



महाराष्ट्र MAHARASHTRA

2015

NA 447876

This Memorandum of Understanding (MoU) signed on the 27<sup>th</sup> day of July 2015.

BETWEEN

Bhabha Atomic Research Centre (BARC), Trombay, Mumbai-400085, Department of Atomic Energy (DAE), Government of India, hereinafter referred to as BARC which expression shall include its successors-in-interest and assigns, of the one part

AND

Indira Gandhi Krishi Vishwavidyalaya, Raipur-492 012 (Chhattisgarh), hereinafter referred to as IGKV which expression shall include its successors-in-interest and assigns, of the other part.

**PREAMBLE**

**WHEREAS** BARC has a strong programme on crop improvement using nuclear techniques and has made substantial and significant contributions in terms of developing and popularizing new varieties of crops. BARC has strong expertise in the field of induced mutation breeding. BARC has developed 42 crop varieties in different crops for commercial cultivation. This crop improvement programme requires field testing of new mutants and selections in specific trials and an Agricultural University is an ideal place to conduct such trials.

spkay



Welcome  
SILITA DEVMANTO  
unique land races have been collected from different parts and at Jagdalpur very rich biodiversity is present. In other vegetables viz. chillies, bottle gourd, brinjal, tomato, ivy gourd, ash gourd, bitter gourd, leafy vegetables seed, cucumber and pumpkin land races have been also collected.

Induced mutations by use of gamma rays can be used for improvement of these land races. One of the important advantages of induced mutation breeding is that it enables breeders to introduce specific improvements without affecting the existing good attributes/qualities of crop varieties. BARC has strong expertise in the field of induced mutation breeding. Therefore Induced mutagenesis with treatment of proper dose of radiation is one of the good options to improve these farmers' varieties/land races without losing its original quality. This breeding method help to reduce height and duration as well as some other drawbacks viz. grain shattering problem, long awns etc. The expected outcome will be: (i) development of high yielding varieties of cereals, pulses, oilseeds and vegetable crops (closely resembled to the farmers' varieties), (ii) development of cereals, pulses, oilseeds and vegetable crop varieties as per the need of farmers' (iii) development of variety with uniqueness or some special character viz red rice, medicinal rice, flaked rice making , low ODAP content in lathyrus, Omega -3 rich variety in linseed, good quality vegetables etc.

The application of nuclear techniques and research efforts are highly relevant in increasing productivity and production of the State. Bhabha Atomic Research Centre (BARC) has developed new techniques, materials and cultures which need large scale field experimentation. Active collaboration between BARC and IGKV will open new avenues for development in State agriculture as well as in the country.

NOW, THEREFORE, IT IS HEREBY AGREED TO BY AND BETWEEN BARC AND IGKV AS FOLLOWS:

1. This MoU supersedes all previous discussion and correspondence on this subject matter.

2. **SCOPE OF MoU:**

This MoU aims at strengthening the linkages between Nuclear Agriculture and Biotechnology Division (NA&BTD), Food Technology Division (FTD) BARC and IGKV through a collaborative programme on

2.1 Breeding of new crop varieties, evaluation, release and notification.

2.1.1 Testing and evaluation trials of newly developed mutants or selections (viz. rice, wheat, mustard, linseeds, soybean, mungbean, urdbean, groundnut, cowpea, pigeon pea etc.) developed by BARC or jointly developed by BARC and IGKV.

2.1.2 Providing field and laboratory facilities for growing and multiplication of hybridized segregating and irradiated population. Breeder seeds multiplication of Trombay varieties.

Sikay



- c. The mutants/ selections advanced during the MoU period will also follow the same nomenclature system in the event of getting released after the period of MoU.
- d. Patents coming out of the MoU will be joint property of both the sides.
- e. Data produced under the MoU will be joint intellectual property of BARC and IGKV and the publication's authorship sequence will be as per their contribution.

**6. Period of MoU**

This MoU comes in effect from the date of its signing and will remain in force for a period of five years.

**7. MoU implementation**

Activities plan will be submitted by concerned scientists from both institutions. The plan for the season will be scrutinized by REAC of the university. Head, NA&BTD, and Head, FTD, BARC will be invitees for the meeting. The REAC along with Head NA&BTD, Head, FTD, BARC will carry out planning and review of MoU-activities.

**8. WORK PLAN UNDER COLLABORATIVE RESEARCH: (Appendix-I)**

**9. ARBITRATION CLAUSE**

Any dispute or difference arising between the parties shall be referred to the Director, BARC and Vice Chancellor, IGKV or any other person mutually acceptable to them. Their decision in the matter shall be final.

**10. CONFIDENTIALITY CLAUSE**

IGKV will not transfer any data obtained through this MoU to any other party in any manner whatsoever without prior written approval of BARC. Similarly, BARC will not transfer any data obtained through this MoU to any other party in any manner whatsoever without the prior written approval of IGKV. In case of replying to any possible RTI application regarding joint activities, it will be so done with mutual consultation.

**11. NO LIABILITY CLAUSE**

All activities will be carried out with due professional care. However, neither BARC nor IGKV shall claim from the other for any loss or damage whatsoever, resulting from implementation of any technology at the premises of the user(s).

8/2/2011





**15. MoU AND ITS AMENDMENTS:**

This MoU shall be the sole repository of the terms and conditions agreed to between the parties and no amendment thereof shall take effect or be binding on BARC and IGKV unless such an amendment is authorized by BARC and IGKV and is recorded in writing and signed by the representatives of BARC and IGKV.

