SCINTELLECT – An undergraduate research initiative

Annual report June 2022 - June 2023 (AY 2021-22)

SCINTELLECT, the undergraduate research initiative of BNCP started in 2016 encourages and facilitates undergraduate students to engage in research projects and scientific writing-publications under the mentorship of a faculty member. This is designed to provide a platform to the students to explore and engage in a full-time research experience in close collaboration with faculty members, postgraduate and PhD students. It provides the opportunity to nurture and hone scientific writing skills in students that subsequently gives them a competitive advantage over their peers in the higher education and industry sectors augmenting their employability. The outcomes of this experiential learning could be presentation of research project in seminars/conferences, research competitions like AVISHKAR and publication in peer reviewed national and international journals.

SCINTELLECT has gained popularity amongst the undergraduate students and there are 03 student working on review papers and 2 groups undertaking projects across diverse disciplines of pharmaceutical sciences.

SCINTELLECT outcomes till date:

1. Review article: Patel, S., Sandha, K., Waingankar, A., Jain, P., & Abhyankar, A. (2023). Atropisomerism transforming anti-cancer drug discovery. Chemical Biology & Drug Design, 101(1), 138-157. **Impact factor :3**
2. Mehta K, Khambete M, Abhyankar A, Omri A. Anti-Tuberculosis Mur Inhibitors: Structural Insights and the Way Ahead for Development of Novel Agents. Pharmaceuticals. 2023 Mar 1;16(3):377. **Impact factor :4.6**
3. Doshi G, Bhatia N, Ved H, Pandya A, Kulkarni D, Naik J, Bandiwadekar T, Godad A, Kale P. Update on Oxytocin, Phosphodiesterase, Neurokinin, Glycine as a Therapeutic Approach in the Treatment of Schizophrenia. CNS & Neurological Disorders-Drug Targets (Formerly Current Drug Targets-CNS & Neurological Disorders). 2023 Aug 1;22(7):994-1007. **Impact factor :2.6**
4.

List of BNCP SCINTELLECT projects June 2021 - June 2022
Undergraduate student research promotion activity

Total SCINTELLECT ongoing projects = 08

Names of students	Name of project	Outcome presented
Sehba Ghaswala, Sadaf Hasham	Formulation development and evaluation of polyherbal antiacnegel	a)Natural Speciality Ingredients Conference 2023 organised by ORAH Nutrichem and SVKM's Dr. BNCP on 9th-10th March 2023 b) 17th AVISHKAR, Research Convention 2022-2023, Mumbai in institute zonal round
Siddhanto Dey, Jay Chachand and Ritiwik Kesarwani	Cuttle fish bone peel off facial mask for acne scars	17th AVISHKAR, Research Convention 2022-2023, Mumbai in institute zonal round And 17th AVISHKAR, Research Convention 2022-2023, Mumbai in Final round

SCINTELLECT-GLIMPSES

AAVISHKAR


University of Mumbai
17th Aavishkar
Inter-Collegiate/Institute/Department Research Convention
(Zonal Round)
Academic Year 2022-23
Certificate of Participation
This is to Certify that Mr. Dey Shidhanto Pravin of Dr. Bhanuben Nanavati College of Pharmacy, Vile Parle has participated and presented a Research Project titled Cuttlefish bone face peel off mask for acne marks in Medicine and Pharmacy Category and UG Level at 17th Aavishkar: Inter-Collegiate/Institute/Department Research Convention (Zonal Round) organized by the University of Mumbai at Bharati Vidyapeeth's College of Pharmacy, Belapur, Navi Mumbai on December 24, 2022 for Pharmacy Colleges/Institutes zone.
Dr. Minakshi Gurav
OSD,
Aavishkar,
University of Mumbai
Dr. Sunil Patil
Director,
Department of Students' Development,
University of Mumbai
December 24, 2022
Belapur, Navi Mumbai


