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CONFIDENTIEL

RESEARCH PROJECT

The PRIORE Effect, recognized in particular for its immuno-stimulation effects, is explored within a Clinic of Globality.

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The work of Antonio PRIORE and his collaborators which found our research project.

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The work of Antonio PRIORE and his collaborators which found our research project.

Our research project has a multidisciplinary dimension. It is based on works done by other research teams, including among them institutional researchers recognized in their respective fields (medicine, oncology, parasitology, physics), and who collaborated with the discoverer Antonio PRIORE. This works have shown that the application of a particular set of electromagnetic fields can heal in large proportions animals with different particularly virulent diseases : grafted and induced tumors, parasites. Clinical trials in humans have been very encouraging.

Professor Raymond PAUTRIZEL (immunology and parasitic biology specialist, director of university laboratory and INSERM in Bordeaux, WHO expert, corresponding member of the academy of medicine, commander of academic palms, ...) and his collaborators, in particular, have shown that this set of electromagnetic fields stimulates in a very important way the immune defenses of the body, especially the humoral defenses.

Public institutions, notably the Ministry of Research and Industry, and two industrial companies (Leroy-Somer, Sovirel) have contributed actively and substantially to this research activity.

Unfortunately, conflicts of interest linked to stakes at several levels (political, academic, industrial, media, intellectual property, ...) jeopardized further research. On the death of Antonio PRIORE in 1983, the lack of financial means definitively halted the continuity of the work and the momentum deployed so far by the researchers.

In his resounding work, Jean-Michel GRAILLE, journalist for the great daily Sud-Ouest, placed this discovery well in its historical context, by presenting its irrefutable content and by pointing out all the events, various and varied, which hindered the completion of the latest explorations in progress. This point is extremely important. The purpose of these explorations was, under the impetus of CNRS physicists and industrial engineers in charge of this issue, to continue updating the data that were lacking for understanding the physical processes implemented in the PRIORE machines. More precisely, these physical processes are located at the level of electromagnetic field / magneto-plasma interactions. Correspondingly, biological efficiency should be explored by varying the values of the physical factors producing these physical processes.

Although the published results of biological and clinical experiments attest to the effects of the PRIORE Effect, the excessive fixation of the "debates" (which quickly turned to controversies, polemics, quarrels, ...) on the notion of healing associated exclusively with cancer, at a time when anti-cancer immunotherapy was in its infancy at most, froze thinking. However, including such a process more widely in the field of immunostimulation reveals its major scopes. But for this, the researcher must strive in all circumstances not to give up in the face of complexity.

The main results and lessons of research carried out in the context of the discovery of Antonio PRIORE.

- The biological effects obtained result from a combination of different electromagnetic fields, while the experimenters observed no effect by applying these fields separately,

- The experiments were carried out and the effects observed and reproduced on numerous occasions. Four versions of these machines were successively produced,

- In contrast to most treatments, the action of these electromagnetic fields **does not supersede the body's natural potential,**

- The process is **non-invasive**,

- The biological data clearly demonstrated immuno-stimulation phenomena, in particular. It has thus been demonstrated, among other things, that these electromagnetic fields **do not directly destroy** the inoculated **pathogenic agents** (grafted tumor cells, induced tumors, parasites), particularly virulent and leading inexorably to the death of the animal, **but stimulate the immune system** to such an extent that the latter can **rid the body of these pathogens**.

The phenomena of **immune memory** and **therapeutic facilitation** have been demonstrated. Animals acquire at varying degrees an immune resistance, which lasts over time, against inoculated pathogens[1].

The very significant improvement in the immune response against isolated antigens[2] (i.e. separated from the pathogen) has also been demonstrated.

