



SUNRISE HOSPITAL

(A unit of Sunrise Institute of Medical Sciences (P) Ltd. - Kakkanad)

Certificate no: 1.0

Issued in compliance with:

SUNRISE HOSPITAL, Seaport - Airport Rd, Thrikkakara, Kakkanad, Kerala 682030

For clinical certification of the below stated medical device:

De-Addicto (EM De-addiction Stimulator for alcohol addicts and severely depressed)

Developed by:

Dr. Sunil Jacob

Director

Centre for Robotics

SCMS School of Engineering and Technology

Karukutty-683 582, Kerala

Along with his team comprising of:

1. **Akhil M S**

Electronics and Communication Department
SCMS School of Engineering and Technology

2. **Jibin Lukose**

Electronics and Communication Department
SCMS School of Engineering and Technology

This is to certify that the clinical trials of the above mentioned device **De-Addicto** (working and principle specified in the attached certificate number 2.0) has been successfully completed over a period from **07/12/2017 to 19/01/2018** under the expert guidance of:

Dr. Chalam Das,

MD (Psychiatry)

Consultant Mental Health, Sunrise Hospital

Sign:

Dr. CHALAM DAS. V.
MD, (Psychiatry)
Consultant Psychiatrist
TCMC Reg. No: 26521
SUNRISE HOSPITAL
Seaport-Airport Road
Kakkanad, Kochi-682 030





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The quality and effectiveness of the above mentioned device has been continually assessed and monitored and is subject to continuous surveillance under an expert medical guidance.

This Certificate is issued under the following conditions:

1. The device was tested on severe alcohol addicts along with prescribed routine medication and has found to be showing positive improvement in comparison to the scenario with prescribed medication alone.
2. The device was tested on patients suffering from various forms of depression along with prescribed routine medication and has found to be showing positive improvement.
3. The stated clinical trials of the above mentioned device has not shown any form of side effects/harm to the patient on whom it has been tested.
4. Possible improvement of the patient's mental and physical state has been noted with regular usage of the above mentioned device.

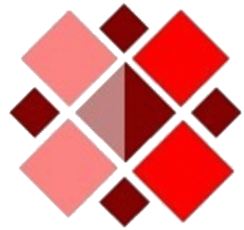
The above mentioned device is further approved for advanced clinical trials since it is found to be effective under normal clinical standard trials.

Sign:

Dr. Chalam Das

Dr. CHALAM DAS. V.
MD, (Psychiatry)
Consultant Psychiatrist
TCMC Reg. No: 26521
SUNRISE HOSPITAL
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EAN

LABS

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De-Adicto

Non-invasive Anti-Depression and
Drug/Alcohol-Rehab E-M Device



PURPOSE

To establish an addiction free society thereby securing the future of the youth and nation.

Problem Statement

The current youth are suffering with different type of addiction E.g. Nicotine, Alcohol, Cocaine, METH etc. The prototype will help the addicted person to come out of addiction.

This is achieved by controlling the dopamine level in the synapse region of the neurons.

The De-addiction centre equipped with our device under the supervision of medical professionals will make the society free of drug addicts.

Scenario Description

In the society the youngster are influenced by different types of addiction. The youngster will have more inclination to experience it. This initial consumption for fun and anxiety will finally lead to addiction.

This in turn ruins their carrier and life. To make them come out of this disastrous situation and lead a normal life we propose “De-Addictive Device for the Drug Addicts”.



Solution

For the survival of the human being there is a rewarding system in the brain controlled by the limbic region. This rewarding system is hijacked by the drugs which in turn leads to addiction.

We are using the device which can stimulate the neuron which secretes the dopamine.

Why now?

According to National Institute of Drug addict NIDA 45% of the College Age and Young Adult in the campus are addicted to different type of drugs. The prospective impact and the College status we have mentioned in the table below.

College Status	Number of Students	Boys	Girls
Addicted due to Drugs	20%	14%	6%
Willingness	19%	13%	6%
Non Willing	1%	1%	0%
2 Years Span DE addictive student	19%	13%	6%

Methodology

The Depressed and drug addicts are treated by different type of Depression and De-addictive medicine. These medicines usually do have a lot of side effects.

The proposed Anti depression and De-Addictive device is completely noninvasive. The human body is completely transparent to magnetic field. The magnetic field previously was used for massage and relaxation. The same concept with a controlled pulse generation and intensity control will serve the purpose of controlling the dopamine level in the neuron.

The same concept can be used by electrical stimulation. In our device, the magnetic pulses can be controlled, its intensity and the position can be changed depending on the different type of addiction.

The dopamine level is maintained by the external device ,giving the same Euphoria affect as the drugs. This depth of influence can be reduced slowly and the dopamine level can be maintained normal. This will help the person come out of the addiction.