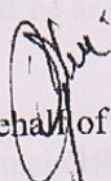
In witness whereof the parties hereto have executed the MoU through their authorized representatives.

For and on behalf of BARC

SPKale

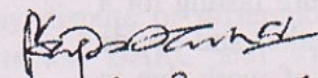
डॉ. शरद पी. काळे / Dr. Sharad P. Kale  
Authorized signatory  
Name and Seal: Associate Director (A), Bio-Science Group  
आयुक्त पर्याय समूह, भारतीय अणुसंशोधन केंद्र  
भारत सरकार, नई दिल्ली  
प्लॉट, पुर्वी-मार्ग, नई दिल्ली, भारत-110 085

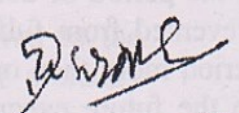
For and on behalf of IGKV

  
Vice Chancellor  
Indira Gandhi Krishi Vishwavidyalaya  
Raipur-492006 (Chhattisgarh)  
Authorized signatory  
Name and Seal:

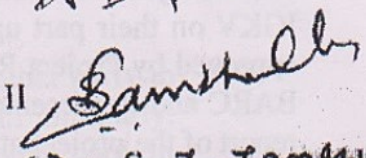
Date: 27/07/2015

Date: 27/07/2015

Witness- I   
Dr. P. Suprasanna

Witness- I   
Dr. Dipak Suro

Witness- II Prasad S. V  
Dr. Prasad S. Variya

Witness- II   
Dr. S. J. Jambhura





Government of India  
Department of Atomic Energy (DAE)  
Board of Research In Nuclear Sciences (BRNS)

Dr. Debanik Roy  
Programme Officer (NRFCC)

BRNS Secretariat, 1st Floor,  
CC, BARC, Trombay,  
Mumbai-400085 Phone:  
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Fax: 2225593946  
Email: deroy@barc.gov.in

No: 36(1)/14/52/2016-BRNS/36125

Date: 12/01/2017

OFFICE MEMORANDUM

Sub: R/P entitled "Development of Electrochemical Oxidation Methods for Treatment of Organic Radioactive Wastes" under Dr. C. Srinivas, Adjunct Faculty, SIES INDIAN INSTITUTE OF ENVIRONMENT MANAGEMENT, Sector-V, Nerul/Navl Mumbai, Maharashtra, 400076 bearing sanction 36(1)/14/52/2016-BRNS with NRFCC, BRNS.

On the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval and sanction of the President of India for the captioned project for 3 years beginning from financial year 2016-2017 with a total grant of Rs.26,54,147/- (Rupees twenty six lakh fifty four thousand one hundred forty seven only) for the project as under :

Item of expenditure	Year 1 (2016-2017)	Year 2 (2017-2018)	Year 3 (2018-2019)
Equipments	992519	25000	25000
Staff Salary - JRF	300000	300000	336000
Consumables	100000	50000	40000
Travel - PI	3000	3000	3000
Contingencies	50000	50000	50000
Overheads	104664	28350	30300
<b>Total(INR)</b>	<b>1550183</b>	<b>456350</b>	<b>484300</b>

Note: \* CHEMICAL LABORATORY FUME HOOD, COD/TOC ANALYSER, DC regulated power supply, PERISTALTIC PUMPS, SPARES AND ACCESSORIES, THERMO REACTOR FOR COD/TOC SAMPLE DIGESTION

JRF salary calculated @25,000/- p.m. for first two years and on re-designation by committee on in third year as SRF @ 28,000/- p.m. RA salary calculated @ 36,000/- p.m.

Overheads calculated @ 7.5% of the other heads except contingency. The remaining 7.5% towards overheads (Rs. 1,63,314/-) shall be released only on meeting the requirements specified (See Annex-B).

- I am also pleased to convey the sanction of the President of India to incur an expenditure of Rs. 15,50,183/- (Rupees fifteen lakh fifty thousand one hundred eighty three only) towards grant for the year 2016-2017.
- The expenditure involved is debitable to: 04 3401 00 004 27 0231.
- This issues with the concurrence of Scientific Secretary, BRNS and IFA.

Sd/-  
Dr. Debanik Roy

Pay & Accounts Officer, DAE, Mumbai - 400 001.





Government of India  
Department of Atomic Energy (DAE)  
Board of Research in Nuclear Sciences (BRNS)

Dr. S.Dutta  
Programme Officer (RTAC)

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Email: dsubrata@barc.gov.in

No: 35/14/14/2018-BRNS/10392

Date: 25/05/2018

**OFFICE MEMORANDUM**

Sub: R/P entitled "Behaviour of radiolabelled 14-C Gliotoxin in soil and plants" under Dr. Ramamoorthy Vellaisamy ramamoorthy.v@tnau.ac.in 9994511343 Dept. of Plant Pathology, Agri, Tamil Nadu Agricultural University, coimbatore, Tamil Nadu, 641003. bearing sanction 35/14/14/2018-BRNS with RTAC, BRNS.

On the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval and sanction of the President of India for the captioned project for 3 years beginning from financial year 2018-2021 with a total grant of Rs. 22,36,140/- (Rupees twenty two lakh thirty six thousand one hundred forty only) for the project as under :

Item of expenditure	Year 1 (2018-2019)	Year 2 (2019-2020)	Year 3 (2020-2021)
Equipments	500000	0	0
Staff Salary - JRF (1)	300000	300000	33600
Staff Salary - SRF	0	0	0
Staff Salary - RA	0	0	0
Technical Assistance	0	0	0
Consumables	200000	100000	100000
Travel - PI	30000	30000	30000
Travel - PC/DC	20000	20000	20000
Contingencies	100000	100000	100000
Bank Interest	0	0	0
Overheads	78750	33750	13770
HRA (To be entered by BRNS)	0	0	0
Salary Arrears (To be entered by BRNS)	0	0	0
Incentive to the Awardee (only DAE-SRC)	0	0	0
<b>Total (INR)</b>	<b>1228750</b>	<b>583750</b>	<b>297370</b>

Note: \* incubator shaker

JRF salary calculated @25,000/- p.m. for first two years and on redesignation by committee on in third year as SRF @ 28,000/- p.m. RA salary calculated @ 36,000/- p.m.

