

How are we doing in the fight against Covid-19?

Researcher and scientist Dr Bijon Kumar Sil is a renowned name in the field of microbiology. In 2003, he invented the SARS coronavirus detection kit in Singapore. Recently, he has come under the limelight with his latest invention—G Rapid Dot Blot—a low-cost and time-saving kit developed by Gonoshasthaya Kendra for detecting Covid-19 with an accuracy of over 90 percent. Even though the kit is yet to be approved by the authorities, its promise has gained much appreciation. Having worked in prominent organisations internationally, the scientist from Natore returned to Bangladesh and joined Gono University and is now its lead virology scientist. The following is an excerpt from an interview taken by Golam Mertoza, which was broadcast live on The Daily Star's Facebook page recently.

What is the current status of your G Rapid Dot Blot kit?
Hopefully, Bangabandhu Sheikh Mujib Medical University (BSMMU) will give us the approval soon.

Last week when we spoke, you were expecting their report in a week's time, which has already passed. Isn't it taking a bit too long?

Yes, it is taking some time indeed. Initially we proposed to detect antibodies and antigens of coronavirus from the blood. But now we are able to do so from saliva—enabling us to get the results rapidly. We discovered that even before the symptoms start to appear in a patient, the virus is present in their saliva. Therefore, we requested BSMMU to use saliva as a sample in the trial of our kits. In order to do so, they had to hold a meeting again and get the approval. After that we gave them the kit along with the containers they needed to collect the saliva in, which they did not have. Hence, it has become a time-consuming process.

So far, two countries got the approval for antigen kits—US and Japan. Experts in Japan said that they will consider using the saliva test in the future.

However, we have done so and the results seem promising. And it is with our kit that I have identified the virus in Dr Zafrullah Chowdhury on May 26. The next day he provided his sample to BSMMU for PCR test.

You were the first scientist in the world to proclaim the development of the antigen and antibody kits. Even though US did so later, they were able to bring it to the market earlier following their approval. You have also accomplished the saliva test before Japan did. Like before, do you think you may fall behind this time?

It is unlikely because we have already filed for a patent. If someone else wants to make use of it, they will need to get our consent.

There seems to be a lot of criticism regarding your kit. Many experts and physicians in the country have claimed that testing with your kit will not provide accurate results.

Those who claimed that the results won't be accurate must be very experienced, and I can't claim to be an expert like them. However, I am very familiar with the coronavirus as well because in 2003, I worked with SARS coronavirus during the outbreak, and the recent one is of a similar kind.

What I say and do is based on my own experience. In 2003, I worked on four different methods to identify SARS, the first and second of which are not possible in Bangladesh because we don't have a laboratory of that calibre. Then there was the PCR method, which we designed at that time (in 2003) in Singapore and the final method was Dot Blot which enabled the fastest detection. It took around three and a half hours to get the result using PCR and cell culture takes even longer.

With Dot Blot we can now get the result in three to five minutes. I claim its accuracy based on my research, innovation and testing.

What is the reason behind their criticism?

The naysayers may be knowledgeable, but I possess more experience in this regard. Both antibody and antigen tests are necessary. In the past 20 years, molecular technology has advanced remarkably. It has been reported from different parts of the world that PCR test results are coming out inaccurately and collecting samples for it remains challenging. It requires skilled technicians because if the sample is not collected from the precise spot, then the result won't be accurate. Therefore, there is a 30 percent chance of the result being inaccurate. The price of PCR machines are more expensive as well. Because of such constraints, I developed the Rapid Dot Blot kit. I

respect criticism, but it would be better if it was constructive.

Whenever I try to reach you, I am told you are busy in the lab. What are you working on now?

Due to the lockdown, we had to import all the required reagents and it was a time consuming and challenging process. With all the criticism around, we are trying to refine our method as much as possible. The lab in which my team and I are working in now was



Dr Bijon Kumar Sil

arranged in only a week. What we are thinking about today, the west is doing so tomorrow. Hence, we had to work diligently so that there are no room for mistakes.

Having worked in state-of-the-art labs in Singapore, how was the experience of returning to Bangladesh to work for an organisation dedicated to the public health of the underprivileged?

The researchers in my team are all very talented individuals. In Singapore, I could avail all the necessary items in no time, there was no lockdown and we made the antigens ourselves. But there are limitations now. All that we require needs to be imported from outside. The

foreign minister, the Prime Minister's Office, customs and others have all assisted us to progress this far.

