

Identification of neuronal regulators of microtubule cytoskeleton using *Caenorhabditis elegans*

**DISSERTATION REPORT SUBMITTED TO
NATIONAL BRAIN RESEARCH CENTRE
(DEEMED UNIVERSITY)
FOR THE PARTIAL FULFILMENT OF
MASTER OF SCIENCE (M. Sc.) IN NEUROSCIENCE**

**Submitted by
AKANKSHA GOYAL**



**NATIONAL BRAIN RESEARCH CENTRE
(DEEMED UNIVERSITY)**

MANESAR-122051

INDIA

JUNE 2020

**राष्ट्रीय मस्तिष्क अनुसंधान केंद्र
(समविश्वविद्यालय)**

(जैव एवं प्रौद्योगिकी विभाग का स्वायत्त संस्था,
विज्ञान एवं तकनीकी मंत्रालय, भारत सरकार)
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NH-08, Manesar - 122 052 (Haryana), INDIA

CERTIFICATE

This is to certify that the dissertation entitled "Identification of neuronal regulators of microtubule cytoskeleton using *C. elegans*" is the result of work carried out by Akanksha Goyal in National Brain Research Centre, Manesar, Haryana, India.

The work presented herein is original and has not been submitted previously for the award of any degree or diploma to **National Brain Research Centre (Deemed to be University)** or to any other University. This work is completely based on the guidelines given by **National Brain Research Centre** and is a record of the candidate's own efforts.



Anindya Ghosh Roy, PhD

Supervisor

Place: Manesar

Date: 29/05/2020



Director, NBRC

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Investigating changes in the functional organisation of brain networks during illusory perception

Akanksha Gupta

*Thesis submitted to
National Brain Research Centre
for the degree of
MASTER OF SCIENCE
(Neuroscience)*



National Brain Research Centre
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Manesar, Haryana, India - 122052

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National Brain Research Centre

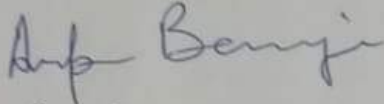
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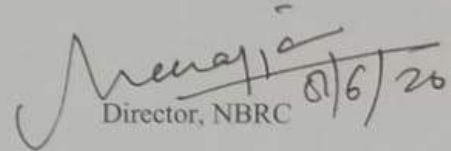
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CERTIFICATE

This is to certify that the dissertation entitled **“Investigating changes in functional organisation of brain networks during illusory perception”** is the result of work carried out by **Akanksha Gupta** in National Brain Research Centre, Manesar, Haryana, India.

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Supervisor


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Date : 01/06/2020

ROLE OF TET ENZYMES IN CNS STEM/PROGENITOR CELLS PROLIFERATION AND DIFFERENTIATION

**M.Sc. Dissertation Report Submitted to The
National Brain Research Centre (Deemed to be University)
Manesar-122052, Haryana, India**



***in partial fulfilment for the award of the degree of*
MASTER OF SCIENCE IN NEUROSCIENCE**

**By
Ankit Dhoundiyal**

***Under the guidance of*
Ranjit K. Giri, Ph.D
Scientist VI (Professor)
Molecular & Cellular Neuroscience Division
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This is to certify that the dissertation entitled "**Role of TET enzymes in CNS stem/progenitor cells proliferation and differentiation**" is the result of work carried out by **Ankit Dhoundiyal** in National Brain Research Centre, Manesar, Haryana, India.

The work presented herein is original and has not been submitted previously for the award of any degree or diploma to **National Brain Research Centre (Deemed to be University)** or to any other University. This work is completely based on the guidelines given by **National Brain Research Centre** and is a record of the candidate's own efforts.

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Date: 26/05/2020

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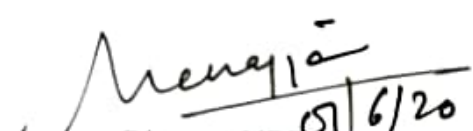
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This is to certify that the dissertation entitled “Dynamics of resting state transient spectral alpha bursts with age” is the result of work carried out by **Mr. Darshit Mahesh Thakar** in National Brain Research Centre, Manesar, Haryana, India.

The work presented herein is original and has not been submitted previously for the award of any degree or diploma to **National Brain Research Centre (Deemed to be University)** or to any other University. This work is completely based on the guidelines given by **National Brain Research Centre** and is a record of the candidate's own efforts.


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Director, NBRC 29/6/20

Place : Manesar

Date : 29/05/2020

Adeno-Associated Virus for Imaging the Barrel Cortex of Rats

Submitted to

National Brain Research Centre, Manesar

in partial fulfillment of the requirements for the degree of

Master of Science in Neurosciences



By

Mantosh Patnaik

M.Sc. Neuroscience, Final year

June, 2020

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This is to certify that the dissertation entitled “Adeno-Associated Virus for Imaging the Barrel Cortex of Rats” is the result of work carried out by **Mantosh Patnaik** in National Brain Research Centre, Manesar, Haryana, India.

