

# CSIR in Media



*75 Years of*

**CSIR Touching Lives**

**A Daily News Bulletin**

**7<sup>th</sup> - 8<sup>th</sup> February 2017**

## New herbal tablet claims to control blood sugar level

*Lab Covered: CSIR-CDRI*

*7<sup>th</sup> February 2017*

Diabetics with the perpetual problem of fluctuating blood sugar level can now take recourse in herbal medicines. DiaMedica tablet, a polyherbal natural product, is claimed to offer protection against all side-effects of diabetes.

“In the English system, there is no medicine for diabetes and the biggest problem is the sugar level which can be controlled by taking these herbal tablets,” said Mr Rathnakar Kalasabail, Managing director, Centre for Advanced Research in Ayurveda Medicines (CARAM). The tablets control sugar and also stimulate the heart by providing it with oxygen, he claimed.

“As DiaMedica tablet is natural, it restores the physiological normalcy of our vital organs, and therefore does not cause sudden fall of blood glucose. They are safe and can be taken along with the medication recommended by other physicians,” he said.

Dr Gopala Krishna, Dean, PG studies, BMJ Ayurveda College, who has been instrumental in developing the medicine, said, “All the 36 herbs used in the tablet have been widely researched and the judicious combination targets naturopathy, cardiopathy, nephropathy, retinopathy, neuropathy and micro and macrovascular complications. The formulation has been put through a wide range of modern line of evaluation. It has been observed that the tablet has satisfactory glycemic control.”

The recently launched tablets have been approved by the Ayush Registration Board and the Ayurvedic Drug Controller has also given the GMP certification. Dr Krishna said, “Ayurvedic medicines take a back seat because of affordability and accessibility. Also, not many ayurvedic physicians are practicing. The cost is higher as compared to modern medicine and these factors play an important role in people using herbal formulations for various ailments.”

### **Cost, dosage lesser**

The Central Drug Research Institute (CDRI) recently released formulations for diabetes that contained only sugar controlling herbs which are also present in DiaMedica tablets.

With DiaMedica, the dependence on the chemical medicines can be reduced. While the dosage of other herbal formulations is 6-10 tablets per day, with DiaMedica, one can take only two tablets every day.

Diabetics spend thousands of rupees every month, but DiaMedica is the most economical brand for sugar control tablets in the country in its class and tablets cost Rs 475 for 45-day dosage.

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### **Published in:**

[Deccan Chronicle](#)

## Deadly pollutants in Mumbai's air have soared in past 10 years

*Lab Covered: CSIR-NEERI*

*7<sup>th</sup> February 2017*

The level of tiny particulate matter in the city's air is several times the safe limit, a study of air pollution data between 2000 and 2012 says. Suspended Particulate Matter (SPM) — a mix of dust, chemicals, soot, pollen and other organic substances — can enter the lungs and causes respiratory ailments.

The study compared Environment Status Reports (ESR) from the Brihanmumbai Municipal Corporation (BMC) between 2006 to 2012 and National Environmental Engineering Research Institute (NEERI) data for the city from 2000 to 2006.

The analysis showed that SPM concentration increased from 2000, with a significant increase since 2006. As against the safe limit of 140 microgrammes per cubic metre ( $\mu\text{g}/\text{m}^3$ ), Mumbai recorded SPM levels at 1,056  $\mu\text{g}/\text{m}^3$  in 2007-08 — seven times the safe limit. By 2012, levels increased to 1,853  $\mu\text{g}/\text{m}^3$ , 13 times the safe limit. BMC's pollution data for 2015-16, taken from the System of Air Quality Weather Forecasting and Research (SAFAR), which collects pollution data from 10 locations in the city, recorded PM<sub>10</sub> (pollutants smaller than 10 microns in diameter) and PM<sub>2.5</sub> levels were above permissible limits at all locations.

The study, Changing Air Quality and its Impact: A case study of Mumbai, was published by the International Journal of Scientific Research last week. Narinder Kaur, assistant professor, Smt MMK College of Commerce and Economics, Bandra, who did the analysis, said, "Continuous emissions of harmful pollutants, especially SPM, are responsible for rising discomfort, and increasing airborne diseases in Mumbai," said Kaur. "Open burning of municipal solid waste on the streets and landfill sites needs to be stopped immediately to improve the city's air quality."

The study said fuel combustion — by vehicles, power stations and industries, construction activities, road dust, burning of garbage and use of wood and dung as cooking fuel — as the main sources of SPM. “The quality of air in an area determines the health of people. It was observed that increased exposure to SPM in Mumbai is resulting in various respiratory diseases such as lung cancer, asthma, bronchitis, pneumonia and even heart disease,” said Kaur.

Doctors said there had been a significant rise in patients visiting them, complaining of respiratory infections mostly related to particulate matter. “SPM carries virus and bacteria, which infect the lungs and cause infections. Those suffering from these problems rarely respond to common medicines,” said Dr Pratit Samdani, physician, Breach Candy Hospital.

