



GOVERNMENT OF WEST BENGAL
OFFICE OF THE PRINCIPAL
Maulana Azad College

8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com

Website: <https://maulanaazadcollegekolkata.ac.in>

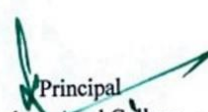
3.2 Innovation Ecosystem

3.2.1 Promotion of Student Research

The institution has a rich tradition of fostering co-curricular activities amongst its students. It has been conducting workshops, seminars, peer meet programmes, industry and institute visits and hands-on training programmes to cater for the growing horizon of its curious young minds across all disciplines mainly under the umbrella of generous support initially from the UGC-Centre for Potential of Excellence Scheme and subsequently from the DBT STAR College Scheme (Phase I support received in 2012) for more than a decade now. The DBT STAR scheme support was especially meant for capacity building in Biotechnology along with promotion of student research with the tag line “Catch them young”. Under the STAR College support student research has blossomed in the college through acquisition of state-of-the-art infrastructure purchased and installed in the five beneficiary Science Departments of Botany, Chemistry, Microbiology, Physics and Zoology. Especially in the lockdown affected period of close to two years, students spent a quality time in research in the safety of their home through engagement in two significant *in silico* activities with premier research institutions of the country as summarised below and detailed in subsequent pages.

In addition to the Science Faculties, students from the department of Languages such as Urdu have also contributed several book chapters in edited volumes published by the Dept. of Urdu, Maulana Azad College.

Name of the research project	Date	Number of participants	Outcome
Creation of an indigenous anti-microbial resistance database under the mentorship of Dr. Saugata Hazra, Assistant Professor, Dept. of Biotechnology, IIT-Roorkee	March 2020 to August 2020	7 faculty members and 12 students from the departments of Botany, Chemistry, Microbiology and Zoology from Maulana Azad College 1 faculty member and 5 research scholars from IIT-Roorkee	Two such works were selected for oral presentation in a national level conference out of which 1 won the third prize.
Participation in the Manav Scientific Reading and Comprehension self-assessment module launched by IISER-Pune and Persistent labs, Pune	September 2021 to October 2021	17 students and 3 faculty members from the Departments of Chemistry and Zoology participated in the programme	All faculty members and students received certificates for completion of the module and the college also received a certificate of appreciation for participation in the programme.


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Letter of intent from IIT-Roorkee to initiate collaborative student research



Dr. Saugata Hazra
Assistant Professor

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
DEPARTMENT OF BIOTECHNOLOGY
ROORKEE-247667, UTTARAKHAND, INDIA
Phone: +91-1332-284800 (O), +91-8171064462 (M)
E-mail: shazrft@iitr.ac.in, saugata.iitk@gmail.com
Web: www.iitr.ac.in

To
The Principal
Maulana Azad College,
W.B., Kolkata

Sub: Proposal for inclusion of Bioscience and Chemistry students and teachers of your college in a multi-Institute collaborative Research programme

Dear Sir,

We are happy to let you know that our Institute is venturing into a giant research programme which involves creation of an indigenous Anti-Microbial Resistance (AMR) database. The work is substantially large in volume and therefore needs parallel involvement of scientists, faculties and students across several Research centres and Higher Educational Institutions. In this connection, we invite your esteemed Institute to be part of this Multi-Institute project and help us in our endeavour towards building this database for understanding localised patterns of anti-microbial resistance.

We will need highly motivated teachers and students (both UG and PG) of your college chiefly from the backgrounds of Biosciences and Chemistry to work in this project along with a few dedicated PC terminals connected to high speed internet. The contribution of your Institute will be acknowledged in future outcomes of this project. In this connection, I will be visiting your college on the 12th of March to have an orientation session with the nominated faculties and students. We will seek the help of Dr. Samudra Prosad Banik, Assistant Professor, Department of Microbiology, of your college to act as the nodal person of this project for all future liaisons and co-ordination of results.

We will be glad if you kindly let us know about your consent to participate in this project.