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1 - Let us quote the case of *Trypanosoma equiperdum* (T.e.), widely used for many experiments within the research framework on the PRIORE effect. This parasite presents the phenomenon of antigenic variation allowing it to escape the immune defenses of the host organism. In mice and rats, all controls die after three days. On the other hand, under the action of PRIORE electromagnetic fields, the titer and specificity of the antibodies produced by the animal's immune system make it possible to overcome this parasite in proportions greater than 80% of the animals treated, and reach 100 % according to the experiment. When the necessary exposure doses (durations, intensities) are respected, the animals are definitely cured. For lower doses, a new parasitaemic wave may appear with an antigenic variant different from the first. However, the first treatment leading to the first negativation facilitates the immune reaction. Indeed, the application of electromagnetic fields induces the production of antibodies, this time specifically directed against the new variant. Another remarkable fact is that the duration of exposure allowing the healing of animals is reduced. The state of immunity conferred by these immunostimulation processes protects the animal against successive re-infestations over long periods of time, thus revealing a strong activation of the immune memory.

2 - in particular, Botat1 (a surface glycoprotein, the dominant antigenic variant of *Trypanosoma equiperdum*), and an enzyme (a peroxidase).

This stimulation of the immune system is characterized in particular by an increase in the titer of the antibodies[3] specific to the inoculated antigen. These antibodies (characterized by different properties), the kinetics of IgM, IgG and other biological factors, were measured by different experimental techniques.

These conclusions were obtained thanks to the work of Professor Raymond PAUTRIZEL and his team (univ. Bordeaux II, INSERM), involved in research on the PRIORE effect, and other researchers including André LWOFF (Nobel Prize, IRSC, Villejuif & Institut Pasteur) and Stratis AVRAMEAS (IRSC, Villejuif), Pierette CHATEAUREYNAUD (CNRS, univ. Bordeaux I), Marcel René RIVIÈRE (National School of Medicine, Brest & IRSC, Villejuif), Ilya CHOUROULINKOV (IRSC, Villejuif), in particular,

- Hypocholesterolemic effects, improvement of skin healing, recovery of organic tissues affected by pathogens, have been observed,

- The biological and therapeutic effects have been observed, analyzed, measured in mammals, with animals belonging to different species (mice, rats, rabbits, etc.). Clinical trials on humans have been very encouraging,

- The experimenters did not find any **harmful side effects**. Unlike what occurs with other physical treatments (diathermy or ionizing radiation : X-ray radiotherapy, proton therapy, hadrontherapy), or pharmaceuticals, the experimental animals only exposed to the PRIORE fields did not undergo any alteration in their state of health, and animals cured of pathogens returned to their initial good general condition. These conclusions should not be surprising given the nature of the electromagnetic components which constitute the PRIORE "radiation" and the powers brought into play : these fields are **not ionizing** and do **not** produce **thermal effects**.

3 - produced by B lymphocytes.

The originality of the subject of our research project.

In summary, the originality of our research project therefore lies in what characterizes the PRIORE Effect :

- the immune system stimulation properties,
- the activation of immune memory,
- the phenomenon of therapeutic facilitation,
- the therapeutic non-alienation,
- the absence of side effects,
- the synergy of the electromagnetic fields used,
- the non-invasive, non-ionizing and non-thermal nature of these fields,

and this with regard to :

- the various pathologies likely to be concerned,
- rapidly applicable applications (compared to the long research which leads to the production of a pharmaceutical product, often with limited indications and inseparable contraindications),
- potential issues related to this effect.

Our research objectives.

The objective of the first step of our research project is to validate and optimize the biophysical process that we recommend.

The expected biological effects depend on the values of the physical parameters that characterize these electromagnetic fields. The correlation which must appear between the values of the physical parameters explored and the biological parameters analyzed will allow to define optimal values for a better therapeutic efficacy.

To do this, we will take back the biological model that demonstrated in a striking way the immunostimulation effects and therapeutic effects on living animals : the African trypanosomiasis *Trypanosoma equiperdum*.

The other biological models proposed by our partners make it possible to address the cellular and molecular aspects that may be involved in the immune response, and to extend the study to the level of inflammatory processes generally involved in parasitic diseases (such as trypanosomiasis)

The stakes and the potential implications.

- The aims : diagnostic, preventive, therapeutic and biotechnological.