University of Mumbai
17th Aavishkar
Inter-Collegiate/Institute/Department Research Convention
(Zonal Round)
Academic Year 2022-23
Certificate of Participation
This is to Certify that Mr. Chachad Jay Kaushikbai of Dr. Bhanuben Nanavati College of Pharmacy, Vile Parle has participated and presented a Research Project titled Cuttlefish bone face peel off mask for acne marks in Medicine and Pharmacy Category and UG Level at 17th Aavishkar: Inter-Collegiate/Institute/Department Research Convention (Zonal Round) organized by the University of Mumbai at Bharati Vidyapeeth's College of Pharmacy, Belapur, Navi Mumbai on December 24, 2022 for Pharmacy Colleges/Institutes zone.
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University of Mumbai
17th Aavishkar
Inter-Collegiate/Institute/Department Research Convention
(Zonal Round)
Academic Year 2022-23
Certificate of Participation
This is to Certify that Mr. Kesarwani Ritik Rakesh of Dr. Bhanuben Nanavati College of Pharmacy, Vile Parle has participated and presented a Research Project titled Cuttlefish bone face peel off mask for acne marks in Medicine and Pharmacy Category and UG Level at 17th Aavishkar: Inter-Collegiate/Institute/Department Research Convention (Zonal Round) organized by the University of Mumbai at Bharati Vidyapeeth's College of Pharmacy, Belapur, Navi Mumbai on December 24, 2022 for Pharmacy Colleges/Institutes zone.
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University of Mumbai
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Inter-Collegiate/Institute/Department Research Convention
(Zonal Round)
Academic Year 2022-23
Certificate of Participation
This is to Certify that Mr. Hasham Sadaf of Dr. Bhanuben Nanavati College of Pharmacy, Vile Parle has participated and presented a Research Project titled ACNE-HEAL- A herbal anti-acne gel in Medicine and Pharmacy Category and UG Level at 17th Aavishkar: Inter-Collegiate/Institute/Department Research Convention (Zonal Round) organized by the University of Mumbai at Bharati Vidyapeeth's College of Pharmacy, Belapur, Navi Mumbai on December 24, 2022 for Pharmacy Colleges/Institutes zone.
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Inter-Collegiate/Institute/Department Research Convention
(Zonal Round)
Academic Year 2022-23
Certificate of Participation
This is to Certify that Ms. Bhanushali Nandini of Dr. Bhanuben Nanavati College of Pharmacy, Vile Parle has participated and presented a Research Project titled Nutracosmastick: Lipstick for children with nutritional values. in Medicine and Pharmacy Category and UG Level at 17th Aavishkar: Inter-Collegiate/Institute/Department Research Convention (Zonal Round) organized by the University of Mumbai at Bharati Vidyapeeth's College of Pharmacy, Belapur, Navi Mumbai on December 24, 2022 for Pharmacy Colleges/Institutes zone.
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Dr. Sunil Patil
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Department of Students' Development,
University of Mumbai


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17th Aavishkar
Inter-Collegiate/Institute/Department Research Convention
(Zonal Round)
Academic Year 2022-23
Certificate of Participation
This is to Certify that Ms. Rathod Divisha of Dr. Bhanuben Nanavati College of Pharmacy, Vile Parle has participated and presented a Research Project titled ULCI-KURE: A herbal gel for management of mouth ulcers in Medicine and Pharmacy Category and UG Level at 17th Aavishkar: Inter-Collegiate/Institute/Department Research Convention (Zonal Round) organized by the University of Mumbai at Bharati Vidyapeeth's College of Pharmacy, Belapur, Navi Mumbai on December 24, 2022 for Pharmacy Colleges/Institutes zone.
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Aavishkar,
University of Mumbai
Dr. Sunil Patil
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University of Mumbai
December 24, 2022


University of Mumbai
17th Aavishkar
Inter-Collegiate/Institute/Department Research Convention
(Zonal Round)
Academic Year 2022-23
Certificate of Participation
This is to Certify that Ms. Ghaswala Sehba of Dr. Bhanuben Nanavati College of Pharmacy, Vile Parle has participated and presented a Research Project titled ACNE-HEAL- A herbal anti-acne gel in Medicine and Pharmacy Category and UG Level at 17th Aavishkar: Inter-Collegiate/Institute/Department Research Convention (Zonal Round) organized by the University of Mumbai at Bharati Vidyapeeth's College of Pharmacy, Belapur, Navi Mumbai on December 24, 2022 for Pharmacy Colleges/Institutes zone.
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Belapur, Navi Mumbai


University of Mumbai
17th Aavishkar
Inter-Collegiate/Institute/Department Research Convention
(Zonal Round)
Academic Year 2022-23
Certificate of Participation
This is to Certify that Ms. Chodasama Isha of Dr. Bhanuben Nanavati College of Pharmacy, Vile Parle has participated and presented a Research Project titled Nutracosmastick: Lipstick for children with nutritional values. in Medicine and Pharmacy Category and UG Level at 17th Aavishkar: Inter-Collegiate/Institute/Department Research Convention (Zonal Round) organized by the University of Mumbai at Bharati Vidyapeeth's College of Pharmacy, Belapur, Navi Mumbai on December 24, 2022 for Pharmacy Colleges/Institutes zone.
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Belapur, Navi Mumbai

University of Mumbai

17th Aavishkar

Inter-Collegiate/Institute/Department Research Convention

(Zonal Round)

Academic Year 2022-23

Certificate of Merit

This is to Certify that **Mr. Chachad Jay Kanubhai** of **Dr. Bhanuben Nanavati College of Pharmacy, Vile Parle** has participated and presented a Research Project titled **Cuttlefish bone face peel off mask for acne marks** in **Medicine and Pharmacy** Category and **UG** Level at 17th Aavishkar: Inter-Collegiate/Institute/Department Research Convention (Zonal Round) organized by the University of Mumbai at Bharati Vidyapeeth's College of Pharmacy, Belapur, Navi Mumbai on December 24, 2022 for **Pharmacy Colleges/Institutes** Zone. The said Research Project is selected for 17th Aavishkar: Inter-Collegiate/Institute/Department Research Convention (Final Round).

