

Department of Biochemical Engineering and Biotechnology

**Minutes of the meeting of
Departmental Research Committee (DRC)
(DRC-02/2013-2014)**

December 31, 2013

The second meeting of *Departmental Research Committee* (DRC) for the academic session 2013-2014 was held on **Thursday, December 26, 2013 at 10:00 AM** in the Committee Room (I-230) of the Department.

The following members were present:

Prof. Prashant Mishra (*Chairman*)
Prof. V.S. Bisaria
Prof. A.K. Srivastava
Dr. Shilpi Sharma
Dr. Ritu Kulshreshtha
Dr. D. Sundar (*Convener*)

Item No. 1 - To confirm the minutes of the 1st meeting of the DRC for the session 2013-2014 (DRC-01/2013-2014) held on November 18, 2013.

The Minutes of the DRC meeting No. 1/2013-2014 were confirmed as circulated.

Item No. 2 - Matters arising out of the minutes of DRC-05/2012-2013.

The position in respect of the following matters was noted with observations/decisions as indicated against each:

(i). Application received from Ms. Nivedita Patra (2008BEZ8220) for continuation of Registration and extension of Scholarship for one more semester starting January 2014.

The Chairman informed the DRC that Dean (Academics) has turned down the request stating that the registration can be continued; however, the Institute Assistantship cannot be given beyond five years. The Dean had further stated that the continuation of registration can be done through progress report submission.

(ii). Application received from Ms. Dhara Thakore (2009BEZ8512) for continuation of Registration and extension of Scholarship for one more semester starting January 2014.

The Chairman informed the DRC that PG section vide its letter No. IITD/A&E(PGS)A-2/2013/4014 dated 03-12-2013, has informed that further Assistantship is usually notified only after registration for Semester 2, 2013-2014 is completed and has advised the student to make a fresh request to DRC after completing registration in the new semester.

(Action: Student Ms. Dhara Thakore to submit a fresh request to DRC after registration for Semester 2, 2013-2014)

(iii). Consideration of the new PhD project floated by Dr. Preeti Srivastava.

The Chairman informed the DRC that, for the PhD project entitled “Biocatalytic viscosity reduction of heavy crude oil” floated by Dr. Preeti Srivastava in collaboration with IOC R&D, Faridabad, a letter of approval from the employer of the proposed Co-Advisor to be formally associated with this specific project is yet to be furnished, though the MoU between IIT Delhi & IOC and the Curriculum Vitae of the Co-Advisor Dr. Manoj Upreti has been submitted to the DRC. All the documents will be required for the DRC to recommend such an arrangement to Dean Academics for his approval.

(Action: Dr. Preeti Srivastava)

Item No. 3 - Progress Report submitted by PhD students for Semester 1, 2013-2014 and award of grade for the course DTD899 (Doctoral Thesis).

On the basis of the progress reports submitted by the PhD students, it was decided to award a satisfactory (X) grade to all the students for the semester in DTD899 course and the Committee authorized the Chairman DRC to forward all the progress reports to the PG section.

(Action: Chairman DRC to forward the letter to Dean - Academics)

Further, it was recommended that the Student’s Research Committee (SRC) that couldn’t meet to monitor the progress of the PhD students this semester may ask the students to make presentation before the SRC in early January 2014.

Item No. 4 - Synopsis of the thesis titled ‘Studies on modulation of gelsolin amyloidogenesis *in vitro*’ submitted by Ms. Prabha Arya (2006BEZ8282).

The Committee discussed and approved the synopsis submitted by Ms. Prabha Arya (2006BEZ8282). The Committee also discussed and approved the panel of Examiners and authorized the Chairman to forward the same to Dean (Academics).

(Action: Chairman DRC to forward List of panel of Examiners to Dean - Academics)

Item No. 5 - A note received from Mr. S. Bhuvanesh (2009BEZ8507), PhD scholar for extension of Institute Assistantship beyond 4 years.

The Committee discussed and recommended the application received from Mr. S. Bhuvanesh (2009BEZ8507) to be forwarded to Dean (Academics).