- The fields of application :

- numerous perspectives of fundamental and applied research starting from the first validations and continuing in the long term,

- rapid applications in the field of experimentation and veterinary applications,

- tests in humans fairly quickly conceivable from the first validations in animals (because no undesirable side effects known to date) : infectious diseases, parasitic diseases,... and in the field of oncology,

- biotechnological obtainments, especially specific antibodies [AYARI-BALANA, 2004].

- The instrumentations : of different ranges as varied as the clinical, biotechnological and scientific approaches conceived ; especially :

- variable exposure volumes (from the small animal to the adult man),

- variable powers according to the pathologies treated,

- shapes adapted to their functionalities.

- The activities :

- multidisciplinary research,

- approaches and practices of care,

- training adapted to these new clinical approaches,

equipment for :

- veterinary laboratories and clinics,

- research laboratories around the biological effects produced by this process,

- hospitals, clinics and various places designed for diagnosis, prevention and care ; from early childhood to the elderly.

- The PRIORE process in the field of immunostimulation :

The PRIORE process falls within the field of **immunostimulation processes**. This characteristic makes it a candidate for the function of **adjuvant** in the context of a method of **vaccination** or research in biology. It has the particularity of being physical in nature unlike adjuvants, substances of a chemical and / or biological nature, of very diverse origins, foreign to the body. Note that there are many adjuvants, but extremely few of them are authorized for human vaccination because of their deleterious effects. For the adjuvants used in human therapeutic trials (especially with cytokines), many precautions are necessary.

For all generations of vaccines, from the oldest to the most recent, stimulation of the immune system is in most cases necessary. It is even essential for certain vaccines that

are widely used and known for a long time. Even with 3rd generation mRNA vaccines, an adjuvant is needed. These vaccination methods are said to be “promising” but their very principles are the subject of intense research in view of the side effects that they can induce[4].

Immunostimulation against an antigen is also widely used as part of a process for obtaining antibodies (polyclonal, monoclonal). These biotechnological products are widely used in therapy and in the fields of analysis and diagnosis, both in clinical and fundamental research.

4 - whose very principles are the subject of much research in view of the side effects they can induce. Let us remember that they consist in using the dendritic cells of the subject to be immunized so that they themselves produce the antigenic protein of the pathogen, by transcribing the inoculated mRNA, in order to present it directly to the immune system.

Our methodological approach leading to the chosen technical options and the resulting achievements : two prototypes validated in terms of physics for biological and clinical experiments.

Our first step was to make an instrumentation to reproduce the electromagnetic fields as they had been recorded by CNRS physicists, A.BOTTREAU and A.BERTEAUD, on A.PRIORE's P2 machine. This instrumentation was carried out in collaboration with W.ELLISON and L.E.De MESNARD. Our experiments were conducted with mice infested with *T.e.* thanks to the help of Professor R.PAUTRIZEL. These experiments did not yield conclusive biological results.

We then inserted a plasma tube in our device so as to approach the instrumentation of A.PRIORE. The plasma tube was of simpler design than that developed by A.PRIORE. Here too, biological experiments have not been conclusive, partly for lack of means.

This first phase nevertheless allowed us to draw the following lessons :

- we have acquired a good knowledge of the technologies used by A.PRIORE and the technical problems inherent to these technologies which the inventor was regularly confronted,

- the experiments that we carried out confirmed to us that the measurements of A.BOTTREAU and A.BERTEAUD, although perfectly coherent with all that we know about the instrumentations developed by A.PRIORE, were incomplete (these researchers had themselves used these measures to achieve a device, but did not achieve the expected effects[5] ; it was the same for [Veyret, 1991]).

Thus, whatever the technical approach envisaged, the fundamental question remains the same : ***what are the physical characteristics of the electromagnetic fields produced by A.PRIORE's machines which are essential for obtaining the biological and therapeutic effects that had been observed ?***

The research path that naturally comes to mind, and since the structure of these machines is well known, would be to reproduce the instrumentation as it was conceived by the inventor. A series of biological experiments would then be carried out by varying the setting ranges of the generators and circuits of this instrumentation, hoping to "fall" on the "right settings", that is to say those that A.PRIORE just kept secret. Once these operating parameters have been set, the characteristics of the electromagnetic fields thus produced would be measured, provided however that the right field parameters are measured with the right measuring instruments.