Please note that as per the government orders under Direct Benefit Transfer (DBT) scheme, the staff salary has to be transferred to his/her bank account. Accordingly, Aadhar Number (UID) of the appointed staff, Bank Account details and the Mobile number linked to the bank account should be obtained and it should be intimated to this office.

Overheads calculated @ 7.5% of the other heads except contingency. The remaining 7.5% towards overheads (Rs. 1,26,270/-) shall be released only on meeting the requirements specified (See Annex-B).

- I am also pleased to convey the sanction of the President of India to incur an expenditure of Rs. 12,28,750/- (Rupees twelve lakh twenty eight thousand seven hundred fifty only) towards grant for the year 2018-2021
- The expenditure involved is debit to: 04 3401 00 004 27 0231.





Government of India  
Department of Atomic Energy (DAE)  
Board of Research in Nuclear Sciences (BRNS)

Dr. S.Dutta  
Programme Officer (RTAC)

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No: 35/14/16/2018-BRNS/10394

Date: 25/05/2018

**OFFICE MEMORANDUM**

Sub: R/P entitled "Biological effect of alpha irradiation in comparison with gamma rays on pollen of some field crops" under Dr. Jayaprakash P jpsarit@gmail.com 4232234796 INDIAN AGRICULTURAL RESEARCH INSTITUTE REGION, IARI, Regional Station, Wellington, Wellington, The Nilgiris, Tamil Nadu, 643231. bearing sanction 35/14/16/2018-BRNS with RTAC, BRNS.

On the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval and sanction of the President of India for the captioned project for 3 years beginning from financial year 2018-2021 with a total grant of Rs. 29,47,640/- (Rupees twenty nine lakh fourty seven thousand six hundred fourty only) for the project as under :

Item of expenditure	Year 1 (2018-2019)	Year 2 (2019-2020)	Year 3 (2020-2021)
Equipments	1600000	0	0
Staff Salary - JRF (1)	300000	300000	33600
Staff Salary - SRF	0	0	0
Staff Salary - RA	0	0	0
Technical Assistance	0	0	0
Consumables	30000	40000	40000
Travel - PI	30000	30000	30000
Travel - PC/DC	20000	20000	20000
Contingencies	30000	25000	25000
Bank Interest	0	0	0
Overheads	148500	29250	9270
HRA (To be entered by BRNS)	0	0	0
Salary Arrears (To be entered by BRNS)	0	0	0
Incentive to the Awardee (only DAE-SRC)	0	0	0
<b>Total(INR)</b>	<b>2158500</b>	<b>444250</b>	<b>157870</b>

Note: \* Alpha irradiator with data processing with alpha irradiation source, B.O.D incubator, Upgradation of Existing Nikon microscope

JRF salary calculated @25,000/- p.m. for first two years and on redesignation by committee on in third year as SRF @ 28,000/- p.m. RA salary calculated @ 36,000/- p.m.

Please note that as per the government orders under Direct Benefit Transfer (DBT) scheme, the staff salary has to be transferred to his/her bank account. Accordingly, Aadhar Number(UID) of the appointed staff, Bank Account details and the Mobile number linked to the bank account should be obtained and it should be intimated to this office.

Overheads calculated @ 7.5% of the other heads except contingency. The remaining 7.5% towards overheads (Rs. 1,87,020/-) shall be released only on meeting the requirements specified (See Annex-B).

- I am also pleased to convey the sanction of the President of India to incur an expenditure of Rs. 21,58,500/- (Rupees twenty one lakh fifty eight thousand five hundred only) towards grant for the year 2018-2021 .
- The expenditure involved is debit to: 04 3401 00 004 27 0231.





Government of India  
Department of Atomic Energy (DAE)  
Board of Research in Nuclear Sciences (BRNS)

Dr. S.Dutta  
Programme Officer (RTAC)

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No: 35/14/24/2018-BRNS/10415

Date: 31/05/2018

**OFFICE MEMORANDUM**

Sub: R/P entitled "Radiation Induced modification of Chitosan for adsorptive removal of Textile Organic Dyes" under Prof. Alka Tiwari atiwari@govtsciencecollegedurg.ac.in 7415514000 , Govt V.Y.T PG Autonomous College, Durg, 491001 bearing sanction 35/14/24/2018-BRNS with RTAC, BRNS.

