

## Pharmacy Faculty Invited To Attend Workshop On Supply Chain Security



Dr. Md. Abu Bakar, Associate Professor, Department of Pharmacy, Brac University was invited to attend a workshop on supply chain security in the pharmaceutical and contract chemical synthesis industries. The workshop was held on July 10<sup>th</sup> and 11<sup>th</sup>, 2019 at Gujarat Forensic Sciences University, Gandhinagar, Ahmedabad, India. The organizers and sponsors were US Department of Energy, Gujarat University, India and Gujarat Forensic Sciences University, India. Senior chemical safety and emergency management researchers were the speakers and participants.

There is a need to strengthen chemical security awareness to improve supply chain security and enhance customer vetting in pharmaceutical and contract chemical synthesis industries. The workshop proposed to promote awareness and education in

technical communities, support the adoption of customer vetting programs in the chemical sector and enhance security coordination and communication.

Source: [Department of Pharmacy](#)

## Pharmacy Faculty Joined International Biology Olympiad as International Jury Member

Md Samiul Alam Rajib, a senior lecturer at the department of Pharmacy of Brac University has recently been invited as an International Jury member at the 30th International Biology Olympiad 2019 (IBO 2019) at Szeged, Hungary. Along with his jury responsibilities, he has also led the Bangladesh National Biology Olympiad team as the deputy team leader and Coach. The team has won 3 Bronze medals for Bangladesh in the same competition. This year, 78 countries participated in this largest competition of college level biological sciences.



Source: [Department of Pharmacy](#)

## Pharmacy Students crowned Champions of the BUNSC Intra University Poster Presentation Competition

A team of two students from the Department of Pharmacy, Brac University became Champions of the “Twenty-One Ovation 3.0” Intra University Poster Presentation Competition organized by the Brac University Natural Sciences Club (BUNSC) last Sunday (21st of July). The presentation topic for the competition was “Environment Sustainability” and participating students were required to present under one of four categories – Waste Management, Water Treatment, Climate Change and Energy Resource Management. The students, Bagdad Ahmed and Ferdousur Rahman, formed one of 18 teams which participated in the tournament, after their submitted abstract was approved for the presentation round.

Bagdad and Ferdousur presented the concept of “Poopaper” – environmentally friendly paper manufactured from animal droppings, mainly elephant dung. This innovative idea originated from the Sri-Lankan social enterprise Eco-Maximus, whose main goal is to enhance conservation, primarily that of the Sri Lankan elephants. The students promoted the climatic benefits of such an innovation, with primary focus on its potential to cut down on mass deforestation and rate of animal extinction. Furthermore, the students also emphasized on the future applications of such a process, with reference to the production of facial tissues from panda faeces.

Source: [Department of Pharmacy](#)

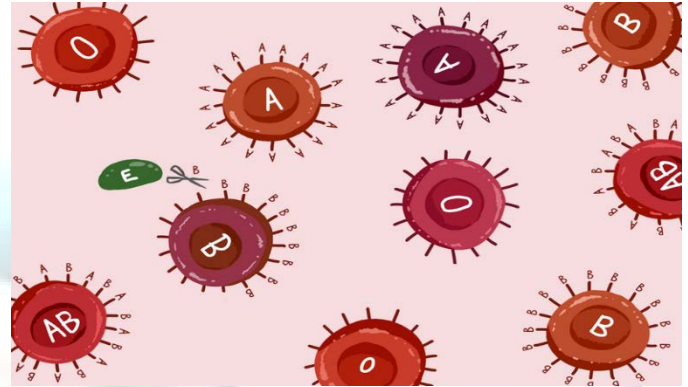
## Creating Universal Donor Blood with a Microbial Enzyme

Hospitals must always maintain a supply of the various blood types that patients might need. Researchers have found a way to convert type A blood into the most universally accepted type O. There are two microbes that typically live in the human gut. These microbes produce enzymes that can make the conversion, which could help build a bigger supply of useful blood.

Molecules on the surface of red blood cells called antigens which give a person a blood type. There are four major blood types A, B, AB and O. If type B blood is given to a person with type A blood, or vice versa, the recipient's immune system will react against the donated red blood cells, which can be deadly. However, type O can be used as a donor for recipients with any blood type because red blood cells from a type O donor don't have the antigens to stimulate such an attack.

As clinicians often don't have time to examine for a person's blood type before giving them a blood transfusion, so universally compatible type O blood is important to have on hand. Moreover, a metagenomic screen discovered a pair of enzymes which are produced by the gut microbe *Flavonifractor plautii*. Very low levels of the enzymes were able to convert type A blood to type O blood.

Some more work will be required before this process can be implemented. The scientists have to ensure that the offending type A antigens have been removed entirely. They also have to test the red blood cells completely to be sure that nothing else has been altered.



Source: [Science, Nature Microbiology](#)

## First Treatment For Severe Hypoglycemia That Can Be Administered Without An Injection

Baqsimi nasal powder, recently approved by the U.S. Food and Drug Administration, is the first glucagon therapy approved for the emergency treatment of severe hypoglycemia that can be administered without an injection. Typically, severe hypoglycemia occurs in people with diabetes who are using insulin treatment. Baqsimi is approved to treat severe hypoglycemia in patients with diabetes who are older than four years.

Janet Woodcock said, "This new way to administer glucagon may simplify the process, which can be critical during an episode, especially since the patient may have lost consciousness or may be having a seizure. In those situations, we want the process to treat the suffering person to be as simple as possible."

Baqsimi, which is a powder administered into the nose, will come in a single-use dispenser that can be given to someone suffering from a severe hypoglycemic episode. The drug increases blood sugar levels by stimulating the liver to release stored glucose into the bloodstream.

Baqsimi should not be taken by patients with pheochromocytoma, a rare tumor of adrenal gland tissue, or by patients who have insulinoma, a tumor of the pancreas. Baqsimi should also not be taken by patients

with a known hypersensitivity to glucagon as allergic reactions may occur.

Side effects of Baqsimi are similar to those associated with injectable glucagon, with the addition of nasal and eye-related symptoms, such as watery eyes and nasal congestion. This is because of the route by which the drug is administered. The FDA granted the approval of Baqsimi to Eli Lilly and Company.



Source: [FDA](#)