



# Bangladesh Academy of Sciences NEWSLETTER

**Vol. 9 No. 3, September-December 2020**

## NATIONAL EVENTS

### **I. BAS Webinar on ‘COVID -19: Role of BAS in Societal Empowerment through Science’ held on Saturday, 19 September 2020**

Bangladesh Academy of Sciences (BAS) organized a BAS Webinar on ‘COVID -19: Role of BAS in Societal Empowerment through Science’ on Saturday, 19 September 2020. Emeritus Professor Dr. AK Azad Chowdhury, President, BAS was the Chief Guest and Professor Dr. Haseena Khan, Secretary, BAS moderated the webinar. The speakers in the webinar were Prof. Dr. Zeba Islam Seraj, Department of Biochemistry and Molecular Biology, University of Dhaka; Prof. Dr. Choudhury Mahmood Hasan, Dept. of Pharmaceutical Chemistry, Faculty of Pharmacy, University of Dhaka; Emeritus Scientist Dr. Firdausi Qadri, Senior Scientist and Head, Mucosal Immunology and Vaccinology Unit, International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B), Dhaka; Prof. Dr. Liaquat Ali, Prof & Former VC, Bangladesh University of Health Sciences and Fellow, Islamic World Academy of Sciences; Major Gen (Retd) Prof. (Dr.) A S M Matiur Rahman, Former Commandant and Professor of Microbiology, Armed Forces Institute of Pathology.

About 40 scientists and teachers including BAS Fellows, BAS Associate Fellows, members of the National Young Academy of Bangladesh (NYAB) and Faculty members of public and private universities, participated in the webinar.

Professor Haseena Khan, moderator of the webinar welcomed the participants with greetings and wishing peace for all.

Professor Haseena Khan mentioned the importance of the BAS webinar under the present unstable and apprehensive situation due to COVID-19 in the country. She introduced the 1st speaker, Prof. Dr. Zeba Islam Seraj and requested her to present her talk and mentioned that the allocated time for each of 5 papers was 10 minutes.

The title of the paper of Professor Seraj was “**Societal Empowerment through Science**”.

Professor Zeba Seraj addressed the Chair, participants and exchanged greetings.

Prof. Zeba Seraj then mentioned that collective intelligence enhances the capacity and empowerment of organizations. Bangladesh Academy of Sciences (BAS) is an organization of collective intelligence in different disciplines of sciences having a higher collective capacity more than any organization of constituting a single discipline.

BAS being a body of scientists can increase awareness among the general public about COVID-19 and its short- and long-term effects on an individual or society of the country.

She gave examples of enhancing awareness about COVID-19 among the general public in New Zealand, and in Vietnam about preparedness and tackling of the spread of COVID-19 infection. The deaths in New Zealand and Vietnam due to COVID-19 are remarkably lower compared to those of other countries. She also cited an example of the Institute of Business Administration (IBA) of Dhaka University about how it continued to teach and evaluate students spread all over the country having limited IT facilities and how IBA tackled the situation so that there had been no loss in timing of their semesters, despite the new coronavirus pandemic.

Professor Seraj showed through diagrams how BAS can increase ‘Advocacy’ through developing Emergency Task Force, Expert Panel and also liaison with students, voluntary bodies and social organizations. She also presented ideas on enabling popular communication channels and social media like You Tube videos, MoU with radio and TV channels and citizen science networks.

Professor Seraj cited an example of management of plastic waste including PPE through advocacy and developing ‘successful citizen science’.

After the presentation, Prof. Haseena Khan expressed thanks to the speaker and commented that the Academy had got some good ideas from this paper.

Professor Khan then requested Professor Dr. Choudhury Mahmood Hasan to present his topic, **‘Role of Medicine in Controlling COVID-19’**.

Prof. Hasan after exchanging greetings with the participants expressed that he had been also a patient of COVID-19 but luckily, it was not serious. Prof. Hasan said that to overcome the present situation the most important things are ‘advocacy’ and new ideas to be given to the Govt. to fight COVID-19, as it is not possible to do anything without the help of the Govt.

