

**NAAC SSR -Cycle 4 : 2018-2023**

**3.7.1**

**Collaborative activities with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the year 2019-20**

Sr. No.	Year of signing MoU/Year of Collaboration	Name of the organization with whom MOU/Collaboration being signed	Duration	List the actual activities under each MOU year-wise	Page No.
<b>Signed MoUs</b>					
1	2019-20	Expert Nutraceutical Advocacy Council	6 years	Internship	1-9
2	2019-20	Praja Foundation	3 years	Internship	10-15
<b>Signed Collaborations</b>					
1	2019-20	Bhabha Atomic Research Centre, Mumbai	3 months	Project Work	16-22
<b>Other Collaborations</b>					
1	2019-20	Centre for Excellence in Basic Sciences, (Dept of Atomic Energy-University of Mumbai)	4 months	Project	23
2	2019-20	KEM Hospital Mumbai	20 days	Internship	24-25
3	2019-20	National Institute for Research in Reproductive Health	4 months	Project	26-27



**SIES College of Arts, Science and Commerce (Autonomous)**  
Sion West, Mumbai 400 022

**NAAC SSR -Cycle 4 : 2018-2023**

**3.7.1 Number of functional MoUs/linkages with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the year 2019-20**

Collaborative activities with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during 2019-20

*This is to certify that pages from number 01 to 27 of the attached documents and reports are verified and found to be true.*

**Principal**



### Report of Collaborations

**Academic Year:** 2019-20

**Department:** Biochemistry - Food Technology and Nutraceuticals

**Collaborating organizations/Linkages:**

Expert Nutraceutical Advocacy Council (ENAC) <https://www.enacnetwork.com/>

**Activity:** Internships under MoU

**Objective:** In the year 2019-20, Department of Biochemistry-Food Technology and Nutraceuticals signed a MoU with Expert Nutraceutical Advocacy Council (ENAC) with an objective that close co-operation between industry and academia would be of major benefit to the student community to enhance their skills and knowledge. Further, the budding graduates from the institution could play key role in the technological up-gradation, innovation and competitiveness of an industry.

**Beneficiaries:** Eight students enrolled for Post Graduate Diploma -Food Technology and Nutraceuticals

Ms. Fatema Tyerwala

Mr. Ganesh Bommeri

Ms. Suvidha Shetty

Ms. Krishnaveni Hariharan

Ms. Jaiba Malpekar

Ms. Aishwarya Moily

Ms. Mohaddesa Shaikh

Ms. Pranali Mahadik

**Outcome:** Internship helped students to gain insights of industry set up and made students abreast with current industry trends.

*Atthekar*  
Signature of HOD

*[Signature]*  
Principal (Stamp & Sign):



True Copy

College seal:



Principal

SIES College of Arts, Science &  
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Sion (West), Mumbai - 400 022

# Expert Nutraceutical Advocacy Council

Nutraceutical, Health & Dietary Supplements

## Certificate of Appreciation

*This is to Certify that*

***Ms. Fatema Tyerwala***

*has successfully completed 2 Months Internship Program  
with Expert Nutraceutical Advocacy Council (ENAC)  
in the Year 2019*



True Copy

Sandeep Gupta,  
Chief Founder & Director  
(ENAC)



Principal  
SIES College of Arts, Science &  
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Site (West), Mumbai - 400 022.

**Expert Nutraceutical  
Advocacy Council**  
Nutraceutical, Health & Dietary Supplements

**Certificate of Appreciation**

*This is to Certify that*

**Mr. Ganesh Bommeri**

*has successfully completed 2 Months Internship Program  
with Expert Nutraceutical Advocacy Council (ENAC)*

*in the Year 2019*



True Copy

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Gion (West), Mumbai - 400 022.



Sandeep Gupta,  
Chief Founder & Director  
(ENAC)

# Expert Nutraceutical Advocacy Council

Nutraceutical, Health & Dietary Supplements

## Certificate of Appreciation

*This is to Certify that*

***Ms. Suvidha Shetty***

*has successfully completed 2 Months Internship Program  
with Expert Nutraceutical Advocacy Council (ENAC)*

*in the Year 2019*



True Copy

*[Signature]*  
Principal  
SIES College of Arts, Science &  
Commerce (Autonomous)  
Sion (West), Mumbai - 400 022.