Such an approach has several disadvantages :

- it requires the development of unusual, expensive and fragile technologies ; a lot of time is needed to achieve a sufficiently reliable device, some parts being subjected to strong heating, in particular,

5 - They recognized that their measures needed to be deepened and prompted further research and construction of M600.

- it involves finely scanning all possible combinations of physical parameters, which requires many biological experiments before finding the right settings; this approach raises a question: what does "finely" mean?

- although generators (radio, microwave, magnetic fields, plasma discharge) can be stably adjusted using current technologies, the resulting electromagnetic fields can exhibit large fluctuations due to plasma instabilities; if the characteristics of the EM fields produced must meet specific criteria, as could occur in the context of resonances phenomena at the EM / biology field interactions, the biological results may be difficult to reproduce,

- moreover, the large fluctuations of the electromagnetic fields produced by the PRIORE machines constitute an electromagnetic noise which can mask the measurements of the the useful components of the produced fields,

- another question arises : how to pin down the right parameters of the fields produced if we do not have an idea, at this stage, of what we want to measure?

For all these reasons, this approach of questioning a black box for the purpose of decrypting it, seems to us at least risky.

To answer these questions in order to make his approach more reliable, the experimenter must then develop physical hypotheses to attempt to understand the operation of the PRIORE machines and the characteristics of the electromagnetic fields they produce. It will thus have a conceptual means to seek to approach the good values of the operating parameters and to measure the relevant parameters of the electromagnetic fields produced.

In this case, it seems to us more appropriate to produce the electromagnetic fields thus envisaged with instrumentation easier to implement and more controlled ! This is the path we followed.

We have therefore carried out an in-depth examination of the entire PRIORE dossier, after having gathered the numerous scattered scientific elements relating to this discovery (published and unpublished) coming from the various researchers (biologists, physicians, veterinarians, physicists, engineers) who had participated in these works, and whose exchanges with some that we knew were rich of lessons.

Our work [AYARI-BALANA, 2003] presents the foundations of our hypotheses (critical restitution of the works of A.PRIORE and his collaborators, synthesis, new hypotheses, research project) which lead to the design of a technically feasible instrumentation exposed in our patent applications [AYARI-BALANA, 2002]. This development remains unique today.

Moreover, although the equipment originally designed by the inventor A.PRIORE had the immense merit of demonstrating in a striking way the biological and therapeutic effects induced by the combination of electromagnetic fields produced, these devices had the disadvantage to have a very low energy efficiency. This is the consequence of the physical concepts implemented by the inventor : the physics of plasmas and the electromagnets made of copper.

To obtain the necessary fields according to our hypotheses, it is necessary to accommodate a certain number of physical parameters :

- for the microwave wave : a high instantaneous power with respect to the frequency of the carrier wave and the high frequency of the modulation signal,
- for the magnetic field : sufficient intensity throughout the exposure volume.

The technical means to be used to produce these fields usually fall within the domain of industry or research centers and require specific studies. Overall, the cost of the instrumentation depends on the size of the exposure volume, as well as the intensity of the magnetic field and the microwave in that volume.

Our technical explorations led us to develop two prototypes of validated instrumentation on physics level. They constitute the director model of the instrumentation that will be used to conduct the biological and clinical experiments.

Items withheld are confidential.

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The international context and the program of collaborations with our partner teams.

At present, research in the field of bio-electromagnetism has not yet demonstrated an immunostimulatory effect as effective and powerful as that discovered and confirmed by A.PRIORE et al.

The process we advocate requires the simultaneous application, on animals, of a magnetic field and a pulsed and angle-modulated microwave electromagnetic wave. It is important to note that the electromagnetic wave does not induce any rise in the temperature of the body (we are in the field of non-thermal effects).

