

Department of Biochemical Engineering & Biotechnology
Minutes of DRC Meeting No 05/2012-13

Date 3rd October, 2013

The **Fifth meeting** of the Departmental Research Committee (DRC) for the session 2012-2013 was held on September 16, 2013 at 3 pm in the Committee Room of the Department. The following members were present:

Prof. Prashant Mishra (Chairperson)
Prof. V. S. Bisaria
Prof. Saroj Mishra
Prof. A.K. Srivastava
Prof. T. R. Sreekrishnan
Dr. D. Sundar
Dr. Ritu Kulshreshtha
Dr. Shilpi Sharma
Dr. Atul Narang (Convener)

Agenda Items:

At the outset, Chairman informed that in order to streamline the DRC approval of sponsored project proposals, the projects may be sent to the Chairman DRC at least 10 days in advance which will be circulated to all the DRC members for their feedback. The suggestions received from the members will be passed on to PI for incorporation. If no comments are received the project will be deemed to be approved and will be ratified in the next DRC meeting.

1. Item 1: Confirmation of minutes of DRC meeting No 4/2012-13.

The minutes of Meeting No. 4/2012-2013 held on June 27, 2013, were confirmed as circulated.

Item 2: Matters arising out of the minutes.

There were no matters arising out of the above minutes.

Item 3: Synopsis of MSR thesis titled 'Development of tools for metabolic engineering in Zymomonas mobilis for malic acid production' submitted by Ms. Shikha Gupta (2011BEY7537).

The committee discussed and approved the synopsis submitted by Ms. Shikha Gupta (2011BEY7537). The Committee also discussed and approved the panel of Examiners and authorized the Chairman to forward the same to Dean (Academics).

Item 4: Constitution of SRC for Himanshu Singh (2012 BEZ 8189).

The committee approved the constitution of the SRC for Himanshu Singh as follows:

Name	Chair	Internal expert	External expert	Supervisor(s)
Himanshu Singh	T. R. Sreekrishnan	Atul Narang	Anupam Shukla	G. P. Agarwal

Item 5: Plan of work for PhD thesis titled 'Proximity effect in ensemble behavior of skeletal muscle myosin II' submitted by Ms. Khushboo Rastogi (2011BEZ8226).

The plan of work for Ph.D. thesis titled 'Proximity effect in ensemble behavior of skeletal muscle myosin II' submitted by Ms. Khushboo Rastogi (2011BEZ8226) was discussed, and based on the recommendation of SRC it was approved.

Item 6: A note received from Dr. Shilpi Sharma for converting GATE fellowship of Mr. Sunil Singh M.S. (R) student to JRF position in her DST sponsored project.

The committee approved the conversion of Mr. Sunil Singh's GATE fellowship to JRF position in Dr. Shilpi Sharma's DST-sponsored project.

Item 7: A request received from Ms. Swati Ojha for providing her fellowship from Departmental Development fund.

The committee recommended Ms. Swati Ojha for a short-term fellowship from Institute funds rather than Departmental Development Fund.

Item 8: Application received from Ms. Surabhi Goel (2010BEZ8763) for DAAD sandwich model scholarship.

The committee approved the application of Ms. Surabhi Goel (2010BEZ8763) for a DAAD sandwich model scholarship.

Item 9: Allotment of broad area of project supervisors to July 2013 entry M.S.(R).

The committee approved the allotment of projects and project supervisors to the MS(R) students joined in July, 2013 (see Annexure 1)

Item 10: Allotment of project to July 2013 entry Ph.D. students.

The committee approved the allotment of projects and project supervisors to PhD students that joined in July, 2013 (see Annexure 2).

Item 11: Project allocation to 2009 entry M.Tech Students and constitution of committee for their evaluation.

The committee approved the allotment of projects, project supervisors, and evaluation committees for 2009-entry M. Tech. students (see Annexure 3).

Item 12: *Reconstitution of SRC of Ms. Pooja Singh.*

Since Dr. Praveen Kaul resigned, the SRC committee of Ms. Pooja Singh was reconstituted. Dr. Praveen Kaul as internal expert was replaced by Dr. Shilpi Sharma.

Item 13: *Nomination for FITT award for best Industry relevant M.Tech (dual degree) and Ph.D. Students.*

The committee recommended two projects for the FITT award, namely, Guneet Kaur (2008BEZ8285, Thesis Title: Production of 1,3-propanediol) and Kankana Kundu (2008BEZ8280, Thesis Title: Effect of process parameters on microbial community profile in a high cell density hybrid anaerobic bioreactor).

