

**DEPARTMENT OF BIOCHEMISTRY  
UNIVERSITY OF DELHI SOUTH CAMPUS**

27<sup>th</sup> December 2022

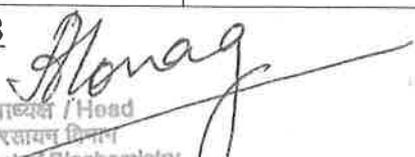
**NOTICE**

**Seminar schedule – M.Sc. Part II, Semester III (2022)**

Seminars (for 60 min and 15 min for discussion) will be held on **29<sup>th</sup>, 30<sup>th</sup> and 31<sup>st</sup> December 2022** from **9.30 A.M. onwards** with 45 min break for lunch.

R.No.	Topic	Student	Tentative time
<b>29<sup>th</sup> December 2022 (9.30 A.M. onwards)</b>			
21249741001	Toxin antitoxin loci; their role in pathogenesis, persistence and drug resistance in mycobacterium tuberculosis	ANJALI MAURYA	9.30 AM - 10.45 AM
21249741002	Cloning, Expression and Purification of GlpQ2 and Rv2277c, putative glycerol-phosphodiesterase of <i>M. tuberculosis</i>	BHUPENDRA MEENA	10.45 AM - 12.00 Noon
21249741003	Ionophores as potent anti-malarials	DEEKSHA	12.00 Noon - 1.15 PM
21249741004	Production and Characterisation of Recombinant Antibodies for Diagnostics and Therapeutics	HITANSHI SHARMA	2.00 PM - 3.15 PM
21249741005	Malaria and its therapy using natural compounds	K RUBINAAJ	3.15 PM - 4.30 PM
21249741006	Identification of novel small molecule inhibitors to develop modified anti-TB chemotherapeutic regimen	KARTIKEY YADAV	4.30 PM - 5.45 PM
<b>30<sup>th</sup> December 2022 (9.30 A.M. onwards)</b>			
21249741007	Expression, Purification and Assay Development of Rv3842c (GlpQ1), a glycerol-phosphodiesterase of <i>M. tuberculosis</i>	PARTHVI MAHENDRU	9.30 AM - 10.45 AM
21249741008	Multiple facets of p53-FoxM1 axis in healthy and cancerous cells	PUSHPINDER KAUR	10.45 AM - 12.00 Noon
21249741009	Induced obesity and characterisation of altered LncRNA expression profile impacting metabolic signals in <i>Drosophila</i>	RAUNAK GUPTA	12.00 Noon - 1.15 PM
21249741010	Phage Display Technology: A versatile tool for discovery of novel therapeutics and diagnostics	SAPNA YADAV	2.00 PM - 3.15 PM
21249741011	Characterization of transcriptome-wide signals in the obesogenic environment in <i>Drosophila</i>	SHRISHTI MITRA	3.15 PM - 4.30 PM
21249741012	LncRNAs and obesity in <i>Drosophila</i>	T AKANKSHA	4.30 PM - 5.45 PM
<b>31<sup>st</sup> December 2022 (9.30 A.M. onwards)</b>			
21249741013	Analysis of alerted metabolic signals from <i>Drosophila</i> fed a high-fat diet regime	VINAYAK JOSHI	9.30 AM - 10.45 AM
21249741014	Neutralizing antibodies against SARS-CoV-2: scenario in light of emerging viral variants	YUSRA RIYAZ	10.45 AM - 12.00 Noon
21249741015	HBx manipulates FoxM1 to promote Hepatocellular carcinoma	AASHNA BANSAL	12.00 Noon - 1.15 PM
20249741012	Expression, Purification and Assay Development of Rv3177c, a hypothetical peroxidase of <i>M. tuberculosis</i>	SHIVANI SHARMA	2.00 PM - 3.15 PM

**Term paper has to be submitted by 2<sup>nd</sup> January 2023**

  
 विभागाध्यक्ष / Head  
 जैव रसायन विभाग  
 Department of Biochemistry  
 दिल्ली विश्वविद्यालय दक्षिण कैंपस  
 University of Delhi South Campus  
 नई दिल्ली-110029  
 New Delhi-110021  
**Head of the Department**