Prof. Hasan talked about 3 general preventive measures:

- (1) Maintain Social (physical) distance
- (2) Use mask
- (3) Wash hand with water and soap or use sanitizer

Professor Hasan then mentioned some common medicines:

1. Doxycycline/Azithromycin
2. Remdesivir

He added that if there is early symptom, the patient has to be very careful. It is very contagious. Since every chemical is foreign to our body, one has to use any drug very carefully and judiciously. He did not consider plasma therapy to be a good option.

It is necessary to intervene at the initial stage. Fatality is 1.0% on an average. Under serious conditions oxygen and ventilation support have to be given urgently. Ventilation for the patients with heart disease or high-level of diabetes is very suitable.

In conclusion, Professor Hasan put emphasis on **‘Advocacy by BAS’** on public empowerment under the

present wake of COVID-19 pandemic as mentioned by Professor Zeba Islam Seraj.

Professor Khan then invited Emeritus Scientist Dr. Firdausi Qadri of ICDDR,B to present her talk. The title of the talk was **‘Supporting vaccine development and implementation in the country to protect against COVID-19’**.

Dr. Qadri thanked the President and the Secretary, BAS for inviting her to the webinar as a speaker.

Dr. Qadri talked about the development of vaccine in the context of present situation in Bangladesh, natural immunity in response to COVID-19 and pre-existing T-cells.

She also mentioned about the specific antibodies in the bodies of symptomatic and asymptomatic patients.

Dr. Qadri also talked about transmission dynamics of COVID-19.

Normally it takes about 12-15 years to get a vaccine. USD 8.00 billion has been provided by different countries for R&D of a vaccine. The Bill Gates Foundation has donated about USD 600 million for R&D of vaccine for COVID-19.

She further mentioned about the population targeted for developing the vaccine on a priority basis:

- 4200 health care workers (HCW)
- Millions of common people

Now, the question is who should get the vaccine first?

Thirteen per cent of the world population has already bought 50% of COVID-19 vaccine. She further mentioned that by this time in Bangladesh 4000 people have already died and 350,000 infected, of which 50% patients are below 35 years. Under the present situation COVID-19 anywhere is COVID-19 everywhere.

As such, self-protection is very important through practicing following three measures:

- i. Social/physical distance
- ii. Hand wash/sanitization
- iii. Wearing mask

Dr. Qadri then said “This pandemic has made it very clear that vaccines do not prevent infectious diseases and save lives in 100% cases. However, they are essential in maintaining global security, social cohesion and economic

stability.” Finally, she remarked that BAS can publicize the ways and means/devices used for self-protection.

Professor Khan, then requested Prof. Dr. Liaquat Ali to present his talk. Professor Ali has been involved in the policy formulation of the Ministry of Health and Social Welfare from the beginning of the COVID-19 pandemic in the country.

Prof. Dr. Liaquat Ali, presented his talk on **‘Laboratory Test in COVID-19: Implications for Management and Prevention’**.

Prof. Ali started his talk with a quote from Director General of WHO ‘Test, Test and Test’. He said that all international policies have given central importance on the implementation of intensive tests for people to control the COVID-19 pandemic, but Bangladesh could not organize the testing facilities in that dimension.

He then discussed the diagnostic tests for the disease where molecular tests to detect viral RNA in swab samples from nose and throat, play major role with Reverse Transcription Polymerase Chain Reaction (RT-PCR) test as the gold standard for routine clinical laboratory purposes. He, however, mentioned that the test can detect active viral infection, generally, upto one week after the onset of symptoms. After that period PCR positivity does not necessarily mean the presence of replicative virus. He stressed on the introduction of the recently adapted quicker and cheaper molecular tests as alternates for the costly, time-consuming and technology intensive RT-PCR tests. He also emphasized on the antigen-based tests (to detect viral protein in the same samples) for mass screening purposes with clear understanding on its appropriate use and limitations, Prof. Ali also explained the importance of antibody tests to be used for surveillance, epidemiological research and vaccination/therapeutic purposes.

Dr. Ali concluded that his team had submitted a report to the Ministry of Health regarding the next course of action for the Govt, but the Ministry was yet to take up a quick step forward.