Item 14: *Dr. Shiv Raj Nanadan Sinha Medal for session 2012-2013.*

No names were recommended for this award since it is reserved for an area (Biomedical Engineering) that does not overlap with the thrust of the department's research.

Item 15: *A request received from Ms. Gayathri for extension of her registration for 1st semester 2013-14.*

The committee recommended the continuation of registration of Ms. Gayathri for another six months with effect from July 2013.

Item 16: *Project proposal titled 'Unraveling the mechanism of an onco miR, mir-191 mediated hypoxia resistance in breast cancer submitted by Dr. Ritu Kulshreshtha for funding from DST (SERB).*

The committee approved the project proposal titled 'Unraveling the mechanism of an onco miR, mir-191 mediated hypoxia resistance in breast cancer' submitted by Dr. Ritu Kulshreshtha for funding from DST (SERB). The chairman was authorized to forward the proposal to Dean IRD.

Item 17: *Project proposal titled 'Biofertilization and "bioirrigation" for sustainable mixed cropping of pigeon pea and finger millet' submitted by Dr. Shilpi Sharma for funding from Indo-Swiss Collaboration in Collaboration in Biotechnology (ISCB).*

The committee approved the project proposal titled 'Biofertilization and "bioirrigation" for sustainable mixed cropping of pigeon pea and finger millet' submitted by Dr. Shilpi Sharma for funding from Indo-Swiss Collaboration in Collaboration in Biotechnology (ISCB).

Item 18: *Project proposal titled 'Bioprospecting endophytes for novel biomass destructuring enzymes: towards production of more cost effective biofuel' submitted by Prof. V.S. Bisaria for funding from DBT.*

The committee approved the 'Bioprospecting endophytes for novel biomass destructuring enzymes: towards production of more cost effective biofuel' submitted by Prof. V.S. Bisaria for funding from DBT.

Item 19: *Any other items:*

SRCs consisting of *internal* expert(s) and supervisor(s) of M.Tech. Projects were approved as per Annexure 3.

The meeting ended with a vote of thanks to the Chair.

Atul Narang.

Atul Narang
Convener, DRC

Annexure 1

Allotment of broad subject area and respective Supervisor(s) to M.S. (R) students

S.No.	Students	Broad area	Supervisor (s)
1	Kunal Gupta	Membrane Based Separation	Prof. G.P. Agarwal
2	Sanjay Singh	Bionanotechnology and Protein Engineering	Prof. Prashant Mishra
3	Deepak Tewari	Membrane Based Separation	Prof. G.P. Agarwal
4	Peeyush Kumar	Production of Bioactive compounds	Prof. V.S. Bisaria
5	Manisha Lamba	Environmental Biotechnology	Dr. Sheik Ziauddin Ahammad
6	Gaurav Sinsinbar	Bionanotechnology and Protein Engineering	Prof. Prashant Mishra
7	Kavita Sharma	Polyhydroxyalkanoate Production	Prof. T.R. Sreekrishnan Prof. A.K. Srivastava

Annexure 2

Allotment of Project to Ph.D students

S.No.	Students	Title of the Project	Supervisor (s)
1	Sakshi Aggarwal	Therapeutic protein production in <i>Pichia pastoris</i>	Prof. Saroj Mishra
2	Sonam Takkar	MicroRNA and AU rich element (ARE) deciphering the regulatory loop	Dr. Ritu Kulshreshta
3.	Richa Sharma	Analysis of diversity of bacterial communities in the rizospheres of economically important legumes using molecular microbiology to look for potential	Dr. Shilpi Sharma
4	Siddhi S	Production of ethanol from agricultural waste by integrating solid state cultivation and vacuum cycling fermentation with intermittent substrate feeding	Prof. P.K. Roychoudhury
5.	Apoorva Verma	Engineering of Azurin protein for the development of anticancer agent	Prof. Prashant Mishra