Sandeep Gupta,  
Chief Founder & Director  
(ENAC)

**Expert Nutraceutical  
Advocacy Council**  
Nutraceutical, Health & Dietary Supplements



**Certificate of Appreciation**

*This is to Certify that*

***Ms. Krishnaveni Hariharan***

*has successfully completed 2 Months Internship Program  
with Expert Nutraceutical Advocacy Council (ENAC)*

*in the Year 2019*



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Sandeep Gupta,  
Chief Founder & Director  
(ENAC)

# Expert Nutraceutical Advocacy Council

Nutraceutical, Health & Dietary Supplements

## Certificate of Appreciation

*This is to Certify that*

***Ms. Jaiba Malpekar***

*has successfully completed 2 Months Internship Program  
with Expert Nutraceutical Advocacy Council (ENAC)*

*in the Year 2019*



True Copy

Principal  
SIES College of Arts, Science &  
Commerce (Autonomous)  
Bion (West), Mumbai - 400 022.

A handwritten signature in black ink, appearing to read 'Sandeep Gupta'.

Sandeep Gupta,  
Chief Founder & Director  
(ENAC)



# Expert Nutraceutical Advocacy Council

Nutraceutical, Health & Dietary Supplements

## Certificate of Appreciation

*This is to Certify that*

**Ms. Aishwarya Moily**

*has successfully completed 2 Months Internship Program  
with Expert Nutraceutical Advocacy Council (ENAC)*

*in the Year 2019*



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Sandeep Gupta,  
Chief Founder & Director  
(ENAC)

**Expert Nutraceutical  
Advocacy Council**  
Nutraceutical, Health & Dietary Supplements

**Certificate of Appreciation**

*This is to Certify that*

**Ms. Mohaddesa Shaikh**

*has successfully completed 2 Months Internship Program  
with Expert Nutraceutical Advocacy Council (ENAC)*

*in the Year 2019*



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Sandeep Gupta,  
Chief Founder & Director  
(ENAC)

**Expert Nutraceutical  
Advocacy Council**  
Nutraceutical, Health & Dietary Supplements

**Certificate of Appreciation**

*This is to Certify that*

**Ms. Pranali Mahadik**

*has successfully completed 2 Months Internship Program  
with Expert Nutraceutical Advocacy Council (ENAC)*

*in the Year 2019*

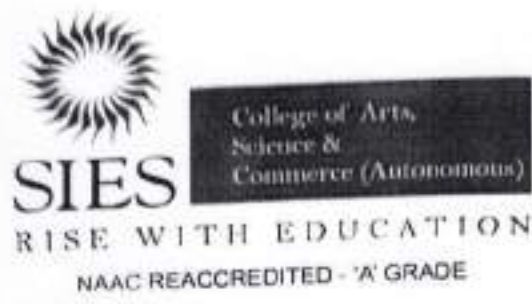


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**Sandeep Gupta,**  
Chief Founder & Director  
(ENAC)

... by ...



**Department of Politics**

- A. **Title of the Activity:** Fellowship and Internship with Praja Foundation, Mumbai
- B. **Background:** Praja Foundation is a non-partisan civil society organization working in the area of urban local governance and management. It offers students fellowships and internships in their projects.
- C. **Aims/Objectives:** To acquaint students with field-based opportunities and working with local councilors and government institutions.
- D. **Location:** SIES College ASC, Mumbai
- E. **Name participants/ beneficiaries:**

**Internships:**

- Mr. Shourya Gori (11<sup>th</sup> November 2019- 14<sup>th</sup> January 2020)
- Ms. Rutuja Tawde (4<sup>th</sup> November 2019 – 19<sup>th</sup> December 2019)
- Ms. Tanishqa Rajc (4<sup>th</sup> November 2019- 19<sup>th</sup> December 2019)

**Elected Representative Fellows**

- Ms. Geethu Pillai (October 2019 to September 2020)
- Mr. Viraj Shende (October 2019 to September 2020)

- F. **Period of the activity:**
- G. **Outcome/Feedback:** Students gained experience in working on ground with local government representatives and bureaucracy along with procedures and rules.
- H. **Annexures:**  
Certificate copies attached to this document.

