

RESHEL

Technology Overview

Technology platform

1. Medical device for deliver medicinal water with semi-conductor chip.

In 1999, Robert Langer Group from MIT announced that they have invented 'medical tool for delivery medicinal water with semi-conductor chip'. First they made small storage on semi-conductor and fill in with drug. After coating the semi-conductor with gold and patch on hurt area. Finally they give a electronic signal then it release the drug.

The MicroCHIPS invented a tool that store drug on Titanium case and give a signal with antenna for wireless. But these techniques had not yet to practical use because it must be simpler.

LOBAC B doesn't need to make complicate drug storage, make semi-conductor with essential mineral element for human body like Mg, Zn, and Fe etc. Attached LOBAC B where it hurts, sweat oxidize the mineral element and it deliver the electron direct to skin. It didn't design to work with drug delivery system. Use mineral matter for nano carrier to targeting transdermal potentials delivery system. This system make ache less by effect of a medicine go directly to the bone, without go to liver or stomach.

2. Contents of technology

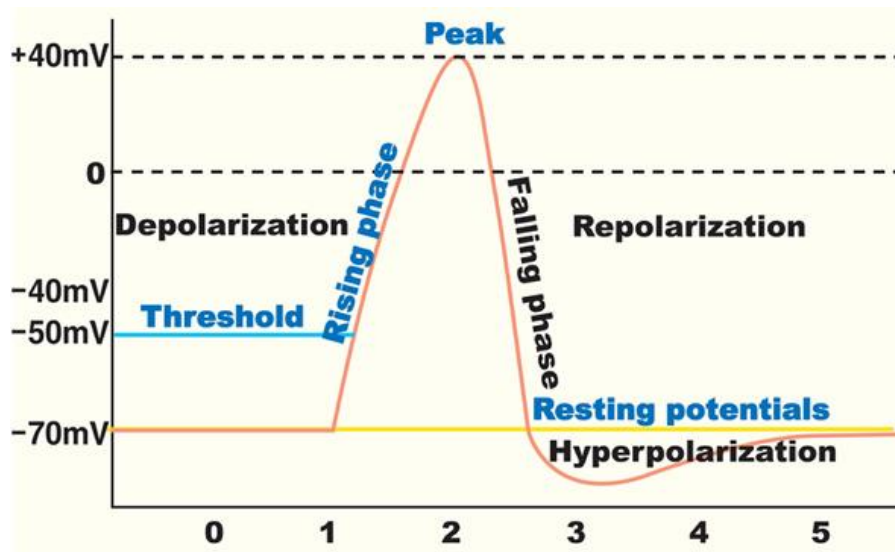
1) Biography of pain

Synapse with nerve cell, muscle cell and parenchyma, get stimulus then it makes action potentials. Action potential turned to depolarization and lose negative potentials. This secrete acetylcholine with make pain. Through the rising phase and the peak depolarization happen, after turn the peak to falling phase, repolarization work and it increase negative potentials about (-)70mV, it separate to choline and acetic acid. After that delivery of stimulus end and pain goes gone..

Above this base on the Nobel Prize winner theory, and make new Theory

- 1) If depolarization
- 2) Then it lose negative potentials
- 3) And secrete acetylcholine

So it is easy to know that if repolarization where it hurts then pain will go.



We can see from the graph that for a moment on rising phase it loses negative potentials and on falling phase it gains negative potentials. After stimulus acetylcholine resolve and pain goes gone.