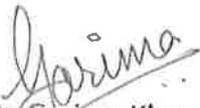


UDSC

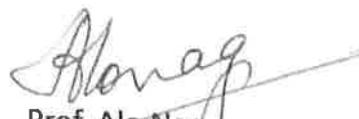
**Department of Biochemistry**  
University of Delhi South Campus  
Benito Juarez Road, New Delhi-110021, India  
Tel. No. 91-11-24157363  
Fax : 91-11-24115270  
30<sup>th</sup> May 2023

### CERTIFICATE

The research work embodied in this dissertation entitled, “**Expression, Purification and enzymatic characterization of GlpQ1 (Rv3842c) of Mycobacterium tuberculosis**” was carried out by Parthvi Mahendru, M.Sc. student (2021-2023) at the Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021, India as part of her training for partial fulfilment towards the degree of Master of Science (Biochemistry) of the University of Delhi.

  
Dr. Garima Khare  
Supervisor  
Dr. Garima Khare  
Assistant Professor  
Department of Biochemistry  
University of Delhi South Campus  
New Delhi - 110021

  
Parthvi Mahendru

  
Prof. Alo Nag  
Head of the Department  
विभागाध्यक्ष / Head  
क्षेत्र १ स्नातक विभाग  
Department of Biochemistry  
दिल्ली विश्वविद्यालय दक्षिण कैंपस  
University of Delhi South Campus  
नए दिल्ली-110021  
New Delhi-110021



UDSC

## Department of Biochemistry

University of Delhi South Campus  
Benito Juarez Road, New Delhi-110021, India  
Tel. No. 91-11-24157363  
Fax: 91 11-24115270

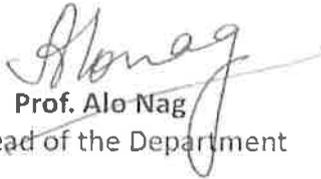
### Certificate

The research work embodied in this dissertation entitled, “**Expression, purification and enzymatic characterization of GlpQ2 (Rv0317c) and Rv2277c of *Mycobacterium tuberculosis***” was carried out by Bhupendra Meena, M.Sc. student (2021-2023) at the Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021, India as part of her training for partial fulfilment towards the degree of Master of Science (Biochemistry) of the University of Delhi.

  
Dr. Garima Khare  
Supervisor

Dr. Garima Khare  
Assistant Professor  
Department of Biochemistry  
University of Delhi South Campus  
New Delhi - 110021

  
Bhupendra Meena

  
Prof. Alo Nag  
Head of the Department

विभागाध्यक्ष / Head  
जेब रसायन विभाग  
Department of Biochemistry  
दिल्ली विश्वविद्यालय दक्षिण परिसर  
University of Delhi South Campus  
नई दिल्ली-110021  
New Delhi-110021



UDSC

## Department of Biochemistry

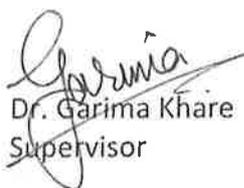
University of Delhi South Campus  
Benito Juarez Road, New Delhi-110021, India

Tel. No. 91-11-24157363

Fax : 91-11-24115270

### Certificate

The research work embodied in this dissertation entitled, "**Identification of small molecule inhibitors to develop modified anti-TB chemotherapeutic regimen**" was carried out by **KARTIKEY YADAV**, M.Sc. student (2021-2023) at the Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021, India as part of her training for partial fulfilment towards the degree of Master of Science (Biochemistry) of the University of Delhi.

  
Dr. Garima Khare  
Supervisor

Dr. Garima Khare  
Assistant Professor  
Department of Biochemistry  
University of Delhi South Campus  
New Delhi - 110021



KARTIKEY YADAV

  
Prof. Alo Nag  
Head of the Department

विभागाध्यक्ष / Head  
केव रसायन विभाग  
Department of Biochemistry  
दिल्ली विश्वविद्यालय दक्षिण परिसर  
University of Delhi South Campus  
बनो ज्वारेज रोड - 110021  
New Delhi-110021



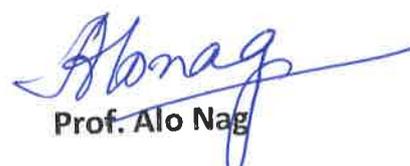
**UDSC**

**Department of Biochemistry**  
University of Delhi South Campus  
Benito Juarez Road, New Delhi-110021  
Tel: 91-11-24157363  
Fax : 91-11-24115270

### **Certificate**

The research work embodied in this dissertation entitled, "**Expression and purification of a putative peroxidase (Rv3177) of *Mycobacterium tuberculosis***" was carried out by Shivani, M.Sc. student (2021-2023) at the Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021, India as part of her training for partial fulfilment towards the degree of Master of Science (Biochemistry) of the University of Delhi.

