Infusion Micropump for Drug Delivery for Treatment of Neurological Disorders and Pain Management

Technology #99058

Infusion Micropump System Delivers Medication through an Internal Device

The drug delivery infusion pump system offers localized medication administration to target tissues with great accuracy. A micropump for drug administration manages pain and treats neurodegenerative disorders. Examples of some neurodegenerative disorders include Alzheimer's, Parkinson's, and multiple sclerosis. This drug delivery infusion pump system includes an internal device composed of a hermetically sealed reservoir and an access port for easy refilling. It also encompasses a battery-less design for transdermal recharging and remote control via a specific frequency. Plus, its small design makes the micropump invisible under the scalp.

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- Trial period up to 18 months. $5000/6 months.
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- Exclusive license for a $30,000 conversion payment.
- No patent expenses.
- 1.5% royalty after $1 million in product sales. 1.0% for MN companies.

**View the Term Sheet **
**Contact Kevin Anderson for specific details. **

**Access Port and Transdermal Recharging makes the Micropump System Minimally Invasive**

The local treatment of neurodegenerative disorders is on the horizon, such as Alzheimer's, Parkinson's disease, multiple sclerosis, or pain management. An infusion micropump system without a piston or batteries remotely dispenses drugs wherever needed throughout the body. The simple, non-invasive implantation of the infusion micropump near the target tissue, such as the abdominal wall or subarachnoid space, ensures that drug delivery remains localized. The technique of localized drug administration is more effective than systemic administration. The infusion micropump recharges transdermally and a hypodermic needle refills the hermetically sealed reservoir through the access port.

**Multiple Drug Delivery Reservoirs in the Implantable Infusion Pump Administer Drugs Simultaneously**

Multiple reservoirs in the micropump dispense various therapeutic drugs at the same time. For example, one reservoir holds a biologically inactive compound and another one holds an enzyme to activate the compound for treatment of a neurodegenerative disorder. The infusion micropump draws medication from the hermetically sealed reservoir and dispenses the medication through the delivery cannula. Programmed delivery rates and schedules sent electronically to the micropump via a specific frequency. The micropump includes safety features to protect against forced delivery by physical compression of the reservoir.

**BENEFITS OF THE MICROPUMP SYSTEM FOR DISPENSING MEDICATION IN NEURODEGENERATIVE DISORDER TREATMENT**

- Hermetically sealed reservoir refills via hypodermic needle through the access port

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• Under the scalp, the invisible pump allows drug administration of small quantities of medication to a local site throughout a 24-hour time period
• A bladder-like reservoir that can fit within layers of human tissues, such as beneath the scalp or within the abdominal wall
• Capable of remote programming and charging transdermally

**Phase of Development** The concept of a drug delivery infusion micropump is established and is available for further research and development.

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