The biological and therapeutic effects of such an association of electromagnetic fields have not yet been explored elsewhere. However, this type of approach (immunostimulation by electromagnetic fields with therapeutic aims) is well anchored in the research practices of the Eastern countries, hence the interest of collaborating with the Armenian and Russian teams who joined this research project.

The contributions of the various teams involved (Bordeaux, Armenian, Russian, Turkish, American, Tunisian) will thus make it possible to measure the extent of the efficiency of the process that we advocate.

For the Bordeaux team, we advocate the use of the parasite *Trypanosoma equiperdum*, because with this biological model the immune system responds very effectively when the organism is exposed to PRIORE electromagnetic fields [PAUTRIZEL, 1977] : the biological and therapeutic effects are very clear for the exposed animals (rate of negativation, specific antibody levels, immunoglobulin levels, serum constants, clinical state, ...), whereas all the control animals die (within a few days after inoculation for the mouse and the rat, a few weeks for the rabbit). The biology of *T.e.* and the characteristics of the immune response of the host against this parasite are well known ; let us note that this parasite presents the phenomenon of antigenic variation allowing it to escape usually the immune defenses. We will use both the surface antigen extracted from the parasite (for experiments requiring long periods of animal exposure, and thus measure the immune response including humoral - specific antibodies - over time), that the living parasite (to study and measure the therapeutic efficacy of the method). These experimental modalities should allow us to determine the optimal values of the physical parameters.

The partner teams (Armenian, Russian, American) who joined us each presented a research program and a biological model of its own.

Items withheld are confidential.

The immediate prospects.

Our project being the result of a personal initiative, we lead it outside institutional framework, which explains why we do not have a research framework suitable for biological and clinical experiments.

The advances outlined in this text have been made with our own means. It is therefore progressively that we have equipped our Pot d'Argile Association with the necessary equipment to realize the prototypes we have today.

Since the current stage requires more financial means, our approach now consists in soliciting public funding and private investors, for our research team and for partner teams in the framework of international collaboration. Our desire is to mobilize the teams whose research program each meets the scientific and ethical requirements so necessary to rehabilitate the discovery of Antonio PRIORE, and which helps to measure the extent of the effectiveness of the process which underlies this discovery.

The urgency is to create a laboratory in Bordeaux for :

- install (mounting, assembly, tests and measurements) the instrumentation to do - intended for biological and clinical experiments - designed from the director model of our prototypes,

- welcome when the time comes the partner teams who have joined us and those who will join us : to learn about the instrumentation intended for the experiments carried out by the Bordeaux team, while waiting for them to equip themselves with instrumentation in order to be able to carry out, each, its own research program defined within the framework of the common project.