Thanks & regards,

Saugata Hazra

Date: 20th Feb, 2020

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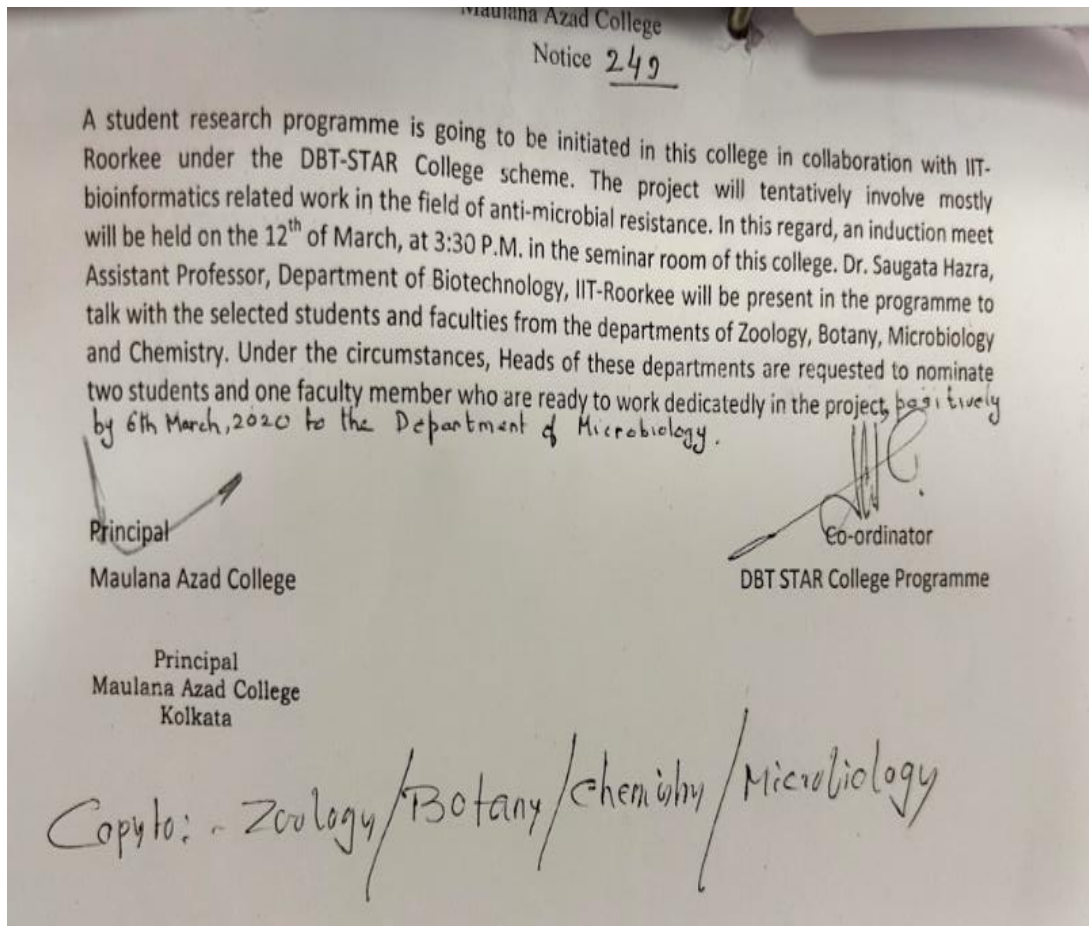
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Copy of the notice for initiation of student research in collaboration
with IIT-Roorkee



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Copy of the communication from mentor of IIT Roorkee to the mentors of
Maulana Azad College regarding progress of the work



Samudra Banik <samudrapb@gmail.com>

AMR project: Requesting mentors to show your activity

Saugata Hazra <saugata.iitk@gmail.com>

Wed, 1 Apr 2020 at 9:01 AM

To: Samudra Banik <samudrapb@gmail.com>, abhishek mukherjee <2007.mukherjee@gmail.com>, Nabanita Ghosh <Ngdiya@gmail.com>, Debalina Bhattacharya <debalina.bhattacharya13@gmail.com>, <chatterjeemadhuvanti@gmail.com>, AVISHEK GHOSH <ovghsh1085@gmail.com>, subir dasgupta <subirdgupta@gmail.com>

Respected Mentors,

I hope that you are all safe and keeping well along with your family during these tough time. We all wish and pray that we may come out of this phase soon. Since there is little window of free time now, we want to put this to our maximal benefit. In this regard, you must have seen I have initiated a training session in the whatsapp group already. I want to get the students acquainted about the basics of handling a pdb file in pymol and coot, like coloring, structure alignment, monomer rendition, saving image of a selected frame etc so that they get habituated with the handling of these softwares before the actual work.

Beside the training of pymol and coot my goal is to teach them the basics of,

- Sequence alignment (Clustal-omega, T-Coffee and ESPript)
- Modeling, where there are unavailability of structure (Swiss Modeller)
- Model Analysis
- Docking

Once we would finish those modules they would be knowledgeable enough to work in the project. But the challenge is to keep them excited, especially in the first batch where they don't have any idea of what they are going to achieve.

