

## TETcor technology summary

At present medical implantable devices which require more power than can be viably provided from a battery, rely on a wire passing through the skin. This break in the skin presents a serious infection risk limiting device deployment to very sick patients where the relative high risk is justified. The solution to this problem is Transcutaneous Energy Transfer (TET) in which power from a coil mounted outside the body flows to a coil mounted inside the body by using magnetic fields to carry energy over the intact skin. TETcor has developed, and protected, an enabling TET technology and seeks development and licensing arrangements with device manufacturers to develop new implantable devices.

Our novel approach adjusts a resonant frequency to regulate the power flow such that the implanted device receives the correct power without excess heating – and under a wide tolerance of operating conditions. This technology has been refined and proven over the last 5 years and is now deployed in animal monitoring devices which can operate for unlimited periods of time.

Our TET technology is well suited for integration into new applications. Our team has experience in working with multi-disciplinary teams in conjunction with medical device manufacturers and life science companies.

### Key facts

- Small implantable coil (5 x 50 mm) with a low component count providing enhanced tolerance and easy implantation in a variety of sites.
- Delivery of up to 15 W of power across 10 mm of skin with an efficiency of greater than 80%.
- Tolerance to a wide variety of coupling conditions provides for ease of implementation without the need for magnets or tissue adhesives.
- Four patents under international examination. Key patents have priority dates from 2004.
- Animal tests confirm at all power transfer levels (up to 15 W) tissue temperature does not exceed 40 C° and an absolute temperature increase of 4 C°. Histological analysis after prolonged power transfer confirms the absence of any alterations in tissue due to field or heating.
- A company with a combined 21 years of experience in inductive power transfer technology is committed to a partnership combining our TET technology with novel implantable devices.

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