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Belapur, Navi Mumbai

University of Mumbai

17th Aavishkar

Inter-Collegiate/Institute/Department Research Convention

(Zonal Round)

Academic Year 2022-23

Certificate of Merit

This is to Certify that **Mr. Kesarwani Ritik Rakesh** of **Dr. Bhanuben Nanavati College of Pharmacy, Vile Parle** has participated and presented a Research Project titled **Cuttlefish bone face peel off mask for acne marks** in **Medicine and Pharmacy** Category and **UG** Level at 17th Aavishkar: Inter-Collegiate/Institute/Department Research Convention (Zonal Round) organized by the University of Mumbai at Bharati Vidyapeeth's College of Pharmacy, Belapur, Navi Mumbai on December 24, 2022 for **Pharmacy Colleges/Institutes** Zone. The said Research Project is selected for 17th Aavishkar: Inter-Collegiate/Institute/Department Research Convention (Final Round).

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(Zonal Round)

Academic Year 2022-23

Certificate of Merit

This is to Certify that **Mr. Dey Shidhanto Pravin** of **Dr. Bhanuben Nanavati College of Pharmacy, Vile Parle** has participated and presented a Research Project titled **Cuttlefish bone face peel off mask for acne marks** in **Medicine and Pharmacy** Category and **UG** Level at 17th Aavishkar: Inter-Collegiate/Institute/Department Research Convention (Zonal Round) organized by the University of Mumbai at Bharati Vidyapeeth's College of Pharmacy, Belapur, Navi Mumbai on December 24, 2022 for **Pharmacy Colleges/Institutes** Zone. The said Research Project is selected for 17th Aavishkar: Inter-Collegiate/Institute/Department Research Convention (Final Round).

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University of Mumbai

December 24, 2022

PUBLICATIONS

Review > CNS Neurol Disord Drug Targets. 2023;22(7):994-1007.
doi: 10.2174/1871527321666220817161035.

Update on Oxytocin, Phosphodiesterase, Neurokinin, Glycine as a Therapeutic Approach in the Treatment of Schizophrenia

Gaurav Doshi [1], Nirav Bhatia [1], Hemen Ved [1], Aditya Pandya [2], Duttraj Kulkarni [2], Janhavi Naik [2], Tejal Bandiwadekar [2], Angel Godad [1], Pravin Kale [1]

Affiliations + expand

PMID: 35980079 DOI: 10.2174/1871527321666220817161035

Abstract

Background: Schizophrenia is a chronic psychiatric disorder characterized by disrupted thoughts, perception, mood, and behavior. It has a heterogeneous genetic and neurobiological background and affects about 0.5-1% of the adult population worldwide. Herein, we review the current approaches and advances in schizophrenia. The potential therapeutic compounds for the treatment of schizophrenia act on the oxytocin receptor, phosphodiesterase system, neurokinin receptor, and glycine transport 1 receptor. Therefore, this article provides an update on the pharmacology of different receptors in addition to the dopaminergic system. These findings would guide the readers on novel targets for schizophrenia with the potential to be therapeutic agents in the future.

Objective: To provide the researchers an update on the emerging role of oxytocin, phosphodiesterase, neurokinin, and glycine which can be explored as potential pharmacotherapeutic targets in the treatment of schizophrenia.

Methods: An extensive literature search was conducted using PubMed, Science Direct, and NCBI with

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Open Access Review

Anti-Tuberculosis Mur Inhibitors: Structural Insights and the Way Ahead for Development of Novel Agents

by Kunal Mehta [1], Mihir Khambete [1], Arundhati Abhyankar [1,*] and Abdelwahab Omri [2,*]

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(This article belongs to the Section Pharmacology)

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Abstract

CHEMICAL BIOLOGY & DRUG DESIGN

REVIEW

Atropisomerism transforming anti-cancer drug discovery

Simran Patel, Khushi Sandha, Anushka Waingankar, Prachi Jain, Arundhati Abhyankar

First published: 18 October 2022 | https://doi.org/10.1111/cbdd.14155

Simran Patel and Khushi Sandha contributed equally to this work.

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Abstract

Atropisomerism is a stereochemical phenomenon that describes how groups are arranged in space as a result of their impeded rotation around a single bond. It is one of the frequently underappreciated conformational kinds of chirality. A significant role for atropisomers in drug discovery and development has been established via substantial study on the characteristics of molecules exhibiting this form of chirality. According to studies on the target selectivity of anti-cancer drugs, it was identified that atropisomers of specific compounds could be examined to modulate the selectivity of promiscuous inhibitors, which are a key target in cancer therapy. Conversely, it was discovered that these deliberate rigidifications of possible molecules along an axis of chirality gave an abundant possibility of acquiring more tailored anti-cancer action. Atropisomerism plays a significant role in altering pharmacodynamic and pharmacokinetic properties and thereby the success of any proposed drug candidate. It is thus necessary to anticipate the impact of stereogenic centres in such compounds on cancer drug development. Hence,

Prepared by

Dr. Tabassum Khan
July 15, 2023