How long did it take you to get approval for the SARS virus kit in Singapore?

Since there was a pandemic, it did not take us long to get the approval. As I had joined the Singapore Civil Service working for the government, the kit we made was considered government-approved.

Compared to SARS, COVID-19 is a worldwide contagion. How long are the developed nations taking to approve the kit during such an emergency?

In the US, in order to get approval from the Food and Drug Administration (FDA), one would have to wait at least three years, provide extensive paperwork and it is a very expensive process. However, for the antigen kit to get approved by the FDA, it only took three days.

In PCR tests, around 30 percent of the time the results turn out to be inaccurate. What about your kit?

It is not possible to get 100 percent accurate results in every test. Due to antigen and antibody tests, the success rate of our kit tends to be above 90 percent.

Vietnam and South Korea have succeeded in dealing with coronavirus in a relatively short time. What would you attribute their success to?

While testing, we detected coronavirus in the saliva of numerous asymptomatic patients. If we look at South Korea, they have conducted mass testing using Rapid Test kits which helped them prevent the spread of the virus. The scenario here is different though, despite the restrictions that were in place, many ignored them increasing the chance of infection.

Many infected patients are opting

for plasma therapy now. Probably even more so since Dr Zafrullah Chowdhury felt better after availing it. How feasible is plasma therapy in Bangladesh?

Last February, I posted on Facebook addressing the World Health Organization that hyper-immune therapy or plasma therapy was the way forward as it can prove effective even for critical patients. After administering it to Dr Zafrullah Chowdhury, it helped him create enough antibodies to fight Covid-19. There is another method which is better—if the blood from a recovered Covid-19 patient can be given to someone who is infected, provided that their blood groups match. Memory cells in the recovered patient's blood helps the plasma cells to produce around 2,000 antibodies every second in the blood to prevent the virus from dominating. Even though plasma therapy is compelling, the latter is even better. Another important factor in combatting this virus is one's morale. A strong morale significantly helps boost the body's immune system.

Since the lockdown is no longer in place, as a scientist, what advice would you give to the general public?

We must maintain good hygiene at all costs. As the virus grows in the mouth, if we drink hot tea and gargle with it, the virus will not be able to multiply easily as tea is an antibiotic and the hot temperature will increase the blood circulation in the mouth increasing the cells of our immune system. Vitamin C plays a vital role too by activating our immune system. There were no supplements for vitamin C and zinc earlier. Gonoshasthaya then produced them. In addition to the natural sources of vitamin C, taking two supplements in the morning and two at night will greatly condense the prevalence of the virus. As there is no running from this virus, we should not dread it and must face it with courage and determination instead.

Why we should let our demographic lead the way

SHARMIN AHMED and SADIA AHMED

WHEN WHO declared Covid-19 a pandemic, many organisations immediately called for ideas on what to do as there was no doubt that an economic disaster was looming. Most measures focused on keeping the economy alive through low interest loans and financial services—all immensely important for keeping businesses buoyant and ensuring a rebound after the crisis. But a key characteristic of Bangladesh is its huge and dense population, one without the safety-net services and support that developed nations can provide to their people. Therefore, this crisis is bound to culminate into a humanitarian disaster for us, leading to people at the bottom of the pyramid living in poor health, hunger and generally low well-being.

While on the one hand we use social-distancing measures, testing and other healthcare services to directly address the pandemic, on the other hand we are also aiming to help the economy survive and remain resilient. Right now, making sure that essential services continue to be provided is crucial, as this will mean people are safe and can survive without "handouts". Yes, without handouts. It is not to say that the efforts of different organisations and individuals alike to

aid people who have lost their jobs and livelihoods should be stopped. These are essential in the short run, although, development experience and countless studies have shown that directly giving cash to people might work better than providing food packages. For a forward-thinking approach we may want to consider more comprehensive systems—sectors like telecommunication, transport, agriculture and labour-intensive industries.

Let's start with the agriculture or the food sector. We have seen farmers in rural areas not being able to sell their products because there aren't enough buyers and transport from rural to urban areas due to the general holiday. This means that in urban areas, prices are going up, making things difficult for the poor even though there is enough food in rural areas. On the other hand, farmers who are not being able to sell are getting poorer. As a result, farmers will not have the money to buy seeds, fertilisers and other materials for the next harvest, which could lead to a real shortage.

