

Ref.No.: - DBCOP/ Notice/

Date: - 19-08-2023

NOTICE

All the Faculties, Ph.D. Scholar & M. Pharm Students of DBCOP are hereby informed that, inauguration program of Certificate course on **“Animal Handling & Preclinical Research”** is scheduled on 21st August 2023 at 10:00 am.

All are requested to attend the inauguration program.




PRINCIPAL
Dr. (Mrs.) Ujwala Mahajan
PRINCIPAL
DADASAHEB BALPANDE COLLEGE
OF PHARMACY, BESA, NAGPUR - 37

Copy to: Academic In charge/Admin. Office
ADMIN/NOTICE/2023-24

Dadasaheb Balpande College of Pharmacy (DBCOP), Besa, Nagpur-440037



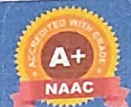
Ambe Durga Education Society's
DADASAHEB BALPANDE COLLEGE OF PHARMACY

Near Swami Samarth Dham Mandir, Besa, Nagpur-37

07103-281277, 281244 www.dbcop.org

NIRF RANK 2019, 2021 & 2022

Accredited by



CGPA: 3.49



CERTIFICATE COURSE ON ANIMAL HANDLING & PRECLINICAL RESEARCH

21st - 26nd August 2023

02 CREDITS

IQAC & DEPT. OF PHARMACOLOGY INITIATIVE

Eligibility

Pharmacy Students & Faculty
Medical Students & Faculty

Limited 50 Seats

Registration Fees: 1000 INR

[For Registration Click Here](#)

or Scan the QR code



Course Objectives

- Overview on regulation pertaining to animal handling & ethical issues.
- To design and execute preclinical animal experimentation and protocols.
- To train students with special emphasis on animal handling skills.



Patron

Honb'le Shri Manoj V. Balpande

President, ADES, Nagpur

Convenor

Dr. Mrs. Ujwala N. Mahajan

Principal, DBCOP, Nagpur

Co-ordinators

Dr. Ajay G. Pise

IQAC Coordinator

+919503056353

Mr. Sachin More

Program Coordinator

+918208153279

Dr. M. Kaleem

Course Coordinator

+919891440489



Ambe Durga Education Society's
Dadasaheb Balpande College of Pharmacy (DBCOP)
Near Swami Samarth Mandir, Besa, Nagpur-37

Animal Handling & Preclinical Research Certificate Course
42 hrs; 02 CREDITS

21st August 2023 to 26th August 2023

Organized by IQAC & Department of Pharmacology

1. Basic Information about the applicant College/Departments:

- (i) Name of the College/University Department/Institute: Dadasaheb Balpande College of Pharmacy, Besa, Nagpur.
- (ii) Complete Postal Address of College/Department/Organization (*Registered Address*) Dadasaheb Balpande College of Pharmacy, Besa Near Swami Samarth Dham Mandir, Nagpur-440037.
- (iii) Status: Affiliated/Conducted/Autonomous: Affiliated
- (iv) Affiliation/Registration No.: RTMNU/CDS/2019/4676
- (v) Name of the Principal/Director/HOD University Dept.: Dr. Ujwala Mahajan
- (vi) Phone Number /Mobile: 8275013831
- (vii) Email ID of College & Principal: ujwalat5@gmail.com

2. Details of the Course Proposed:

- (i) Name of the Certificate Course: Animal Handling & Preclinical Research Certificate Course
- (ii) Target Group(s): M. Pharm. Ph.D. students and Faculties
- (iii) Duration of the Course: 30.15 hours
- (iv) Timings: 6 hrs/weeks (10.00 am-6.00 pm)
- (v) Medium of Instruction: English
- (vi) No. of candidates to be admitted: 50
- (vii) Fees to be Charged per student: Rs1000/-



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3. Syllabus for the proposed Course: A copy of the Syllabus must be attached giving details about Theory & Practical etc. along with the Teaching Plan and course objectives.

Course Objectives:

1. To acquire the knowledge and approval required for obtaining form B in Department of Pharmacology.
2. To train Pharmacy students with special emphasis on animal handling skills.
3. Regulation pertaining to animal handling & ethical issues.

Expected Outcome:

After completing this course, it will be anticipated that the students will be able to comprehend and acquire the ability to handle animals' expertise as well as ethical issues related to CCSEA guidelines that will be helpful to explain the responsibilities that various teammates participate in and how they may can work together to achieve the team's objectives. A certification of completion will be awarded to students following their completion of the course.