In this regard, it will be extremely helpful for the success of the project, if you can also train your respective students in these areas over some online session either through the group or personally. Please do not hesitate to call/text/mail me for any clarification. Please also keep me posted about their progress. I don't know students could understand the importance of the aspect or not but I'm really hopeful that most of you with your illustrious background of research would have easily understand the importance of such an unique collaborative network project. Some of you are already showing your interest and trying your best. My earnest request to others to join us.

In anticipation of your kind help

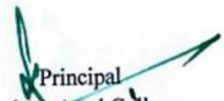
Thanks & regards,
Saugata

Dr. Saugata Hazra
Assistant Professor
Department of Biotechnology
Adjunct Faculty, Centre for Nanotechnology
Indian Institute of Technology Roorkee (IITR)
Roorkee, Uttarakhand 247667, India

Email: shazrft@iitr.ac.in, saugata.iitk@gmail.com

Tel: +91-1332-284800 (O), +91-7895208643 (M)

Website: [Hazra Lab](#)
[MAT Hazra Lab](#)


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Copy of mail from Dr. Hazra's lab regarding demonstration of Auto-Dock software usage to the students

7/31/24, 12:29 AM

Gmail - Invitation for docking tutorial by Hazra lab, IITR



Samudra Banik <samudrapb@gmail.com>

Invitation for docking tutorial by Hazra lab, IITR

10 messages

Vivek Junghare <vivek.junghare@gmail.com>

Tue, May 12, 2020 at 2:19 PM

To: subir dasgupta <subirdgupta@gmail.com>, Debalina Bhattacharya <debalina.bhattacharya13@gmail.com>, AVISHEK GHOSH <ovghsh1085@gmail.com>, Nabanita Ghosh <Ngdiya@gmail.com>, abhishek mukherjee <2007.mukherjee@gmail.com>, ghoshmonalisa18@gmail.com, tgfbeta.ctla@gmail.com, uditamono@gmail.com, eeron199711@gmail.com, parijatchakraborty888@gmail.com, debjitbag22@gmail.com, pritamchoudhury10@gmail.com, gayensayantan108@gmail.com, subhasismaity5534@gmail.com, ssuman0912@gmail.com, arnabghosh532@gmail.com, kunduarijit85@gmail.com, ahana1993@gmail.com, sourya bhattacharya <souryajnv@gmail.com>, kunal dhankhar <kunaldhankhar06@gmail.com>, Nitish Pandey <nitish.pandey99@gmail.com>, ABIRLAL MUKHERJEE <abiribra94@gmail.com>, Subhecchha Baidya <baidya.ethane@gmail.com>, Muskaan Bhambri <bhambrimuskaan@gmail.com>

Cc: Saugata Hazra <saugata.iitk@gmail.com>, Samudra Prasad Banik <samudrapb@gmail.com>

Dear all,

I am Vivek from Dr. Hazra's lab, IIT Roorkee. I would like to invite you all for the session on docking demonstration using AutoDock. The session will be held through Skype on 3:30 pm, today. Please send your Skype id in the reply of this email.

Best regards,
Vivek.

—
PhD Scholar,
Dept. of Biotechnology,
IIT Roorkee.

Samudra Banik <samudrapb@gmail.com>

Tue, May 12, 2020 at 2:36 PM

To: Vivek Junghare <vivek.junghare@gmail.com>

Cc: subir dasgupta <subirdgupta@gmail.com>, Debalina Bhattacharya <debalina.bhattacharya13@gmail.com>, AVISHEK GHOSH <ovghsh1085@gmail.com>, Nabanita Ghosh <Ngdiya@gmail.com>, abhishek mukherjee <2007.mukherjee@gmail.com>, ghoshmonalisa18@gmail.com, Pratip Mukherjee <tgfbeta.ctla@gmail.com>, uditamono@gmail.com, eeron199711@gmail.com, parijatchakraborty888@gmail.com, debjitbag22@gmail.com, pritamchoudhury10@gmail.com, gayensayantan108@gmail.com, subhasismaity5534@gmail.com, ssuman0912@gmail.com, arnabghosh532@gmail.com, Arijit Kundu <kunduarijit85@gmail.com>, Ahana Das <ahana1993@gmail.com>, sourya bhattacharya <souryajnv@gmail.com>, kunal dhankhar <kunaldhankhar06@gmail.com>, Nitish Pandey <nitish.pandey99@gmail.com>, ABIRLAL MUKHERJEE <abiribra94@gmail.com>, Subhecchha Baidya <baidya.ethane@gmail.com>, Muskaan Bhambri <bhambrimuskaan@gmail.com>, Saugata Hazra <saugata.iitk@gmail.com>

Thanks Vivek. Just one more query, most of us already have autodock tools 1.5.6. Do we still need to install Autodock 4.2.6?

