



# Conference Report

## Report of 5th Nabanita-Satish Chandra Biswas and 2nd Dr. Murali Mohan Biswas Memorial Lectures-2018

On 7th July, 2018, Institute of Science, Education and Culture (ISEC) in collaboration with Birla Industrial and Technological Museum (BITM) has organized “5th Nabanita-Satish Chandra Biswas Memorial Lecture-2018” and “2nd Dr. Murali Mohan Biswas Memorial Lecture-2018” at Conference Hall of BITM. Photographs of the founder of ISEC, late Prof (Dr.) Murali Mohan Biswas and his parents late Satish Chandra Biswas and Nabanita Biswas were garlanded with Rajanigandha flower. At 11.45am, Prof. Anil Kumar Ghosh, President of ISEC, delivered his Inaugural Speech as Dr. E. Islam, Director of BITM, was not present. He welcomed all members in the Hall. Responsibility of conducting the seminar was taken up by Prof. Santanu Das, the Secretary of ISEC.

Miss Ayshwarya Ghosh, who obtained 1st place among girl students and 3rd position among boys and girls in West Bengal and also 6th rank in India in CBSE 10th standard board examinations was felicitated with a flower bouquet by Miss. Sharadia Das, another blooming bud of ISEC family. Then Prof. Chittabrata Palit gave a certificate of appreciation from ISEC to Miss Ayshwarya and Prof. Santanu Das gifted her gift pack and the March, 2018 issue of the journal “Indian Science Cruiser” published by the ISEC. He also mentioned that Proceedings of 4th ISEC seminar published in the journal, had been written by her. Before starting lectures, the Secretary informed the audience that Nabanita-Satish Chandra Biswas Memorial Lecture had first been started by late Prof (Dr.) Murali Mohan Biswas and after his demise in 2016, the ISEC started another memorial lecture in his name.

Title of “5th Nabanita-Satish Chandra Biswas Memorial Lecture-2018” was “*Curiosity in Creativity*”. The speaker was Prof. Santosh Kumar Chakraborty, Ex-Director, National Institute of Technical Teachers Training & Research (NITTTR), Kolkata. At first, he read out

the article that had been distributed among the audience. He also explained the subject in a very lucid way with some of his own experiences. He made the audience understood that everyone has their own skills, sharing of knowledge boosts them towards their success and nothing can be solved by taking revenge to others. It was also detailed that a continuous and priority based research work, positive thinking along with curiosity results invention/ discovery/creation. It was also expressed in words that not only human being but also other living beings have their own excellence to explore and to renovate their lives. After this lecture, the audiences became enthusiastic.

The topic of “2nd Dr. Murali Mohan Biswas Memorial Lecture - 2018” was “*Snake, Snakebite and Its Management*”. The distinguished speaker was Dr. Kaushik Bharati, MIPHA, Public Health Consultant, New Delhi. Abstract of the Lecture was provided to all before the lecture. Dr. Bharati elaborately explained the subject matter with a very interesting power point presentation. It was spelled out that there are large variety of venomous and non-venomous snakes present throughout the world. All human beings live with several wrong myths such that: 1. Snakes drink milk, 2. Snakes have revenging attitude, 3. Snakes can dance, 4. Cobras carry gem stone on their head, 5. Rat snakes have venom in tail, 6. Red sand boa gives prosperity, etc.. In India, some snakes are relating to Hindu Devas, e.g., Lord Shiva, Lord Vishnu, Vasuki, Maa Manasa, Krishna, Astika, etc. There are two categories of venomous snakes available in world, viz., Sokhogyphae and Proteroglypha.

Different types of snake families are Viperidae (true vipers), Elapidane (Cobras and kraits), Crotalidae (Pit vipers), Colubridae (Back-fanged snake), Hydrophidae (sea snake). Russell’s viper and saw scaled vipers contain hemotoxic venom. Saw scaled viper rubs their body and produce a sound of wood cutting. They are extremely dangerous and

contain highly potent hemotoxic venom. Russell's viper (Chandrabora in Bengali) is discovered by Patrick Russell. When it moves, it hisses loudly. Kraits contain neurotoxic venom and its bite can cause death due to respiratory failure. Common Kraits (Kalach in Bengali) are 15 times deadlier than cobra venom. The Banded Krait (Shakhamuti in Bengali) inspired a Sherlock Holmes Classic! It contains weaker venom. Colubridae are largest group of snakes in the world and they are mostly harmless. Hydrophidae carry venom more toxic than cobras. They are different in colours and shapes.