Professor Haseena Khan then requested Maj Gen (Retd) Prof. Dr. A S M Matiur Rahman to present his talk. Professor Rahman presented in details the structures and characters of Corona virus through a slide presentation.

Major Gen (Retd) Prof. Dr. A S M Matiur Rahman presented an overview of the SARS-CoV-2 virus and its molecular structures. He further mentioned about the history of viral infection that ranges from mild to critical i.e. common cold is a mild infection by the Influenza virus and critical infections are caused by SARS, MERS, SARS CoV-2 viruses. Professor Rahman added that due to infection of the virus, kidney and liver also get affected.

Prof. Matiur Rahman talked about the discovery of different type of viruses. He showed slides on the global timeline of infection by the different viruses.

Professor Rahman showed, through slides, different positions of multiplication of viruses in the human body. Apart from the lungs the virus may infect other organs like blood vessels, heart, kidney, liver etc.

He then mentioned the symptoms of a patient infected by COVID-19. He mentioned different drugs and 3 preventive measures i.e. hand wash/sanitizer use, use of masks and maintaining social (physical) distance.

Professor Rahman described the development of vaccines by different countries. He appreciated the role of Dr. Firdausi Qadri and Dr. Liaquat Ali about their efforts for vaccine development and policy development for the Govt.

At the end, Professor Haseena Khan said that the presentation was an excellent overview of the complex structures and characters of the corona virus.

After all presentations, the Chair Professor A K Azad Chowdhury expressed his own views on COVID 19 and various drugs used in its treatment and mentioned his work on antiviral drugs. He thanked the speakers for very important and excellent presentations regarding on-going researches, vaccine and medicine development, policy formulation regarding prevention, medication, advocacy, safety, and pre-and post-pandemic urban rural and social backgrounds. Professor Chowdhury thanked all Fellows and participants for attending a successful webinar.

At the request of the Secretary of BAS , Prof. Dr. K M Sultanul Aziz; Prof. Dr. A K M Azharul Islam; Prof. Dr. Z N Tahmida Begum, Prof. Dr. Md. Muhibur Rahman; Prof. Dr. M Shamsher Ali; Prof. Dr. Yearul Kabir; Prof. Dr. M Tofazzal Islam and Prof. Dr. Saleh Hasan Naqib participated in the discussion.

Prof. Tofazzal Islam, BAS Fellow requested the Academy for publicity of the webinar through electronic and



on-line media. Prof. Yearul Kabir proposed to invite the Govt. machinery and policy makers in such a webinars in future so that the recommendations developed in the webinars might be materialized.

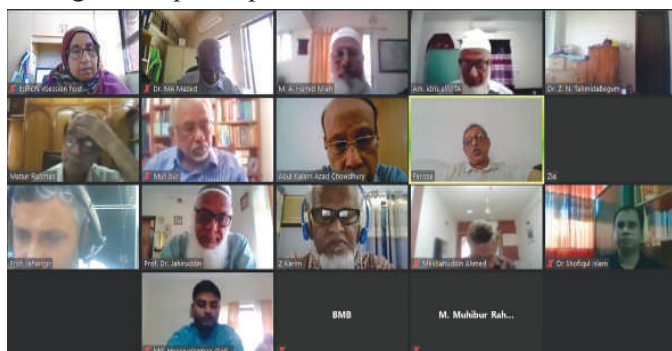
Professor Naqib mentioned that expansion of COVID-19 through droplet transmission had created a confusion among mass people.

Professor Haseena Khan, Secretary, BAS expressed thanks and gratitude to all Fellows and other participants for joining the webinar and said that it was the 1st experimentally organized webinar on health sciences. She hoped to organize another in the field of agriculture and food sciences next and drew the conclusion of the webinar with thanks and gratitude to all.

## II. Academy Lecture on 'Land Degradation in Bangladesh: Challenges and Opportunities for Remediation', 12 November 2020

The Bangladesh Academy of Sciences organized the Academy Lecture on 'Land Degradation in Bangladesh: Challenges and Opportunities for Remediation' presented by Dr. M. Jahiruddin, Fellow, BAS & Professor, Department of Soil Science, Bangladesh Agricultural University on 12 November 2020 at 11:00 a.m. on Zoom online platform.