The work presented herein is original and has not been submitted previously for the award of any degree or diploma to **National Brain Research Centre (Deemed to be University)** or to any other University. This work is completely based on the guidelines given by **National Brain Research Centre** and is a record of the candidate's own efforts.

Prof. Neeraj Jain

Director

NBRC, Manesar

(Supervisor)

Prof. Neeraj Jain

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(Director, NBRC)

Place : NBRC, Manesar

Date : 1/06/2020

UNDERSTANDING HOW VIRUSES AFFECT BRAIN

*Thesis submitted to
National Brain Research Centre
For the award of
Master of Science in Neuroscience*

Parmar Misha Ben Bharatkumar

Batch 2018-2020



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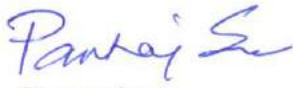
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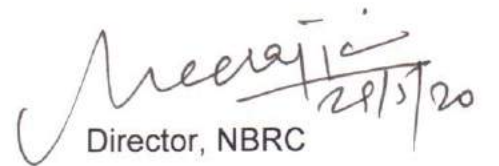
This is to certify that the dissertation entitled "UNDERSTANDING HOW VIRUSES AFFECT BRAIN" is the result of work carried out by Miss PARMAR MISHA BEN BHARATKUMAR in National Brain Research Centre, Manesar, Haryana, India.

The work presented herein is original and has not been submitted previously for the award of any degree or diploma to **National Brain Research Centre (Deemed to be University)** or to any other University. This work is completely based on the guidelines given by **National Brain Research Centre** and is a record of the candidate's own efforts.


Supervisor

Place: Manesar

Date: May 29, 2020


Director, NBRC

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Role of Microtubule and Actin regulators in the dendrite development in *Caenorhabditis elegans*

Dissertation submitted to
National Brain Research Centre

For the completion of
Masters of Science (M.Sc.) in Neuroscience

Submitted by
Nitish Kumar

Under the guidance of
Dr. Swagata Dey and Dr. Anindya Ghosh-Roy



NATIONAL BRAIN RESEARCH CENTRE
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CERTIFICATE

This is to certify that the dissertation entitled "**Role of Microtubule and Actin regulators in the dendrite development in *Caenorhabditis elegans***" is the result of work carried out by Mr. Nitish Kumar in National Brain Research Centre, Manesar, Haryana, India.

The work presented herein is original and has not been submitted previously for the award of any degree or diploma to **National Brain Research Centre (Deemed to be University)** or to any other University. This work is completely based on the guidelines given by **National Brain Research Centre** and is a record of the candidate's own efforts.

Supervisor

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Dr. Swagata Dey

Co-supervisor

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Correlation of Neurochemical Profile to the Retinal Fundus Imaging Features : Pilot Experiment

By

Pratibha Ahirwal

A Dissertation Submitted to the Faculties of National Brain Research Centre

In Partial Fulfilment of the Requirements for Master's in Neuroscience



National Brain Research Centre

Manesar, Gurugram (Haryana)

June 2020

राष्ट्रीय मस्तिष्क अनुसंधान केंद्र
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(जैव एवं प्रौद्योगिकी विभाग का स्वायत्त संस्था,
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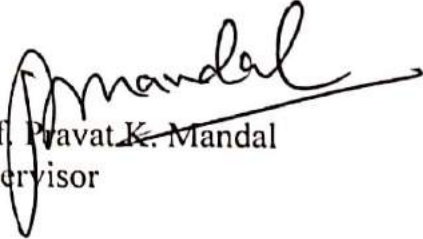
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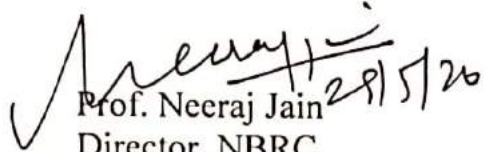
This is to certify that the dissertation entitled "**Correlation of Neurochemical profile to the Retinal fundus imaging features: Pilot Experiment**" is the result of work carried out by **Ms. Pratibha Ahirwal** in National Brain Research Centre, Manesar, Haryana, India.

The work presented herein is original and has not been submitted previously for the award of any degree or diploma to **National Brain Research Centre (Deemed to be University)** or to any other University. This work is completely based on the guidelines given by **National Brain Research Centre** and is a record of the candidate's own efforts.


Prof. Pravat K. Mandal
Supervisor

Place: Manesar

Date: 29/05/2020


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Director, NBRC
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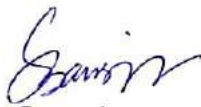
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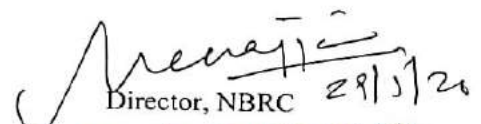
This is to certify that the dissertation entitled “**LincRNAp21-mediated control of neuronal translation**” is the result of work carried out by Ms. Rekha Singh in National Brain Research Centre, Manesar, Haryana, India.

The work presented herein is original and has not been submitted previously for the award of any degree or diploma to National Brain Research Centre (Deemed to be University) or to any other University. This work is completely based on the guidelines given by National Brain Research Centre and is a record of the candidate's own efforts.


