

**FORMAT FOR SUBMISSION OF PROGRESS REPORT OF STATE/INSTITUTIONAL LEVEL
BIOTECH HUBS**

(Sanctioned during 2010-11 and 2011-12)

Period under report – 2013 - 2014

- 1. Name & address of the institution:** Lady Keane College, Shillong
- 2. Name & designation of the Coordinator:** Mr. G.G. Syngai, HOD, Biochemistry Department,
Lady Keane College, Shillong.
- 3. Telephone, Mobile, Fax and Email of the Coordinator:** +919856007518 (M)
ggsyngai@gmail.com
- 4. Level of the Biotech Hub:** Institutional
- 5. Year of sanction with DBT's sanction no.:** BT/04/NE/2009 dated September 21, 2010

6. A brief write up about your organization/institution (not exceeding 10 lines):

Lady Keane College, the first women's college in North Eastern India was established in 1935, in the heart of Shillong city, the capital of Meghalaya. The tribal students of the North Eastern region make up for 80% of the present student's strength. Students from all parts of India are also admitted and this brings about an integration of traditions and cultures of the region. This is in keeping with the objectives set by the founders: "To do whatever necessary and legitimate for the spread of liberal education in all branches among women irrespective of religion, caste, creed or nationality". Accredited with a CGPA of 2.74 on a four point scale at B grade by NAAC in 2009, Lady Keane College is also a recipient of the DBT-Star College Scheme since 2009.

7. Total funding received so far (Rupees in lakhs):

Financial year	2010-11 (1st year)	2011-12 (2nd year)	2012-13 (3rd year)	Total (Rs. In lakhs)
Amount Received	19.00	10.03		

8. Infrastructure created:

(a) List of equipment procured:

Sl. No	EQUIPMENTS	Brand Name	Model No	Rupees (in Lacs)
1	Refrigerated Centrifuge (17,500rpm) 1.5/2.0 ml micro tubes	Eppendorf	5430 R	4.7
2	UV/ Vis Spectrophotometer	Shimadzu	UV –1800	5.025
3	Digital Trinocular Microscope	Labomed	Lx 400	0.78
4	Vertical Slab Gel Electrophoresis	TechnoSource	02 -00142	0.14
5	Submarine Electrophoresis Unit	TechnoSource	08 -00105	0.16
6	Electrophoresis Power Supply	TechnoSource	PAGE-100	0.45
7	Western Blot System	Medox	MX – 246 – 01	0.13

8	Computer (1 No.)	HP Pavilion	p6338in	0.4559
9	Laser Printer	Canon	LBP 2900B	0.0659
10	Gel Rocker	Medox	MX – 1290 -02	0.18
11	Electronic Balance	Shinko	JA -310	0.35
12	Refrigerator (175 Litres)	LG	185RP3	0.099
13	Micropipettes	BioLit	Proline-var.	0.105
14	Micropipettes	BioLit	Proline-var.	0.05
15	Micropipettes	BioLit	Proline-var.	0.05
16	Micropipettes	BioLit	Proline-var.	0.05
17	Micropipettes	BioLit	Proline-var. 100 – 1000 µl	0.05
18	Micropipettes	BioLit	Proline-var. 1000 – 5000 µl	0.05
19	pH meter	Chemiline	CL 110	0.07
20	Hot Air Oven	NSW	143(OUA-2)	0.2019
21	Serological Water Bath	NSW	125(SBS-1)	0.1298
22	Autoclave	NSW	229	0.0979
23	UPS	Foxin	FPS 600	0.02
24	Online UPS with 16 Nos. Batteries	SUKAM	IntelliQ Series	3.95
25	Inverter with 8 Nos. Batteries	SUKAM	IntelliQ Series	1.95

9. Teaching/training activities taken up during the period of report:

(a) Trainings conducted:

Serial No.	Topic	Duration and Date	No. of participants
1	Outreach Training programme for class x-students on the theme “DNA and its chromosomal structure”	2 days. 26 th – 27 th April 2013	27
2	Awareness programme for Higher Secondary (Science) students on the theme “Recent trends in biological sciences” (An Outreach Programme)	12 th November 2013	64
3	Three-Day Training Programme for the BSc III (Hons.) on the theme “Enzymes – the biological catalysts”	9th – 11th December, 2013	25

(b) Overall score of the training programmes according to participants as per feedback taken in the prescribed format:

Scores	5	4	3	2	1
No. of participants assigning the score	56	40	16	4	-

(c) No. of students doing project works under biotech hubs facility:

UG: PG: Ph.D.: 1 (One)

(d) No. of courses supported (by biotech hub infrastructure & facilities):

UG: 1

PG:

Ph.D.: 1 (One)

(d) Invited lectures/hands-on trainings offered at other institutions:

Sl. No.	Name of the resource person	Topic	Organised by	Duration & Date
1	Mr. G.G. Syngai	<i>“The basic concepts of DNA packaging in the nucleus of a cell”</i>	Institutional Biotech Hub, Lady Keane College at Anderson H/S School, Nongstoin	1 hour 26-4-2013
2	Dr. D.Nongbri	<i>“Principles of DNA extraction from Eukaryotic cells”</i>	Institutional Biotech Hub, Lady Keane College at Anderson H/S School, Nongstoin	1 hour 26-4-2013