About 25 participants attended the lecture. Emeritus Prof. Dr. A K Azad Choudhury, President, Bangladesh Academy of Sciences (BAS) was the Chief Guest. Prof. Dr. Zahurul Karim, Vice President, BAS chaired the occasion and Professor Dr. Haseena Khan, Secretary, BAS delivered the address of welcome and moderated the event. The occasion started with exchange of greetings among all the participants.



*Participants in the Academy lecture*

The Secretary, BAS Professor Dr. Haseena Khan welcomed all Fellows, Faculty members of BAU and

other participants and exchanged greetings. Professor Khan then introduced the Speaker Professor Dr. M Jahiruddin and mentioned his notable academic records and professional achievements. Professor Khan with permission of the Chair requested Professor Jahiruddin to start his presentation.

Professor Jahiruddin addressed the Chief Guest, Chairperson, Fellows and participants and started his presentation through the slide presentation of the topic on zoom platform.

Professor Jahiruddin defined the land degradation and its concept, described types of land degradation in Bangladesh, challenges and opportunities for remediation. Land degradation is a process in which the value of biophysical environment is affected. Biophysical environment includes livings (bio) such as plants and animals and non-livings (physical) such as soils and water. It causes decline in productive capacity of land. It is either natural or human induced. Professor Jahiruddin also described the types of land degradation, such as soil erosion, soil salinity, soil fertility depletion and heavy metal contamination.

He emphasized on soil erosion in hilly areas i.e. in Chittagong Hill Tracts, water logging in Jessore, salinity in southern districts.

As the soil fertility declines, new nutrient deficiency arises with time which contributes to hidden hunger. It is one variant of hunger which arises from lack of micronutrients. Professor Jahiruddin also presented the extent of soil fertility depletion change in soil organic matter with time and land elevation, arsenic contamination, land degradation and heavy metal contamination.

Professor Jahiruddin then described the challenges i.e. declining arable land, climate change (salinity, drought, flood), deforestation and soil erosion; jhum cultivation; declining soil organic matter and soil fertility; protect heavy metals pollution and nutritious and safe food production. To face all these adverse conditions, stress tolerant crop varieties have been developed; less water requiring crops, arsenic mitigation strategy and liming have been adapted. He also mentioned about floating garden and conservation agriculture.

Professor Jahiruddin concluded that combined efforts of the government, international organizations, NGOs, famers, extension department, research and education institutions are needed for sustainable land development.



After presentation, the Chair opened the floor for question and answers.

Prof. Dr. Zeba Seraj wanted to know about the possibility of using city waste as compost fertilizer in crop land. Prof. Dr. A S M Matiur Rahman mentioned about the water logging at Bhavadah in Jessore, causing distress to the lives of thousands of people.

Prof. Dr. A S M Matiur Rahman asked about the soil salinity in southern districts of Bangladesh. Professor Zia Uddin Ahmed, Prof. Dr. M Firoze Ahmed asked questions about carbon depletion. Dr. M Idris Ali and Dr. M A Hamid Miah commented that it was an excellent presentation about crop management, water management and fertilizer management. They mentioned about crop intensity increase from single to 3-4 crops in a year with efficient water use.

Prof. Dr. Z N Tahmida Begum wanted to know about land degradation management, nitrogen fixation and forestation.

Prof. Dr. M Firoze Ahmed wanted to know about composting from municipality waste under the Bill and Malinda Gates Foundation grant.

All the speakers put emphasis on advocacy for adoption of proven technologies where BAS can play an important role for negotiating with Government for necessary steps and policy formulation.

The Chair then requested the Chief Guest Emeritus Prof. Dr. A K Azad Choudhury, President, BAS to deliver his address and comment. Professor Choudhury commented that topics were very important and excellent in the context of present agriculture in the country. He put emphasis on macro and micro approach to prevent arable land degradation and cropping intensity.

He commented that city solid waste is mixed with polythene and plastic non-degradable products and wastes. Soil pollution and land degradation must be stopped.

He also commented that agriculture has done better in the present COVID-19 crisis compared to other areas of development .