Sanjeev Mehta, pulmonologist, Lilavati Hospital, Bandra, said the percentage of patients diagnosed with respiratory ailments concerned with SPM has doubled between 2007 and 2017, compared to the earlier decade. “We observed a decrease in lung function even when they are healthy or not even smokers,” said Mehta.

A report by International Agency for Research on Cancer (IARC), cited in the study, found young children to be worst affected by the impact of SPM. “Cases of birth defects, lower intelligence quotient and premature deaths have all been identified as a direct impact of exposure to toxic pollutants like SPM in Mumbai’s air,” she said.

“The personal exposure for Mumbaiites to pollution, especially particulate matter, is very high, which has serious health consequences. Mumbai needs a comprehensive air pollution action plan, and it should be stringently implemented in a time-bound manner,” said Anumita Roychowdhury, executive director, in-charge of clean air and sustainable cities programme, Centre for Science and Environment (CSE)

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Other air pollutants such as nitrogen dioxide (NO<sub>2</sub>) and sulphur dioxide (SO<sub>2</sub>) showed an increase during some years between 2007 and 2012, they did not show a clear rising trend like SPM.

### **The air you breathe:**

Suspended Particulate Matter (SPM) is a mix of dust, chemicals, soot, pollen, water droplets and other organic substances.

SPM is released during fuel burning - by vehicles, power stations and industries, construction activities, road dust, burning of garbage and use of wood and dung as cooking fuel.

The particles can enter the lungs and get lodged in the tissues, causing respiratory illnesses.

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**Published in:**

**[Hindustan Times](#)**

## The Himalayan fear of a major earthquake

*Lab Covered: CSIR-NGRI*

*7<sup>th</sup> February 2017*

When the Himalayas shake, shivers run down North India, even if the tremor is moderate.

Described by seismologists as a ‘tectonic episode, the Monday night tremor, measuring 5.8 on the Richter Scale with its epicentre at Gupt Kashi in Uttarakhand’s Rudraprayag district, could be felt as far away as the Capital and Haryana.

This is the third quake to strike the State, coming after nearly two decades. A 6.8 magnitude quake rocked Uttarkashi in October 1991. It was followed by one of the same intensity in March 1999, with the epicentre at Chamoli.

There is enough scientific understanding that the Himalayan region is seismically active and the possibility of a massive earthquake is very real. The collision between the Indian and Eurasian plates, which has been ongoing for millions of years, has been a cause of the heightened seismic activity in the region.

Indeed, the world’s tallest mountain range is in itself the result of the thrusting of the plates, pushing up the Himalayas. So far, however, the tremors have been essentially in the nature of release of latent strains in the earth’s interiors. “In the past hundred years there has been no major earthquake in the Uttarakhand area in the foothills of the Himalayas and there is a build up of stress, which makes it a highly stressed location. Moderate intensity quakes are a way of release of this energy,” said Srinagesh, a senior seismologist with the National Geophysical Research Institute (NGRI), Hyderabad.

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The NGRI has three seismic observatory stations in Almora and Rudraprayag districts. Reports from there state that the ground shook but caused little or no damage. The earthquake occurred at a depth of 14 km, he told BusinessLine.

In contrast, the 7.8 Kangra (Himachal Pradesh) earthquake of April 1905 killed over 20,000 people. The 1934 temblor on the Nepal-Bihar border, measured 8, causing widespread damage including 19,000 killed. The April 2015 7.9 magnitude quake flattened buildings and killed over 20,000 people.

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**Published in:**

**[Hindu Business Line](#) [Business Line](#)**



## Experiments in Vizag Agency areas bear fruit

*Lab Covered: CSIR-CCMB*

*7<sup>th</sup> February 2017*

### **Commercial production of Andhra Pradesh apple may begin in four to five years**

Experiments of the past three years have confirmed that the Agency areas of Visakhapatnam are suitable for apple cultivation.

If all goes well, commercial production of apples could begin in four to five years.

“We are undertaking further study on the varieties that are suitable for the region. The outcome of these studies is expected in a couple of years,” chief scientist of the Centre for Cellular and Molecular Biology (CCMB), Hyderabad, Ramesh Aggarwal, said. He was on a visit to the Regional Agricultural Research Station (RARS) at Chintapalli in the Agency area of the district recently.

“Low chilling varieties of apple saplings — Anna, Michael and Selection — were planted at RARS, in 2014. The results — the average number of fruits per tree was 35 and average weight of each fruit was 53 gm,” Associate Director of Research, RARS, G. Jogi Naidu, told The Hindu.

“We again planted new varieties — Apple ‘A’ mark creeper, Apple Bilaspur and Nonisalan — in August 2016 and we are expecting good results. The CCMB distributed around 5,000 saplings to 100 tribal farmers in 2014 for cultivation in the Agency. Around 15,000 saplings were distributed to them recently,” he said.

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“The results have shown that the fruit has a sweet/sour taste. It is small in size,” said Mr. Naidu.

“The overall average minimum temperatures in the Agency areas of Visakhapatnam district is in the range of 4 to 17 degrees Celsius during winter. RARS is also growing wheat from Indore and white rajma, chick pea, barley and oats on an experimental basis.”

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**Published in:**

**[The Hindu](#)**