

Project 1

Project title: Development of novel lead molecules targeting Alzheimer disease

Abstract: We are to find newer leads to combat Alzheimer's disease which would work by preventing senile plaque formation. Senile plaque is deposited in brain neurons due to β - β entanglement of protein fibrils which is called Amyloidogenesis. The β -secretase or γ -secretase cleaves Amyloid Precursor protein (APP) to yield toxic $A\beta$ -42 or $A\beta$ -40 protein (or peptide) which are basically beta fibrils. The adherent β -fibrils conjoin by stacking together due to cross linking by hydrogen bonding. This form beta stack or senile plaque in brain neuronal pathway. Our aim is to design heterocyclic non-toxic lead/s which would inhibit both β -secretase upstream as well as destabilize β - β plaque downstream to attenuate protein fibrillation. The lead would also cross the blood brain barrier work in the brain. BCRC, Durgapur will carry out virtual screening and ligand design, synthesis of the molecules, evaluation of anti-aggregator property by in vitro protein fibrillation assay, total characterization of the molecules (1H , ^{13}C -NMR and MS) and molecular biology experiments (CD, ITC, SEM) will be carried out at NIPER Kolkata.

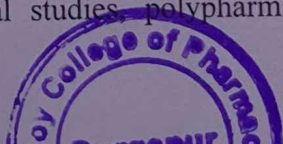
Investigators

1. Principal Investigator: Dr. Souvik Basak, Associate Professor, BCRC, Durgapur
2. Co-Investigator: Mrs. Puja Mishra, Assistant Professor, BCRC, Durgapur
3. Co-Investigator: Dr. Abhijit Hazra, Scientist Gr-I, NIPER Kolkata

Project 2

Title: Studies are aimed at repositing of drugs statins (Simvastatin & Rosuvastatin) for the treatment of depression and the mechanism involved therein.

Abstract: Studies are aimed at repositing of drugs (NSAIDS/ HYPOLIPIDEMICS) for the treatment of depression and identifying fast acting antidepressant without rebound symptoms. In vivo assay (Acute and chronic test), Mechanistic studies, In Vitro assay, Confirming the targets will be carried out at BCRC, Durgapur. Estimation of brain neurotransmitter (glutamate & GABA), BDNF, Rho expression; nNOS and eNOS, immunohistochemical studies, polypharmacology analyses will be carried out at NIPER Kolkata.



Investigators

1. Principal Investigator: Dr Shyamshree S S Manna, BCRCP, Durgapur
2. Principal Investigator: Amit Kumar Halder, BCRCP, Durgapur
3. Co-Investigator: Dr. Sugato Banerjee, Associate Professor, NIPER Kolkata

Project 3

Project title: Coumaric acid/pullulan conjugate-based hydrogel dressings for burn wound healing applications

Abstract: We would synthesize coumaric acid/pullulan conjugate-based hydrogel dressings and subsequently characterize their burn wound healing efficacies at cellular level and in animal models. Coumaric acid is a natural bioactive agent with anti-inflammatory, anti-bacterial and antioxidant properties and it displayed promising tissue regeneration and wound closure potentials (Contardi et al., 2021). Thus, it is assumed that coumaric acid/pullulan conjugate-based hydrogels could represent themselves an evolving burn wound dressing. Synthesis, formulations, and characterization will be carried out at BCRCP, Durgapur and cell culture experiments and animal studies will be carried out at NIPER Kolkata.

Investigators

1. Principal Investigator: Dr. Hriday Bera, Associate Professor, BCRCP, Durgapur
2. Co-Investigator: Dr. Souvik Basak, Associate Professor, BCRCP, Durgapur
3. Co-Investigator: Dr. Kausik Kapat, Assistant Professor, NIPER Kolkata

Shyamshree S S Manna



Samir Kumar Samanta
21/12/27
Prof. (Dr.) Samir Kumar Samanta
M. Pharm., Ph.D (J.U.)
Principal
Dr. B. C. Roy College of Pharmacy & AHS
Durgapur, West Bengal-713206

Fwd: curcumin pyrazole isoxazole

From: kausik kapat (kausikkapat2012@gmail.com)
To: souvik_basak1@yahoo.com; souvikb9@gmail.com
Date: Wednesday, May 10, 2023 at 01:20 PM GMT+5:30

Souvik, pls. see the attachment. Abhijit has identified that the compounds reported in those papers are quite similar to yours.
For information only.
Regards,

----- Forwarded message -----
From: **Abhijit Hazra** <apuhazra@gmail.com>
Date: Wed, Feb 15, 2023 at 6:30 PM
Subject: curcumin pyrazole isoxazole
To: kausik kapat <kausikkapat2012@gmail.com>

PFA
Thanks

Dr Abhijit Hazra
Scientist Gr I
NIPER Kolkata (Chunilal Bhawan, 168 Maniktala Main Road, Kolkata-700054)
Dept. of Pharmaceuticals (MoC&F)
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Scopus ID: 23477128800

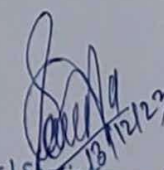
Dr. Kausik Kapat


Assistant Professor, Medical Devices


National Institute of Pharmaceutical Education and Research Kolkata


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M. Pharm., Ph.D (J.U.)
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A handwritten signature in black ink, appearing to read "Samir Kumar Samanta" with a date "12/29" written below it.

Prof. (Dr.) Samir Kumar Samanta
M. Pharm., Ph.D (J.U.)
Principal
Dr. B. C. Roy College of Pharmacy & AHS
Durgapur, West Bengal-713206

Re: zeta potential reults

From: Abhijit Hazra (apuhazra@gmail.com)

To: kausik.kapat@niperkolkata.ac.in

Cc: souvik9@gmail.com; souvik_basak1@yahoo.com

Date: Tuesday, March 28, 2023 at 04:30 PM GMT+5:30

Please find attached the NMR data.

Thanks

On Thu, Mar 23, 2023 at 6:17 AM Kausik Kapat <kausik.kapat@niperkolkata.ac.in> wrote:

Dear Souvik,

These are the zeta potential data for the samples submitted by Hriday Bera. Please forward it to him.

For your reference please.

Regards,
Kausik

----- Forwarded message -----

From: ARJA ASWANI <arajaashwini@gmail.com>

Date: Monday, 13 March 2023

Subject: zeta potential reults


To: Kausik Kapat <kausik.kapat@niperkolkata.ac.in>


Good Afternoon Sir,


Below I'm attaching the results of zeta potential for given samples.

Thanks & Regards
Aswani Arja

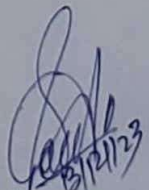
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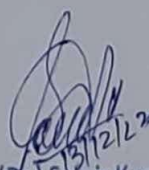
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