(Action: Chairman DRC to forward the letter to Dean - Academics)

Item No. 6 - A note received from Mr. Satyendra Singh (2009BEZ8510), PhD scholar for extension of Institute Assistantship beyond 4 years.

The Committee discussed and recommended the application received from Mr. Satyendra Singh (2009BEZ8510) to be forwarded to Dean (Academics).

(Action: Chairman DRC to forward the letter to Dean - Academics)

Item No. 7 - A note received from Prof. P.K. Roychoudhary for including Dr. Shaikh Ziauddin Ahammad as Co-Supervisor for the PhD thesis of Ms. S. Siddhi (2013BEZ8029) and constitution of SRC for the student.

The request of Prof. P.K. Roychoudhary was discussed and it was approved for including Dr. Shaikh Ziauddin Ahammad as Co-Supervisor for the PhD thesis of Ms. S. Siddhi. The Committee constituted the SRC for Ms. S. Sidhi as given in **Annexure 1**.

Item No. 8 - A note received from Dr. Shilpi Sharma for a change of topic of PhD thesis allotted to Ms. Richa Sharma (2013BEZ8026) and constitution of SRC for the student.

The request of Dr. Shilpi Sharma was discussed and a new PhD project was allotted to the student Ms. Richa Sharma (**Annexure 2**). The Committee also constituted the SRC for Ms. S. Sidhi as given in **Annexure 1**.

Item No. 9 - Formation of Student's Research Committee (SRC) for the following MSR students –

Ms. Manisha Lamba (2013BEY7506)

Mr. Peeyush Kumar (2013BEY7508)

The Committee discussed and constituted the SRC as given below.

Student	Chairman, DRC or his nominee	One expert in the field from the Department	One Institute faculty expert, preferably in the concerned area, from outside the Department to which the student belongs	Supervisor (s)
Manisha Lamba (2013BEY7506)	PK Roychoudhary	TR Sreekrishnan	James Gomes Kusuma School of Biological Sciences IIT Delhi	Ziauddin Ahammad
Peeyush Kumar (2013BEY7508)	PK Roychoudhary	Shilpi Sharma	S.K. Khare Department of Chemistry IIT Delhi	VS Bisaria D. Sundar

Starting with 2013-entry MSR students, the Committee decided that a separate SRC would be constituted for each MSR student. The SRCs would monitor the progress of the MSR students based on the written report & presentation every semester and will recommend the number of thesis credits being considered as cleared (at the end of semester) out of the total thesis credits registered by the students in his/her research work. With the recommendations of the SRC, the Supervisors are required to forward the progress report of the MSR students to the BED800 course Coordinator (i.e., the DRC Convener) at the end of each semester, with a recommendation for satisfactory 'X' grade or a 'U' grade for unsatisfactory progress, for those students continuing with their project work.

(Action: Supervisors of 2013-entry MSR students to submit requests to DRC for constitution of SRC)

Item No. 10 - Allotment of Supervisors for 2013 December-entry PhD students (Mr. Vidhu. S. and Ms. Jaspreet Kaur Dhanjal)

The Committee approved the allotment of projects to the 2013 December-entry PhD students as well as to one 2013-July entry (Gautam Anand) and two 2012-entry PhD students (Moolchand and Jitendra Singh Verma) as given in **Annexure - 3**.

Item No. 11 - Applications received for admission to PhD program under Quality Improvement Program (QIP) for the year 2014-2015.

On scrutiny of the three applications received from the QIP office, the Committee found the following two candidates to be eligible to be called for a personal interview as they satisfied the minimum short-listing criteria of the department for admission to PhD program approved in the DFB dated 08-08-2013:

S.No.	Application Number	Name of candidate	Category	Teaching Experience	Industry Experience	Research Papers (Journals/Conf)
1.	50448	Pankaj Sanwal	General	13 years 1 month	4 years 1 month	0/1
2.	50606	Manjunath Dammali	General	3 years 6 months	10 months	04/06

As per the guidelines of QIP and the interview schedule finalized by the National QIP Coordination Committee, it was decided by the Committee to hold the interviews for the QIP candidates on January 20, 2014 at 12 noon.