[Quoted text hidden]

—
Samudra Prasad Banik, Ph.D.
Assistant Professor
Department of Microbiology
Maulana Azad College
Government of West Bengal
Kolkata, India

Samudra Banik <samudrapb@gmail.com>

Tue, May 12, 2020 at 2:39 PM

To: Vivek Junghare <vivek.junghare@gmail.com>

Cc: subir dasgupta <subirdgupta@gmail.com>, Debalina Bhattacharya <debalina.bhattacharya13@gmail.com>, AVISHEK GHOSH <ovghsh1085@gmail.com>, Nabanita Ghosh <Ngdiya@gmail.com>, abhishek mukherjee <2007.mukherjee@gmail.com>, ghoshmonalisa18@gmail.com, Pratip Mukherjee <tgfbeta.ctla@gmail.com>, uditamono@gmail.com, eeron199711@gmail.com, parijatchakraborty888@gmail.com, debjitbag22@gmail.com,

<https://mail.google.com/mail/u/0/?ik=84da6a4c44&view=pt&search=all&permthid=thread-f.1666473927680731509&siml=msg-f.16664739276807315...> 1/4

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Screenshots of an online training session conducted by a research scholar from IIT Roorkee

Three day National level e-Workshop on Molecular Dynamics Simulation using Python Programming (2020-08-12 at 02:03 GMT-7)

Welcome to Drive

Sequence file

Sequence target → Template Search → Building a model → Energy Minimization → Validation of Model

You can put uniprot or genpept id here or name of organism or gene

Uniprot id - A6H929
Genpept id - CAJ85677.1

Search options:

- Numerous options available
- Depends on your problem
- common search options
 - uniprot id from literature
 - organism name
 - enzyme name
 - gene name
 - protein function

Vivek Junghare

Three day National level e-Workshop on Molecular Dynamics Simulation using Python Programming (2020-08-12 at 02:03 GMT-7)

Welcome to Drive

```

    select the Force Field:
    From /usr/share/gronacs/top:
    1: AMBER93 protein, nucleic AMBER94 (Duan et al., J. Comp. Chem. 24, 1999-2012, 2003)
    2: AMBER94 force field (Cornell et al., JACS 117, 5179-5197, 1995)
    3: AMBER96 protein, nucleic AMBER94 (Kollman et al., Acc. Chem. Res. 29, 461-469, 1996)
    4: AMBER99 protein, nucleic AMBER94 (Wang et al., J. Comp. Chem. 21, 1049-1074, 2000)
    5: AMBER99SB protein, nucleic AMBER94 (Hornak et al., Proteins 65, 712-725, 2006)
    6: AMBER99SB-ILDN protein, nucleic AMBER94 (Lindorff-Larsen et al., Proteins 78, 1958-58, 2010)
    7: AMBER03 force field (Garcia & Sanbonmatsu, PNAS 99, 2782-2787, 2002)
    8: CHARMM27 all-atom force field (CHARM22 plus CMAP for proteins)
    9: GROMOS96 43a1 force field
    10: GROMOS96 43a2 force field (Improved alkane dihedrals)
    11: GROMOS96 45a3 force field (Schuler JCC 2001 22 1205)
    12: GROMOS96 53a5 force field (JCC 2004 vol 25 pag 1656)
    13: GROMOS96 53a6 force field (JCC 2004 vol 25 pag 1656)
    14: GROMOS96 54a7 force field (Eur. Biophys. J. (2011), 40,, 843-856, DOI: 10.1007/s00249-011-0780-9)
    15: OPLS-AA/L all-atom force field (2001 aminoacid dihedrals)
    
```

Vivek Junghare

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Screenshots of an online presentation session of a student of Maulana Azad College before
Dr. Saugata Hazra

NDM Presentation (2020-08-17 at 06:57 GMT-7) Open with ▾

My Drive > Meet Recordings >

New Delhi Metallo-beta-lactamase

Presented by
NILANJAN GHOSH DASTIDAR,
AHANA DAS
Maulana Azad College, Kolkata

meet.google.com is sharing your screen. Stop sharing Hide

Nilanjan Ghosh Dastidar

NDM Presentation (2020-08-17 at 06:57 GMT-7) Open with ▾

My Drive > Meet Recordings >

Residues of NDM-1 which interact with Zinc ions

Asp 124 His 250
Zn II
His 122 Cys 208
His 120 His 189
Zn I

Saugata Hazra



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A copy of the first page of the abstract book of the National online conference