Annexure 3

S.No.	Student Name	Topic	Supervisor/s	Internal Expert
1.	Ankita Vij	Studies on newer reactor designs for cultivation of Plant cells on inert solid support	A. K. Srivastava	G.P.Agarwal
2.	Vaibhav Yadav	Studies on newer reactor designs for cultivation of hairy root cultures on inert solid supports	A. K. Srivastava	G.P.Agarwal
3.	Ishita Goel	Studies on newer reactor designs for PHB production	A. K. Srivastava	TR Sreekrishnan
4.	Pemmaraju Ananta Subrahmanyam	Study on conductivity of anaerobic granules	Zia Shaikh	TR Sreekrishnan
5.	Devansh Durgaraju	Study on remediation of Cr by SRBs in a batch Bioreactor	G. P. Agarwal (with TRS).	A.K.Srivastava
6.	Mayank Gupta	Comparative study of ethanol fermentation using different wild type and recombinant strains (AN)	G. P. Agarwal	A.K.Srivastava
7.	Jasraj Singh Dhanju	Study of low pressure limiting flux (for high MW proteins): The causes and their effects on low MW protein transmission using experimental approach.	G. P. Agarwal	Zia Shaikh
8.	Mayank Goel	Development of practical multi-stage ultrafiltration strategy for protein fraction to achieve high purity and high yield.	G. P. Agarwal	Zia Shaikh
9.	Vikrant Vatsal	Development of Artificial Cornea by tissue engineering	P. Roychoudhary	Ritu Kulshreshtha
10.	Tanuj Kumar	Conversion of lignocellulose into ethanol using new technique	P. Roychoudhary	V S Bisaria
11.	Bhaskar Singh	Studies on synthesis of bioactive compounds in the plant cell culture of <i>Tinospora cordifolia</i>	V. S. Bisaria (with D. Sundar)	Prashant Mishra
12.	Saundarya Baghel	Improvement of specificity of lipase using computational and biochemical approach.	Prashant Mishra	Preeti Srivastava
13.	Lalit Kumar	Purification and stabilization of recombinant human erythropoietin	Prashant Mishra	Preeti Srivastava
14.	Kanwarbir Singh Bajwa	Magnetic properties of iron oxide nanoparticles encapsulated in polymers	Prashant Mishra Neeraj Khare (Physics)	Ravikrishnan E

15.	Divyansh Raj	Studies on biodegradability of magnets from Magnetotactic bacteria.	Prashant Mishra	Ravikrishnan E
16.	Manish Bagga	Synthesis of Graphene oxide protein complexes	Prashant Mishra BR Mehta (Physics)	Atul Narang
17.	Shivkesh Dahiya	Synthesis of oligosaccharides using glycosynthase variant of β -glucosidase of <i>Pichia etchellsii</i> .	Saroj Mishra	Prashant Mishra
18.	Manish Bharti	Effect of propionic acid on methanogenic activity	Zia Shaikh	Shilpi Sharma
19.	Ramesh Jat	Characterization of pSJ12, a new plasmid isolated from waste water metagenome	Preeti Srivastava	Shilpi Sharma
20.	Sandesh Lokhande	Studies on the dynamics of origin proximal loci of <i>Rhodococcus erythropolis</i> PR4	Preeti Srivastava	Shilpi Sharma
21.	Sakshi Agarwal	Non-target effects of bioinoculants in rhizosphere	Shilpi Sharma (with Prof V. S. Bisaria).	D. Sundar
22.	Charu Mehta	Expression of Lac Repressor as a Function of the Cell Cycle.	Atul Narang	D. Sundar
23.	Rohit Sharma	Studies on repressor-effector-operator interactions in <i>E. coli</i> .	Atul Narang	D.Sundar
24.	Shruti Singla	Evaluation of Constitutive and Starvation Promoters for Protein Expression in <i>E. coli</i>	Atul Narang	Ritu Kulshreshtha
25.	Kanika Khanna	The Role of Intergenic Spacing in Transcriptional Control of the <i>lac</i> Operon.	Atul Narang	Saroj Mishra
26.	Anurag Sinha	Isolation and characterization of microorganisms for biodegradation of asphaltene	Preeti Srivastava (jointly with Dr. M.P. Singh/Dr. Manoj Upreti, IOCL, Faridabad).	Saroj Mishra
27.	Avinash Kumar	Development of multianalyte biosensor using paper microfluidics	Ravikrishnan Elangovan	Subhash Chand
28.	Nikita Gupta	Beta-galactosidase catalyzed synthesis of galacto-oligosaccharides using Beta-galactosidase produced by <i>Kuyveromyces marxianus</i> .	Subhash Chand	V.S. Bisaria
29.	Shachi Mittal	In vitro examination of the different attributes of Granulocyte Colony Stimulating Factor (GCSF) on safety and efficacy of drug.	V. S. Bisaria (with A. Rathore)	Subhash Chand
30.	Surabhi Yadav	Studies on the enrichment of selected probiotic population in continuous culture using prebiotic agents	Shilpi Sharma (with Prof Subhash Chand).	P.K.Roychoudhury
31.	Vaibhav	Development of magnetic tweezers	Ravikrishnan	Zia Shaikh

	Morwal		Elangovan	
32.	Abhishek Persad	Create PAT based process control scheme for Pichia Pastoris fermentation	Ravikrishnan Elangovan (with A. Rathore)	Atul Narang