Cobras are of two types; 1. Biocellate (Spectacled) Cobras i.e., Gokhro in Bengali, are very fast and alert, 2. Monocellate cobra, i.e., Keote (rarer than Biocellate, mostly nocturnal and active at dusk and dawn).

Pit vipers have a pair of heat-sensitive pits located between the eyes and nostrils on either sides of their face. Bamboopit vipers are nocturnal, green in colour and very dangerous as they mostly bite on head, neck and shoulders. When they bite, burning sensation, pain and swelling start within a minute. King cobra (Sankhachur in Bengali) is the longest and the most venomous snake in the world. They are very intelligent and aggressive in nature. When it bites, death occurs within 10 mins. Venomous sea snakes are: Hook nosed sea snake (venom is 4-10 times more toxic than cobra venom) and Yellow lipped sea krait (also called Banded sea snake. It is nocturnal and contains neurotoxic venom).

Non Venomous snakes are: Indian Rat snake, Checkered keelback, Indian Rock python, Red sand Boa (two headed snake). Mildly venomous are: Common vine snake and Ornate flying snake (i.e. gliding snake), etc.. Most of the snakes eat frog, insects, etc.. From the discussion, it is clear that four most dangerous snakes are Russell's viper, Spectacled cobra, common Krait, and Saw scaled viper. Major snakebite deaths occur due to these big four. Snake has very keen sense of smell, its tongue has taste bud and also snake can respond to sound wave. Taste bud of snake tongue uses an organ called Jacobson's organ which gives the sensing capability to snake. Venom gland consists of serous cell and it is placed posterior to eye.

Around 45000 people die due to snakebites in India. Venoms are rich in enzymes viz., peptidases, nucleases that help digest the prey. When snake bites, toxic secretion occurs from venom gland and it

constitute proteins. These proteins make the toxin. There are four different modes of actions occurred due to snakebite. Venom attacks blood cells and tissues break down. It also attacks nervous system and causes toxicity of cells of patients. *Snake bite is a major problem and it is a medical emergency but patients are taken to different 'ojhaas' before going to doctors or hospitals.* With proper medical treatment adopting accurate time management, snakebite patients can be saved. Psychological treatments with the patient is very important to fight against snakebite. In most of the cases, deaths occur due to panic. More than one lac antivenoms are available but it is important to identify the species of snake by taking a photo of snake, bite area, amount of venom injected due to snake bite, age and physique of victim. Gum bleeding, hematemesis, hemoptysis, epistaxis, eye bleeding, hematuria happen due to viper's bite. For elapid bites, difficulty in speaking, swallowing and breathing are noticed. Sleeping tendency, ptosis and also glossopharyngeal pulsus are also symptoms of elapid bites. Russell's viper bite damages the infected areas and bite area burns due to cobra bites.

At first, bite area is to be wiped with a clean cloth very quickly. If patient carries any metal aid then that aid should be removed. Patients must be kept as steady as possible keeping their limbs below heart. Some precautions are very essential for snake bite, viz., never to use tourniquet, ice, electric shock, not to cut bite site, not to rub potassium permanganate and also not to suck bite area. Antivenom is discovered by Albert Calmette. The basics of antivenom therapy is to collect serum of an immunized animal with snake venom. This serum is injected to patient to envenom him/her. Some Indian Pharmaceutical company e.g., Bengal Chemicals and Pharmaceuticals Ltd., Kolkata, Serum Institute of India Ltd., Pune, etc., prepare antivenom. Above all, "Prevention is better than cure". So walking in proper dress and light, sleeping on bed, etc., not to play with snake is important. Everyone should keep in mind that snake provides ecological balance and economic benefits. So, snakes are not to be killed.

This important and also informative discussions made the audiences aware about aspects of various snakes. At the end, Prof. Santanu Das delivered a vote of thanks. (*A few photographs of the Event are in back inside cover*).

**Bandana Barman**

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