**Report Prepared by:**

**Signature:**

**Signature of HOD**

**Name: Ajinkya Gaikwad, Asst. Professor, Dept of Politics**

**Principal:**

**True Copy**

**Principal**

**SIES College of Arts, Science & Commerce (Autonomous)  
Sion (West), Mumbai - 400 022.**



This is to certify that

Shourya Goni

has successfully volunteered/  
interned with us

from 11<sup>th</sup> Nov, 2019

to 14<sup>th</sup> Jan, 2020

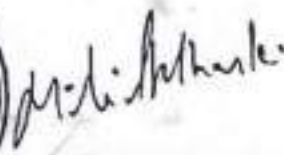
and has actively participated in

R & D-Data Collection & Entry, Research

Media Dissemination, Capacity Building &  
Dialogue & Advocacy.



Nitai Mehta  
Managing Trustee



Milind Mhaske  
Project Director

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**PRAJA.ORG**

MAKING DEMOCRACY WORK

Praja Foundation | Victoria Building,  
1st Floor, Aglary Lane, Off. Mint Road,  
Fort, Mumbai 400001. Tel: +91 - 022 - 3361 8042  
Web: www.praja.org  
Email: info@praja.org

This is to certify that

Rutuja Shekhar Tawade

has successfully volunteered/  
interned with us

from 4<sup>th</sup> November 2019

to 19<sup>th</sup> December 2019

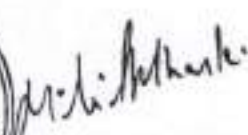
and has actively participated in

R&D - Data collection & Data Entry,

Capacity Building - Workshop, Support Team.



**Nitai Mehta**  
Managing Trustee



**Milind Mhaske**  
Project Director



Principal  
SIES College of Arts, Science &  
Commerce (Autonomous)  
Slon (West), Mumbai - 400 022.



MAKING DEMOCRACY WORK

Praja Foundation - Victoria Building,  
1st Floor, Agaria Lane, Gift Hill Road,  
Fort, Mumbai 400022. Tel: 022-22658042  
Web: www.praja.org  
Email: info@praja.org

This is to certify that

Tanishqa Sachin Raje.

has successfully volunteered/  
interned with us

from 4<sup>th</sup> November 2019

to 19<sup>th</sup> December 2019

and has actively participated in

R&D - Data collection, Data Entry.

Capacity Building - Workshop, Support Team.

**Nital Mehta**  
Managing Trustee



**Milind Mhaske**  
Project Director



Principal  
SIES College of Arts, Science &  
Commerce (Autonomous)  
Sion (West), Mumbai - 400 022.



# Certificate

This is to certify that

*Geethu Gopalakrishna Pillai*

has successfully completed Elected Representatives

Fellowship Program 2019-20 of Praja Foundation, Mumbai.



Supported by



**UNICHEM**  
LABORATORIES LTD.

Niral Mehta,  
Managing Trustee

Milind Mhaske,  
Director



# Certificate

This is to certify that

*Dinaj Vijay Shende*

has successfully completed Elected Representatives

Fellowship Program 2019-20 of Praja Foundation, Mumbai.



Supported by



*Nitajit Phalgal*  
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Nitajit Phalgal  
Managing Director, Science &  
Commerce (Autonomous)  
Slon (West), Mumbai - 400 022.

*Milind Mhaske*

Milind Mhaske,  
Director



### Report of Collaborations

**Academic Year:** 2019-20

**Department:** Biochemistry

**Collaborating organization/Linkage:**

Research Institute: Bhabha Atomic Research Center (BARC), Mumbai

**Report:**

**Objective:** In the year 2019-20, Department of Biochemistry collaborated with Bhabha Atomic Research Center (BARC), Mumbai for providing opportunity to MSc (part II) students for completing their research project (Dissertation). Five students were selected on merit basis.