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Animal Handling & Preclinical Research Certificate Course
42 hrs. 02 CREDITS

21th August 2023 to 26th August 2023

Organized by IQAC & Department of Pharmacology

Syllabus (Theory & Practical)

Theory [18 Hrs.]

A. Regulatory Guidelines associated with Experimental Animal and facility. [3 Hrs.]

- CCSEA Guidelines for the animal house facility.
- Form A, Form B, Form C, Form D
- Flow of ethical approval.
- 3 R Principle
- Care and Maintenance of Animal House Facility
- Standard Operating Procedure for animal House facility
- Investigators' necessities for performing animal house facility.

B. Experimental Planning [5 Hrs.]

- Experimental Animals and their utility
- Pre-, post- experimental set-up
- Dose calculation
- Route of administration
- Blood withdrawal techniques
- Anesthesia and euthanasia
- Disposal of dead animals and carcasses.
- Techniques in experimental pharmacology

C. Preclinical Experimental Models [5 Hrs.]

- Cell cultures using either MTT or WST-1 Test for cell viability and cell proliferation studies.
- Cardiovascular studies using either Isoproterenol (100 mg/kg/day, i.p.) in the 11th and 12th days) or Doxorubicin (5 mg/kg s.c.) for inducing Myocardial Infarction
- High-Fat Diet-Induced Obesity in Animal Models (HFD containing 60% kcal fat, 20% kcal carbohydrate, and 20% kcal protein)
- Streptozotocin-Induced Type 2 Diabetes Animal Models (STZ, 40 mg/kg i.p)
- DMBA Induced Breast Cancer in Animal Models (50 mg/kg s.c.)
- CNS disorder-related Models
- Skin disorder-related protocol
- Inflammatory & analgesic Animal protocol
- Bioavailability study planning.
- Surgical procedure protocol

D. Biostatistical tool [5 Hrs.]

- Collection techniques of experimental data
- Utility and application of biostatistical tools like T test, Z test, Chi square test, ANOVA etc.
- Graphical representation of data



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Practical (demonstration) and assignment/quiz: [24 Hrs.]

1. Visit to animal house facility for understanding the layout of the animal house facility. (1 Hrs.)
2. SOP and its implementation of Animal House facility (2 Hrs.)
3. Handling Techniques for experimental animals (2 Hrs.)
4. Various routes of administration to the experimental animal (2 Hrs.)
5. Blood withdrawal techniques (2 Hrs.)
6. Anesthesia and euthanasia (1 Hrs.)
7. Modeling of Behavioral Experimentations associated with various systems. (08 Hrs.)
8. Modeling of Cardiovascular/Obesity/ Breast Cancer Experimentations associated with numerous systems. (03 Hrs.)
9. Modeling of surgical experimentation like stereotaxy, olfactory bulbectomy etc. (08 Hrs.)
10. Demonstration of animal dissection with a detailed outline of organs. Isolation of organs. (5 Hrs.)
11. Preparation of tissue for quantitative and qualitative estimation. (5 Hrs.)



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Theory Session Plan (10.00 pm-01.00 pm)

Day	Lecture 1	Lecture 2
21 August 2023	CCSEA Guidelines for the animal house facility. Form A, Form B, Form C, Form D Flow of ethical approval. 3 R Principle Care and Maintenance of Animal House Facility	Standard Operating Procedure for animal House facility Investigators' necessities for performing animal house facility. Experimental Animals and their utility
22 August 2023	Pre-, post- experimental set-up Dose calculation Route of administration Blood withdrawal techniques Anaesthesia and euthanasia Disposal of dead animals and carcasses.	Techniques in experimental pharmacology Cardiovascular tests High-Fat Diet-Induced Obesity Streptozotocin-Induced Type 2 Diabetes DMBA Induced Breast Cancer in Animal Models
23 August 2023	Skin disorder-related protocol Inflammatory & analgesic Animal protocol Bioavailability study planning. Surgical procedure protocol	Collection techniques of experimental data Utility and application of biostatistical tool like T test, Z test, Chi square test, ANOVA etc.
24 August 2023	Toxicity Studies CNS disorder-related Models	
25 August 2023	Modeling of surgical experimentation like stereotaxy, olfactory bulbectomy etc. (2 Hrs.)	Demonstration of animal dissection with a detailed outline of organs. Isolation of organs. (1 Hrs.)
26 August 2023	Preparation of tissue for quantitative and qualitative estimation. (3 Hrs.)	-