On the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval and sanction of the President of India for the captioned project for 3 years beginning from financial year 2018-2021 with a total grant of Rs. 32,51,400/- (Rupees thirty two lakh fifty one thousand four hundred only) for the project as under :

Item of expenditure	Year 1 (2018-2019)	Year 2 (2019-2020)	Year 3 (2020-2021)
Equipments	1400000	0	0
Staff Salary - JRF	300000	300000	336000
Staff Salary - SRF (1)	0	0	0
Staff Salary - RA	0	0	0
Technical Assistance	0	0	0
Consumables	100000	100000	50000
Travel - PI	30000	30000	30000
Travel - PC/DC	20000	20000	20000
Contingencies	35000	35000	35000
Bank Interest	0	0	0
Overheads	138750	33750	32700
HRA (To be entered by BRNS)	0	0	0
Salary Arrears (To be entered by BRNS)	0	0	0
Incentive to the Awardee (only DAE-SRC)	0	0	0
<b>Total(INR)</b>	<b>2023750</b>	<b>518750</b>	<b>503700</b>

Note: \* FTIR Spectrometer, pH meter, Water distillation assembly for triple distilled water  
JRF salary calculated @25,000/- p.m. for first two years and on redesignation by committee on in third year as SRF @ 28,000/- p.m. RA salary calculated @ 36,000/- p.m.

Please note that as per the government orders under Direct Benefit Transfer (DBT) scheme, the staff salary has to be transferred to his/her bank account. Accordingly, Aadhar Number (UID) of the appointed staff, Bank Account details and the Mobile number linked to the bank account should be obtained and it should be intimated to this office.

Overheads calculated @ 7.5% of the other heads except contingency. The remaining 7.5% towards overheads (Rs. 2,05,200/-) shall be released only on meeting the requirements specified (See Annex-B).

- I am also pleased to convey the sanction of the President of India to incur an expenditure of Rs. 20,23,750/- (Rupees twenty lakh twenty three thousand seven hundred fifty only) towards grant for the year 2018-2021
- The expenditure involved is debit to: 04 3401 00 004 27 0231.
- This is issued with the concurrence of the competent authority in the Department (p. /c of file no.





Government of India  
Department of Atomic Energy (DAE)  
Board of Research in Nuclear Sciences (BRNS)

Shri D.K. Dalal  
Programme Officer (ATC)

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No: 34/14/16/2018-BRNS/34103

Date: 15/06/2018

**OFFICE MEMORANDUM**

Sub: R/P entitled "Post-Processing of NQR signals in digital domain in FPGA" under Dr. Rangababu Peesapati Asst. prof. Dept. of ECE, National Institute of Technology Meghalaya, Laitumkhrh Shillong 793003 bearing sanction 34/14/16/2018-BRNS with ATC, BRNS.

On the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval and sanction of the President of India for the captioned project for 2 years beginning from financial year 2018-2019 with a total grant of Rs. 20,03,000/- (Rupees twenty lakh three thousand only) for the project as under :

Item of expenditure	Year 1 (2018-2019)	Year 2 (2019-2020)
Equipments	100000	0
Staff Salary - JRF (2)	600000	600000
Travel - PI	100000	100000
Travel - PC/DC	120000	0
Contingencies	70000	70000
Overheads	69000	52500
<b>Total(INR)</b>	<b>1059000</b>	<b>822500</b>

Note: \* Laptop

JRF salary calculated @25,000/- p.m.

Please note that as per the government orders under Direct Benefit Transfer (DBT) scheme, the staff salary has to be transferred to his/her bank account. Accordingly, Aadhar Number (UID) of the appointed staff, Bank Account details and the Mobile number linked to the bank account should be obtained and it should be intimated to this office.

Overheads calculated @ 7.5% of the other heads except contingency. The remaining 7.5% towards overheads (Rs. 1,21,500/-) shall be released only on meeting the requirements specified (See Annex-B).

- I am also pleased to convey the sanction of the President of India to incur an expenditure of Rs. 10,59,000/- (Rupees ten lakh fifty nine thousand only) towards grant for the year 2018-2019 .
- The expenditure involved is debit to: 04 3401 00 004 27 0231.
- This is issued with the concurrence of the competent authority in the Department

Shri D.K. Dalal

Pay & Accounts Officer, DAE, Mumbai - 400 001.





Government of India  
Department of Atomic Energy (DAE)  
Board of Research in Nuclear Sciences (BRNS)

Dr. S.Dutta  
Programme Officer (RTAC)

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+91-2225595331  
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No: 35/14/32/2018-BRNS/35090

Date: 28/06/2018

**OFFICE MEMORANDUM**

Sub: R/P entitled "DES. & DEV. OF GAMMA-FLUORESCENCE DUAL IMAGING SENTINEL LYMPH NODE NAVIGATION SURGERY IO PROBE" under Prof. Siva Sankara Sai S. sivasankarasai@sssihl.edu.in 9440826406 DEAN, FACULTY OF SCIENCES, Centre for Academic Research, Sri Sathya Sai Institute of Higher Learning, Prasanthi Nilayam, Andhra Pradesh, 515134. bearing sanction 35/14/32/2018-BRNS with RTAC, BRNS.

On the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval and sanction of the President of India for the captioned project for **3 years** beginning from financial year **2018-2021** with a total grant of **Rs.97,45,000/- (Rupees ninety-seven lakh and forty-five thousand only)** for the project as under :

Item of expenditure	Year 1 (2018-2019)	Year 2 (2019-2020)	Year 3 (2020-2021)
Equipments	4850000	250000	200000
Technical Assistance	740000	540000	340000
Consumables	450000	500000	400000
Travel - PI	200000	200000	125000
Travel - PC/DC	50000	50000	50000
Contingencies	100000	50000	50000
Overheads	100000	100000	100000
<b>Total(INR)</b>	<b>6490000</b>	<b>1690000</b>	<b>1265000</b>

Note: \* Flat Pane Multi Anode PMT Assembly, IDEAS ROSMAP-MP Multi-Anode-Photomultiplier Read-Out, Lead Fabrication, Prototype Fabrication

Overheads calculated @ 7.5% of the other heads except contingency. The remaining 7.5% towards overheads (Rs. 3,00,000/-) shall be released only on meeting the requirements specified (See Annex-B).