**Beneficiaries:** 02 MSc students

1. Rachael Thomas
2. Sayyeda Anam Sayed Zulfqar Ali

**Duration:** 03 months (May 2019 to July 2019)

**Outcome:** Students got an exposure to complete their dissertation in a Research institute. The students got oriented to research culture, learnt techniques and acquired basic research skills.

*Bothekar*  
Signature of HOD

*[Signature]*  
Principal (Stamp & Sign):

College seal:



**Annexure:**

Acceptance letter and Certificate of completion issued by BARC to the students



True Copy

*[Signature]*  
Principal  
SIES College of Arts, Science &  
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Sion (West), Mumbai - 400 022.



Government of India  
Bhabha Atomic Research Centre  
Human Resource Development Division

Ref: HRDD/2019/190443

Date:-April 16, 2019

Head

SIES College of Arts, Science & Commerce  
Mumbai

**Subject: Practical Training/Project Work facilities for the students of your Institution at BARC**

Dear Sir/Madam

The application of Ms. Varghese Rachael Thomas, M.Sc., Biochemistry student has been accepted for practical training/project work at NABTD (Division) from 01-May-19 to 31-Jul-19. The following may please be noted:

1. While reporting for Practical Training/Project Work, applicant(s) are required to submit following documents at **BARC Training School, Anushaktinagar** not earlier than 10 days ahead of the starting date of training, **duly completed & signed where necessary**, alongwith this acceptance letter for further processing:
  - i. Bio-data form with **photograph and certificate** both duly signed by the Principal/Head of Department of the Institution alongwith seal.
  - ii. Information sheet duly completed and forwarded by the Principal/Head of Department of the Institution with signature & seal.
  - iii. Photocopy of student Identity Card provided by your Institution (**having clear validity till end of training**) attested by the Principal/Head of Department of the Institution with signature & seal.
  - iv. Undertaking printed on plain paper and duly filled, alongwith a non-judicial stamp paper of any format for Rs. 100/- or higher denomination (no need to type on stamp paper & no need to notarise). Non-judicial stamp paper should not be dated earlier than 180 days from the date of reporting.
  - v. Deed of undertaking, Declaration & Check List
  - vi. Gazetted Officer's Certificate on letter head/Police Verification Certificate.
  - vii. TWO copies of their recent 'front-face' photograph-(4cmx 3cm),
  - viii. Students can pay the amount of ₹200/- by credit card or debit card when they report at BARC or a Demand Draft for ₹200/- only of Nationalized Bank in favour of "Accounts Officer BARC" payable at Mumbai, (Ensure validity of DD for more than one month after submission to I-Card cell). **NOT APPLICABLE FOR BRNS PROJECT.** Photographs, Declaration, Temporary Entry Permit and demand draft are not to be submitted at Training School but to be retained by candidate for submission at a later date at Security Section for issue of identity Card.
2. **Introduction letter(s) after scrutiny of documents, will be issued at Computer lab no.1, 1<sup>st</sup> floor, BARC Training School, between 10:30 to 11:45 hrs. only on Mondays** (for applications dropped from Wednesday Afternoon to Friday Forenoon of the previous week) **and on Thursdays** (for applications dropped from Friday Afternoon of the previous week to Wednesday Forenoon).
3. In the event of a holiday on Monday or Thursday, the intimation letters will be issued on the next working day.
4. **Items such as mobile phone, mp3 player, pen drive, electronics/digital diary, sim card, audio/video cassette, CDs, DVDs, camera or any other electronic gadgets are STRICTLY PROHIBITED to be carried inside the BARC premises.**
5. **Students are to carry the original identity cards issued by the institution at all times during their visit to the Centre.**
6. The student(s) nominated for practical training/project work in BARC are not eligible for any stipend during the training period.