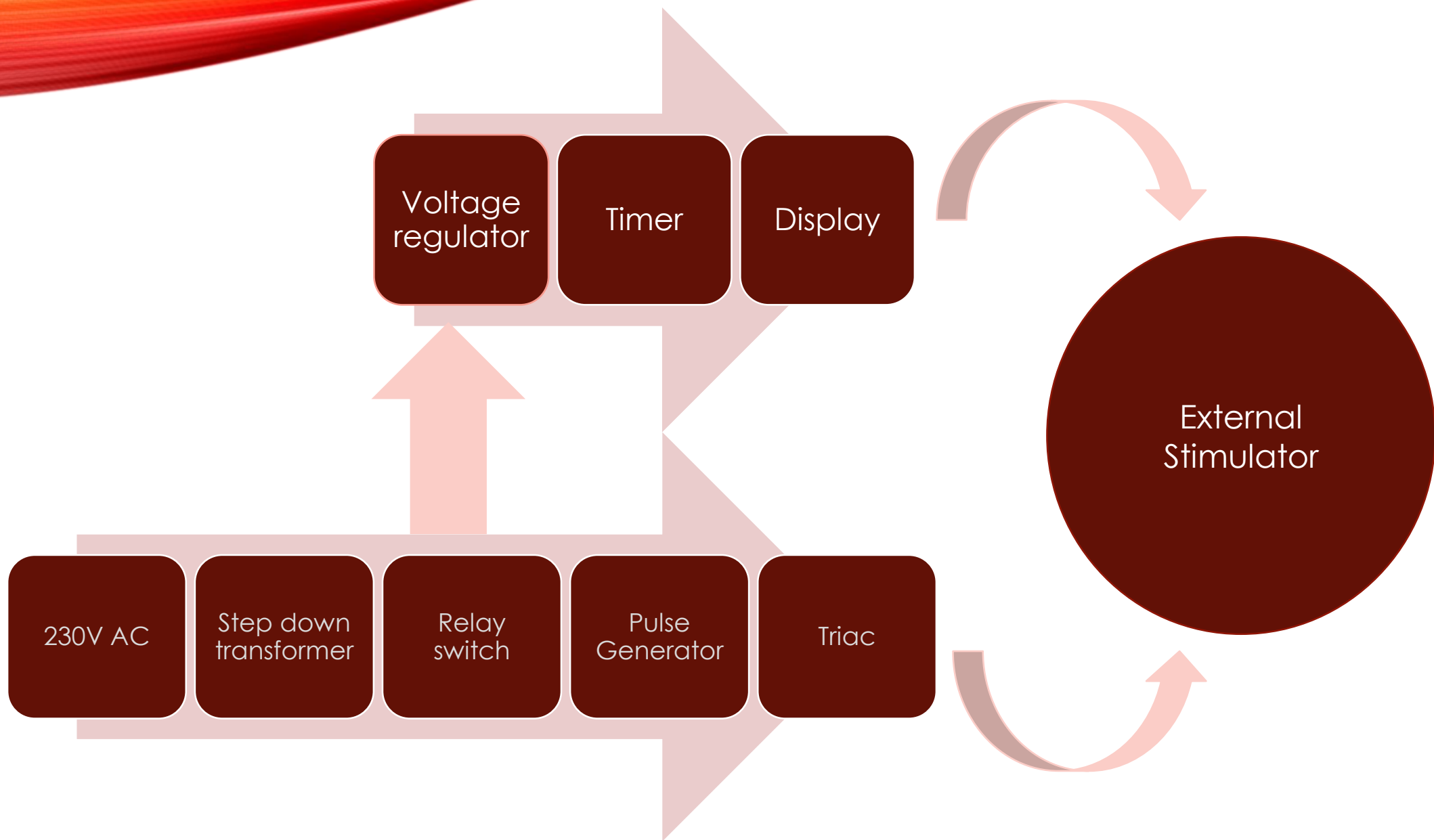


The three modules are used

- 1) Power and switching module**
- 2) Display module**
- 3) EM coil module.**

The relay will help in switching between different modules. Initially the buzzer is on indicating that the time for EM stimulation is not being set.

- The pre-settable up-down counter will set the timing for the stimulation.**
- The buzzer will be off and an LED will turn ON and OFF indicating the status of the pulse duration of the stimulation.**
- The high current will pass thru the device creating the magnetic field.**
- The magnetic field influences the part of the brain which is exposed to it, controlling the action potential responsible for Dopamine secretion in synapse region.**





Roadmap to Market

With collective efforts from hospitals and de-addiction centres across the world we would like to establish a drug free society with the help of our device.

Within the next year, we are planning to reach out experts in the field of neuro science to make the device more effective.

