

# Goan engineer's medical device can save humans and animals

## Start-up entrepreneur incubated at BITS Pilani incubator BioNest

**SHASHWAT GUPTA RAY**

[shashwat@herald-go.com](mailto:shashwat@herald-go.com)

**VASCO:** Considering both humans and animals are susceptible to body temperature fluctuation that can cause even death if timely treatment is not given, Goan engineer Tejas Barve of Barve Technologies incubated at BITS Pilani Goa Campus has developed medical devices named Thermodrip Cool and Hot meant for immediate treatment against rise and fall in body temperature of both, humans and animals.

"Thermodrip Cool can be used to bring down body temperature of a human or animal in case of high fever or sunstroke immediately. The device along with intravenous fluids can reduce body temperature that can be as high as 105 degrees Celsius and get the person or the animal back to normal within 45 minutes to one hour," Tejas said.

Thermodrip Hot helps increase the body temperature in cases where it falls below normal and affects pumping of blood.



Tejas Barve demonstrates the functioning of Thermodrip Cool device

The main motivation for developing this device came from his concern for human and animal health.

"I'm an animal lover and I take care of stray animals. Being an engineer I received a lot of ideas in this regard. One of the veterinarians Dr Anesh Vegas gave me idea to develop a device for high fever and heat stroke cases in animals. Currently there is no device in the market for this purpose," he said.

So for over a period of time he worked on this idea and came up with two medical devices - Thermodrip Cool and Thermodrip Hot.

**Tejas' after ... Pg 11 >>**

"What cargo will the barges bring to Rassaim, Loutolim or what cargo will they take? How will passengers and vehicles alight from the ferry when the design shows it is 3.1mts from MSL?"

Mascarenhas said, "Dy CoP visited their panchayat in 2019 during a gram sabha and when people questioned him why the letter from CoP to our panchayat states that it is for passenger/cargo he said it was a mistake when the Sagarmala project clearly says it is for port expansion, quick evacuation of cargo, an increase of industrial output and logistics also the parking facility is not shown on their plan which will definitely displace the locals who are staying close to the river bank."

### TEJAS' AFTER SALES SERVICE IS VERY PROMPT AND PROPER: VETERINARIAN

"We have tested our products with few veterinarians and I've got very good results in terms of treatment outcome and the time taken. Our tests have shown that the time taken for treatment also reduces considerably which is very useful in saving lives during critical situation," Barve said.

He currently doing more tests and validation studies then enter the human treatment market.

These are very simple devices, which can be attached to an adapter it has got a switch. The user has to fill water in this aluminum cavity and this align pores get attached with the pores folder in a simple way. Thus align gets attached to the bottle and the end gets attached to the device.

"Our goal is to take the product to global market and save as many human and animal lives as possible. We are a bootstrap company and my mother is the major funder for this product I owe her a lot for this innovation we are now looking at commercialisation of this product and we want to get into manufacturing space through collaboration after getting required regulatory approvals," he said.

He has already applied for the patent. Sharing thoughts about the innovation, In-charge of BITS BIRAC BioNEST Mridula Goel said, "The device currently is helping a lot of animals. The ambition is to scale it up for human application. But right now it is helping a lot of veterinarians for looking after animals suffering from sunstroke or high fever. It's a highly innovative device. We like the quick application of Thermodrip."

"Our incubator is happy to associate it with stages because he being a local go and youth, he can really motivate others and make a difference to lives of animals. In Goa we have many animal lovers here who stop I hope many of them will find the device useful," she said.

Veterinarian from Gogol, Margao, Dr Aneesh Viegas who uses the Thermodrip device, said: "It is a very innovative and useful product. Tejas' after sales service is very prompt and proper. It's a life saving device which helps in cooling down the temperature of animals. This is a drip fluid cooler. He also has another device to heat up the temperature in cases where body temperature comes down and becomes very cold."

"I have three cooling and three heating devices and have

used it on many patients who come to me with below normal temperature or above normal temperature. Also the different devices are used in different scenarios many times a day. The device is a very sturdy product and I would recommend this to all veterinarians," Dr Viegas added.