(Action: Chairman DRC to forward the recommendations to Coordinator, QIP/CEP, IIT-D)

Item No. 12 - A note received from Prof. A.K. Srivastava for consideration of two industry-sponsored PhD applications that he has received.

On scrutiny of the applications, the Committee found the applicants to be ineligible to be called for interview as they didn't satisfy the minimum short-listing criteria of the department for admission to PhD program approved in the DFB dated 08-08-2013.

Item No. 13 - Consideration of PhD projects floated by Dr. Ravikrishnan Elangovan and Dr. Ziauddin Shaikh Ahammad.

The following 4 new PhD projects submitted by the Departmental Faculty were circulated to the DRC members on December 20, 2013 for their comments:

#	PhD Project Title	Supervisor 1	Supervisor 2
1	Study of switching in Bacterial Flagellar Motor under varying proton motive force	Ravikrishnan E	Sunil Nath
2	Study of intra - head interaction in myosin II molecule in ensemble	Ravikrishnan E	-
3	Mapping of ARGs distribution in the river Yamuna (in Delhi) and upstream of river Ganges (Rishikesh-Haridwar) and development of possible mitigation strategy.	Ziauddin Ahammad	-
4	Efficiency comparison of conventional wastewater treatment systems in removing emerging pollutants	Ziauddin Ahammad	-

After discussion, the Committee approved the above four new Ph.D. Projects. An updated list of DRC approved Ph.D. projects as on date is appended to the end of the minutes (**Annexure 3**).

Item No. 14 - A note received from Dr. Atul Narang for consideration of the application of Ms. Sayantari Ghosh for availing the *DBT Research Associateship* (effective January 01, 2014), by working under his mentorship.

The Committee discussed and recommended the application to be forwarded to Dean (R&D).

(Action: Chairman DRC to forward the letter to Dean – R&D)

Item No. 15 - Matters for information of the DRC.

None

Item No. 16 - Any other item with the permission of the Chair.

- a) *A note received from Dr. Ritu Kulshreshtha for a change of topic of PhD thesis allotted to Ms. Sonam Takkar (2013BEZ8030) and constitution of SRC for the student.*

The request of Dr. Ritu Kulshreshtha was discussed and a new PhD project was allotted to the student Ms. Sonam Takkar (**Annexure 2**). The Committee also constituted the SRC for Ms. Sonam Takkar as given in **Annexure 1**.

The meeting ended with thanks to all the members.


D. SUNDAR
DRC Convener

Distribution

All DRC members and other DBEB Faculty (by email)

Cc: DRC File

Student's Research Committee (SRC) approved by DRC

Student	Chairman, DRC or his nominee	One expert in the field from the Department	One Institute faculty expert, preferably in the concerned area, from outside the Department to which the student belongs	Supervisor (s)
S. Sidhi (2013BEZ8029)	TR Sreekrishnan	GP Agarwal	James Gomes Kusuma School of Biological Sciences IIT Delhi	PK Roychoudhary Ziauddin Ahammad
Richa Sharma (2013BEZ8026)	D. Sundar	Preeti Srivastava	Anil K Saxena Division of Microbiology IARI, New Delhi	Shilpi Sharma VS Bisaria
Sonam Takkar (2013BEZ8030)	PK Roychoudhary	Prashant Mishra	Vivek Perumal Kusuma School of Biological Sciences IIT Delhi	Ritu Kulshreshtha

(Action: Respective Supervisors to send the filled-in form to Chairman DRC for forwarding to Dean Academics)

