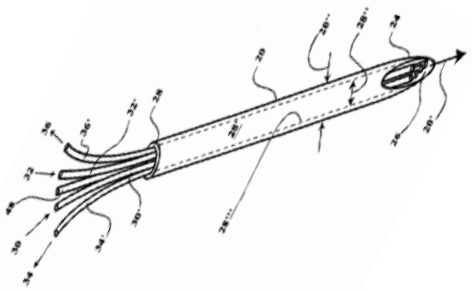
PRECISON SENSING AND TREATMENT DELIVER DEVICE FOR PROMOTING HEALING IN LIVING TISSUE

INTRODUCTION

A micro-needle insertable in a target cell tissue, including a manipulative end maintained exterior of cell tissue and an insertion end positionable in or adjacent of target cell tissue. A plurality of micro-tubes are bundled to pass through the needle body and extend to respective distal ends grouped proximally interior of the insertion end. A sensing fiber is extendable from means for sensing for passage through the needle body to a distal end capable of sensing cell tissue parameters. The insertion end and the bundled micro-tube and sensing fiber distal ends are positionable in or adjacent of cell tissue thereby providing rapid evaluation of cell parameters by optic fiber sensing, fiber sampling of cell parameters, and precise delivery of therapeutic fluids or additional treatment measures. A method is disclosed of precisely positioning a micro-needle having a plurality of micro-tubes and sensing fibers therein for evaluating and treating cell tissue.

CONCEPT

The objective of the technology was to create a minimal-invasive way to control the tissue cells environment to promote self healing via administering therapeutic fluids directly to tissue cells and simultaneously measuring and/or monitoring their effects.



INVENTION OVERVIEW

The technology is a micro-needle insertable into cell tissue that reduces damage to surrounding tissue.

- Reduces damage to tissue
- Used in targeted tissue area
- Insertable to targeted tissue cells
- Administered therapeutic fluids, vibrations, and temperature and measures effectiveness of treatment.
- U.S. Patent Number: 7,837,654 B2
- Application Number: 11,311,585
- Date of Patent: 23 Nov 2010

DOING BUSINESS WITH CCDC AVIATION & MISSILE CENTER

CCDC Aviation & Missile Center is a leader in partnering with domestic firms. Successfully developed and implemented innovative tools to ease the technology transfer process such as:

- Patent License Agreements
- Cooperative Research and Development Agreements
- Test Services Agreements

FOR FURTHER INFORMATION:

U.S. ARMY COMBAT CAPABILITIES DEVELOPMENT COMMAND AVIATION & MISSILE CENTER:

ATTN: FCDD-AMG-CST
Office of Research and Technology Applications
5400 Fowler Road
Redstone Arsenal, AL 35898

Phone: 256-876-8473 or 256-313-0895
Email: usarmy.redstone.ccdc-avmc.mbx.orta@mail.mil