BUSINESS MODEL

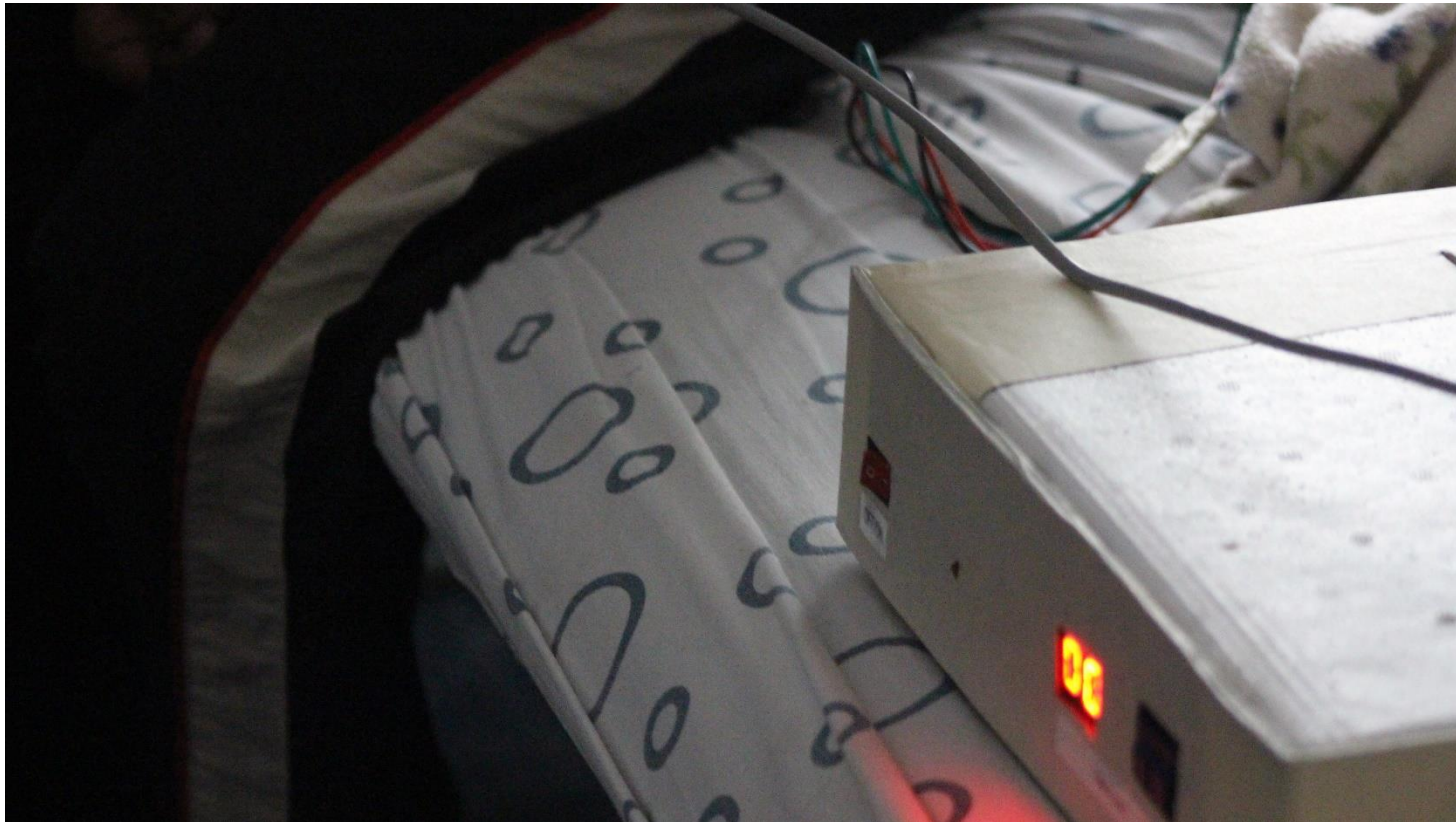
Key Partners	Key Activities	Value Propositions	Relationships	Customer Segments
<ul style="list-style-type: none"> State Government Hospitals De-addiction Centers 	<ul style="list-style-type: none"> Control to drug addiction Enhancing the mental state of an individual 	<ul style="list-style-type: none"> To built a better society A better future for our youth Nation's morale and development 	<ul style="list-style-type: none"> Hospitals Campus National Service Schemes De-addiction centers 	<ul style="list-style-type: none"> Hospitals De-addiction treatment centers Drug addicts Alcohol addicts Campuses
	Key Resources <ul style="list-style-type: none"> Social media NGO 		Channels <ul style="list-style-type: none"> Social media Digital media Drug impact awareness classes 	



COMPETITORS

Since the concept that we have brought into light has never been taken into consideration before, the existence of competitors would be questionable.

PHOTOS



De-Addicto (Prototype)



Photos taken during first clinical trials of prototype.



TEAM

Name	Designation	Contact Number	E-Mail
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