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Practical Session Plan (1.30 pm-06.00 pm)

Day	Batch A	Batch B
21 August 2023	Visit to animal house facility for understanding the layout of the animal house facility. (1 Hrs.) SOP and its implementation of Animal House facility (2 Hrs.) Handling Techniques for experimental animals (1 Hrs.)	Handling Techniques for experimental animals (1 Hrs.) Various routes of administration to the experimental animal (2 Hrs.) Blood withdrawal techniques (1 Hrs.)
22 August 2023	Handling Techniques for experimental animals (1 Hrs.) Various routes of administration to the experimental animal (2 Hrs.) Blood withdrawal techniques (1 Hrs.)	Visit to animal house facility for understanding the layout of the animal house facility. (1 Hrs.) SOP and its implementation of Animal House facility (2 Hrs.) Handling Techniques for experimental animals (1 Hrs.)
23 August 2023	Blood withdrawal techniques (1 Hrs.) Anesthesia and euthanasia (1 Hrs.) Modeling of Behavioral Experimentations associated with various systems. (2 Hrs.)	Modeling of Behavioral Experimentations associated with various systems. (4 Hrs.) Modeling of Cardiovascular/Obesity/Breast Cancer Experimentations associated with numerous systems. (03 Hrs.)
24 August 2023	Modeling of Behavioral Experimentations associated with various systems. (4 Hrs.) Modeling of Cardiovascular/Obesity/Breast Cancer Experimentations associated with numerous systems. (03 Hrs.)	Blood withdrawal techniques (1 Hrs.) Anesthesia and euthanasia (1 Hrs.) Modeling of Behavioral Experimentations associated with various systems. (2 Hrs.)
25 August 2023	Modeling of surgical experimentation (4 Hrs.)	Demonstration of animal dissection with a detailed outline of organs. Isolation of organs. (4 Hrs.)
26 August 2023	Demonstration of animal dissection with a detailed outline of organs. Isolation of organs. (4 Hrs.)	Modeling of surgical experimentation (4 Hrs.)

Session Planning :(Daily assignment and quiz at the end of the day)

Passing Criteria:

Total Assignment/Quiz: 06 (60 Marks)

Final Examination: 40 Marks

Total: 100

Passing Requirement: 50* (30 out of 60 in the assignment and 20 out of 40 in the final exam)

[*No certificate will be issued if one of above criteria does not meet]



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4. Details of the Faculty for Course:

(i) Whether College /Department has any Degree/ Diploma Course related to the Proposed course: - NO

(ii) Whether the course is prepared by Experts from related field: Yes.

(iii) Information of Course Coordinator (To be appointed for the course):

Name and Address/ e-mail & Mobile No. (WhatsApp)	Qualification	Experience
Dr. Mohammed Kaleem	M. Pharm., Ph. D.	8 yrs.
Mr. Sachin More	M. Pharm., (Ph. D.)	15

(iv) Information of Faculty Members (To be appointed for the course)

Sr. No.	Name of the Faculty Member	Qualification	Topics	Full e-mail PostalAddress/ &Mobile No.
1.	Dr. Mohammed Kaleem	M. Pharm., Ph. D.	Screening Methods for Anti-Cancer Drug Evaluation - DMBA Induced Breast Cancer in Animal Models a) Cytotoxicity Screening Models and Applications - Cell cultures using either MTT or WST-1 Test for cell viability and cell proliferation studies Cell Lines in Drug Screening - Cryopreservation - Complete Medium - Freezing Medium - Thawing Process - Animal Handling and blood Withdrawals and sacrifice	Dadasaheb Balpande College of Pharmacy, Besa, Nagpur, Nagpur (M.S.), India: Email: kaleemmubin88@gmail.com ; Mob: 9891440489
2.	Mr. Sachin More	M. Pharm., (Ph. D.)	a) Fundamentals of Drug Discovery Principles: - Clinical Trials and Clinical Research b) Regulatory Guidelines for Animal Experimentation - Form A, Form B, Form C, Form D - Flow of ethical approval - Protocols Designing - Depression (Tail Suspension,	Dadasaheb Balpande College of Pharmacy, Besa, Nagpur (M.S.), India: Email: sam007more@gmail.com ; 9960567037