  
**Dr. Garima Khare**  
Supervisor

  
**Prof. Alo Nag**  
Head of the Department

# Long Non- coding and Obesity in *Drosophila*

M.Sc. Dissertation submitted to the University of Delhi towards  
the partial fulfilment for the award of the Degree of  
Master of Science (Biochemistry)  
2021-2023

By  
**T AKANKSHA**

Under the supervisor of  
**DR. DAU DAYAL**



Department of Biochemistry  
University of Delhi, South Campus  
Benito Juarez Road,  
Delhi-110021, India



UDSC

Department of Biochemistry  
University of Delhi South Campus  
Benito Juarez Road, New Delhi-110021, India  
Tel. No. 91-11-24157363  
Fax : 91-11-24115270

## CERTIFICATE

The research work embodied in this dissertation entitled “**Long Non-Coding RNA and Obesity in *Drosophila***” was carried out by **T AKANKSHA**, M.Sc. student (2021-2023) at the Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi- 110021, India as a part of her training for partial fulfilment towards the degree of Master of Science (Biochemistry) of the University of Delhi.

  
Dr. Dau Dayal  
Supervisor  
Assistant professor  
Department of Biochemistry  
University of Delhi South  
Campus

Dr. Dau Dayal  
Assistant Professor  
Department of Biochemistry  
University of Delhi South Campus  
New Delhi-110021



**T AKANKSHA**

Student

  
Prof. Alo Nag  
Head of Department  
Department of Biochemistry  
University of Delhi South Campus

विभागाध्यक्ष / Head  
जैव रसायन विभाग  
Department of Biochemistry  
दिल्ली विश्वविद्यालय दक्षिण परिसर  
University of Delhi South Campus  
नई दिल्ली-110021  
New Delhi-110021

# **Characterization of transcriptome – wide signals in the obesogenic environment in *Drosophila***

Dissertation submitted for the partial fulfillment of the requirement  
for the degree of

**Masters of Science (Biochemistry)**

**2021-2023**



Submitted by  
**SHRISHTI MITRA**

Under the supervision of  
**DR. DAU DAYAL**

Department of Biochemistry  
University of Delhi South Campus  
Benito Juarez Road, New Delhi-110021, India



UDSC

## Department of Biochemistry

University of Delhi South Campus  
Benito Juarez Road, New Delhi-110021, India

Tel. No. 91-11-24157363

Fax : 91-11-24115270

### Certificate

The research work embodied in this dissertation entitled, “**Characterization of transcriptome – wide signals in the obesogenic environment in *Drosophila***” was carried out by **Shrishti Mitra**, M.Sc. student (2021-2023) at the Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021, India as part of her training for partial fulfilment towards the degree of Master of Science (Biochemistry) of the University of Delhi.

  
Dr. Dau Dayal

Supervisor  
Dr. Dau Dayal  
Assistant Professor  
Department of Biochemistry  
University of Delhi South Campus  
New Delhi-110021

  
Prof. Alo Nag

Head of the Department

विभागाध्यक्ष / Head  
केम रसायन विभाग  
Department of Biochemistry  
दिल्ली विश्वविद्यालय दक्षिण परिसर  
University of Delhi South Campus  
नई दिल्ली-110021  
New Delhi-110021

  
Shrishti Mitra

(Student)

**Analysis of alerted metabolic signals in  
*Drosophila* evolved on an obesogenic diet**

Dissertation submitted for the partial fulfillment of the requirement  
for the degree of