10. Research activities (please provide details of only those research activities being carried out at biotech hub):

(a) Type of work carried out:

Sl. No.	Title of the research	Persons involved	Status (Ongoing/completed)
1	“Study on the effect of automobile pollution on the abundance of soil arthropods and a simultaneous analysis of the chlorophyll content, catalase activity and heavy metal accumulation in <i>Oxalis corniculata</i>”	Dr.D.G.Marbaniang, Dr. P.Law, Dr.S.Dohling, Dr.D.Nongbri, Mr.R.Decruse, Mr.L.Pyngrope, Mrs.W.Lyngdoh, Mr.G.G.Syngai, Mr.B.Sohkhlet	Completed
2	“Acute toxicity of ethanolic extract of <i>Zingiber officinale</i> rhizomes on common carp (<i>Cyprinus carpio carpio</i> L., 1758)”	Mr. G.G.Syngai	Ongoing

(b) No. of papers published/presented with impact factor (please mention only those have been arising out of biotech hub support): (Provide a list on a separate sheet, if necessary. Papers with due acknowledgements to the Biotech Hub should only be listed.)

(c) Collaboration with other departments/institutions:

Sl. No.	Dept./Institution collaborated	Nature of collaboration	Duration
1.	Department of Chemistry, Lady Keane College, Shillong	Minor Research Project	1 year
2.	Department of Botany, Lady Keane College, Shillong	”	“
3.	Department of Zoology, Lady Keane College, Shillong	”	“
4.	Department of Biochemistry, Lady Keane College, Shillong	”	”

11. Major achievements of the Biotech Hub during the year:

- (a) Taken up a Minor Research Project which is a collaborative project of the Faculty members involved in the Biotech Hub from the department of Chemistry, Botany, Biochemistry and Zoology of Lady Keane College, Shillong on the **“Study on the effect of automobile pollution on the abundance of soil arthropods and a simultaneous analysis of the chlorophyll content, catalase activity and heavy metal accumulation in *Oxalis corniculata*”**.
- (b) Conducted a Two-Day Outreach Training Programme on **“DNA and its chromosomal structure”** at Anderson Higher Secondary School on 26 – 27 April 2013 in Nongstoin which is located 100 kms away from Shillong.
- (c) Conducted an Awareness programme for Higher Secondary (Science) students on the theme **“Recent trends in biological sciences”** at Jail Road Boys’ Higher Secondary School, Shillong on 12th November 2013
- (d) Conducted a Three-Day Training Programme for BSc. III year (Honours) students of Lady Keane College, Shillong on **“Enzymes – the biological catalysts”** on 9 - 11 December 2013

12. Manpower Recruitment Details:

Sl. No.	Name	Designation	Specialization	Period of engagement
1	Mr. Badaplang Sohkhlet	SRF	Biochemistry	From 16 th May 2011 till date
2	Mr. Banmanbha Tymthai	Lab. Assistant	_____	On a need basis

13. Service provided:

(a) No. of students/workers utilizing the facilities:

Students – 46

Faculty – 3

(Documentary evidences attached)

Institutional Biotech Hub, Lady Keane College, Shillong EPENDORF CENTRIFUGE (5400 R)					
LOG REGISTER					
DATE	TIME		USER	SIGNATURE	REMARK
	FROM	TO			
23-June-11	01:05pm	1:45pm	B. Sokehlet.	<i>[Signature]</i>	Good.
23-Mar-12	04:30pm	5:00pm	P. Law & K. Pala.	<i>[Signature]</i>	Good.
24-Mar-12	12:30pm	2:00pm	B. Sokehlet.	<i>[Signature]</i>	Good.
26-Mar-12	03:30pm	4:00pm	B. Sokehlet.	<i>[Signature]</i>	Good.
10-Aug-12	01:20pm	4:00pm	B. Sokehlet.	<i>[Signature]</i>	Good.
13-Aug-12	9:06pm	5:00pm	B. Sokehlet.	<i>[Signature]</i>	Good.
17-Aug-12	12:30pm	2:00pm	Dr. P. Law	<i>[Signature]</i>	Good.
05-Oct-12	02:28pm	2:54pm	B. Sokehlet.	<i>[Signature]</i>	Good.
06-Oct-12	12:55pm	01:06pm	B. Sokehlet.	<i>[Signature]</i>	Good.
08-Oct-12	11:09pm	11:49am	B. Sokehlet.	<i>[Signature]</i>	Good.
08-Oct-12	03:39pm	02:50pm	B. Sokehlet.	<i>[Signature]</i>	Good.
12-Oct-12	12:30pm	01:00pm	B. Sokehlet.	<i>[Signature]</i>	Good.
16-Oct-12	01:45pm	02:00pm	S. Dohing &	<i>[Signature]</i>	Good.
do	do	do	B. Sokehlet.	<i>[Signature]</i>	Good.
11-Dec-12	1:30pm	2:00pm	Winder School Participants.	<i>[Signature]</i>	Good.
19-Dec-12	2:30pm	4:20pm	Dr. S. Dohing	<i>[Signature]</i>	Good.
19-Dec-12	10:05pm	1:00pm	B. Sokehlet.	<i>[Signature]</i>	Good.
20-Dec-12	02:45pm	03:55pm	B. Sokehlet.	<i>[Signature]</i>	Good.
16-Jan-13	12:00pm	12:04pm	B. Sokehlet.	<i>[Signature]</i>	Good.
24-Jan-13	01:45pm	01:55pm	B. Sokehlet.	<i>[Signature]</i>	Good.
11-Feb-13	2:00pm	02:15pm	Training and Engg. to Biological Catalysis	<i>[Signature]</i>	Good.