Soil erosion and soil stress must be arrested. Stress tolerant crop variety is highly required. Soil degradation must be brought under control. The Chief Guest. congratulated Professor Jahiruddin for excellent presentation. The Chief Guest then expressed thanks to the chair of the session and concluded his address.

The Chair, Dr. Zahurul Karim said that discussion and observation of the Chief Guest is very rich and useful. He requested Professor Haseena Khan to make comments on the presentation. She congratulated Professor Jahiruddin for his excellent and resourceful presentation. She said that it was a very stimulating discussion made by Dr. M. Abdul Hamid Miah on afforestation and Prof. Zeba Seraj on advocacy to be taken up by the Bangladesh Academy of Sciences. BAS will see what the policy makers will do. Academy will bring it to the attention of the Govt. She further said that the Academy would organize such lectures in future.

Prof. Zahurul Karim, the Chair of the session commented that Professor Jahiruddin brought many important issues through a few of his slides. Degradation of soil has been presented but not drivers of the degradation by climate change and land degradation, carbon stock and its use, influence on soil flora and fauna and decrease of organic matter. Soil is a living resource. The use of nitrogen and other fertilizer is increasing at a high rate.

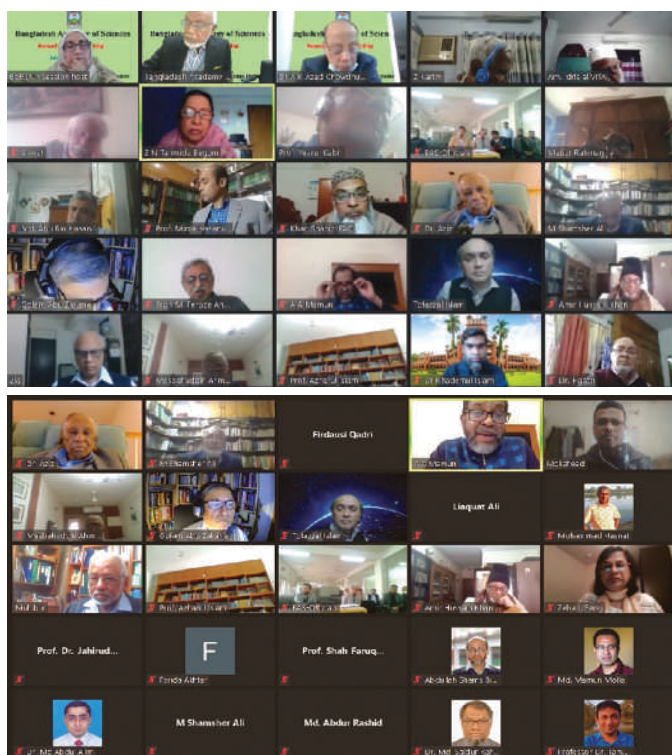
He also mentioned about the change of light texture soil and overuse of carbon in light texture soil. He further talked about arsenic mitigation in ground water, consumption of arsenic by leafy vegetables and ground water depletion. BADC has a lot of information and data on ground water depletion in urban and rural areas and use of lime/dolomite use in soil. Regarding water logging in the southern zone, he said that 77 polders have been dilapidated. Policy has been developed regarding unclassified forest, deforestation and land degradation. The formulated policy needs endoresement of the Government..

The Chair expressed thanks to all participants and declared the the Academy lecture session closed.

### III. Annual General Meeting (July 2019-June 2020)

The Annual General Meeting (July 2019-June 2020) of the Bangladesh Academy of Sciences (BAS) was held on **Saturday, 19 December 2020 at 10:30 am.** on Zoom Platform. Emeritus Professor Dr. A K Azad Chowdhury, President, BAS presided.

About 36 Fellows, 5 Associate Fellows and 1 Expatriate Fellow joined the Annual General Meeting (July 2019-June 2020).



*Participants in the Annual General Meeting*

#### IV. BAS Fellow Election 2018

As per BAS Constitution and Regulations, nomination for BAS Fellow Election 2018, was invited from the Fellows on 19 July 2020. In total 7 nominations were received. The ballot papers were distributed to the Fellows on 01 November 2020. The last day of casting vote was 30 November 2020.