2) Point of Action

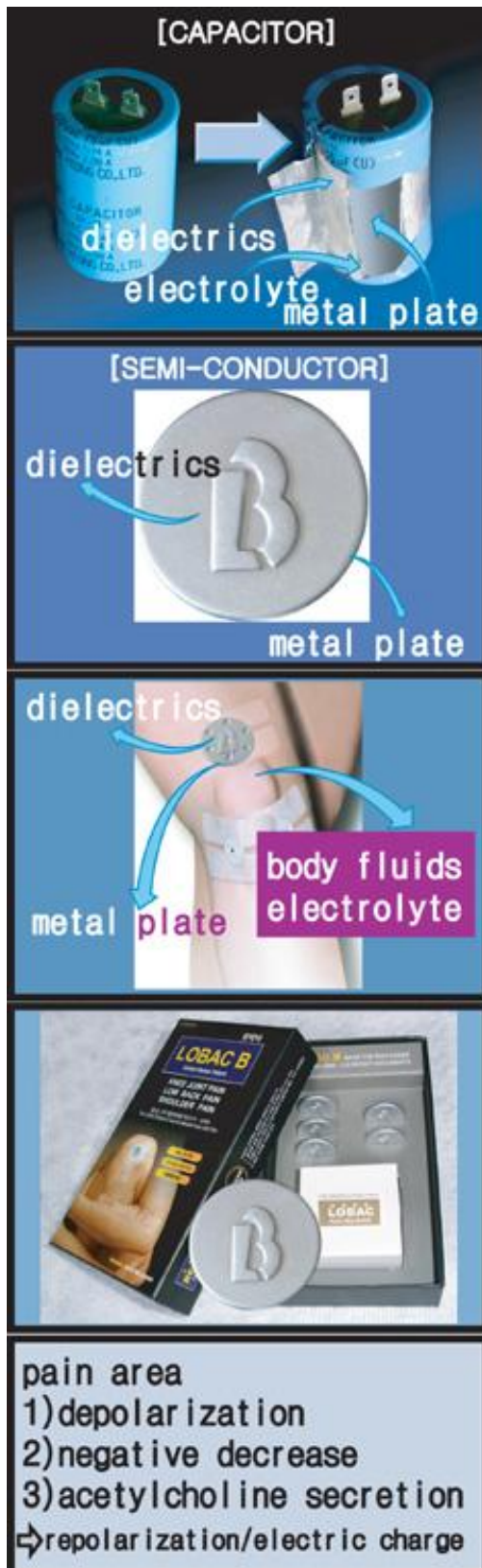
To make repolarization sored area, we use P-type semi-conductor which have same structure with half capacitor / condenser.

P-type element conducts electricity with carry electron hole.

P-type semi-conductor have same structure with half-capacitor which don't have electrolyte.

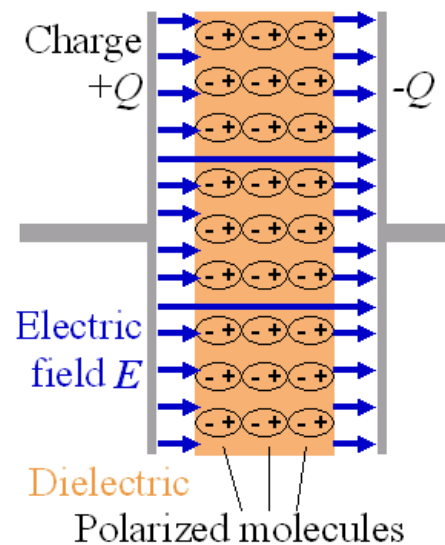
If patch P-type semi-conductor to skin, then it contact to human electrolyte and its structure turns to whole condenser (dielectrics/electrolyte/metal plate). To do that condenser can have the polarity.

Patch semi-conductor's pole to ached area, treat sweat from ached area, and acetylcholine as a one part of electrolyte.



Ached area which lose negative electricity, because of depolarization, use action of polarity of capacitor / condenser to repolarization.

Actions of polarity make pain gone with turns electrolyte to polarized molecules which shown as below.



If oxidation & reduction doesn't appear automatically then turn electricity energy to act.

And attach a permanent magnet which has magnetic flu density about 90Gauss $\pm 20\%$ to make easy to repolarization.

It is easy to understand Targeting transdermal Potentials Delivery System using semi-conductor, if we know the structure and usage of capacitor.

Stage of development

This product is just before to recognition of CE from Europe, and FDA from USA.

It will use in research of Alzheimer's disease, Cancer of lymph, etc.

Specific Patent Information

Our company have USPTO, EP and Korea Patent.

The company has U.S.A Patents registered

U.S.A Resistration	Patch type aluminum remedial implement
	U. S 6,537,572B1
	2003. 03.25
EROPE Resistration	Therapeutics Aluminium pflaster
	EB1103282B1
	2003 05.07