**Masters of Science (Biochemistry)**

**2023**



Submitted by

**VINAYAK JOSHI**

Under the supervision of

**DR. DAU DAYAL**

Department of Biochemistry

University of Delhi South Campus

Benito Juarez Road, New Delhi-110021, India



**UDSC**

## **Department of Biochemistry**

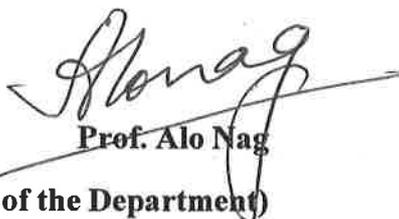
University of Delhi South Campus  
Benito Juarez Road, New Delhi-110021, India  
Tel. No. 91-11-24157363  
Fax: 91-11-24115270

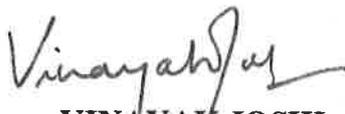
### **CERTIFICATE**

The research work embodied in this dissertation entitled, “**Analysis of alerted metabolic signals in *Drosophila* evolved on an obesogenic diet**” was carried out by **Mr. VINAYAK JOSHI, M.Sc. student (2021-2023)** at the Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021, India, as part of his training for partial fulfillment towards the degree of Master of Science (Biochemistry) of the University of Delhi.

  
**Dr. Dau Dayal**

(Supervisor)  
Dr. Dau Dayal  
Assistant Professor  
Department of Biochemistry  
University of Delhi South Campus  
New Delhi-110021

  
**Prof. Alo Nag**  
(Head of the Department)

  
**VINAYAK JOSHI**  
(Student)

दिनागोप्यक / Head  
जैव रसायन विभाग  
Department of Biochemistry  
दिल्ली विश्वविद्यालय दक्षिण परिसर  
University of Delhi South Campus  
नई दिल्ली-110021  
New Delhi-110021

# **Induced obesity and characterization of altered lncRNA expression profile impacting metabolic signals in *Drosophila***

Dissertation submitted for the partial fulfilment of the requirement  
for the degree of

**Masters of Science (Biochemistry)**

**2023**



**RAUNAK GUPTA**

Department of Biochemistry

University of Delhi South Campus

Benito Juarez Road, New Delhi-110021, India



UDSC

## Department of Biochemistry

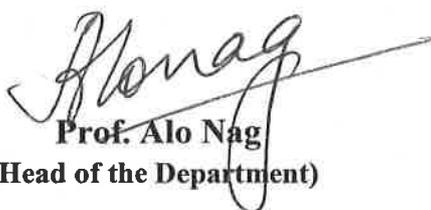
University of Delhi South Campus  
Benito Juarez Road, New Delhi-110021, India  
Tel. No. 91-11-24157363  
Fax: 91-11-24115270

### CERTIFICATE

The research work embodied in this dissertation entitled, “**Induced obesity and characterization of altered lncRNA expression profile impacting metabolic signals in *Drosophila***” was carried out by **Ms. Raunak Gupta, M.Sc. student (2021-2023)** at the Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021, India as part of her training for partial fulfilment towards the degree of Master of Science (Biochemistry) of the University of Delhi.

  
**Dr. Dau Dayal**  
(Supervisor)

Dr. Dau Dayal  
Assistant Professor  
Department of Biochemistry  
University of Delhi South Campus  
New Delhi-110021

  
**Prof. Alo Nag**  
(Head of the Department)

विभागाध्यक्ष / Head  
जीव रसायन विभाग  
Department of Biochemistry  
दिल्ली विश्वविद्यालय दक्षिण परिसर  
University of Delhi South Campus  
नई दिल्ली - 110021  
New Delhi-110021

  
**RAUNAK GUPTA**  
Student

**WNT Signaling: A Prime Modulator of p53-FoxM1  
Axis in Healthy and Cancerous Cells**

**Dissertation Submitted in Partial Fulfillment of the  
Requirement for the Degree of**

**MASTER OF SCIENCE**

**in**

**BIOCHEMISTRY**

**(2021-2023)**

**By**

**PUSHPINDER KAUR**

**Under the Supervision of**

**PROF. ALO NAG**



**Department of Biochemistry  
University of Delhi, South Campus  
Benito Juarez Road, New Delhi-110021, India**



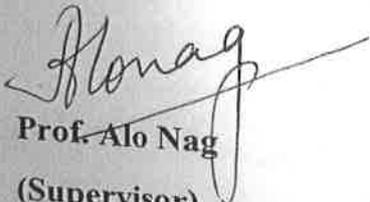
Department of Biochemistry

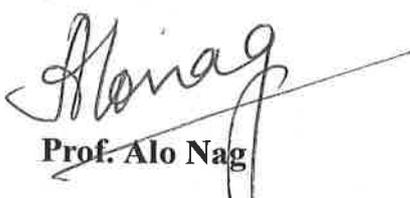
University of Delhi South Campus  
Benito Juarez Road, New Delhi-110021  
Email: [hodbiochemistry@gmail.com](mailto:hodbiochemistry@gmail.com)