The cover features a central image of a hand holding a globe. At the top, there are logos for the Government of West Bengal, Sustainable Development Goals, and World Environment Day. The main text reads: **NATIONAL ONLINE CONFERENCE** (e-Conference | Digital-Lectures | e-Competitions) on **Environment, Human Health and Sustainable Development Goals** and **WORLD ENVIRONMENT DAY 2020 CELEBRATION** on **5-6 June 2020**. Below this, a red banner contains the text *Souvenir and Abstracts*. The bottom section lists the organizing and co-organizing bodies: Environment and Social Development Association (ESDA), Delhi; and Grass Roots Research and Creation India (P) Ltd. (GRC India), Noida. It also lists associated organizations: Dr. Bhim Rao Ambedkar College, University of Delhi, Delhi; CSIR-NEERI, DELHI; Amity University, Gurugram; G.D. Goenka University, Gurugram; and Institute of Engineering and Technology, Dr. R. M. L. Avadh University, Ayodhya, U.P.

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Copy of the first collaborative abstract (Corresponding to the oral presentation) by students and faculty members of both IIT-Roorkee and Maulana Azad College

NATIONAL ONLINE CONFERENCE

on

Environment, Human Health and Sustainable Development Goals

5-6 June 2020

IN PURSUIT OF AN INTERMEDIATE HOST OF SARS-COV2: THE ACE2 (AND FURIN CLEAVAGE) TRAIL

Sourya Bhattacharya¹, Avishek Ghosh^b, Rajesh Kumar Gazara^{1,3} Oindrila Sahab,
Ankit Mukherjee², Soumi Pal², Moumita Pal², Shabbir Haider²,
Saugata Hazr^{1*} and Samudra Prosad Banik^{2*}

¹Department of Biotechnology, Indian Institute of Technology-Roorkee, Roorkee

²Department of Microbiology, Maulana Azad College, Kolkata

³Department of Electrical Engineering, Indian Institute of Technology-Roorkee

Corresponding author: *saugata.iitk@gmail.com, *samudrapb@gmail.com

ABSTRACT

Covid-19 has emerged as the most significant pandemic of recent times with more than 56 lakhs people affected worldwide. It is caused by an enveloped (+) single-stranded, non-segmented RNA virus, SARS-CoV-2, belonging to β -Coronaviridae. The virus primarily infects ciliated human lung epithelial cells by docking onto Angiotensin Converting Enzyme 2 (ACE2) receptors with the Receptor Binding Domain (RBD) of its envelope-associated Spike protein; subsequently, the membrane fusion domain is released by the host furin protease to facilitate viral entry. There has been a lot of debate regarding the origin and accelerated spread of this virus. Given the possibility of a zoonotic link to nurture the appearance of the furinsite, plausibly through repeated rounds of recombination, we analyzed ACE2 and spike sequences of twelve animals from the Huanan seafood market. Potential interaction between ACE2 and Spike RBD was identified by docking Spike-RBD on to hACE2. Monkey had the highest resemblance with hACE2 with all nine residues being same; sheep and rat shared 8 out of nine interacting residues, followed by camel (7/9), pig (7/9), and dog (6/9). Furin cleavage sites were detected in Spikes from corona viruses of rat, pig, chicken and dog. Phylogenetic tree revealed that Spikes from monkey and civet were closest to SARS-CoV2. However, no furin sequences were detected in them. In this respect, spikes from rats and dogs with furine sites shared the next rung of relatedness to SARS-CoV2. It is possible that SARS-CoV2, born in monkey, remained undetected due to inadequate sampling. Given the close association of rats as pests (and as food) to the human society, it might also well have been the last intermediate host which nurtured the creation of SARS-CoV-2. However, further conclusions cannot be warranted without modeling the ACE2-spike interactions from the suspected animals with the corresponding wet lab validations.

Keywords: SARS-CoV2, zoonotic transmission, Spike-ACE2 interaction, Huanan sea food market, furin cleavage site.

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Copy of the second collaborative abstract (Corresponding to the oral presentation) by students and faculty members of both IIT-Roorkee and Maulana Azad College

NATIONAL ONLINE CONFERENCE

on

Environment, Human Health and Sustainable Development Goals

5-6 June 2020

BCII METALLO- B-LACTAMASES AS BACTERIAL RESPONSE TO CARBAPENEMS, THE LAST HUMAN ANTIMICROBIAL RESORT

Subhecchha Baidya¹, Monalisa Ghosh², Vivek Junghare¹, Muskaan Bhambri¹,
Samudra Prosad Banik², Debalina Bhattacharya^{2*} and Saugata Hazra^{2*}

Corresponding author: debalina.bhattacharya13@gmail.com, saugata.iitk@gmail.com

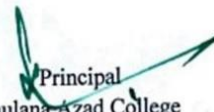
ABSTRACT

Bacteria, fungi produce antimicrobials as molecules for predation within the gargantuan microbial community. Specific defense molecules were also produced by the bacterial cells, to counteract and hydrolyze the antimicrobials. Credits of discovery goes to Sir Alexander Fleming. Since then, the random and indiscriminate overexploitation of these antimicrobials by human beings initiated an accelerated co-evolution of both the antimicrobial (anthropogenically) as well as its degrading enzyme (natural selection). The BcII metallo- β -Lactamase (MBL) is one of the latest thwarts of the bacterial community against possibly the last weapon of humankind, the Carbapenems.

