorders [21].

In the present experimental setup we examined a situation in which an excess of reactive oxygen species comes from the cellular environment. Reactive oxygen species are generated as a response by a number of traumatic factors acting on our body. Among these are ultraviolet radiation, cigarette smoking, alcohol, nonsteroidal anti-inflammatory drugs, ischemia-reperfusion injury, chronic infections, inflammatory disorders, electromagnetic fields and many others [22,23]. According to Kwolek-Mirek and Zadrag-Tecza [24] "viability is defined as a percentage of live cells in a whole

population." Our results clearly showed that the intelligent matter of the book improved cell viability after exposure to a defined artificial oxidative stress as simulated in this study.

The innate, nonspecific immune system is actually composed of cellular and physical defenses that are not related to a prior exposure to specific pathogens [25]. Neutrophilic granulocytes (polymorphonuclear neutrophils) represent the largest group of leukocytes. Besides natural killer cells, they represent the first line of defense against pathogenic microorganisms in the blood. They fight them by releasing reactive oxygen species (ROS) during an oxidative burst [26]. For an overview of the role of neutrophils in health and disease, see [27,28].

We used an in vitro model to investigate whether the intelligent matter of the book was able to influence the generation of endogenous superoxide anion radicals when compared with the untreated control book. The results demonstrated that the primary innate immune defense could be strengthened by the intelligent matter of the book.

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