Supervisor

Place : Manesar

Date: May 29th 2020


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LincRNA-P21 MEDIATED CONTROL OF NEURONAL TRANSLATION

MASTER OF SCIENCE (M.Sc.) NEUROSCIENCE

DISSERTATION REPORT SUBMITTED TO

NATIONAL BRAIN RESEARCH CENTRE

DEEMED UNIVERSITY

Submitted by:

REKHA SINGH

NATIONAL BRAIN RESEARCH CENTRE

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MANESAR-122051

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A Pilot Study to understand the role of Astrocytes in Japanese Encephalitis Virus mediated neuroinflammation.

*Dissertation report submitted by S. INDIRA PRIYA
on the partial fulfilment of the requirements for the degree of*

Masters in Neuroscience

June 2020

Under the supervision of

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National Brain Research Centre

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CERTIFICATE

This is to certify that the dissertation entitled "*A pilot study to understand the role of Astrocytes in Japanese encephalitis virus mediated neuroinflammation*" is the result of work carried out by **Ms. S. Indira Priya** in National Brain Research Centre, Manesar, Haryana, India.

The work presented herein is original and has not been submitted previously for the award of any degree or diploma to **National Brain Research Centre (Deemed to be University)** or to any other University. This work is completely based on the guidelines given by **National Brain Research Centre** and is a record of the candidate's own efforts.



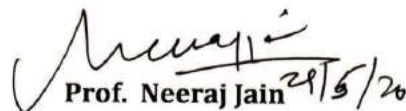
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Manesar, Gurgaon (Haryana)

Place : Manesar

Date : 20-05-2020



Prof. Neeraj Jain

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Effects of Safranal on Amyloid beta-Induced Production of Reactive Oxygen Species and Nitric Oxide from Glial Cells

A Dissertation submitted to

**National Brain Research Centre
(Deemed-to-be University)**

For the partial fulfillment of

Master of Science (M.Sc.) in Neuroscience

By

Sharmistha Panda



**National Brain Research Centre
Manesar, Haryana-122052
India
June 2020**

राष्ट्रीय मस्तिष्क अनुसंधान केंद्र (समविश्वविद्यालय)

(जैव एवं प्रौद्योगिकी विभाग का स्वायत्त संस्था,
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National Brain Research Centre (Deemed University)

(An Autonomous Institute of Deptt. of Biotechnology,
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NH-08, Manesar - 122 052 (Haryana), INDIA

CERTIFICATE

This is to certify that the dissertation entitled "Effects of safranal on amyloid beta-induced production of reactive oxygen species and nitric oxide from glial Cells" is the result of work carried out by **Sharmistha Panda** in National Brain Research Centre, Manesar, Haryana, India. The work presented herein is original and has not been submitted previously for the award of any degree or diploma to **National Brain Research Centre (Deemed-to-be University)** or to any other University. This work is completely based on the guidelines given by **National Brain Research Centre** and is a record of the candidate's own efforts.

Shiv Kumar Sharma, PhD
(Supervisor)

Place: Manesar
Date: 29-05-2020

Prof. Neeraj Jain 28/5/20
(Director, NBRC)

प्रो. नीरज जैन / Prof. Neeraj Jain
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EFFECT OF TUMOR NECROSIS FACTOR (TNF α) ON TAU EXPRESSION

Dissertation submitted to

**National Brain Research Centre
Manesar, Gurugram – 122051**

For the partial fulfillment of M.Sc. in Neuroscience

**BY
SHASHWATI TRIPATHI
UNDER THE SUPERVISION OF
DR. ELLORA SEN**



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This is to certify that the dissertation entitled “**Effect of Tumor Necrosis Factor (TNF α) on Tau expression**” is the result of work carried out by **Shashwati Tripathi** in National Brain Research Centre, Manesar, Haryana, India.

The work presented herein is original and has not been submitted previously for the award of any degree or diploma to **National Brain Research Centre (Deemed to be University)** or to any other University. This work is completely based on the guidelines given by **National Brain Research Centre** and is a record of the candidate's own efforts.

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**ROLE OF MIR204-5P IN ZIKA VIRUS-MEDIATED
NEUROPATHOGENESIS**

***Thesis submitted to
National Brain Research Centre
for the award of
Master of Science in Neuroscience***

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This is to certify that the dissertation entitled "ROLE OF MIR204-5P IN ZIKA VIRUS
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Characterizing Variability of Audiovisual Speech Perception Based on Prestimulus Oscillatory Features of Electrophysiological Brain Signals

Vinsea A V Singh

*A Dissertation Submitted to the
National Brain Research Centre
for the award of
Masters in Neuroscience*



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**Seasonal and sex differences in Tyrosine Hydroxylase expression in the
Anterior forebrain pathway of House crows (*Corvus Splendens*)**

**Submitted to
National Brain Research Centre, Manesar
in partial fulfillment of the requirements for the degree of
Master of Science in Neurosciences**



**By
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