

**FORMAT FOR SUBMISSION OF PROGRESS REPORT STATE/INSTITUTIONAL  
LEVEL BIOTECH HUBS**  
**(Format for biotech hubs sanctioned during 2010-11 and 2013-14)**

**Period under report: 2015 - 2016**

1. **Name & address of the institution:** Lady Keane College, Shillong
2. **Name & designation of the Coordinator:** Mr. G.G. Syngai, Assistant Professor & Head,  
Department of Biochemistry, Lady Keane  
College, Shillong
3. **Telephone, Mobile, Fax and Email of the Coordinator:** +919856007518 (M)  
[ggsyngai@gmail.com](mailto: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 which was established in 1935 is one of the premiere institutes for women's education in North East India. With an aim at providing excellent all round education, it strives to empower women for becoming future leaders of tomorrow and who will help shape society. Our commitment to quality found its stamp of approval from the National Accreditation and Assessment Council (NAAC), Bangalore when this apex autonomous agency reaccredited our institution and awarded 'A' Grade with our quality profile standing at 3.09 (CGPA) on a 4 point scale. The motto "**Excellence with Integrity**" is the driving force behind each endeavour of every single member –past and present- of this college, to impact the life of every young woman who wisely chooses to be nurtured and educated by it.

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

(Rs. In lakhs)

Financial year	2010-11 (1 <sup>st</sup> year)	2011-12 (2 <sup>nd</sup> year)	2012-13 (3 <sup>rd</sup> year)	2013-14 (4 <sup>th</sup> year)	2014-15 (5 <sup>th</sup> year)	2015-16 (6 <sup>th</sup> year)	Total	Balance on 31/03/2016
Amount Received	19.00	10.03	5.21	3.67	2.47	-	40.38	(-)1.15065

## 8. Infrastructure created:

(a) List of equipment procured: (Pl. list all the equipments procured under the biotech hub since its inception)

Sl. No	Name of the equipment	Model No & Brand Name	Cost in Indian Rupees (in Lacs)	Date of Purchase	No. of researchers/ students utilized Equipments
1	Refrigerated Centrifuge (17,500rpm) 1.5/2.0 ml micro tubes	5430 R Eppendorf	4.7	19/01/2011	12
2	UV/ Vis Spectrophotometer	UV –1800 Shimadzu	5.025	20/04/2011	78
3	Digital Trinocular Microscope	Lx 400 Labomed	0.78	20/04/2011	15
4	Vertical Slab Gel Electrophoresis	02 -00142 TechnoSource	0.14	29/03/2011	2
5	Submarine Electrophoresis Unit	08 -00105 TechnoSource	0.16	3/05/2011	2
6	Electrophoresis Power Supply	PAGE-100 TechnoSource	0.45	29/03/2011	2
7	Western Blot System	MX – 246 – 01 Medox	0.13	3/05/2011	
8	Computer (1 No.)	p6338in HP Pavilion	0.4559	21/01/2011	7
9	Laser Printer	LBP 2900B Canon	0.0659	21/01/2011	7
10	Gel Rocker	MX – 1290 -02 Medox	0.18	29/03/2011	2
11	Electronic Balance	JA -310 Shinko	0.35	29/03/2011	4
12	Refrigerator (175 Litres)	185RP3 LG	0.099	20/04/2011	4
13	Micropipettes	Proline-var. 0.1 – 3 µl BioLit	0.105	29/03/2011	7
14	Micropipettes	Proline-var. 2 – 20 µl BioLit	0.05	29/03/2011	7
15	Micropipettes	Proline-var. 10 – 100 µl BioLit	0.05	29/03/2011	7
16	Micropipettes	Proline-var. 20 – 200 µl BioLit	0.05	29/03/2011	7
17	Micropipettes	Proline-var. 100 – 1000 µl BioLit	0.05	29/03/2011	7
18	Micropipettes	Proline-var. 1000 – 5000 µl BioLit	0.05	29/03/2011	7
Contd.....					