30<sup>th</sup> May, 2023

## CERTIFICATE

The research work embodied in this dissertation project report entitled "*WNT Signaling: A Prime Modulator of p53-FoxM1 Axis in Healthy and Cancerous Cells*" was carried out by Ms. Pushpinder Kaur, M.Sc. student (2020-2022) at the Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021, India, as part of his training towards the partial fulfillment for the degree of Master of Science (Biochemistry) at the University of Delhi.

  
Prof. Alo Nag  
(Supervisor)

  
Prof. Alo Nag  
(Head of the Department)

  
Pushpinder Kaur  
(Student)

**HBx Manipulates FOXM1 via Gli1 to Cause  
Hepatocellular Carcinoma**

*Dissertation Submitted in Partial Fulfilment of the  
Requirement for the Degree of*

**MASTER OF SCIENCE  
BIOCHEMISTRY (2021-2023)**

**By:**

**AASHNA BANSAL**

*Under the Supervision of*

**PROF. ALO NAG**



**Department of Biochemistry University of Delhi, South Campus**

**Benito Juarez Road,**

**New Delhi-110021, India**



**UDSC**

## **Department of Biochemistry**

**University of Delhi South Campus**

Benito Juarez Road, New Delhi-110021, India

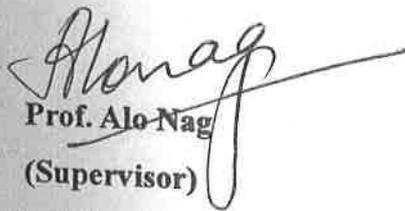
*Email:* hodbiochemistry@gmail.com

Tel. No. 91-11-24157363

Fax: 91-11-24115270

## **CERTIFICATE**

The research work embodied in this dissertation project report entitled "*HBx manipulates FOXM1 via Gli1 to cause Hepatocellular carcinoma*" was carried out by **Ms. AASHNA BANSAL**, M.Sc. student (2021-2023) at the Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021, India, as part of his training towards the partial fulfilment for the degree of Master of Science (Biochemistry) at the University of Delhi.

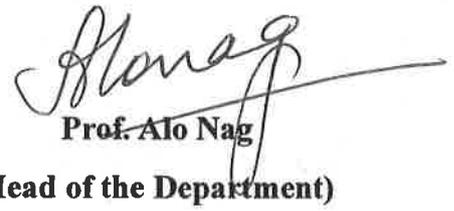
  
**Prof. Alo Nag**  
(Supervisor)

Dr. Alo Nag  
(Professor)  
Department of Biochemistry  
University of Delhi South Campus  
New Delhi-110021



**AASHNA BANSAL**

(Student)

  
**Prof. Alo Nag**  
(Head of the Department)

दिनागाध्यक्ष / Head  
जैव रसायन विभाग  
Department of Biochemistry  
दिल्ली विश्वविद्यालय दक्षिण परिसर  
University of Delhi South Campus  
नई दिल्ली-110021  
New Delhi-110021

**An investigation on alterations in *Plasmodium falciparum*  
proteome in response to an ionophore, Maduramicin**

Thesis submitted to the University of Delhi in partial fulfilment of the  
requirements for the Degree of

**MASTER OF SCIENCE  
IN  
BIOCHEMISTRY**

By  
K RUBINAAJ

Under the supervision of  
Prof. ALO NAG



Department of Biochemistry  
University of Delhi South Campus  
Benito Juarez Road, Dhaula Kuan  
New Delhi-110021  
India