- I am also pleased to convey the sanction of the President of India to incur an expenditure of **Rs. 64,90,000/- (Rupees sixty four lakh ninety thousand only)** towards grant for the year 2018-2019 .
- The expenditure involved is debitable to: **04 3401 00 004 27 0231**.
- This is issued with the concurrence of the competent authority in the Department.

*Sulabata Dutta*

Dr. S.Dutta





Government of India  
Department of Atomic Energy (DAE)  
Board of Research in Nuclear Sciences (BRNS)

Dr. S. Dutta  
Programme Officer (WWM)

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No:37(2)/14/02/2018-BRNS/

10191

OFFICE MEMORANDUM

Date:

11 JUN 2019

Sub: R/P entitled "Synthesis of metal ferrite modified MCM-41 (FMMCM) composites as adsorbent for remediation of Cr(VI)" under Dr. Rashmi Acharya, Associate Professor, Centre for Nanoscience & nanotechnology, Siksha O Anushandhan University, Bhubaneswar, Odisha-751030 bearing sanction No.37(2)/14/02/2018-BRNS with WWM, BRNS.

In continuation of this Department's OM of even number dated 02/04/2018 on the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval of the President of India for the continuance of captioned project during 2019-2020 and sanction to incur an expenditure of Rs. 10,99,025/- (Rupees ten lakh ninety nine thousand twenty five only) as detailed below:

Item of expenditure	Year 2 (2019-2020)
Equipments	450000
Staff Salary - JRF	372000
Staff Salary - SRF	0
Consumables	120000
Travel - PI	45000
Contingencies	20000
Bank Interest	0
Overheads	74025
Salary Arrears	18000
<b>Total(INR)</b>	<b>1099025</b>

- The grant remaining unspent under the Heads "Equipments", "Consumables" and "Overheads" for the year 2018-2019 are only allowed to be carried forward to the current financial year 2019-2020. Unspent balance under other heads will be adjusted while releasing the subsequent grant.
- Salary of JRF has been revised to Rs.31,000/- p.m. w.e.f. 01.01.2019 vide OM No.10/1(21)/2014/Fellowship /R&D-II/5739 dated 03.05.2019. Salary arrears has been calculated @ Rs.6,000/- p.m. w.e.f. 01.01.2019 to 31.03.2019.
- The expenditure involved is debit to the following Head of Account: 3401 00 004 27 02 31
- This is issued with the concurrence of the competent authority in the Department.

Dr. S. Dutta

Pay & Accounts Officer, DAE, Mumbai-400 001



Please Distribute to the Addressee as Marked ✓



Government of India  
Department of Atomic Energy (DAE)  
Board of Research in Nuclear Sciences (BRNS)

Dr. Ashok Pandey  
Programme Officer (BRE)

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No:37(2)/14/20/2017-BRNS/

10192

OFFICE MEMORANDUM

Date:

11 JUN 2019

Sub: R/P entitled "Design and synthesis of smart supramolecular dyes based on TPE modified PDlcucurbituril conjugates." under Dr. Mainak Banerjee, Assistant Professor, Dept. of Chemistry, Birla Institute of Technology & Science, Pilani, KK Birla Goa Campus, Zuarinagar, Goa-403726. bearing sanction 37(2)/14/20/2017-BRNS with BRE, BRNS.

In continuation of this Department's OM of even number dated 29/12/2017 on the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval of the President of India for the continuance of captioned project during 2019-2020 and sanction to incur an expenditure of Rs. 5,82,275/- (Rupees five lakh eighty two thousand two hundred seventy five only) as detailed below:

Item of expenditure	Year 2 (2019-2020)
Equipments	0
Staff Salary - JRF	372000
Staff Salary - SRF	0
Consumables	100000
Travel - PI	25000
Contingencies	30000
Overheads	37275
Salary Arrears	18000
<b>Total(INR)</b>	<b>582275</b>

- The grant remaining unspent under the Heads "Equipments", "Consumables" and "Overheads" for the year 2018-2019 are only allowed to be carried forward to the current financial year 2019-2020. Unspent balance under other heads will be adjusted while releasing the subsequent grant.
- Salary of JRF has been revised to Rs.31,000/- p.m. w.e.f. 01.01.2019 vide OM No.10/1(21)/2014/Fellowship /R&D-II/5739 dated 03.05.2019. Salary arrears has been calculated @ Rs.6,000/- p.m. from 01.01.2019 to 31.03.2019.
- The expenditure involved is debit to the following Head of Account: 3401 00 004 27 02 31
- This is issued with the concurrence of the competent authority in the Department.

*Ashok Pandey*  
24.5.2019  
Dr. Ashok Pandey

Pay & Accounts Officer, DAE, Mumbai-400 001



istribute to the Addressee as Marked(-)



Government of India  
Department of Atomic Energy (DAE)  
Board of Research in Nuclear Sciences (BRNS)

Dr. Ashok Pandey  
Programme Officer (BRE)

BRNS Secretariat, 1st Floor,  
CC, BARC, Trombay,  
Mumbai-400085  
Phone: +91-02225594566  
Email: ashokk@barc.gov.in

No: 58/14/04/2019-BRNS/

102547

Date 26 JUN 2019

OFFICE MEMORANDUM

Sub: R/P entitled "Fusion Reaction Studies with Weakly Bound Nuclei" under Dr. Bhushan Anil Kanagalekar, Assistant Professor, Dept. of Physics, Rani Channamma University, Vidya Sangama, National Highway-04, Belagavi, Karnataka- 591156 bearing sanction 58/14/04/2019-BRNS with BRE, BRNS.