If the flow of goods from rural to urban areas is increased, farmers could earn enough to invest next season and food prices can also be kept stable. With that in mind, import of farming

material should be subsidised for next season. And for the next one or two years, the government should try to get more open pollinated variety (OPV) seeds. Hybrid is expensive and cannot be reused, OPV has less yield but can be replanted without buying new seeds—that is what we need now, cheaper seeds that can be re-used. The government and multilateral organisations should collaborate to support seed companies to expand and extend their distribution networks to reach more farmers.

Similarly, the production of PPE will continue to be important until most of the world can be vaccinated. This implies a steady demand for PPE which some of our factories already produce; and potentially others too can.

Companies should now restructure their CSR activities to support the governments in this crisis. Mobile operators could give free airtime to the poor. And the benefits could be two-way as these networks can provide data that will help determine who needs what kind of support and how to reach them. Keeping communication lines alive is also very important to ensure that news and information have a way of reaching those who are stuck in slums without televisions and access to information. Investing in increasing the reach of bKash and other money transfer services

would be useful. It is high time we brought in our low-income unbanked population into the formal financial sector backed by telecommunication services. While it is inevitable that we will go through a recession, the idea should be to make sure people do not suffer through it and die of hunger or starvation.

When the economy starts to reopen, and it must happen gradually, the government should initiate projects to employ people. Construction, real estate and factories—anything that needs a large number of workers—will be essential for our recovery. The gig economy will also be key, as it could be a source of mass employment.

Because we have a small pool of funds, its judicious use is vital for us to weather this crisis. The World Bank has predicted a 22 percent fall in remittances due to Covid-19, and Bangladesh still remains significantly dependent on remittances. To resend our workers abroad, we need to inspire confidence among countries that need them. This could include testing facilities at airports or before travel.

The truth it is that while the pandemic has left us in uncharted waters, old debates on letting go of the one-size-fits-all theories are all the more valuable now. We need to look



If the flow of goods from rural to urban areas is increased, farmers could earn enough to invest next season and food prices can also be kept stable.

PHOTO: STAR

at our demographics for guidance, our internal systems and decide what's best for us. The good news is that past calamities have shown us to be a resilient people.

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QUOTABLE Quote

EM FORSTER
(1879-1970)
British novelist, essayist, and social and literary critic.

Spoon feeding in the long run teaches us nothing but the shape of the spoon.

CROSSWORD BY THOMAS JOSEPH

ACROSS

- 1 River vessels
- 6 Iron output
- 11 Some messages
- 12 Curaçao's neighbor
- 13 Singer Reese
- 14 Home design
- 15 Go along with
- 17 Pillbox, for one
- 18 John who plays Sulu
- 19 "My bad!"
- 22 Finger count
- 23 Personally gave
- 24 Fizzy quaffs
- 25 Bit of inside info
- 27 Rap performers
- 30 Denies
- 31 Brewpub

DOWN

- 1 Edit
- 2 Don of "Coconut"
- 3 Bird of prey
- 4 Floor piece
- 5 Hockey plays
- 6 Blue
- 7 Due follower
- 8 Tricktaking card game
- 9 On the train
- 10 Best Picture of 1955
- 16 Lackeys
- 20 Pics
- 21 "— bodkins!"
- 24 "Fifth Beetle" Sutcliffe
- 25 Delayed
- 26 In recent days
- 27 Yacht spot
- 28 Shrewd
- 29 Passover meals
- 30 Train supports
- 34 Heaps
- 36 Egg layer
- 37 East, in Berlin

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YESTERDAY'S ANSWERS

R	A	J	A	H	W	A	L	E	S
A	D	E	L	E	A	L	A	M	O
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M	I	A	M	I	R	A	D	A	R
A	R	M	E	D	A	R	E	N	A

BEETLE BAILEY BY MORT WALKER

THE PENTAGON CALLED WHILE YOU WERE OUT

SURE AND I GOT A HOLE-IN-ONE

AROUND HERE EVERY DAY IS APRIL FOOLS' DAY!

BABY BLUES BY KIRKMAN & SCOTT

HEY, AREN'T YOU WANDA FROM THE YOUTUBE CHANNEL?

UM, YEAH!

I JUST LOVE IT! YOU'RE SO FUNNY! CAN WE TAKE A SELFIE?

I THINK MOM MIGHT BE COOL.

WHOSE MOM?