

Department of Biochemical Engineering and Biotechnology
Minutes of 8th DRC meeting, 2020-2021

Dated: 23rd June 2021

The eighth meeting of the Departmental Research Committee (DRC) for the academic session 2020-2021 was held on 23rd June 2021 at 9.30 am by video conferencing.

The following members were present:

Prof. Shilpi Sharma (Chairperson)
Prof. D. Sundar (Head, DBEB)
Prof. T. R. Sreekrishnan
Prof. Atul Narang
Prof. Ritu Kulshreshtha
Prof. Preeti Srivastava
Prof. Rohan Jain (Ph.D. & MSR Coordinator)
Prof. Ishaan Gupta (Convenor)

Invited member (for agenda item No 4)

Prof. Z. A. Shaikh

1. To confirm the minutes of the 7th meeting of the DRC for the session 2020-2021 held on 19th May 2021.

Minutes were confirmed as circulated.

2. To report the matters arising from minutes of Meeting No. 07/2020-2021

Item No 8a: Ph.D. student Sakshi (2018BEZ8243) presented the progress of her Ph.D. project in an SRC meeting held on 14th June 2021 in the presence of the SRC members, Head DBEB and DRC Chairperson. She was advised to present a plan of work with clear strategies for executing work on the newly proposed title.

3. Synopsis of Ph.D. students

(a) Manju (2015BEZ8354): Treatment of complex dyes and effluents using engineered Laccase 1 of *Cyathus bulleri*
(b) Rabab Anjum (2015BEZ8352): Mass production of shikimic acid (Raw material for Tamiflu) from plant cell culture
(c) Anika Goel (2017BEZ8288): Strategies for production of biopolymers from gaseous substrates (Methane & air)
(d) Deepak Kumar Prasad (2015BEZ8001): Monitoring and assessing the risks of the emerging contaminants in river Ganga – a comprehensive study
(e) Rishabh Shukla (2015BEZ8351): Efficiency comparison of conventional wastewater treatment systems in removing emerging pollutants

The Committee discussed and approved the five synopsis. The Committee also approved the panel of Examiners and authorized the Chairperson to forward the same to Dean Academics.

(Action: These supervisors to send the following documents to the DRC Chairperson: (a) Filled in form for Ph.D. synopsis submission & Appointment of Examiners, and (b) soft copy of the Synopsis)

4. MSR selection, Entry Sem 1, 2021-2022

The shortlisting criteria for MSR programme was finalised in 7th meeting of DRC (2020-21) and was duly approved by Dean Academics on 21st May 2021 (<https://beb.iitd.ac.in/MSR-shortlisting-criteria-2021-2022-Sem-1.pdf>).

Interviews were conducted for applicants from CFTI on 1st June 2021 and 23rd June 2021 in the presence of DRC members and faculty members who floated projects for the batch of Entry Sem I, 2021-22. Based on the performance in interview (for CFTI applicants), the GATE scores of the applicants other than CFTI, and the number of projects available for allotment to MSR students, Entry Sem I, 2021-2022 (<https://beb.iitd.ac.in/MSR-projects-2021-2022-Sem-1.pdf>), **11** candidates were recommended for selection to the departmental MSR programme (Sem I, 2021-22).

5. Request received for permission to attempt Comprehensive exam Paper I by Akshay Lohakare (2020BEZ8511).

Akshay Lohakare's request to appear for Paper I of Written Comprehensive examination scheduled for Aug 2021 with a current CGPA of 7.45 was approved with the following conditions (a) he will take up additional courses to meet the required grade of 7.5 before appearing for the oral plan of work, and (b) his attempt in Aug 2021 will be counted towards the two attempts permissible for appearing in written comprehensive examination for the Ph.D. students.

6. To report the matters for ratification by the DRC

(a) Project proposals submitted by faculty members

- For departmental Ph.D. / MSR programme

The proposal titled "Modulating the stress response in *Escherichia coli* as a strategy for design of improved host cell platforms" by Prof. K. J. Mukherjee was circulated to the DRC members on 22nd May 2021. It was approved for floating for the Ph.D. and MSR students of Entry Sem I, 2021-2022.

- For extramural funding:

S. No.	Project Name	Investigators	Funding agency
1	Polymer-based hybrid magnetic nanocomposites for the treatment of emerging contaminants and antibiotic resistance genes in wastewater	Dr. Kashif Raees; Mentor: ZA	N-PDF
2	Elucidation of mechanism of bacterial adherence on fabrics to limit the spread of nosocomial infections	Shweta Dixit; Mentor: SS	N-PDF
3	From biomass to bioelectricity: Sustainable energy generation from effluent with Microbial Fuel Cells	B. R. SreeLekshmy; Mentor: LED	N-PDF

4	Removal of iron from mining waste using innovative biotechnological and chemical technologies	Dr. Soniya Dhiman; Mentor: RJ	N-PDF
5	Targeted engineering of rhizospheric microbiome for enhancing growth parameters of wheat under abiotic and biotic stresses	SS	DST
6	Tackling AMR development and transmission in a One Health context using diagnostics led intervention in shrimp aquaculture	RE (Co-PI: V. Perumal, KSBS)	JPIAMR
7	Design of self-assembled electrodes for enhanced microbial electron transfer in bioelectrochemical systems	LED (Co-PI: J. Sarkar, Chem Engg)	DBT
8	Biotechnology for the recovery of Ge, Ga and In from industrial waste	RJ (Co-PI: ZA, TRS)	IGSTC
9	Development of metabolite-based “next generation formulation” for plant growth promotion and biocontrol: case study with tomato as model crop	Dr. A. Bhattacharjee; Mentor: SS	DST-WOS-A
10	Identification of key metabolites conferring general suppressiveness against phytopathogens under organic agricultural practice	Radheshyam Yadav; Mentor: SS	N-PDF

The above projects were circulated to members, since no comments were received the projects were forwarded to Dean R&D and the item was ratified.

7. Any other item with the permission of Chair

- Paper I of written comprehensive examination

Prof Ishaan Gupta and Prof R. Elangovan were requested to coordinate the Paper I of written comprehensive examination scheduled for 1st week of August.

Shilpi Sharma
Chairperson, DRC

DBEB Faculty (by email)