On the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval and sanction of the President of India for the captioned project for 3 years beginning from financial year 2019-2020 with a total grant of Rs. 23,79,600/- (Rupees twenty three lakh seventy nine thousand six hundred only) for the project as under :

Item of expenditure	Year 1 (2019-2020)	Year 2 (2020-2021)	Year 3 (2021-2022)
Equipments	600000	0	0
Staff Salary - JRF	372000	372000	0
Staff Salary - SRF	0	0	420000
Consumables	50000	50000	50000
Travel - PI	30000	30000	30000
Contingencies	25000	25000	25000
Bank Interest	0	0	0
Overheads	78900	33900	37500
<b>Total(INR)</b>	<b>1155900</b>	<b>510900</b>	<b>562500</b>

Note: \* Charged Particle detector, Laptop

JRF salary calculated @31,000/- p.m. for first two years and on redesignation by committee on in third year as SRF @ 35,000/- p.m. RA salary calculated @ 47,000/- p.m.

Please note that as per the government orders under Direct Benefit Transfer (DBT) scheme, the staff salary has to be transferred to his/her bank account. Accordingly, Aadhar Number (UID) of the appointed staff, Bank Account details and the Mobile number linked to the bank account should be obtained and it should be intimated to this office.

Overheads calculated @ 7.5% of the other heads except contingency. The remaining 7.5% towards overheads (Rs. 1,50,300/-) shall be released only on meeting the requirements specified (See Annex-B).

- I am also pleased to convey the sanction of the President of India to incur an expenditure of Rs. 11,55,900/- (Rupees eleven lakh fifty five thousand nine hundred only) towards grant for the year 2019-2020.
- The expenditure involved is debit to: 04 3401 00 004 27 0231.
- This is issued with the concurrence of the competent authority in the Department.

*Ashok Pandey*  
6.6.2019

Dr. Ashok Pandey

Pay & Accounts Officer, DAE, Mumbai - 400 001.





Government of India  
Department of Atomic Energy (DAE)  
Board of Research in Nuclear Sciences (BRNS)

Dr. S. Dutta  
Programme Officer (HLC)

BRNS Secretariat, 1st Floor, CC,  
BARC, Trombay, Mumbai-400085.  
Phone: +91-02225595331  
Email: dsubrata@barc.gov.in

No:37(1)/14/21/2018-BRNS/

102743

OFFICE MEMORANDUM

Date:

27 JUN 2019

Sub: R/P entitled "DEVELOPMENT OF ANTIMICROBIAL POROUS POLYMERIC BANDAGE FOR SKIN TISSUE REGENERATION" under Dr. Sreelekha T.T., Assistant Professor, Division of Cancer Research, Regional Cancer Centre, Medical College Campus, Thiruvananthapuram, Kerala, 695011. bearing sanction 37(1)/14/21/2018-BRNS with HLC, BRNS.

In continuation of this Department's OM of even number dated 03/08/2018 on the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval of the President of India for the continuance of captioned project during 2019-2020 and sanction to incur an expenditure of **Rs. 9,47,775/- (Rupees nine lakh forty seven thousand seven hundred seventy five only)** as detailed below:

Item of expenditure	Year 2 (2019-2020)
Equipments	0
Staff Salary - JRF	372000
Staff Salary - SRF	0
Consumables	425000
Travel - PI	40000
Contingencies	30000
Bank Interest	0
Overheads	62775
Salary Arrears	18000
<b>Total(INR)</b>	<b>947775</b>

- The grant remaining unspent under the Heads "Equipments", "Consumables" and "Overheads" for the year 2018-2019 are only allowed to be carried forward to the current financial year 2019-2020. Unspent balance under other heads will be adjusted while releasing the subsequent grant.
- Salary of JRF has been revised to Rs.31,000/- p.m. w.e.f. 01.01.2019 vide OM No.10/1(21)/2014/Fellowship /R&D-II/5739 dated 03.05.2019. Staff salary arrears has been calculated @ Rs.6,000/- p.m. from 01.01.2019 to 31.03.2019.
- The expenditure involved is debitable to the following Head of Account: 3401 00 004 27 02 31
- This is issued with the concurrence of the competent authority in the Department.

*S. Dutta*

Pay & Accounts Officer, DAE, Mumbai-400 001

Dr. S. Dutta





Government of India  
Department of Atomic Energy (DAE)  
Board of Research in Nuclear Sciences (BRNS)

Dr. S. Dutta  
Programme Officer (HLC)

BRNS Secretariat, 1st Floor, CC,  
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No:37(1)/14/10/2017-BRNS/

10272

OFFICE MEMORANDUM

Date:  
27 JUN 2019

Sub: R/P entitled "Radio sensitizing Effect of Inositol Hexaphosphate in Colon Cancer Cells by targeting ErbB Signaling" under Dr. B. Vijaya Lakshmi, Assistant Professor, Institute of Genetics & Hospital for Genetic Diseases, Osmania University, Begumpet, Hyderabad-500016 bearing sanction 37(1)/14/10/2017-BRNS with HLC, BRNS.