Sl. No	Name of the equipment	Model No & Brand Name	Cost in Indian Rupees (in Lacs)	Date of Purchase	No. of researchers/ students utilized Equipments
19	pH meter	CL 110 Chemiline	0.07	29/03/2011	7
20	Hot Air Oven	143(OUA-2) NSW	0.2019	20/04/2011	7
21	Serological Water Bath	125(SBS-1) NSW	0.1298	20/04/2011	3
22	Autoclave	229 NSW	0.0979	20/04/2011	19
23	UPS	FPS 600 Foxin	0.02	21/01/2011	
24	Online UPS with 16 Nos. Batteries	IntelliQ Series SUKAM	3.95	26/03/2014	
25	Inverter with 8 Nos. Batteries	IntelliQ Series SUKAM	1.95	27/03/2014	
<b>Total cost =</b>			19, 31, 045		

**9. Detail of hands on training programmes/workshops organized during the period of report:**

**(a) Hands on trainings conducted:**

Serial No.	Topic	Duration and Date	No. of participants	Level of participants
1	Fifteen-Day Training Programme for Biotechnology students of St. Edmund's College, Shillong on <b>"Biological Techniques"</b>	Fifteen days 5 <sup>th</sup> – 20 <sup>th</sup> May 2015	5	B.Sc. 3 <sup>rd</sup> year (Honours)
2	Five – Day Training Programme for students of Lady Keane College, Shillong on <b>"Significance of Biomolecules in Clinical Diagnosis"</b> .	Five days 30 <sup>th</sup> Nov – 4 <sup>th</sup> Dec 2015	35	B.Sc. 3 <sup>rd</sup> year Life sciences

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

Total No. of participants	No. & percentage of participants assigning score of				
	5	4	3	2	1
40	12 (30%)	25 (62.5%)	2 (5%)	-	-

\*Mention percentages in parenthesis

**(c) Workshop/seminars/awareness programmes conducted:**

Serial No.	Topic	Duration and Date	No. of participants
1	Talk cum Awareness Programme On <b>“How are the various drug formulations (tablet, capsule, etc.) manufactured?”</b> for the BSc 2nd Semester Students of Lady Keane College, Shillong.	Two hours. 29 <sup>th</sup> February, 2016	59

**(d) No. of students doing project works using biotech hub facility:**

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

**(e) Courses/Study programmes supported (by biotech hub infrastructure & facilities):**

Sl. No.	Level (UG/PG/PhD)	Name of the Course/Study programme	Nature of support
1.	UG	Biochemistry Honours	Provided equipments for conducting the practicals
2	Ph.D	Ph.D programme	Provided equipments, chemicals and other miscellaneous items

**(f) Outreach programmes conducted:**

Serial No.	Topic	Name of the institution where conducted	Duration and Date	Level of participants
1	Outreach Awareness Programme On <b>“Biotechnology and its importance in human welfare”</b> .	Laban Bengalee Boys Higher Secondary School, Shillong	One-Day 15 <sup>th</sup> October 2015	Class XI Science students
2	Outreach Awareness Programme On <b>“Biotechnology and sustainable development”</b> .	Army Public School, Shillong	One hour. 29 <sup>th</sup> October, 2015	Class XI Science students
Contd...				

3	Outreach Awareness Programme On “Microbes as bio-tools”	Army Public School, Shillong	One hour. 2 <sup>nd</sup> November, 2015	Class XII Science students
4	Outreach Awareness Programme On “Environmental Biotechnology - its role in environment protection and restoration”	Gorkha Pathshala Higher Secondary School, Shillong.	One day. 20 <sup>th</sup> November, 2015	Class XI Science student

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

Sl. No.	Name of the resource person	Topic	Organised by	Duration & Date

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	“Acute toxicity of ethanolic extract of <i>Zingiber officinale</i> rhizomes on common carp ( <i>Cyprinus carpio carpio</i> L., 1758)”	G.G.Syngai S.Dey R. Bharali	Ongoing
2	“Acute toxicity of aqueous extract of <i>Allium sativum</i> on juvenile common carp ( <i>Cyprinus carpio</i> L., 1758)”	G.G.Syngai S.Dey R. Bharali	Completed

(b) No. of papers published/presented with impact factor (please mention only those 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.)