BcII is the first MBL discovered in *Bacillus cereus* bacteria and one of the first's w.r.t. crystallographic characterizations. It belongs to the class B β -Lactamases which cleaves the functional β -Lactam ring present in commonly prescribed antibiotics like Penicillin, Cephalosporin and Carbapenem. Clinically approved inhibitor is currently unavailable for combinatorial therapy (e.g. Amoxicillin-Clavulanate) against plasmid mediated accelerated dissemination of the BCII gene. The enzyme has two Zn ions at active site co-ordinated in place by conserved amino acid residues (His 86, 88, 149 for Zn1 and Asp 90, Cys 168, His 210 for Zn2). Flexibility of catalysis has made it even more challenging for drug designing. It is considered as an evolutionary significant one due to both of its mono and di Zinc variants. Unlike SBLs, the nucleophilic attack to drug is initiated by a catalytic water molecule (OH⁻) and no residue takes part in catalysis directly. BcII shares more than 80% sequence similarity with many MBL, especially Bla2 (*Bacillus anthracis*).

We will review here the significance and general catalytic mechanism of BCII metallo- β -Lactamases in an illustrated manner to spread awareness and share our thoughts and research ideas to design novel therapeutics to combat this enzyme.

Keywords: Antimicrobial resistance, β -Lactamases, Metallo- β -Lactamase, Carbapenem, BcII.


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Copy of the first slide of oral presentation 1 “In pursuittrail”

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE


 **ESDACON** 2020
World Environment Day Celebration
5th & 6th June, 2020 (Stay Home, Stay Safe)

In pursuit of an intermediate host of SARS-CoV2: The ACE2 (and furin cleavage) trail

Sourya Bhattacharya
Under the guidance of

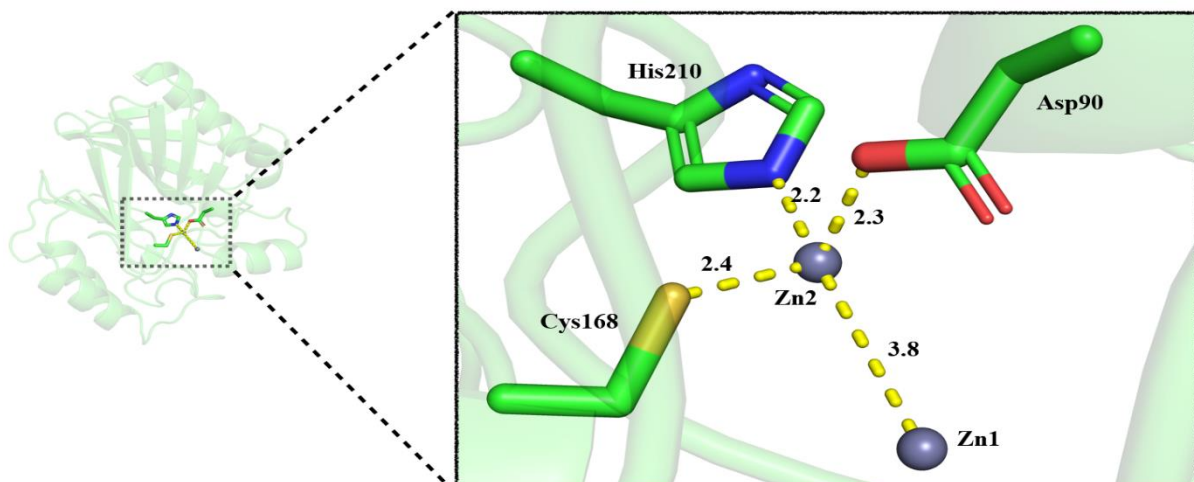
Dr. Saugata Hazra
Assistant Professor
Department of Biotechnology
Indian Institute of technology, Roorkee

Dr. Samudra Prosad Banik
Assistant Professor
Department of Microbiology
Maulana Azad College
Government of West Bengal
Kolkata, India



Copy of a slide of oral presentation 2 “BCII antimicrobial resort”

Zn² Residues





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Copy of the certificate awarded for 3rd prize in Oral presentation and participation certificate