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			Forced Swim Test, Open Field Test)	
3.	Mr. Sachin Mendhi	M.Pharm. (Ph. D.)	• Animal Facility Management and Maintenance • Care and Maintenance of Animal House Facility • Standard Operating Procedure for animal House facility • Epilepsy	Dadasaheb Balpande College of Pharmacy, Besa, Nagpur (M.S.), India: Email: sachinmendhi@dbcop.org Mob: 9860673010
4.	Ms. Amruta Shete	M. Pharm. (Ph. D.)	• Investigators' necessities for performing animal house facility • 3 R Principles • Duration of study • Neurodegenerative Models (Alzheimer's)	Dadasaheb Balpande College of Pharmacy, Besa, Nagpur (M.S.), India: Email: amrutapharma05@gmail.com ; 9561648221
5.	Ms. Krutika Sawarkar	M. Pharm. (Ph. D.)	• CCSEA Guidelines for the animal house facility. • Dose calculation • Neurodegenerative Models (Parkinson) • Inflammation and Wound Healing Models • Plethysmometer (Paw Edema)	Dadasaheb Balpande College of Pharmacy, Besa, Nagpur (M.S.), India: Email: krutikasawarkar@dbcop.org Mob:9503296928
6.	Dr. Subhash R. Yende	M. Pharm. Ph. D.	• Drug Acting CNS	Guru Nanak College of Pharmacy, Nagpur (M.S.), India. Email:subhashyende@gmail.com Mob:9028665370



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5. Details of the Physical Facility to be provided for the course:

- (i) Classrooms Details: For the intake of 50 students, classes shall be conducted at SeminarHall, DBCOP.
- (ii) Library Details: 10 Books are available on above listed topics at DBCOP library.
- (iii) Details of Practical Room/Laboratory: Applicable



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(iv) Details of Laboratory Equipment's: Applicable

(v) Any Other facility/Online Platforms etc.

6. Particulars of Expenditure:

Sr. No.	Particulars	Amount
1.	Honorarium to Staff	60,000
2.	Teaching Material	20,000
3.	Contingencies	20,000
4.	Total	1,00,000

7. Credit weightage of the course.

Name of the Course	Number of Hours of Teaching/Training	Number of Credits as per Table A
Experimental pharmacology Certificate Course	40 hours	2

***The Application Form should be accompanied with Hourly Teaching Plan to justify the teaching hours and duration of course.**

Signature & Seal of the
Principal/Director/Head of Department

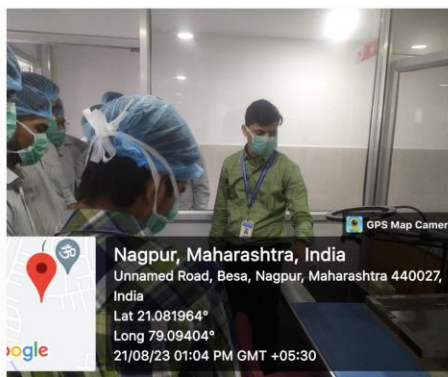
Signature & Seal of the
Course Director

UNDERTAKING

I, **Dr. Ujwala Mahajan** Principal/Head of Institution **Dadasaheb Balpande College of Pharmacy, Besa, Nagpur** Undertake to state that I shall be abiding by the rules & regulations of the Department regarding organization and completion of the course.

Dated:

Signature & Seal





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Program Celebration Report

Name of the program Conducted: Certificate Course on Animal Handling & Preclinical Research

Relevant Occasion: Initiative by IQAC, Pharmacology Department, DBCOP

Date: 21th – 26th August 2023

Venue: DBCOP Conference hall

Relevance to POs: I, II, III, V, VI, VIII, X, XI

Objective:

1. Overview on regulation pertaining to animal handling & ethical issues.
2. To design and execute preclinical animal experimentation & protocol.
3. To train students with special emphasis on animal handling skills

Beneficiary: M. Pharm. Ph.D. students and Faculties

Program Organizing committee: Pharmacology Department

Program Outcome: Through this program 53 students were benefitted, and they got trained with:

1. Ethical consideration associated with preclinical research.
2. Designing & execution animal protocol for screening various biological activities.
3. Analyzing & interpreting preclinical outcomes.

Attachments Needed

- i) Notice
- ii) Flyer of the program
- ii) Photographs of celebration



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Course Coordinator

Dr. M. Kaleem

Principal

Dr. Ujwala N Mahajan

Report

In Pharmacy fraternity this was the initiative took by IQAC, Pharmacology Department, Dadasaheb Balpande College of Pharmacy Besa, Nagpur by organizing the Certificate Course for students entitled “**Animal Handling & Preclinical Research Certificate Course**” under Dadasaheb Balpande College of Pharmacy Besa, Nagpur, Maharashtra-440037. This certificate course was scheduled from 21th August 2023 to 26th August 2023. The objective of this certificate course was to acquire the knowledge and skills required for animal handling and preclinical research on an individual basis. To regulate pertaining to animal handling & ethical issues, to plan and execute preclinical animal experimentation & protocol. By also training students with special emphasis on animal handling skills.