Institutional Biotech Hub, Lady Keane College, Shillong						
LABOMED						
Electronic Microscope with (DIGIEYE Camera)						
Funded by DBT, Govt. of India						
DATE	TIME		USER	EXPERIMENT	SIGNATURE	REMARK
	FROM	TO				
5 th -08-2011	10:15AM	12:00	CLAU. & STUDENTS TRAINING	MITOCH. BANCAS ROOT TIPS.	<i>[Signature]</i>	Good.
24 th -04-2013	11:15AM	12:00	CLAU. & STUDENTS	OBSERVATION OF ANTERIOR APC POLYMERIZATION CHROMOSOMES.	<i>[Signature]</i>	Good.
21 st -04-2014	10:00AM	4:00PM	Rp. Biochem. 2 nd YEAR.	MITOCH. UPTAKE AND ROOT TIPS.	<i>[Signature]</i>	Good.
24 th -04-2014	10:00AM	4:00PM	Rp. Biochem. 2 nd YEAR.	RBC COUNT.	<i>[Signature]</i>	Good.

Institutional Biotech Hub, Lady Keane College, Shillong SHIMADZU UV-VIS SPECTROPHOTOMETER (UV-1800)					
LOG REGISTER					
DATE	TIME		USER	SIGNATURE	REMARK.
	FROM	TO			
09/04/12	11:00	12:30	B.Sc. 1st Year (BIOCHEM. HONS.)	<i>[Signature]</i>	Good.
16/09/13	3:45	4:00	B.Sc. 1st Year (BIOCHEM. HONS.)	<i>[Signature]</i>	OK.
17/09/13	3:35	3:50	B.Sc. 1st Year (BIOCHEM. HONS.)	<i>[Signature]</i>	OK.
18/11/13	2:20pm	3:00	B.Sc. 1st Year (BIOCHEM. HONS.)	<i>[Signature]</i>	OK.
22/11/13	10:30	11:50	B.Sc. 1st Year (BIOCHEM. HONS.)	<i>[Signature]</i>	OK.
18/12/13	10:25	12:00	B.Sc. 1st Year (BIOCHEM. HONS.)	<i>[Signature]</i>	OK.
01/04/14	11:30	11:56	B.Sc. 1st Year (BIOCHEM. HONS.)	<i>[Signature]</i>	Good.
03/04/14	4:20	04:50	Sankaraj B. Nongfaj	<i>[Signature]</i>	OK.
3/4/14	11:20	do	Sankaraj B. Nongfaj	<i>[Signature]</i>	OK.
3/4/14	11:20	do	Prasanna Marbannang	<i>[Signature]</i>	OK.
3/4/14	11:20	do	P. Sankaraj B. Nongfaj	<i>[Signature]</i>	OK.
"	11:20	12:00	Sankaraj B. Nongfaj	<i>[Signature]</i>	OK.
"	11:20	2:00	Marbannang	<i>[Signature]</i>	OK.
"	11:20	2:00	Marbannang	<i>[Signature]</i>	OK.
5/4/14	12:10	12:40	B.Sc. 1st Year (BIOCHEM. HONS.)	<i>[Signature]</i>	OK.

(b) Other services provided (like diagnostic, consultancy etc.), if any: *(Please specify the nature of service)*

(c) Services provided to other Biotech Hubs: *(Please specify the nature of service)*

14. Future activities and proposed action plan:

The Institutional Biotech Hub, Lady Keane College, Shillong further plans to continue with the work of:

- (i) Organizing a Training Programme for Class – XII (Science) students
- (ii) Organizing an Awareness programme
- (iii) Organizing an Outreach Programme

15. Additional Details

(i). **Name of the Co-coordinator:** Mrs. W. Lyngdoh

Address: Dept. of Zoology, Lady Keane College, Shillong – 793001, Meghalaya

Mobile no.: 09436102535 (M)

Email: lyngdohwanda@rediffmail.com

(ii). **Name of the Co-coordinator:** Dr. S. Dohling

Address: Dept. of Botany, Lady Keane College, Shillong – 793001, Meghalaya

Mobile no.: 09863085923 (M)

Email: staddohling@yahoo.co.in

Mr. G.G. Syngai

Co-ordinator

Institutional Biotech Hub

Lady Keane College