NATIONAL ONLINE CONFERENCE
(e-Conference | Digital-Lectures | e-Activities | e-Competitions)
Environment, Human Health and Sustainable Development Goals
and
WORLD ENVIRONMENT DAY 2020 CELEBRATION
5-6 June 2020

Organized by **Environment and Social Development Association (ESDA), Delhi**
Co-Organized by **Grass Roots Research and Creation India (P) Ltd., Noida**

In association with
Dr. Bhim Rao Ambedkar College, University of Delhi, Delhi | CSIR-NEERI, DELHI
Amity University, Gurugram | G.D. Goenka University, Gurugram
IET Dr. R. M. L. Avadh University, Ayodhya, U.P. | Alumni Association of JNU

Certificate of Award

This is to certify that
Sourya Bhattacharya
Dept. of Biotechnology, IIT Roorkee
has participated and achieved **3rd Position** in the technical session 2 of **Oral Paper Presentation**
during National Online Conference held on 5-6 June, 2020

Prof. P. B. Sharma
VC, Amity University
Haryana

Dr. S. K. Goyal
Head
CSIR-NEERI-Delhi Zonal

Dr. G. K. Arora
Principal
Dr. Bhim Rao Ambedkar College, DU

Prof. R. K. Thakur
GD Goenka University
Haryana

Dr. Jitendra K. Nagar
Organising Secretary
General Secretary, ESDA, Delhi

NATIONAL ONLINE CONFERENCE
(e-Conference | Digital-Lectures | e-Activities | e-Competitions)
Environment, Human Health and Sustainable Development Goals
and
WORLD ENVIRONMENT DAY 2020 CELEBRATION
5-6 June 2020

Organized by **Environment and Social Development Association (ESDA), Delhi**
Co-Organized by **Grass Roots Research and Creation India (P) Ltd., Noida**

In association with
Dr. Bhim Rao Ambedkar College, University of Delhi, Delhi | CSIR-NEERI, DELHI
Amity University, Gurugram | G.D. Goenka University, Gurugram
IET, Dr. R. M. L. Avadh University, Ayodhya, U.P. | Alumni Association of JNU

Certificate of Participation

This is to certify that
Dr. Samudra Prosad Banik
Department of Microbiology, Maulana Azad College, Kolkata
has participated as a **DELEGATE** in the NATIONAL ONLINE CONFERENCE and
World environment Day Celebration held on 5-6 June, 2020.

Prof. P. B. Sharma
VC, Amity University
Haryana

Dr. S. K. Goyal
Head
CSIR-NEERI-Delhi Zonal

Dr. G. K. Arora
Principal
Dr. Bhim Rao Ambedkar College, DU

Prof. R. K. Thakur
Dean
GD Goenka Uni. Gurugram

Dr. Jitendra K. Nagar
Organising Secretary
General Secretary, ESDA, Delhi

Principal
Maulana Azad College
Principal
Maulana Azad College
Kolkata
Govt. of West Bengal



GOVERNMENT OF WEST BENGAL
OFFICE OF THE PRINCIPAL
Maulana Azad College

8, RAFI AHMED KIDWAI ROAD, TALTALA, KOLKATA 700013



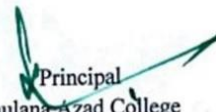
Phone: 033 2249-3737/2226-7814 e-mail: maulanaazadcollegekolkata@gmail.com

Website: <https://maulanaazadcollegekolkata.ac.in>

Student publications

As one of the more significant impacts of DBT Support, the college boasts of several publications arising out of the short student research projects sponsored by DBT. Following is the list of such publications

Title of paper	Name of the author/s	Department of the student	Name of journal	Calendar Year of publication	ISSN number
Black Tea (<i>Camellia sinensis</i>) Extract Induced Changes on Placenta can Alter Fetal and Neonatal Bone Health in Experimental Animal Model	Dey, A. , Gomes, A., Chakraborty, K. and Dasgupta, S.C.	Zoology	Advances in Clinical Toxicology	2020	ISSN 2577-4328
Overview of Plant Nematodes as an agricultural Nemesis	Sanjukta Manna and Souradeep Das	Zoology	International Journal of Recent Scientific Research	2020	ISSN 0976-3031
Impact of urbanization on abundance of soil arthropods	Sanjukta Manna and Arnab Kar	Zoology	Uttar Pradesh Journal of Zoology	2020	ISSN 0256-971X
Gluten induced inflammatory responses in murine model: An overview	Sanjukta Manna, Taniya Mondal and Ayantika Mitra	Zoology	International Journal of Recent Scientific Research	2020	ISSN 0976-3031
Microplastic in India a shoddy affair	Abhishek Mukherjee, Archisman Bhattacharjee and Aoishik Roy	Zoology	Uttar Pradesh Journal of Zoology	2020	Print ISSN:0256-971X
Emerging Applications of Nanotechnology in neurological Disorders: Recent Review	Rajarshi Ghosh, Pradip Bhattacharjee, Anish Pal	Zoology	Bioscience Biotechnology Research Communications	2021	Print-ISSN: 0974-6455 E-ISSN: 2321-4007
Interrelation between Surface Wax Alkanes from Red Kidney Bean	Abhishek Mukherjee, Avinanda Sengupta ,	Zoology	Legume Research - An International Journal	2020	"Print ISSN 0250-5371 Online ISSN