A 3-Member committee counted the votes and in the light of BAS Constitution Article 9 declared the following 4 candidates as winners of BAS Fellow Election 2018:

Professor Dr. Md. Abu Bin Hasan Susan  
Department of Chemistry  
University of Dhaka, Dhaka 1000

Professor Dr. Md. Anwar Hossain  
Vice Chancellor  
Jashore University of Science and Technology, Jashore

Dr. Khan Shahidul Huque  
National Consultant, Livestock Project  
Development Adviser FAO of the United Nations  
Dhanmondi, Dhaka

Professor Dr. Mirza Hasanuzzaman  
Department of Agronomy  
Sher-e-Bangla Agricultural University, Dhaka-1207

#### V. BAS Associate Fellow Election 2019

As per BAS Constitution and Regulations, the nomination for BAS Associate Fellow election was invited through printing media and from BAS Fellows on 23 July 2019. In total 10 nominations were received. The sectional committees examined the scrutinized the nominations and finalized. The ballot papers for BAS Associate Fellow Election were distributed among the Fellows on 01 November 2020. The last date of receiving vote was 30 November 2020.

A 3-member committee constituted by the BAS Council counted the votes and in the light of BAS Constitution declared the following candidates as winner of BAS Associate Fellow Election 2019:

##### Physical Sciences:

Dr. Md. Mamun Molla  
Professor, Department of Mathematics & Physics  
North South University, Bashundhara, Dhaka-1229

##### Engineering Sciences:

Dr. Tanveer Ferdous Saeed  
Professor, Department of Civil Engineering  
University of Asia Pacific, 74/A, Green Road, Dhaka-1205

#### VI. BAS Expatriate Fellows Election

Prof. Dr. Yearul Kabir, Associate Secretary, BAS and Prof. Dr. M Feroze Ahmed nominated Professor Dr. Muhammad Morshed, Dept. of Pathology and Laboratory Medicine, BC Centre for Disease Control, 655 West 12th Avenue, Vancouver, BC, V5Z 4R4, Canada and Dr. Mustafizur Rahman, Professor (Retd.), Department of Mechanical Engineering, National University of Singapore, Singapore for Expatriate Fellow of BAS respectively.

The 4th & 5th meeting of BAS Council discussed the matter and decided to place the nominations of Professor Dr. Muhammad Morshed and Prof. Dr. Mustafizur Rahman in the Annual General Meeting (AGM July 2019-June 2020) for election.

Now as per BAS Constitution and Regulations, Annual General Meeting (AGM July 2019-June 2020) held 19 December 2020 following candidates were selected as BAS Expatriate Fellows:

Professor Dr. Muhammad Morshed  
Dept. of Pathology and Laboratory Medicine  
BC Centre for Disease Control, 655 West 12th Avenue  
Vancouver, BC, V5Z 4R4, Canada

Dr. Mustafizur Rahman, Professor (Retd.)  
Department of Mechanical Engineering  
National University of Singapore

