

**Administrative**  
(Application No:HC-152)

**File No.BT/265/NE/TBP/2011**  
GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE & TECHNOLOGY  
DEPARTMENT OF BIOTECHNOLOGY  
(NER DIVISION)  
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Block-2, 7<sup>th</sup> Floor,  
CGO Complex, Lodhi Road  
New Delhi-110003  
Dated: 23/4 /2012

**ORDER**

Sanction of the President is hereby accorded under Rule 18 of the Delegation of Financial Powers Rules, 1978 for the implementation of the project under 'DBT's Twinning programme for the NE' titled "**Effect of Heavy metals and pesticides on male fertility and testicular carcinoma in situ: resveratrol, coenzyme Q10 targeting the therapeutic machinery of pre-cancerous cellular condition**" by Dr. Subhadeep Roychoudhury, Assam University, Silchar, Assam and Dr. Nabendu Murmu, Chittaranjan National Cancer Institute, Kolkata at a total cost of ₹ 41.22 lakhs (Rupees Forty One lakhs and Twenty Two thousand only) for a period of three years, on the terms and conditions detailed as under:

**2.0 The Project:**

**2.1 Project Title:** Effect of Heavy metals and pesticides on male fertility and testicular carcinoma in situ: resveratrol, coenzyme Q10 targeting the therapeutic machinery of pre-cancerous cellular condition.

**2.2 Project Investigators**

**2.2.1 Principal Investigator:  
(Parent Institute)**

Dr. Subhadeep Roychoudhury  
Assistant Professor  
Dept. of Life Science and Bioinformatics  
Assam University, Silchar - 788011  
Assam

**2.2.2 Principal Investigator:  
(Collaborating Institute)**

Dr. Nabendu Murmu  
Senior Scientific Officer (II)  
Dept. of Cancer Chemoprevention  
Chittaranjan National Cancer Institute  
37-S.P.Mukherjee Road, Kolkata- 700026

2/6/12

### 2.3 Objectives:

- To find out any possible effect of environmental risk factors mainly heavy metals (Pb,As, Cd), pesticides (organo chlorine and organo phosphorous) and tobacco constituents (benzopyrene/cotinine/nicotine) on semen quality including sperm DNA integrity.
- To study the effect of toxicants on testicular oxidative stress and antioxidant systems.
- To evaluate the differential gene and protein expression pattern of the stress proteins (HSPs and Metallothioneins)
- To evaluate the expression pattern of transcription factor NF-κB and its targeted genes COX-2
- To define the mechanism of heavy metals (arsenic, cadmium, lead), pesticides and tobacco action in Testicular Carcinoma In Situ.
- To determine whether toxic heavy metals, pesticides and tobacco induces I-κB phosphorylation and nuclear localization of NF-κB1 and Rel A in Testicular Carcinoma In Situ.
- To assess the activity of heavy metals, pesticides and tobacco induced NF-κB and COX-2 in Testicular Carcinoma In situ Cell Line at transcriptional and post-transcriptional level.
- To explore the effect of Resveratrol and Co Q 10 in Testicular Cancer In Situ.

### 2.4 Time Schedule:

The duration of the project is **three years** from the date of issue of sanction order.

### 2.5 Equipment Details:

#### 2.5.1 Parent Institute:- Assam University, Silchar, Assam

- (i) Fluorescence microscope (ii) Haemocytometer (iii) Makler counting Chamber
- (iv) Phase contrast binocular microscope (v) Bacteriological incubator
- (vi) Centrifuge (vii) Biosafety cabinet (viii) Micropipette (set of 3) (ix) Deep Freezer (-80 C)

#### 2.5.2 Collaborating Institute:- Chittaranjan National Cancer Institute, Kolkata

- (i) Micropipette multi channel (set of 2) (ii) Micropipette single channel (set of 3)
- (iii) Digital Homogenizer

### 2.6 Manpower:

#### Fellowship Conditions:

JRF emoluments shall be ₹16,000/- + HRA for the 1<sup>st</sup> two years and ₹18,000/- + HRA for the 3<sup>rd</sup> year for SRF and applicable, only if JRF/SRF is NET/GATE/BET/BINC qualified, otherwise it shall be ₹12,000/- + HRA for the 1<sup>st</sup> two years for JRF and ₹14,000/- + HRA for the 3<sup>rd</sup> year for SRF.

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2.6.1 Parent Institute:- Assam University, Silchar, Assam

(Rupees in lakhs)

Sr. No.	Position (No)	Emolument	1 <sup>st</sup> yr	2 <sup>nd</sup> yr	3 <sup>rd</sup> yr	Total
1	JRF/SRF (1 No.)	JRF @ ₹ 16,000/- + 10 % HRA for the 1 <sup>st</sup> & 2 <sup>nd</sup> yr and SRF @ ₹ 18,000/- + 10 % HRA for 3 <sup>rd</sup> yr	2.11	2.11	2.38	6.60
	<b>Total</b>		<b>2.11</b>	<b>2.11</b>	<b>2.38</b>	<b>6.60</b>

2.6.2 Collaborating institute:- Chittaranjan National Cancer Institute, Kolkata

(Rupees in lakhs)

Sr. No.	Position (No)	Emolument	1 <sup>st</sup> yr	2 <sup>nd</sup> yr	3 <sup>rd</sup> yr	Total
1	JRF/SRF (1 No.)	JRF @ ₹ 16,000/- + 30 % HRA for the 1 <sup>st</sup> & 2 <sup>nd</sup> yr and SRF @ ₹ 18,000/- + 30 % HRA for 3 <sup>rd</sup> yr	2.50	2.50	2.80	7.80
	<b>Total</b>		<b>2.50</b>	<b>2.50</b>	<b>2.80</b>	<b>7.80</b>