For this course, Shri Manoj Balpande, President, Ambe Durga Education society, Nagpur and Dr. Ujwala N. Mahajan, Principal, Dadasaheb Balpande College of Pharmacy were the major supporter, Dr. Ajay Pise, IQAC Co-ordinator and Dr. M. Kaleem was the course coordinator. For offline sessions the technical support was given by Mr. Sachin M. More, Mr. Sachin Mendhi, Ms. Amruta Shete and Ms. Krutika R. Sawarkar, Mr. Dipak Awaze and Mr. Krishna Thakre made enormous efforts to conduct animal handling activities. On day 1, the inaugural function was inaugurated by Shri Manoj Balpande, President, Ambe Durga Education society, Nagpur in the presence of Dr. Ujwala N. Mahajan, Principal, Dadasaheb Balpande College of Pharmacy, Dr. Ajay Pise, IQAC Co-ordinator and teaching, non-teaching staff and students.

On day 1 for session 1 and 2 we had Inauguration, about workshop and guidelines about program by Mr. Sachin M. More, While Mr. Kishor R. Danao, explained about In silico techniques and Docking, demonstrated it using software by while, Mr. Sachin M. More, enlighten regarding Drug Discovery, demonstrated visit and Maintenance of animal House.

On day 2 for session 1, Regulatory guidelines on Experimental Animals, Basics of experimental Protocols was delivered by Ms. Krutika R. Sawarkar Mr. Sachin M. More.



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For session 2, Dr. Mohammed Kaleem, enlightened about Hand on Basics of experimental Protocols and Routes of drug administration, euthanasia, anesthesia etc.

On day 3 for session 1, Dr. Subhash Yende, (GNCP, Nagpur) gave minutes and important points regarding Toxicity studies, while Mr. Sachin M. Mendhi briefed about neurological behaviors models.

For session 2, Mr. Sachin M. Mendhi, has explained regarding hand on basics of neurological behaviors models (FST and TST) and hand on basics neurological behaviors models (light and dark and EPM).

On day 4, for session 1, Dr. Mohammed Kaleem, explained and enlighten the session regarding Cell lines studies and their application, on the other hand, Mrs. Amruta D. Shete explained about neurological behavior models memory for Alzheimer. For session 2, Mrs. Amruta D. Shete given the knowledge regarding hand on basics neurological behaviors models (Morris Water maze) and (Radial arm maze).

On day 5, for session 1, Ms. Krutika R. Sawarkar performed the session on analgesic and antiinflammatory, demonstrating analgesic & wound healing models.

For session 2, Dr. Mohammed Kaleem, managed and trained students regarding hand on animal dissection with a detailed outline of organs, Isolation of organs, along with Surgical procedure and Histopathology.

On day 6, for session 1, Mr. Sachin More, conducted the session and explained about Interpretation of statistical data and One-way Anova and different test.

For session 2, Dr. Mohammed Kaleem, explained regarding about Statistical Interpretation data using Graph pad prism 9.

The valedictory program of the certificate course was held on Day 6, 26th of August 2023 in presence of Dr. Ujwala Mahajan Principal, DBCOP, Nagpur, Dr. Nilesh Mahajan as a guest and speaker, Dr. Ajay Pise IQAC Coordinator, Dr. Mohammed Kaleem, Course Coordinator, Mr. Sachin More, Program Coordinator, teaching and supporting staff of DBCOP. In this certificate course the appreciation was given to the students in different categories. The best attendee award

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was secured by Mr. Bhawana Dhumbhare. The best performer award was secured by Ms. Vithika V. Gupta while Ms. Devyani Sonak was awarded for scoring the highest score in assessment.

Patron

Shri. Manoj V. Balpande
President, ADES, Nagpur

Convenor

Dr. Mrs. Ujwala N. Mahajan
Principle, DBCOP, Nagpur

Dr. Mohammed Kaleem
Course Co-ordinator
DBCOP, Besa, Nagpur

Mr. Sachin More
Program co-ordinator
DBCOP, Besa, Nagpur

Dr. Ajay Pise
IQAC Co-ordinator
DBCOP, Besa, Nagpur