MAY 2023

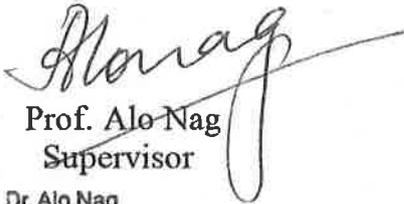


## Department of Biochemistry

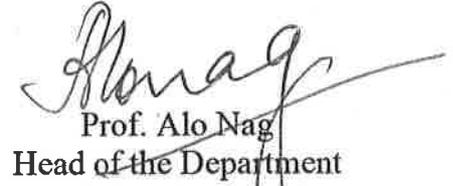
University of Delhi South Campus  
Benito Juarez Road, New Delhi-110021, India  
Tel. No. 91-11-24157363  
Fax : 91-11-24115270

### Certificate

The research work embodied in this dissertation entitled, “An investigation on alterations in *Plasmodium falciparum* proteome in response to an ionophore, Maduramicin” was carried out by K Rubinaaj, M.Sc. student (2021-2023) at the Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021, India as part of her training for partial fulfilment towards the degree of Master of Science (Biochemistry) of the University of Delhi.

  
Prof. Alo Nag  
Supervisor

Dr. Alo Nag  
(Professor)  
Department of Biochemistry  
University of Delhi South Campus  
New Delhi-110021

  
Prof. Alo Nag  
Head of the Department

विभागाध्यक्ष / Head  
जीव रसायन विभाग  
Department of Biochemistry  
दिल्ली विश्वविद्यालय दक्षिण कैंपस  
University of Delhi South Campus  
नई दिल्ली-110021  
New Delhi-110021



K Rubinaaj

**INVESTIGATION ON THE MODE OF ACTION OF  
NOVEL ANTIMALARIAL USING PROTEOMICS  
STUDY OF *P.falciparum***

**Dissertation Submitted in Partial Fulfillment  
Of the Requirement for the degree of**

**MASTER OF SCIENCE**

**in**

**BIOCHEMISTRY**

**May 2023**

**By**

**DEEKSHA**



**Under the Supervision of  
PROF. ALO NAG**

**Department of Biochemistry  
University of Delhi, South Campus  
Benito Juarez Road,  
New Delhi-110021**



# Department of Biochemistry

## University of Delhi South Campus

Benito Juarez, New Delhi-110021, India

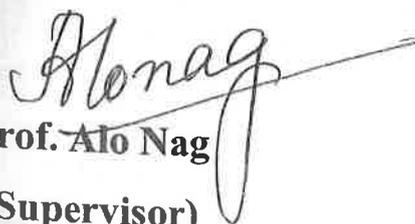
Tel. No.: 91-11-24157363

Fax: 91-11-24115270

Website: <http://biochem.du.ac.in/web/>

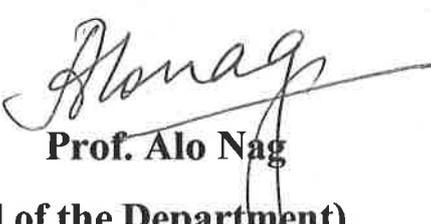
## CERTIFICATE

The research work embodied in this dissertation project report entitled “**INVESTIGATION ON THE MODE OF ACTION OF NOVEL ANTIMALARIAL USING PROTEOMICS STUDY OF *P.falciparum***” was carried out by **Ms. Deeksha**, M.Sc. student (2021-2023) at the Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021, India, as part of his training towards the partial fulfillment for the degree of Master of Science (Biochemistry) at the University of Delhi.

  
**Prof. Alo Nag**  
(Supervisor)

Dr. Alo Nag  
(Professor)  
Department of Biochemistry  
University of Delhi South Campus  
New Delhi-110021

  
**Deeksha**  
(Student)

  
**Prof. Alo Nag**  
(Head of the Department)

दिनागप्रमुख / Head  
जैव रसायन विभाग  
Department of Biochemistry  
दिल्ली विश्वविद्यालय दक्षिण परिसर  
University of Delhi South Campus  
नई दिल्ली-110021  
New Delhi-110021



## Department of Biochemistry

University of Delhi South Campus  
Benito Juarez Road, New Delhi-110021, India

Tel. No. 91-11-24157363

Fax : 91-11-24115270

UDSC

### Certificate

The research work embodied in this dissertation entitled, "Cloning and Phage Display of Receptor Binding Domain (RBD) of SARS CoV-2" was carried out by **SAPNA YADAV**, M.Sc. student (2021-2023) at the Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021, India as part of her training for partial fulfilment towards the degree of Master of Science (Biochemistry) of the University of Delhi.