**BANGLADESH ACADEMY OF SCIENCES  
LIST OF EXISTING FELLOWS**

As on 19 December 2020

| SL No | Name of Fellows                                      | Residence        | Office/Mobile                    | Email   |
|-------|--|------------------|----------------------------------|---|
| 1     | Prof. Dr. MAM Muhtasham Hussain                      | 9127428, 8115940 | —                                | rercdu@yahoo.com                                |
| 2     | Prof. Dr. HM Sengupta                                | —                | 01853632086                      | —   |
| 3     | Prof. Dr. M Shamsheer Ali                            | —                | 01819253931                      | msali_37@yahoo.com                              |
| 4     | Prof. Dr. AM Harun-ar-Rashid                         | (01727264871)    | 01712096835 01730644784          | —   |
| 5     | Prof. Dr. AKS Ahmed                                  | (abroad)         | —                                | —   |
| 6     | Prof. Dr. AS Islam                                   | 9895831          | 01731914274                      | ahmadshams24@gmail.com                          |
| 7     | Prof. AQ Sarker                                      | (abroad)         | —                                | —   |
| 8     | Prof. Dr. Syed Nurun Nabi                            | 9889815, 9890442 | 01817035159                      | nabi64@dhaka.net                                |
| 9     | Prof. Dr. Abdul Matin Patwari                        | —                | 01715059227, 01316108512         | ampatwari32@gmail.com                           |
| 10    | National Emeritus Scientist<br>Dr. Kazi M Badruddoza | 8914649          | 01720902481                      | kazibadruddoza.barc@gmail.com                   |
| 11    | National Prof. AKM Aminul Haque                      | 222294933        | 01713018391, 01707883797         | sharminr71@gmail.com                            |
| 12    | Prof. Dr. Amir Hussain Khan                          | 6953501          | 01716134591                      | ahkhan2007@yahoo.com                            |
| 13    | Prof. Dr. Zahurul Karim                              | 9146 169         | 01713095387                      | zkarim.karim@gmail.com                          |
| 14    | Dr. AM Choudhury                                     | —                | 01977320311                      | —   |
| 15    | Prof. Dr. Mesbahuddin Ahmad                          | —                | 01711595665                      | mesbahuahmad@gmail.com                          |
| 16    | Dr. M Idris Ali                                      | 01999921559      | 01999921559                      | midrisali45@gmail.com                           |
| 17    | Prof. Dr. ZN Tahmida Begum                           | 8613972          | 9661900, 01855522933             | bdbotsoc@gmail.com;<br>sansons@asiateln.net     |
| 18    | Prof. Dr. Arun Kumar Basak                           | —                | 0721773 939, 01715519667         | akbasak2001@yahoo.com                           |
| 19    | Dr. MA Hamid Miah                                    | —                | 01752934125                      | mhmiah46@gmail.com                              |
| 20    | Prof. Dr. Hajera Mahtab                              | 9853348          | 01711336713                      | hajera mahtab@gmail.com                         |
| 21    | Prof. Dr. Shariff Enamul Kabir                       | 7791044          | 01713464698                      | skabir_ju@yahoo.com                             |
| 22    | Prof. Dr. Md. Anwar Hossain                          | —                | 01715799177                      | anwar.cfd@gmail.com                             |
| 23    | Prof. Dr. AKM Azharul Islam                          | 01711726026      | —                                | azi46@ru.ac.bd, azi46@iiuc.ac.bd                |
| 24    | Prof. Dr. Liaquat Ali                                | 01819229382      | 01819229382                      | liaquat304@gmail.com,<br>liaquat@pihs.ac.bd     |
| 25    | Prof. Dr. Mohammad Kaykobad                          | 9665650/7982     | 01552463351                      | mkbd1234@yahoo.com                              |
| 26    | Prof. Dr. AK Azad Khan                               | —                | 58616641-50, 01711566814         | president@dab-bd.org,<br>azadkhan1941@gmail.com |
| 27    | Prof. Dr. KM Sultanul Aziz                           | 8822827, 8828961 | 01913 460808, 01819410315        | azizkms@gmail.com,<br>dailyaziz@yahoo.com       |
| 28    | Prof. Dr. Syed M. Humayun Kabir                      | 9872137          | 01552391811                      | smhkabir39@yahoo.com                            |
| 29    | Maj. Gen. Prof. Dr. ASM Matiur Rahman                | —                | 8712821, 01713030403             | drmatiurrahman@gmail.com                        |
| 30    | Prof. Dr. Mohammad Mosihuzzaman                      | —                | 01755654160, 8837055             | mmosihuzzaman@yahoo.com                         |
| 31    | Prof. Dr. Zia Uddin Ahmed                            | —                | 01714 015978                     | ziaahmed26@yahoo.com                            |
| 32    | Prof. Dr. Haseena Khan                               | 880-8917159      | 9661900-49 / 7645<br>01711612344 | haseena@univdhaka.edu;<br>haseena@du.ac.bd      |
| 33    | Prof. Dr. Mesbahuddin Ahmed                          | —                | 01711521466                      | netproj2003@yahoo.com                           |
| 34    | Prof. Dr. Mohammad Rezwan Khan                       | 01716048946      | 01716048946, 9125912-6           | rezwanm@uiu.ac.bd                               |