### JAIL ADMIN WILL BE MANAGED BY PI AND SP LEVEL OFFICIALS: CM

Further, Sawant said that jail administration will henceforth be managed by PI and SP level officials of Goa Police.

CM was speaking to media persons after paying a surprise visit to the Colvale Jail. CM interacted with the staff and inmates of the jail and reviewed the security arrangements and administrative functioning of the Jail.

He also instructed officials to undertake necessary administrative changes.

Sawant said that administration at the jail will be streamlined with focus on better overall control, health facilities to inmates and enhanced training facilities for inmates as well as staff.

### SAWANT FAILED TO PROVIDE A PROPER MINING POLICY: VIJAI

He said, "A lot of murders are taking place and bodies are continuously being discovered. Even the common man in Goa is not safe."

Pointing out at the various incidents he said, "In Assagao, one local boy was found dead and his family has suspected it to be case of murder. Then there was the case where another local boy had fallen from the Mandovi Bridge and his parents are now saying he was murdered. Very recently there was the shocking daylight murder in Baina. There was yet another murder case from the shootout incident that took place in Curchorem over a sand mining issue. Today, a body was found in Altinho in Panjim."

He further said, "Leaving aside these murders, you also have the BJP leaders themselves in the Sonali Phogat case, where her family members came here and said she was murdered in Goa. The police have made arrests in that case but till today the cops are clueless about the motive of the murder. What is happening?"

He also urged Goans to wake up and fight back and not let the BJP government assume Goemkars are 'susegad' and won't say anything.

Earlier on Tuesday, Sardesai tweeted, "No law, no order, no clue! While @DrPramodSawant is busy with breaking the opposition and not with breaking crime syndicates operating in #Goa, a parallel economy in the state is forcing local #Goemkars out of jobs and crime lords and their friends are taking over the State."

He also reiterated that the Sawant had failed to provide a proper mining policy and had only given false assurances which he failed to implement.

### COMPLETE LAWLESSNESS IN THE STATE: RTI ACTIVIST

PANJIM: RTI activist Sudip Tamhankar on Tuesday said there was complete lawlessness in the State and alleged that the police are refusing to register cases.

Speaking to reporters, Tamhankar said that recently a rent-a-bike operator, who had gone to lodge a case of theft of his vehicle, was abused by the Panjim Police, who also refused to register the case. He alleged that the police were harassing complainants and demanding "haftas" from them.

Tamhankar said another case of alleged corruption in the police department was the decision to revert to officers of the rank of Assistant Sub Inspector (ASI) and above issuing motor vehicle challans within a fortnight after Director General of Police (DGP) Jaspal Singh directed that traffic violators should be challaned only by concerned DySPs/SDPOs and Police Inspectors (PIs).

Referring to the Anti-Corruption Branch (ACB) of Vigilance Department giving clean chit to Calangute MLA Michael Lobo and Art and Culture Minister Govind Gaude respectively in the Outline Development Plan (ODPs) for Calangute and Candolim areas and into the renovation of Kala Academy building without inviting tenders, Tamhankar said that he will now file a case before the SP (ACB) demanding reinvestigation into both the complaints.

#### FEATURES OF THERMODRIP DEVICE: THERMODRIP COOL:

- » Highly effective for high fever cases
- » Can get the patient back to normal within 45 mins to 1 hour
- » Very effective in Hyperthermia, Tick Fever cases and viral infections
- » Cost effective and efficient system

#### THERMODRIP HOT:

- » The temperature of fluid reaches upto 104°F
- » Very effective in long surgeries
- » Useful for hypothermic cases

#### WORKING OF THE DEVICE:

- » The device works by attaching to the intravenous (IV) fluid line
- » The IV fluid passing through the line gets cooled to a specific temperature this fluid enters into the animal intravenously
- » This slightly cold fluid and blood mixture reaches the heart and this cools the core body temperature
- » It helps in getting the body temperature back to normal in a short amount of time