- Syngai, G.G., Gopi, R., Bharali, R., Dey, S., Lakshmanan, G.M.A., Ahmed, G. (2016) **Probiotics – the versatile functional food ingredients**. *J. Food Sci. Technol.* 53(2): 921-933. DOI: 10.1007/s 13197 – 015-2011-0.[Springer Journal]  
**Impact factor - 2.203 H Index – 59 Scopus – 0.71**

- Syngai, G.G., Dey, S., Bharali, R. (2016) **Evaluation of toxicity levels of the aqueous extract of *Allium sativum* and its effect on the behaviour of juvenile common carp (*Cyprinus carpio* L.,1758).** *Asian J. Pharm. Clin. Res.* 9(3): 417-421.  
**H Index – 13      Scopus – 0.4**

**(c) Collaboration with other departments/institutions:**

Sl. No.	Dept./Institution collaborated	Nature of collaboration	Duration
1	Department of Biochemistry, Lady Keane College, Shillong	Training programmes on: “ <b>Biological Techniques</b> ”& “ <b>Significance of Biomolecules in Clinical Diagnosis</b> ”	9(nine)+5(five) days
2	Department of Botany, Lady Keane College, Shillong	Training programme on: “ <b>Biological Techniques</b> ”	2(two) days
3	Department of Zoology, Lady Keane College, Shillong	Training programme on: “ <b>Biological Techniques</b> ”	2(two) days
4	Department of Chemistry, Lady Keane College, Shillong	Training programme on: “ <b>Biological Techniques</b> ”	1(one) day

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

- **176 students** could be familiarized with the different aspects of Biotechnology through the **4 Outreach Awareness Programmes** conducted for Class XI & XII Science students of different schools in the city.
- A total of **40 students** could be trained to enhance their practical skills through the **2 Training Programmes** conducted; with one being of 15- day duration for students of a neighboring institution and the other of 5-day duration for the students of the host institution.
- Conducted **1 in-house Awareness Programme** which saw the participation of **59 B.Sc students** of the college.
- Publication of **Papers in peer reviewed journals.**
- Publication of the 1<sup>st</sup> issue of the **Keanean Bio Connect Newsletter.**
- Observed the **National Science Day -2016** by organizing a popular talk.
- **Standard Operating Protocols** of the experiments conducted during the training programmes have been compiled in the form of manuals.
- **Standard Operating Procedures (SOPs)** of the high-end equipment’s continues to be maintained.

**12. Manpower Recruitment Details:**

Sl. No.	Name	Designation	Specialization	Period of engagement
1.	Mr. Badaplang Sohkhlet	SRF	Biochemistry	From 16 <sup>th</sup> May 2011 till 9 <sup>th</sup> July 2014
2.	Ms. Abigail Majaw Laloo	JRF	Biochemistry	From 16 <sup>th</sup> October 2014 till 31 <sup>st</sup> December 2015
3	Ms. Melarahun Shisha Lyngkhai	JRF	Biotechnology	From 6 <sup>th</sup> April 2016 till date
4	Mr. Banmanbha Tymthai	Lab. Assistant	-	On a monthly basis

**13. Service provided:**

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





























**Students – 40**

**Faculty – 4(Botany), 1(Zoology) and 3(Biochemistry)**



(Must have documentary evidence)

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**(b) Services provided to other Biotech Hubs/Sr secondary schools:**

(Please specify the nature of service)

- Organized a Fifteen-Day Training Programme On “Biological Techniques “for the B.Sc. 3<sup>rd</sup> year Biotechnology students of St. Edmund’s College, Shillong.

**14. Future activities and proposed action plan:**

- To further organize Training Programmes for enhancing the practical skills of the students.
- To further organize Outreach and Awareness Programmes so as to familiarize the students about the field of Biotechnology in particular and Biological Sciences in general.
- To make efforts for publication of research papers which will be an index of the Research activities undergoing in the Hub.
- To continue publication of the next issue of the Keanean Bio Connect Newsletter.

**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](mailto:staddohling@yahoo.co.in)

Mr. G.G. Syngai

Co-ordinator

Institutional Biotech Hub

Lady Keane College