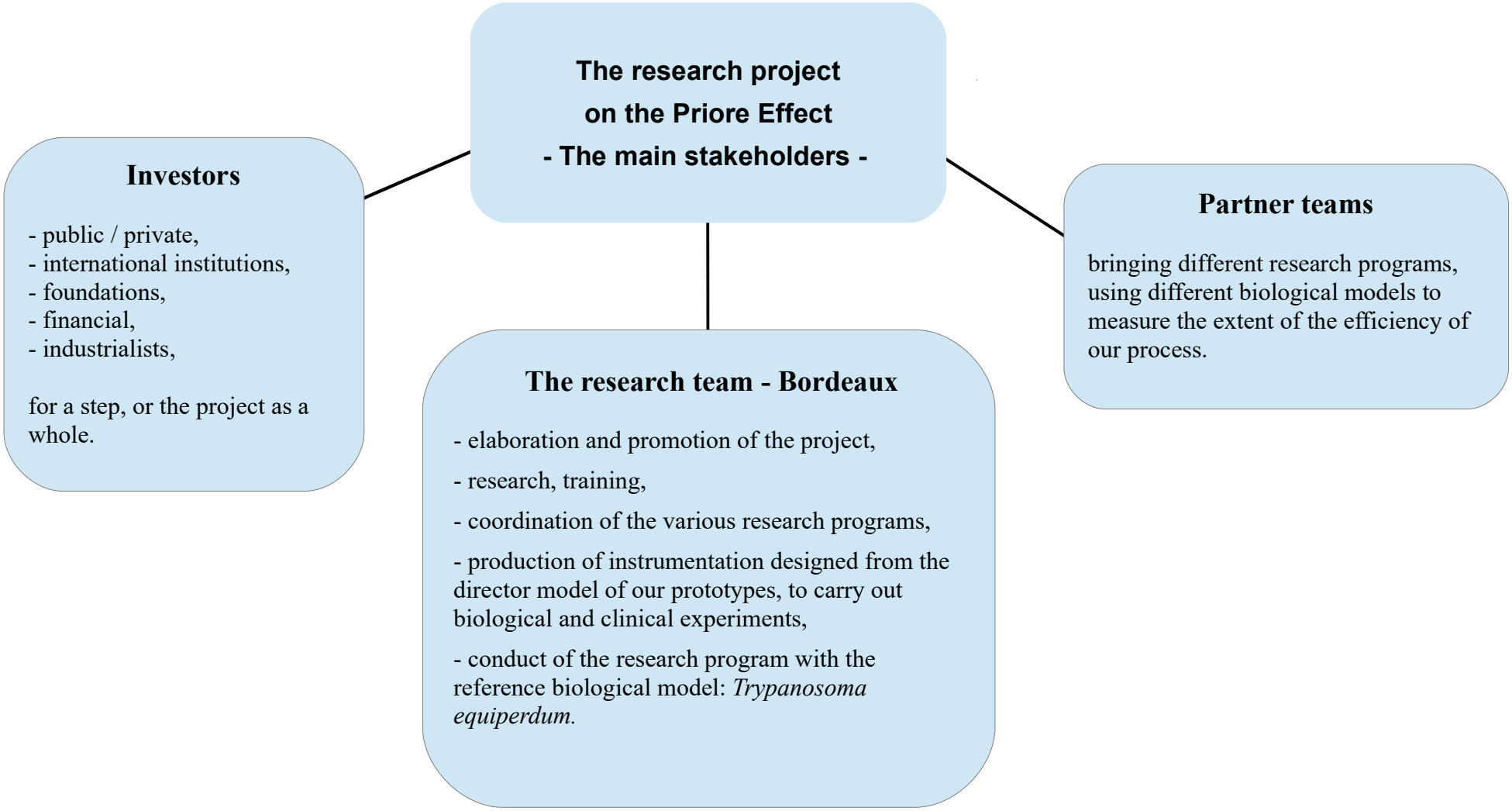
Indeed, the premises that the association currently dispose, serve :

- for assembling, and technical tests,

- to organize meetings, presentations/ demonstrations of our technical achievements for the attention of potential collaborators : scientists, researchers, suppliers/ industrialists, investors, institutional decision-makers...

- for initiation-training.

Currently, the main stakeholders are our research team in Bordeaux and the partner teams who have joined us. Our explorations focus on teams likely to join us, as well as on potential investors (organization chart below).


The research project
on the Priore Effect
- The main stakeholders -
Investors
- public / private,
- international institutions,
- foundations,
- financial,
- industrialists,
for a step, or the project as a whole.
The research team - Bordeaux
- elaboration and promotion of the project,
- research, training,
- coordination of the various research programs,
- production of instrumentation designed from the director model of our prototypes, to carry out biological and clinical experiments,
- conduct of the research program with the reference biological model: Trypanosoma equiperdum.
Partner teams
bringing different research programs, using different biological models to measure the extent of the efficiency of our process.

The referents of the Pot d'Argile Association.

Mohamed AYARI :

Functions: President of the association,
Head of projects.

Skills: Practitioner and researcher in Clinical Psychology and Psychopathology, specifically with so-called « autistic » people.

Arthur BALANA-CERVERÓ :

Function: Secretary of the association.

Skills: Research engineer,
Instrumentation and physical measurements, electronic and microwave,
Physics of interactions electromagnetic field - states of matter.

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