University of Mumbai

PROJECT REPORT

Preparation of ^{99m}Tc-labelled Chlorambucil-HYNIC for imaging of tumorous lesions

Submitted by

Sayali Surendra Deshmukh

Master of Science, Chemical Sciences,

Satish Pradhan Dnyanasadhana College, Thane

Under the Guidance of

Dr. Mohini Guleria

Radiopharmaceuticals Division

Bhabha Atomic Research Centre

Mumbai-400085

INDIA

May, 2023

Dr. Mohini Guleria
Scientific Officer (F)
Radiopharmaceuticals Division
Email: mohini@barc.gov.in

SUPERVISOR'S CERTIFICATE

This is to certify that the project report titled "***Preparation of ^{99m}Tc-labelled Chlorambucil-HYNIC derivative for possible application as SPECT imaging agent***", submitted by **Ms. Sayali Surendra Deshmukh** as a part of her M.Sc. Organic Chemistry (Part II) curriculum, at **Satish Pradhan Dnyanasadhana College** is a record of bonafide investigation carried out by her in the Radiopharmaceuticals Division, Bhabha Atomic Research Centre, Mumbai, under my supervision and to the best of my knowledge this report has not been submitted elsewhere for the award of any degree or diploma. Ms. Sayali Surendra Deshmukh was regular, punctual, sincere and hardworking throughout the tenure of the training project from 30th January 2023 to 28th April 2023.

Date: 28.04.2023

Mohini

Dr. Mohini Guleria
Scientific Officer (F)
Radiopharmaceuticals Division
Bhabha Atomic Research Centre
Mumbai-400085

वैज्ञानिक अधिकारी( )/Scientific Officer( )
रेडिओफेषज प्रभाग/RPhD
रेडियो रसायनिकी एवं आइसोटोप वर्ग/RC & IG
भाभा परमाणु अनुसंधान केन्द्र/BARC,
ट्रॉम्बे, मुंबई-85/Trombay, Mumbai-85.

MUMBAI UNIVERSITY

UNIVERSITY OF MUMBAI

Satish Pradhan Dnyanasadhana College, Thane

(Arts, Science and Commerce)

Re-Accredited "B+" Grade (CGPA 2.69) by NAAC, ISO 21001:2018 (Certified)

Affiliated To University of Mumbai

CERTIFICATE

2022-2023

This is to certify that **Miss Sayali Surendra Deshmukh** has satisfactorily completed her research project on the **Preparation of 99mTc-labelledChlorambucil-HYNIC for imaging of tumorous lesions** as partial fulfillment of the degree of masters science (organic chemistry) at the M.Sc department of chemistry, under the guidance of **Dr. Mohini Guleria (BARC Scientific Officer) and Dr. Kalpana Rathod (Satish Pradhan Dnyanasadhana college, P.G.Co-ordinator).**

27/06/23

Examiner's Sign

Satish Pradhan Dnyanasadhana College Thane (Arts, Science & Commerce)

Dr. Kalpana Rathod

P.G.Coordinator

University of Mumbai

PROJECT REPORT

on

Synthesis of Erlotinib conjugated TAT-DOTA peptide for targeting EGFR positive cancer cells

Submitted by

Ms. Rutuja Rajendra Padwal

2nd Year, M.Sc,

Satish Pradhan Dnyanasadhana College, Thane, Maharashtra

Discipline: Organic Chemistry

Under the Guidance of

Dr. (Smt.) Akanksha Jain

Radiopharmaceuticals Division

Bhabha Atomic Research Centre

Mumbai-400085, India

February-April, 2023

GOVERNMENT OF INDIA
BHABHA ATOMIC RESEARCH CENTRE
RADIOPHARMACEUTICALS DIVISION

Dr. Akanksha Jain
Scientific Officer (E),
Radiopharmaceuticals Division
Email: ajindal@barc.gov.in

SUPERVISOR'S CERTIFICATE

This is to certify that the project report titled "***Synthesis of Erlotinib conjugated TAT-DOTA peptide for targeting EGFR positive cancer cells*** ", submitted by **Ms. Rutuja Rajendra Padwal** as a part of her M.Sc. Organic Chemistry (Part II) curriculum, at **Satish Pradhan Dnyanasadhana College** is a record of bonafide investigation carried out by her in the Radiopharmaceuticals Division, Bhabha Atomic Research Centre, Mumbai, under my supervision and to the best of my knowledge this report has not been submitted elsewhere for the award of any degree or diploma.Ms. **Rutuja Rajendra Padwal** was regular, punctual, sincere and hardworking throughout the tenure of the training project from 30th January 2023 to 28th April 2023.

