New device for laboratory animal telemetry

A new implantable telemetry system for monitoring laboratory animals has been patented and developed. The device allows long term studies without any restriction on the positioning of the animal inside the cage. Partners to further develop the device and/or to establish commercial agreements along with technical cooperation are sought.

The Challenge

The monitoring of physiological parameters of animals tested in laboratory is relevant for a lot of different kind of researchs. There are many implantable devices for animals with various purposes such as muscle stimulation, automatic dispensing of drugs and measurement of biological parameters. Most of them use a radio frequency energy for transmitting both data and power. A small battery inside the implant provides power to the system, but it limits their lifespan. There are systems that allow to power the implant with an external link, but in these inventions the energy transfer is point by point and extremely focused on a small space area, causing severe restrictions on positioning and orientation. The present technology consists on a system for generating a maximal uniform magnetic field in an area as large as the application needs, allowing the animal that carries the implant to move freely inside the cage.

Innovative advantages

- The system allows the measurement and transmission of physiological data of an animal which moves freely in its cage for a long period of time.
- No restrictions on positioning and orientation.
- The animal can develop its habitual physical activity without causing any physiological changes that could affect their development, behavior, and the data obtained.
- No battery is required allowing to monitor and record the data during all the animal’s lifetime. The energy storing device inside the implant allows to work for a certain period of time outside the animal cage.
- Small size. The implant can be inserted in the abdominal cavity of small laboratory animals.

Current stage of development

Prototype available ready to use.

Applications and Target Market

- This technology is useful for measure and send information of different biological parameters in laboratory animals for example in drug research and development studies.
- It could be of interest for companies devoted to animal telemetry devices.

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