**NO ACCOMMODATION WILL BE MADE AVAILABLE BY BARC DURING THE TRAINING PERIOD AND THE TRAINEES WILL HAVE TO MAKE THEIR OWN ARRANGEMENTS FOR THEIR STAY IN MUMBAI.**

Thanking You,

Yours faithfully,

True Copy

Copy to: Concerned Head of Division with a request to submit the  
Online request for issuing TEPs to Project Students

Encl: As above



Principal  
SIES College of Arts, Science &  
Commerce (Autonomous)  
Sion (West), Mumbai - 400 022.

V.LakshmiNarasimhan  
Officer-in-charge  
Practical Training & Project Work

Telephone: 91-22- 25593864/ 25590365  
Fax: 91-22- 5505326, 91-22-5519613



Government of India  
BHABHA ATOMIC RESEARCH CENTRE  
NUCLEAR AGRICULTURE & BIOTECHNOLOGY DIVISION  
TROMBAY, MUMBAI- 400 085, INDIA

Ref: BARC/NA&BTD/OPA-14487

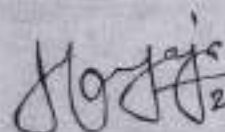
Date: 21 January, 2020

### CERTIFICATE

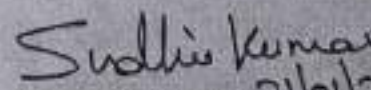
This is to certify that Ms. Varghese Rachael Thomas, student of M.Sc. (Biochemistry), SIES College of Arts, Science & Commerce (Autonomous), Mumbai has carried out the research project work entitled "Screening of soybean mutants for improved seed quality" from 1<sup>st</sup> May 2019 to 31<sup>st</sup> July 2019.

This project was conceptualized and executed at the Nuclear Agriculture and Biotechnology Division, BARC, Mumbai. No part of this work should be published in any form, in any national/international journal and should not be presented as paper/poster in any symposia or conference by the trainee and her parent institute/college.

Ms. Rachael has demonstrated good work ethics and interpersonal skills. She is very hardworking, sincere and has good research aptitude. We wish her all the success in her career.

  
21/1/2020

(Dr. J. G. Manjaya)  
Scientific Officer-G  
Group leader  
Soybean Improvement Research Group

  
21/01/2020  
(Dr. S. K. Gupta)  
Scientific Officer-F  
NA&BTD

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Sion (West), Mumbai - 400 022.





Government of India  
Bhabha Atomic Research Centre  
Human Resource Development Division

Ref: HRDD/2019/190519

Date:-April 25, 2019

Head

SIES College of Arts, Science & Commerce  
Mumbai

**Subject: Practical Training/Project Work facilities for the students of your Institution at BARC**

Dear Sir/Madam

The application of Ms. Sayyeda Anam, M.Sc., Biochemistry student has been accepted for practical training/project work at RBHSD (Division) under the guidance of Dr. Vinay Kumar from 01-May-19 to 31-Jul-19. The following may please be noted:

1. While reporting for Practical Training/Project Work, applicant(s) are required to submit following documents at **BARC Training School, Anushaktinagar** not earlier than 10 days ahead of the starting date of training, **duly completed & signed where necessary**, alongwith this acceptance letter for further processing:
  - i. Bio-data form with **photograph and certificate** both duly signed by the Principal/Head of Department of the Institution alongwith seal.
  - ii. Information sheet duly completed and forwarded by the Principal/Head of Department of the Institution with signature & seal.
  - iii. Photocopy of student Identity Card provided by your Institution (**having clear validity till end of training**) attested by the Principal/Head of Department of the Institution with signature & seal.
  - iv. Undertaking printed on plain paper and duly filled, alongwith a non-judicial stamp paper of any format for Rs. 100/- or higher denomination (no need to type on stamp paper & no need to notarise). Non-judicial stamp paper should not be dated earlier than 180 days from the date of reporting.
  - v. Deed of undertaking, Declaration & Check List
  - vi. Gazetted Officer's Certificate on letter head/Police Verification Certificate.
  - vii. TWO copies of their recent 'front-face' photograph-(4cmx 3cm).
  - viii. Students can pay the amount of ₹200/- by credit card or debit card when they report at BARC or a Demand Draft for ₹200/- only of Nationalized Bank in favour of "Accounts Officer BARC" payable at Mumbai, (Ensure validity of DD for more than one month after submission to I-Card cell). **NOT APPLICABLE FOR BRNS PROJECT.** Photographs, Declaration, Temporary Entry Permit and demand draft are not to be submitted at Training School but to be retained by candidate for submission at a later date at Security Section for issue of identity Card.
2. **Introduction letter(s) after scrutiny of documents, will be issued at Computer lab no.1, 1<sup>st</sup> floor, BARC Training School, between 10:30 to 11:45 hrs. only on Mondays** (for applications dropped from Wednesday Afternoon to Friday Forenoon of the previous week) **and on Thursdays** (for applications dropped from Friday Afternoon of the previous week to Wednesday Forenoon).
3. In the event of a holiday on Monday or Thursday, the intimation letters will be issued on the next working day.
4. **Items such as mobile phone, mp3 player, pen drive, electronics/digital diary, sim card, audio/video cassette, CDs, DVDs, camera or any other electronic gadgets are STRICTLY PROHIBITED to be carried inside the BARC premises.**
5. **Students are to carry the original identity cards issued by the institution at all times during their visit to the Centre.**
6. The student(s) nominated for practical training/project work in BARC are not eligible for any stipend during the training period.

**NO ACCOMMODATION WILL BE MADE AVAILABLE BY BARC DURING THE TRAINING PERIOD AND THE TRAINEES WILL HAVE TO MAKE THEIR OWN ARRANGEMENTS FOR THEIR STAY IN MUMBAI.**

Thanking You,

True Copy

Yours faithfully,

Copy to: Concerned Head of Division with a request to submit the principal  
Online request for issuing TEPs to Project Students SIES College of Arts, Science &  
Commerce (Autonomous)  
Encl: As above MUMBAI 400 022  
SIES COLLEGE OF ARTS, SCIENCE & COMMERCE (AUTONOMOUS)  
MUMBAI 400 022

V. Lakshmi Narasimhan  
Officer-in-charge  
Practical Training & Project Work  
Sion (West), Mumbai - 400 022.

**PROJECT**

**EXPRESSION AND PURIFICATION OF DYRK2  
KINASE PROTEIN**

Submitted by

**SAYYEDA ANAM SAYED ZULFIQAR ALI**

DEPARTMENT OF BIOCHEMISTRY

SIES COLLEGE OF ARTS, SCIENCE AND COMMERCE

JAIN SOCIETY, SIES LANE, SION WEST, MUMBAI- 400022



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PROTEIN CRYSTALLOGRAPHY SECTION,  
RADIATION BIOLOGY AND HEALTH SCIENCE DIVISION  
BHABHA ATOMIC RESEARCH CENTRE  
TROMBAY, MUMBAI - 400085



MAY-JULY 2019

Principal

SIES College of Arts, Science &  
Commerce (Autonomous)  
Sion (West), Mumbai - 400 022.





**भाभा परमाणु अनुसंधान केंद्र**  
**BHABHA ATOMIC RESEARCH CENTRE**

*Certificate*

This is to certify that Ms. Sayyeda Anam Sayed Zulfiqar Ali, a student from Department of Biochemistry, SIES College of Arts, Science and Commerce, Slon, Mumbai has undergone research training under me on the project entitled "*Expression and Purification of DYRK2 Kinase Protein*" in Protein Crystallography Section, Radiation Biology and Health Sciences Division, Bhabha Atomic Research Centre, Mumbai from 1st May, 2019 to 31st July, 2019.