Date: 28/4/23

Akanksha

Dr. Akanksha Jain
Scientific Officer (E), Radiopharmaceuticals Division
Bhabha Atomic Research Centre
Mumbai-400085

MUMBAI UNIVERSITY

UNIVERSITY OF MUMBAI

Satish Pradhan Dnyanasadhana College, Thane
(Arts, Science, and Commerce)

Re-Accredited "B+" Grade (CGPA 2.69) by NAAC, ISO 21001:2018 (Certified)

Affiliated To University of Mumbai

CERTIFICATE

2022-2023

This is to certify that **Miss. Rutuja Rajendra Padwal** has satisfactorily completed her research project on **Synthesis of Erlotinib conjugated TAT -DOTA peptide for targeting EGFR positive cancer cells.**

as a partial fulfilment of the degree of masters of science (organic chemistry)at the Radiopharmaceutical division under the guidance of **Dr. Akanksha Jain SO/E** Radiopharmaceutical Division BARC Mumbai and **Dr. Kalpana Rathod (P.G co- ordinator)** at Dnyanasadhana college

Satish Pradhan Dnyanasadhana College, Thane (Arts, Science & Commerce)

26/06/23

Dr. Kalpana Rathod

(P.G Coordinator)

Examiner's signature

CHECKED BY

A PROJECT REPORT ON

"Studies towards design and synthesis of a hydrogen-bonded organic framework"

Submitted by

HEMANGI ULHAS PATIL

PROJECT TRAINEE

Discipline: Chemical Science

30 Jan – 30 April 2023

HOMI BHABHA NATIONAL INSTITUTE (HBNI)

MUMBAI

Under the guidance of

DR. SUCHETA CHATTERJEE

Bio-Organic Division (BOD)

Bhabha Atomic Research Centre

Trombay, Mumbai-400085, India

CERTIFICATE BY PROJECT SUPERVISOR

This is to certify that the project work on ***"Studies towards design and synthesis of a hydrogen-bonded organic framework"*** has been carried out by Ms. Hemangi Patil in Bio-Organic Division, BARC under my supervision and this will be submitted to Satish Pradhan Dnyansadhana College, Thane, for partial fulfilment of the degree in M.Sc. Chemistry.

Signature: Sucheta Chatterjee

Name: DR. SUCHETA CHATTERJEE

Designation: SCIENTIFIC OFFICER/F

Division/Unit: BIO-ORGANIC DIVISION, BARC

UNIVERSITY OF MUMBAI

SATISH PRADHAN DNYANASAADHANA COLLEGE,THANE
(ARTS,SCIENCE AND COMMERCE)
CERTIFICATE

2022-2023

This is to certify that the project work on **"Studies towards design and synthesis of a hydrogen-bonded organic framework"** has been carried out by **Ms. Hemangi Patil** in Bio-Organic Division, BARC under the guidance of **Dr. Sucheta Chatterjee** (BOD, BARC) and this will be submitted to Satish Pradhan Dnyansadhana College, Thane, for partial fulfilment of the degree in M.Sc. Chemistry.

Date :
Place : Thane

Dr. Sucheta Chatterjee
Bio- Organic Division (BOD)
Bhabha Atomic Research Centre

Dr. Kalpna rathod
PG Co-ordinator

Satish Pradhan Dnyanasadhana College, Thane (Arts, Science & Commerce)

26/06/23

Examiner's Signature

CHECKED BY

Bhabha Atomic Research Centre

Summer Internship, 2023

Project Report

An efficient green synthesis of α-aminophoshonates and its application for the synthesis of eugenol based aminophosphonates

By Dhanashree Pandurang Gawali

Satish Pradhan Dnyanasadhana college
Thane (Arts, Science and Commerce)
2022-2023
Thane-400604, Maharashtra, India

Under the guidance of Dr. Papiya Dey

Bhabha Atomic Research Centre

Summer Internship, 2023

Project Report

An efficient green synthesis of α-aminophoshonates and its application for the synthesis of eugenol based aminophosphonates

By Dhanashree Pandurang Gawali

Satish Pradhan Dnyanasadhana college
Thane (Arts, Science and Commerce)
2022-2023
Thane-400604, Maharashtra, India

Under the guidance of Dr. Papiya Dey

UNIVERSITY OF MUMBAI

SATISH PRADHAN DNYANASADHANA COLLEGE OF ARTS, SCIENCE AND COMMERCE.

M.Sc. Part-II

Department of chemistry.

Submitted by: - Dhanashree Pandurang Gawali

Co-ordinator of Department: Dr. Kalpana Rathod

Guided By: Dr. Papiya Dey

CERTIFICATE

This is to certify that this report entitled **'An efficient green synthesis of α-aminophosphonates and its application for the synthesis of eugenol based aminophosphonates'** was carried out by Dhanashree Pandurang Gawali, student at Satish Pradhan Dnyanasadhana college, Thane under my supervision and guidance at the Bio-Organic Division, Bhabha Atomic Research Centre Mumbai for the partial fulfilment of the degree in M.Sc. Chemistry. To the best of my knowledge, the work presented by her is original and has not been presented earlier.

28th April, 2023

BARC, Mumbai

Research guide: Dr. Papiya Dey

Co-ordinator: Dr. Kalpana Rathod

Examiner's signature: 27/04/23

Satish Pradhan Dnyanasadhana College, Thane (Arts, Science & Commerce)