2.7 Budget Estimate:

The total cost of the project is ₹ 41.22 lakhs (Rupees Forty One lakhs and Twenty Two thousand only) as per budget summary given below:

2.7.1. Parent Institute:- Assam University, Silchar, Assam

(Rupees in lakhs)

Head	1 <sup>st</sup> yr	2 <sup>nd</sup> yr	3 <sup>rd</sup> yr	Total
<b>I. Non Recurring</b> (Equipment's & accessories)	11.62	0.00	0.00	11.62
<b>Sub Total - I</b>	<b>11.62</b>	<b>0.00</b>	<b>0.00</b>	<b>11.62</b>
<b>II. Recurring</b>				
1. Manpower	2.11	2.11	2.38	6.60
2. Consumables	1.80	1.20	1.00	4.00
4. Travel	0.10	0.15	0.15	0.40
5. Contingency	0.15	0.15	0.15	0.45
6. Overhead Charges	0.50	0.25	0.25	1.00
<b>Sub Total- II (1-5)</b>	<b>4.66</b>	<b>3.86</b>	<b>3.93</b>	<b>12.45</b>
<b>GRAND TOTAL (I+II)</b>	<b>16.28</b>	<b>3.86</b>	<b>3.93</b>	<b>24.07</b>

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2.7.2 Collaborating institute:- Chittaranjan National Cancer Institute, Kolkata

(Rupees in lakhs)

Head	1 <sup>st</sup> yr	2 <sup>nd</sup> yr	3 <sup>rd</sup> yr	Total
<b>I. Non Recurring</b> (Equipment's & accessories)	2.35	0.00	0.00	<b>2.35</b>
<b>Sub Total- I</b>	<b>2.35</b>	<b>0.00</b>	<b>0.00</b>	<b>2.35</b>
<b>II. Recurring</b>				
1. Manpower	2.50	2.50	2.80	<b>7.80</b>
2. Consumables	2.50	1.50	1.50	<b>5.50</b>
4. Travel	0.10	0.15	0.15	<b>0.40</b>
5. Contingency	0.20	0.20	0.10	<b>0.50</b>
6. Overhead Charges	0.20	0.20	0.20	<b>0.60</b>
<b>Sub Total- II (1-5)</b>	<b>5.50</b>	<b>4.55</b>	<b>4.75</b>	<b>14.80</b>
<b>GRAND TOTAL (I+II)</b>	<b>7.85</b>	<b>4.55</b>	<b>4.75</b>	<b>17.15</b>

- (i) Grand total for 3 years (24.07+ 17.15) = ₹ 41.22 lakhs  
(ii) Total for 1<sup>st</sup> year release (16.28+ 7.85) = ₹ 24.13 lakhs

2.8 Other Terms & Conditions:

2.8.1 The other terms and conditions governing this sanction are attached at Annexure-I

2.8.2 A Memorandum of Agreement (MoA) will be signed between the department and the grantee institute on a ₹ 100/- stamp paper in the format given at Annexure II and the subsequent releases will be made only after signing of MoA by the grantee institute and its acceptance by DBT. All pages need to be signed by the PI and the forwarding authority and the MoA returned to DBT within 30 days of issue of this letter.

2.8.3 The Non-recurring items must be procured and installed within 6 month period from the date of sanction.

2.8.4 In case the amount of grant-in-aid is refunded, the whole or a part amount of the grant, with an interest at 10% per annum there on shall be recovered.

2.8.5 No international travel will be undertaken from the sanctioned project grant unless specified otherwise.

2.9 This issues under the powers delegated to this Department and with the concurrence of IFD, DBT vide their Dy No. 102/I. F.D/ SAN/4828-4831/2011-12 Dated 07/03/2012.

2.9.1 This sanction order has been noted at Serial No..... in the Register of Grants.

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2.9.2 The accounts of grantee institution shall be open to inspection by sanctioning auditory / audit.

3.0 M/s Biotech Consortium India Ltd (BCIL), Anuvrat Bhawan, 210, Deen Dayal Upadhyay Marg, New Delhi-110 002, is administrating the North Eastern Region Biotechnology Programme Management Cell (NER-BPMC) of the DBT.

Vaishali Panjabi

(Dr. Vaishali Panjabi)  
Scientist 'C'

To  
The Pay & Accounts Officer,  
Department of Biotechnology,  
New Delhi – 110003

Copy to:

1. The Principal Director of Audit (Scientific Department), AGCR Building, New Delhi - 110 002.
2. Cash Section, DBT (For information only).
3. Sanction Folder.
4. IFD, DBT.
5. The Registrar, Assam University, Silchar – 788011, Assam.
6. The Director, Chittaranjan National Cancer Institute, 37-S.P.Mukherjee Road, Kolkata- 700026.
7. The Vice Chancellor, Assam University, Silchar – 788011, Assam.
8. Dr. Subhadeep Roychoudhury, Assistant Professor, Dept. of Life Science and Bioinformatics Assam University, Silchar - 788011, Assam.
9. Dr. Nabendu Murmu, Senior Scientific Officer (II), Dept. of Cancer Chemoprevention, Chittaranjan National Cancer Institute, 37-S.P.Mukherjee Road, Kolkata- 700026.
10. Concern File.
11. The Managing Director, Biotech Consortium India Limited, (NER-BPMC), 5th Floor, Anuvart Bhawan, 210, Deen Dayal Upadhyaya Marg, New Delhi- 110002.

Vaishali Panjabi

(Dr. Vaishali Panjabi)  
Scientist 'C'