In continuation of this Department's OM of even number dated 29/12/2017 on the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval of the President of India for the continuance of captioned project during 2019-2020 and sanction to incur an expenditure of Rs. 6,14,913/- (Rupees six lakh fourteen thousand nine hundred thirteen only) as detailed below:

Item of expenditure	Year 2 (2019-2020)
Equipments	0
Consumables	500000
Travel - PI	25500
Contingencies	50000
Overheads	39413
<b>Total(INR)</b>	<b>614913</b>

2. The grant remaining unspent under the Heads "Equipments", "Consumables" and "Overheads" for the year 2018-2019 are only allowed to be carried forward to the current financial year 2019-2020. Unspent balance under other heads will be adjusted while releasing the subsequent grant.
3. The expenditure involved is debitable to the following Head of Account: 3401 00 004 27 02 31
4. This is issued with the concurrence of the competent authority in the Department.

*S. Dutta*

Dr. S. Dutta

Pay & Accounts Officer, DAE, Mumbai-400 001

Copy forwarded to:

1. Director of Audit, Scientific Department, AEAP, OYC, CSM Marg, Mumbai-400 001.





Government of India  
Department of Atomic Energy (DAE)  
Board of Research in Nuclear Sciences (BRNS)

Dr. Ashok Pandey  
Programme Officer (BRE)

BRNS Secretariat, 1st Floor, CC,  
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Phone: +91-02225594566  
Email: ashokk@barc.gov.in

No:37(3)/14/20/2016-BRNS/ 37003

16 JUL 2019; Date: 05/07/2019

OFFICE MEMORANDUM

Sub: Terminal grant-in aid for the year 2019-2020, for the R/P entitled "Chalcogenides, dichalcogenides, carbon and oxide nanostructures for thermal energy harvesting" under Dr. Vilas Shelke, Sr. Scientific Officer-II, Department of Physics, Barkatullah University, Bhopal, Madhya Pradesh, 462026. bearing sanction 37(3)/14/20/2016-BRNS with BRE, BRNS.

In continuation of this Department letter of even number dated 11/04/2018, on the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval of the President of India for the continuance of captioned project during 2019-2020 and sanction to incur an expenditure of Rs. 9,37,651/- (Rupees nine lakh thirty seven thousand six hundred fifty one only) as detailed below:

Item of expenditure	Year 3 (2019-2020)
Equipments	0
Staff Salary - JRF	19633
Staff Salary - SRF	397833
Consumables	300000
Travel - PI	45000
Contingencies	100000
Overheads	57185
Salary Arrears	18000
<b>Total(INR)</b>	<b>937651</b>

Date of Termination of the Project : 31/03/2020.

- The grant remaining unspent under the Heads "Equipments", "Consumables" and "Overheads" for the year 2018-2019 are allowed to be carried forward to the current financial year 2019-2020.
- Salary of JRF & SRF has been revised to Rs.31,000/- & Rs.35,000/- p.m. respectively w.e.f. 01.01.2019 vide OM No.10/1(21)/2014/Fellowship /R&D-II/5739 dated 03.05.2019. Salary arrears has been calculated @ Rs.6,000/- p.m. from 01.01.2019 to 31.03.2019. Staff salary has been calculated @ Rs.31,000/- p.m. from 01.04.2019 to 19.04.2019 for JRF & @ Rs.35,000/- p.m. from 20.04.2019 to 31.03.2020 for SRF.
- The expenditure involved is debitable to the following Head of Account: 04 3401 00 004 27 02 31
- This is issued with the concurrence of the competent authority in the Department.

*Ashok Pandey*  
14.6.2019  
Dr. Ashok Pandey

Pay & Accounts Officer, DAE, Mumbai-400 001.





Government of India  
Department of Atomic Energy (DAE)  
Board of Research in Nuclear Sciences (BRNS)

Dr. Ashok Pandey  
Programme Officer (BRE)

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3rd Floor, CFB, BARC,  
Trombay, Mumbai-400085  
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Email: ashokk@barc.gov.in

10631

13 SEP 2019

No: 58/14/21/2019-BRNS/

Date: 06/09/2019

**OFFICE MEMORANDUM**

Sub: R/P entitled "Estimation of Diffuse Extra Galactic Background Light Through VHE Gamma ray Observation of Blazars" under Dr. Naseer Iqbal, Professor, Dept. of Physics, University of Kashmir, Hazratbal, Srinagar, Jammu & Kashmir-190006, India. bearing sanction 58/14/21/2019-BRNS with BRE, BRNS.

On the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval and sanction of the President of India for the captioned project for 3 years beginning from financial year 2019-2020 with a total grant of Rs. 33,60,700/- (Rupees thirty three lakh sixty thousand seven hundred only) for the project as under :

Item of expenditure	Year 1 (2019-2020)	Year 2 (2020-2021)	Year 3 (2021-2022)
Equipments	150000	0	0
Staff Salary - JRF	744000	744000	0
Staff Salary - SRF	0	0	840000
Consumables	40000	40000	40000
Travel - PI	80000	80000	60000
Contingencies	40000	40000	40000
Overheads	76050	64800	70500
<b>Total(INR)</b>	<b>1130050</b>	<b>968800</b>	<b>1050500</b>

Note: \* 2 UPS backup , 02 Lenovo ideacentre 520 AIO Desktops

JRF salary calculated @ Rs.31,000/- p.m. for first two years and on redesignation by committee on in third year as SRF @ Rs.35,000/- p.m.

Please note that as per the government orders under **Direct Benefit Transfer (DBT) scheme, the staff salary has to be transferred to his/her bank account.** Accordingly, Aadhar Number (UID) of the appointed staff, Bank Account details and the Mobile number linked to the bank account should be obtained and it should be intimated to this office.

Overheads calculated @ 7.5% of the other heads except contingency. The remaining 7.5% towards overheads (Rs. 2,11,350/-) shall be released only on meeting the requirements specified (See Annex-B).