Allotment of Projects for PhD students

Sl. No.	Student	Project Title	Supervisor (s)
1	Richa Sharma (2013BEZ8026)	Efficacy and Risk Assessment of Bioinoculants in <i>Cajanus cajan</i>	Shilpi Sharma VS Bisaria
2	Sonam Takkar (2013BEZ8030)	Unraveling the role of microRNAs in hypoazia:reoxygenation biology	Ritu Kulshreshtha
3	Gautam Anand (2013BEZ8024)	Effect of application of bioinoculants and "bioirrigation" for sustainable mixed cropping of pigeon pea and finger millet on rhizospheric community	Shilpi Sharma VS Bisaria
4	Moolchand (2012BEZ8550)	Production of a therapeutic protein in <i>Pichia pastoris</i>	Saroj Mishra
5	Jitendra Singh Verma (2012BEZ8551)	Production of medical grade bio/copolymers by gram positive bacteria (<i>Bacillus</i> sp.)	AK Srivastava
6	Vidhu. S. (2013 Dec entry)	Experimental investigation of ATP synthesis by chloroplast thylakoids and reconstituted systems	Sunil Nath Ravikrishnan E
7	Jaspreet Kaur Dhanjal (2013 Dec entry)	Functionally interacting proteins: Analyses and Prediction	D. Sundar

(Action: Respective Supervisors to submit requests to DRC for constitution of SRC)

PhD projects approved by DRC (as on Dec 26, 2013)

Annexure 3

Supervisor 1		Project Title	Supervisor 2
GP Agarwal	1	Protein transmission investigations through ultrafiltration for moderately high-pressure range (> 100 Kpa).	
	2	Production and purification of lipase using MF and UF membrane	Prashant Mishra
VS Bisaria	1	Production of bioactive compounds by plant cell cultures of <i>Tinospora cordifolia</i>	D. Sundar
AK Srivastava	1	Mass production of bio/copolymer using <i>Azohydromonas australica</i> & <i>A. eutropha</i> in novel reactor configurations.	
	2	Mass Production of biodegradable Co-polymers from renewable resources	
TR Sreekrishnan	1	Production of Biopolymers (PHB and its derivatives) from molasses using <i>A. latus</i>	AK Srivastava
	2	Production of Biopolymers (PHB and its derivatives) from sulfite waste water	AK Srivastava
Sunil Nath	1	Measurement of oxygen exchange by mass spectrometry for probing the mechanism of ATP synthesis by ATP synthase: A splendid molecular machine.	Praveen Kaul
	2	Probing the mechanism of ATP synthesis	Praveen Kaul
PK Roychoudhary	1	Process optimization for bioconversion of rice straw to ethanol	Prashant Mishra
Shilpi Sharma	1	Microbial production of chitosanase for generation of biologically active chitosan-oligosaccharides	Subhash Chand
	2	Diversity of ACC deaminase positive bacteria in stressed agricultural environments.	VS Bisaria
	3	Evaluation of microbial community structure and function in pesticide contaminated soil using molecular markers	
	4	Analysis of diversities of bacterial communities in the rhizospheres of economically important legumes using molecular microbiology	
Ritu Kulshreshtha	1	MicroRNA and AU rich element (ARE) deciphering the regulatory loop	
	2	Investigating modulation of miRNA expression in the hypoxic stem cell niche	
Preeti Srivastava	1	Engineering of <i>Dibenzothiphenene monooxygenase</i> (DszC) for enhanced substrate range and improved activity	
	2	Chromosome Segregation in <i>Rhodococcus erythropolis</i> PR4	
	3	Biocatalytic viscosity reduction of heavy crude oil	Manoj Upreti, IOC R&D, Faridabad
Ravikrishnan Elangovan	1	Direct detection of Enteric Fever in Blood	Shalini Gupta (Chemical) Vivek Perumal (SBS)
	2	Study of Torque versus load in Bacterial flagellar Motor	Sunil Nath
	3	Study of switching in Bacterial Flagellar Motor under varying proton motive force	Sunil Nath
	4	High precision localization of elongated fluorescent objects	
	5	Study of intra - head interaction in myosin II molecule in ensemble	
Ziauddin Ahammad	1	Mapping of ARGs distribution in the river Yamuna (in Delhi) and upstream of river Ganges (Rishikesh-Haridwar) and development of possible mitigation strategy.	
	2	Efficiency comparison of conventional wastewater treatment systems in removing emerging pollutants	