**Dr. Amit Das**

*Protein Crystallography Section*  
*Radiation Biology and Health Sciences Division*  
*B.A.R.C, Trombay, Mumbai - 400085*

31st July, 2019



वैज्ञानिक अधिकारी / Scientific Officer F

रेडिएशन बायोलॉजी एवं स्वास्थ्य विभाग (खण्ड 5) में

Radiation Biology & Health Sciences Division

अणु परमाणु अनुसंधान केंद्र, मुंबई

अणु परमाणु अनुसंधान केंद्र, मुंबई (खण्ड 5) में



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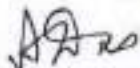
Supervisor of Auto, Balance &  
 Department (Syndromed)  
 200 022

## DECLARATION

The project entitled "Expression and Purification of DYRK2 Kinase Protein" is being submitted by Ms. Sayyeda Anam Sayed Zulfiqar Ali, a student from Department of Biochemistry, SIES College of Arts, Science and Commerce, Sion, Mumbai as a part of her academic training. The work was carried out by her under my supervision and guidance, from 1st May, 2019 to 31st July, 2019.

The concept and hypothesis behind the research work and experiments were planned at Bhabha Atomic Research Centre (B.A.R.C.) by Dr. Amit Das and executed by the candidate under my guidance. The research work was carried out at B.A.R.C., Mumbai and data included in the thesis cannot be used for further analysis, grant application, reproduced, distributed, shared or published anywhere in any form without written permission from the investigator (Dr. Amit Das) at B.A.R.C.

Signature of Candidate  
Ms. Sayyeda Anam Sayed Zulfiqar Ali  
Department of Biochemistry  
SIES College of Arts, Science and Commerce  
Sion, Mumbai

  
Signature of Guide  
Dr. Amit Das

Protein Crystallography Section  
Radiation Biology and Health Sciences Division  
Bhabha Atomic Research Centre, Trombay, Mumbai - 400085

शुद्धीकरण विभाग / Scientific Officer F  
रेडिएशन बायोलॉजी व हेल्थ साइन्स डिवीजन  
भारतीय परमाणु अनुसंधान संस्थान, ट्रोम्बाय  
मुंबई - ४०००८५

Date: 31/7/2019

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University of Mumbai



मौलिक विज्ञान प्रकर्ष केन्द्र

मौलिक विज्ञान प्रकर्ष केंद्र

UM-DAE Centre for Excellence in Basic Sciences  
Registered under the Society Registration Act, 1860



## CERTIFICATE

This is to certify that Ms. Arpita A Khot studying MSc II (Biotechnology) at SIES College of Arts, Science and Commerce (Autonomous) has completed a research project under the guidance of Dr. Sinjan Choudhary at the Protein Chemistry Laboratory, Department of Chemistry, UM-DAE Centre for Excellence in Basic Sciences during the academic year 2019-2020. She has completed the dissertation project entitled '**INHIBITION OF AGGREGATION IN ALPHA SYNUCLEIN PROTEIN BY SYNTHETIC SELENIUM COMPOUNDS**' for the partial fulfillment of the degree of Masters of Science in Biotechnology 2019-2020. This thesis report represents the experiments and literature carried out by her from the 15th of October 2019 to 6th March 2020.

Principal investigator:

Dr. Sinjan Choudhary

Assistant Professor

Protein Chemistry laboratory

UM DAE Centre for excellence in basic sciences

Date: 15/12/2020

Seal of institute:



Address: UM-DAE CEBS, "Nalanda", Opp Nano Sciences Building, University of Mumbai, Vidyanagari, Santacruz (E), Mumbai 400098. Phone: 912226532132, Fax: 02226532134, Web: www.cbs.ac.in



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Sion (West), Mumbai - 400 022.



College of Arts,  
Science &  
Commerce (Autonomous)

RISE WITH EDUCATION

NAAC REACCREDITED - 'A' GRADE

Report of Collaborations

Academic Year: 2019-2020

Department: Microbiology

Collaborating organizations/Linkages:

C. Hospital:

- Seth G.S. Medical College & KEM hospital, Parel, Mumbai

Report:

**Objective:** In the year 2019-20, Department of Microbiology collaborated with KEM Hospital to provide internship opportunities to students.

**Beneficiaries:** A student successfully completed internship at KEM Hospital.

**Outcome:** The students got an exposure to work in a Microbiology lab. The students learned techniques and acquired Microbiological skill required in laboratory.