- I am also pleased to convey the sanction of the President of India to incur an expenditure of Rs. 11,30,050/- (Rupees eleven lakh thirty thousand fifty only) towards grant for the year 2019-2020 .
- The expenditure involved is debitable to: **04 3401 00 004 27 0231.**
- This is issued with the concurrence of the competent authority in the Department.

*Ashok Pandey*  
12.9.2019  
Dr. Ashok Pandey

Pay & Accounts Officer, DAE, Mumbai - 400 001.



32 no 15 (E)



Government of India  
Department of Atomic Energy (DAE)  
Board of Research in Nuclear Sciences (BRNS)

Shri Mandar Joshi  
Programme Officer (DIR)

BRNS Secretariat, 3rd Floor, CFB,  
BARC, Trombay, Mumbai-400085  
Phone 25594683  
e-mail: prg4.brns@barc.gov.in

Date: 19 NOV 2019

No. 34/14/11/2016-BRNS/10967

OFFICE MEMORANDUM

R/P entitled "Development of Bismuth Based Materials for Piezoelectric Microsystem in Robotic Applications" under Dr. Sanjeeb Rout, Associate Prof., Dept. of Physics, Birla Institute of Technology, Mesra, Ranchi, Jharkhand- 835215 bearing sanction 34/14/11/2016-BRNS with D 1 R, BRNS.

In continuation of this Department's Office Memorandum number 34047 dated 18.04/2018, on the recommendations of Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval of the President of India for the extension of captioned project upto 31/03/2020 and sanction to incur an expenditure of ₹612743/- (Rupees six lakh twelve thousand seven hundred and forty three only) as detailed below:-

Item of expenditure	Amount (Rupees)
Staff : SRF(1)	404645
Consumables	100000
Travel	30000
Contingency	20000
Overheads	40098
Arrears	18000
Total:	612743

Due to staff salary revision w.e.f 01/01/2019 vide OM no. 10/1(21)/2014/Fellowship/R&D-II/5739 dated 03/05/2019 Staff salary towards JRF @ 31000 p. m. for the period 01/04/2019 to 26/07/2019 and SRF @ Rs. 35,000 p.m for the period 27/07/2019 to 31/03/2020. Staff salary arrears @ Rs. 6,000 p.m. for the period 01/01/2019 to 31/03/2019.

Overheads calculated @ 7.5% of the other heads except contingency. The remaining 7.5% towards overheads (₹40098) shall be released only on meeting the requirements specified.

The captioned project will stand terminated on 31/03/2020

The grant remaining unspent under 'equipment', 'consumables' & 'overheads' is allowed to be carried forward during the extension period.

The expenditure involved is debitale to: 03 3401 00 004 27 02 31.

The other Terms and Conditions of the sanction letter of even number dated 18.04/2018 will remain unchanged.

This issues with the concurrence of the competent authority in the department.

19/11/19  
(Mandar Joshi)

Pay & Accounts Officer, DAE, Mumbai 400001





Government of India  
Department of Atomic Energy (DAE)  
Board of Research in Nuclear Sciences (BRNS)

Dr. Ashok Pandey  
Programme Officer (NPP)

BRNS Secretariat, 316-C,  
CFB, BARC, Trombay,  
Mumbai-400085.

No: 36(2)/14/25/2016-BRNS/36235

Date: 19/11/2019

OFFICE MEMORANDUM

Sub: **Extension with additional grant for the year 2019-2020 R/P** entitled "Physical behaviour of natural silicates and.....environmental studies: a computational approach" under Prof. Nibir Mandal, Deptt. of Geological Sciences, Jadavpur University, Kolkata, West Bengal-700 032 bearing sanction 36(2)/14/25/2016-BRNS with NPP, BRNS.

In continuation of this Department's OM of even number dated 27/08/2018, on the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval of the President of India, for the continuance and extension of the captioned project during the financial year 2019-2020 and sanction to incur an additional grant of Rs. 5,58,500/- (Rupees Five Lakhs Fifty-eight thousand five hundred only) as detailed below:

1. Staff Salary	Rs. 4,20,000/-
2. Travel	Rs. 30,000/-
3. Consumable	Rs. 50,000/-
4. Overhead	Rs. 37,500/-
5. Staff Salary Arrear	Rs. 21,000/-
Total	Rs. 5,58,500/-

Due to staff salary revision vide OM no. 10/1(21)/2014/Fellowship/R&D-II/5739 dated 03/05/2019. Staff salary towards SRF has been revised to Rs. 35,000/- p.m. w.e.f. 01/01/2019. Staff salary arrears @ Rs.7,000 p.m. for SRF for the period 01/01/2019 to 31/03/2019.

- The grant remaining unspent under the Heads "Consumables" and "Overheads" for the year 2018-2019 are only allowed to be carried forward to the current financial year 2019-2020.
- This is issued with the concurrence of the competent authority in the Department.

*Ashok Pandey*  
19-11-2019

Dr. Ashok Pandey

Copy forwarded to:

Pay & Accounts Officer, DAE, Mumbai - 400 001.

- Registrar, Jadavpur University, Kolkata, West Bengal-700 032.
- Principal Investigator(PI): Prof. Nibir Mandal, Deptt. of Geological Sciences, Jadavpur University, Kolkata, West Bengal-700 032.
- AAO (Cheque), DAE, Anushakti Bhavan, CSM Marg, Mumbai-400 001.
- Member Secretary (NPP): Shri. V. Vinod, vvinod@igcar.gov.in;
- Principal Collaborator(PC):Dr. Ashok Kumar Arya, MSD, BARC, Mumbai 400 085,