**Prof. Amita Gupta**  
Supervisor

Dr. Amita Gupta, Ph.D.  
Professor  
Department of Biochemistry  
University of Delhi South Campus  
New Delhi-110021

**Prof. Alo Nag**  
Head of the Department

विभागाध्यक्ष / Head  
जैव रसायन विभाग  
Department of Biochemistry  
दिल्ली विश्वविद्यालय दक्षिण कैंपस  
University of Delhi South Campus  
नई दिल्ली-110021  
New Delhi-110021

**SAPNA YADAV**

Student



UDSC

## Department of Biochemistry

University of Delhi South Campus  
Benito Juarez Road, New Delhi-110021, India  
Tel. No. 91-11-24157363  
Fax : 91-11-24115270

### Certificate

The research work embodied in this dissertation entitled, "Characterization of anti-RBD antibodies and Cloning and Phage Display of RBD Domain of S-Protein of Sars-CoV-2" was carried out by YUSRA RIYAZ, M.Sc. student (2021-2023) at the Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021, India as part of her training for partial fulfilment towards the degree of Master of Science (Biochemistry) of the University of Delhi.

Prof. Amita Gupta  
Supervisor

**Dr. Amita Gupta, Ph.D.**  
**Professor**  
**Department of Biochemistry**  
**University of Delhi South Campus**  
**New Delhi-110021**

Prof. Alo Nag  
Head of the Department

  
YUSRA RIYAZ

विभागाध्यक्ष / Head  
जैव रसायन विभाग  
Department of Biochemistry  
दिल्ली विश्वविद्यालय दक्षिण परिसर  
University of Delhi South Campus  
नई दिल्ली-११००२१  
New Delhi-110021



UDSC

## Department of Biochemistry

University of Delhi South Campus  
Benito Juarez Road, New Delhi-110021, India  
Tel. No. 91-11-24157363  
Fax : 91-11-24115270

### Certificate

The research work embodied in this dissertation entitled, "**Development of strategy to eliminate aberrant-light chain amplification during cloning of light chain from Hybridoma**" was carried out by **Hitanshi Sharma**, M.Sc. student (2021-2023) at the Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021, India as part of her training for partial fulfilment towards the degree of Master of Science (Biochemistry) of the University of Delhi.

Prof. Amita Gupta  
Supervisor

Dr. Amita Gupta, Ph.D.  
Professor  
Department of Biochemistry  
University of Delhi South Campus  
New Delhi-110021

Prof. Ato Nag  
Head of the Department

विभागाध्यक्ष / Head  
जैव रसायन विभाग  
Department of Biochemistry  
दिल्ली विश्वविद्यालय दक्षिण परिसर  
University of Delhi South Campus  
नई दिल्ली-110021  
New Delhi-110021

**HITANSHI SHARMA**



UDSC

## Department of Biochemistry

University of Delhi South Campus  
Benito Juarez Road, New Delhi-110021, India  
Tel. No. 91-11-24157363  
Fax : 91-11-24115270

### Certificate

The research work embodied in this dissertation entitled, "**Cloning and characterization of HigBA loci of *Mycobacterium tuberculosis***" was carried out by **ANJALI MAURYA**, M.Sc. student (2021-2023) at the **Department of Biochemistry, University of Delhi South Campus**, Benito Juarez Road, New Delhi-110021, India as part of her training for partial fulfilment towards the degree of Master of Science (Biochemistry) of the University of Delhi.

**Prof. Amita Gupta**  
Supervisor

Dr. Amita Gupta, Ph.D.  
Professor  
Department of Biochemistry  
University of Delhi South Campus  
New Delhi-110021

**Prof. Alo Nag**  
Head of the Department

विभागाध्यक्ष / Head  
जैव रसायन विभाग  
Department of Biochemistry  
दिल्ली विश्वविद्यालय दक्षिण परिसर  
University of Delhi South Campus  
नई दिल्ली-110021  
New Delhi-110021

Anjali Maurya—  
**ANJALI MAURYA**  
Student