*[Handwritten Signature]*  
for Signature of HOD

HEAD OF THE DEPARTMENT OF MICRO-BIOLOGY  
S.I.E.S. COLLEGE OF ARTS, SCIENCE & COMMERCE  
SION (WEST), MUMBAI - 400 022.

*[Handwritten Signature]*

Principal (Stamp & Sign):  
Principal  
SIES College of Arts, Science &  
Commerce (Autonomous)  
Sion (West), Mumbai - 400 022.

College seal:



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*[Handwritten Signature]*  
Principal  
SIES College of Arts, Science &  
Commerce (Autonomous)  
Sion (West), Mumbai - 400 022.

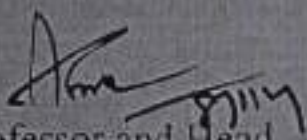


Department of Pathology  
Seth G. S. Medical College & K. E. M. Hospital  
Parel, Mumbai 400012, India

Date:- 8<sup>th</sup> November 2019.

This is to state that, **Miss. Sayali Nitin Shinde** student from SIES College of Arts, Science and Commerce, Sion (West), Mumbai - 400 022, was engaged as an intern in the Department of Pathology from 18.10.2019 to 08.11.2019.

During this period she was present in the section of OPD -008, O.C lab, EMS Lab & CVTC 315

  
Professor and Head  
Department of Pathology  
PROFESSOR AND HEAD  
G.S.M.C. and K.E.M.H  
Department of Pathology  
Parel, Mumbai, 12



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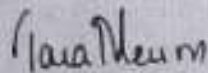


Professor  
Department of Pathology  
Seth G. S. Medical College &  
K. E. M. Hospital  
Parel, Mumbai, 12

### CERTIFICATE


This is to certify that **Kajal Kadam**, student of MSc. Part II Biotechnology, SIES College, has satisfactorily completed the dissertation work entitled, "**Study of mitochondrial dysfunction in women with Polycystic Ovary Syndrome**" for the partial fulfillment of the Master's degree in Biotechnology as prescribed by the University of Mumbai during the academic year 2019-2020.

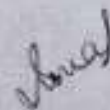
This dissertation represents an independent work carried out by her.



Dr. Tara Menon  
Co-ordinator  
Department of Biotechnology  
**CO-ORDINATOR**

DEPARTMENT OF BIOTECHNOLOGY  
COLLEGE OF ARTS, SCIENCE & COMMERCE

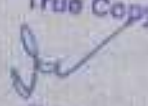
  
25/9/2020  
Signature of examiner



Dr. Uma Shankar  
Principal



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आई सी एम आर - राष्ट्रीय प्रजनन  
स्वास्थ्य अनुसंधान संस्थान  
भारतीय आयुर्विज्ञान अनुसंधान परिषद  
स्वास्थ्य अनुसंधान विभाग  
स्वास्थ्य एवं परिवार कल्याण विभाग  
भारत सरकार



ICMR - National Institute for  
Research in Reproductive Health  
Indian Council of Medical Research  
Department of Health Research  
Ministry of Health and Family Welfare  
Government of India

## CERTIFICATE

This is to certify that the research work reported in the thesis entitled **STUDY OF MITOCHONDRIAL DYSFUNCTION IN WOMEN WITH POLYCYSTIC OVARY SYNDROME** is submitted by Miss. Kajal Kadam to Department of Biotechnology, SIES College of Arts, Science and Commerce (Autonomous), Sion (West), Mumbai in partial fulfillment of the Master's Degree in Science (Biotechnology). It is an authentic record of the work carried out by her under my supervision as a full time student at Department of Molecular Endocrinology, India Council of Medical Research- National Institute for Research in Reproductive Health (ICMR-NIRRH), Mumbai during the period November 2019- February 2020. This work is original and has not been submitted for any degree or any other university.

*Pallavi Shukla*

Dr. Pallavi Shukla

(Supervising Guide)

Scientist 'C'

Department of Molecular Endocrinology

ICMR, NIRRH, Mumbai.



Date: 03<sup>rd</sup> March, 2020

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*[Signature]*

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