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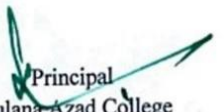
Website: <https://maulanaazadcollegekolkata.ac.in>

(Phaseolus vulgaris L.) Seeds and Adzuki Bean Weevil [Callosobruchus chinensis (F.)] (Coleoptera: Bruchidae)	Subhajit Shaw, Sanandita Sarkar, D. Pal, U.K. Das				0976-0571"
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N.B. – Names of students of Maulana Azad College are indicated in bold font.

Publications in book chapters by Students from the Dept. of Urdu, Maulana Azad College

Sl.No.	Name of the Student	Chapter in Book	Name of the Book	Page No.	ISBN No	Year	Publisher
1	Mudabbir Sultan Salim	Nazm "Baad-ul-Mashriqen" Aik Mutaleah	Allama Jameel Mazhari Hayat-o-Funn By Dabir Ahmed	254-257	978-81-928246-9-7	2018	Deptt. Of Urd, Maulana Azad College
2	Saheen Parveen	Jameel Mazhari: Masnawi 'Aab-o-Sarab' ki Roshni Mein	Allama Jameel Mazhari Hayat-o-Funn By Dabir Ahmed	258-261	978-81-928246-9-7	2018	Deptt. Of Urd, Maulana Azad College
3	Sajda Nigar	Jameel Mazhari: Apni Ghazlon ke Ayene Mein	Allama Jameel Mazhari Hayat-o-Funn By Dabir Ahmed	262-263	978-81-928246-9-7	2018	Deptt. Of Urd, Maulana Azad College
4	Sarfaz Alam	Jameel Mazhari: Bahasiat Rubayee Go	Allama Jameel Mazhari Hayat-o-Funn By Dabir Ahmed	267-270	978-81-928246-9-7	2018	Deptt. Of Urd, Maulana Azad College
5	Mir Md Iqbal Alam	Allama Jameel Mazhari Ki Ghazal Goi	Allama Jameel Mazhari Hayat-o-Funn By Dabir Ahmed	271-276	978-81-928246-9-7	2018	Deptt. Of Urd, Maulana Azad College
6	Md Aslam	Jameel Mazhari: Bahasiat Marisa Go	Allama Jameel Mazhari Hayat-o-Funn By Dabir Ahmed	277-282	978-81-928246-9-7	2018	Deptt. Of Urd, Maulana Azad College
7	Kashif Shamim	Allama Jameel Mazhari Ki Shairi Kr Mukhtalif Pahloo	Allama Jameel Mazhari Hayat-o-Funn By Dabir Ahmed	283-286	978-81-928246-9-7	2018	Deptt. Of Urd, Maulana Azad College
8	Nudrat Tasnim	Allama Jameel Mazhari: Shaks Aur Shair	Allama Jameel Mazhari Hayat-o-Funn By Dabir Ahmed	287-289	978-81-928246-9-7	2018	Deptt. Of Urd, Maulana Azad College
9	Shoab Akhtar	Jameel Mazhari Ki Shairi Ki Infaradiat	Allama Jameel Mazhari Hayat-o-Funn By Dabir Ahmed	290-292	978-81-928246-9-7	2018	Deptt. Of Urd, Maulana Azad College
10	Md Enayat Khan	Allama Jameel Mazhari: Bahasiat Marsia Nigar	Allama Jameel Mazhari Hayat-o-Funn By Dabir Ahmed	293-297	978-81-928246-9-7	2018	Deptt. Of Urd, Maulana Azad College
11	Jamshed Iqbal	Allama Jameel Mazhari: Bahasiat Nazm Nigar	Allama Jameel Mazhari Hayat-o-Funn By Dabir Ahmed	298-304	978-81-928246-9-7	2018	Deptt. Of Urd, Maulana Azad College
12	Nudrat Tasnim	Gopichand Narang : Urdu Tanqeed Ka Aik Motabar Naam	Shoor-e-Naqd By Dabir Ahmed	161-165	978-81-939832-4-9	2019	Maulana Azad College


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