| SL No | Name of Fellows                       | Residence            | Office/Mobile                      | Email  |
|-------|---------------------------------------|----------------------|------------------------------------|--|
| 35    | Prof. Dr. Shah M Faruque              | —                    | 01713 093857                       | shah.faruque@gmail.com;<br>shah.faruque@iub.edu.bd           |
| 36    | Prof. Dr. AK Azad Chowdhury           | 0258613619           | 01713040361, 9661900/8157          | akchowdhury2003@yahoo.com,                                   |
| 37    | Prof. Dr. M Feroze Ahmed              | 01819242878, 9614877 | 01819242878, 8144303,<br>583155514 | ferozeahmed45@gmail.com<br>mfahmed@stamforduniversity.edu.bd |
| 38    | Emeritus Scientist Dr. Firdausi Qadri | 8845131,             | 9827035, 01711595367               | fqadri@icddrb.org  |
| 39    | Prof. Dr. Md. Saidur Rahman           | 9665650, Ext. 7136   | 01819482136                        | saidurrahman@cse.buet.ac.bd                                  |
| 40    | Prof. Dr. Choudhury Mahmood Hasan     | 01819 253698         | 9885078 , 01819 253698             | cmhasan@gmail.com  |
| 41    | Prof. Dr. Md. Abdur Rashid            | 02-44865007          | 8650736, 01711947741               | r.pchem@yahoo.com  |
| 42    | Prof. Dr. Md. Muhibur Rahman          | —                    | 01730352830                        | mmrahmanugc@gmail.com  |
| 43    | Dr. Md. Sirajul Islam                 | 01713 049989         | 9827069 (Direct)                   | sislam@icddrb.org  |
| 44    | Prof. Dr. Md. Abdul Alim              | —                    | 01552345618                        | a0alim@gmail.com   |
| 45    | Prof. Dr. Yearul Kabir                | 9661920-73 Ext.7637  | 01710-327716                       | ykabir@yahoo.com   |
| 46    | Prof. Dr. M. Jahiruddin               | —                    | 01718 813889                       | m_jahiruddin@yahoo.com                                       |
| 47    | Prof. Dr. Zeba Islam Seraj            | —                    | 01711 595576                       | zebai@du.ac.bd   |
| 48    | Prof. Dr. Saleh Hasan Naqib           | —                    | 01715 049589                       | salehnaqib@yahoo.com   |
| 49    | Prof. Dr. Choudhury Rafiqul Ahsan     | —                    | 01819401185                        | crahsan@du.ac.bd   |
| 50    | Prof. Dr. Kamrul Hasan                | —                    | 01753 072171                       | kamrul_hasanbd@yahoo.com<br>khasan@eee.buet.bd               |
| 51    | Prof. Dr. M Sohel Rahman              | —                    | 01552389480                        | msrahman@cse.buet.ac.bd<br>sohel.kcl@gmail.com               |
| 52    | Prof. Dr. M. Tofazzal Islam           | 0171-4001414         | 01534568893                        | tofazzalislam@yahoo.com                                      |
| 53    | Prof. Dr. A A Mamun                   | —                    | 01829 729361                       | mamun_phys@juniv.edu   |
| 54    | Prof. Md. Abu Bin Hasan Susan         | 01819843753          | 01552327672                        | susan@du.ac.bd   |
| 55    | Prof. Dr. Md. Anwar Hossain           | 01709818101          | 01993 314391                       | vc@just.edu.bd;hossaina@du.ac.bd                             |
| 56    | Dr. Khan Shahidul Huque               | 01552376788          | 01742660964                        | kshuque58@gmail.com  |
| 57    | Prof. Dr. Mirza Hasanuzzaman          | 01716587711          | —                                  | mhzsauag@yahoo.com,<br>mirzahasanuzzaman@sau.edu.bd          |

## Editorial Committee

Dr. M A Hamid Miah                      Editor  
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## Bangladesh Academy of Sciences

National Museum of Science & Technology Bhaban  
Agargaon, Dhaka-1207, Bangladesh  
Phone: +8802 58160621, +8802 58160622  
Fax: +8802 58160626  
E-mail: office@bas.org.bd  
Website: www.bas. org.bd

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