

# **RBVRR WOMEN'S COLLEGE OF PHARMACY**

# 3-4-343, Barkathpura, Hyderabad - 500 027 (T.S), India Office: +91 40-27563065, Mobile: +91 9848930555 (Approved by the AICTE, PCI & Affiliated to Osmania University) Recognized under Section 2(f) of the UGC Act 1956 EAMCET Code: RBVW | PGECET Code: RBVW1

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# GREENCHEMISTRY Boght IN DRUG DISCOVERY

**CERTIFICATE COURSE** 

ON

# 18th -23rd DECEMBER 2023

# TARGET AUDIENCE

- Under Graduates
- Post Graduates
- Research Scholars
- Science Enthusiasts

# **COURSE BENEFITS**

- Learn about principles of green chemistry
- Gain hands on training on microwave synthesizer
- Learn about design of nano-catalysts and significance of phase transfer catalysts and Biocatalysts in drug discovery.

# **Registration Link:** https://forms.gle/hNGyeHVWdKgXkaAK9

Registration Fee: 1000/-

Last Date for Registration: 15<sup>th</sup> Dec 2023

#### ABOUT RBVRR WOMEN'S COLLEGE OF PHARMACY:

RBVRR Women's College of Pharmacy, founded in the year 2006, operates successfully under Hyderabad Mahila Vidhya Sangam, guided by the visionary leadership of its Founder Principal, Prof. M. Sumakanth, with a core mission of offering education to young women. The college has spacious classrooms, wellequipped laboratories with the latest equipment, and well-furnished seminar hall, conference room and library with a good number of the latest editions of both textbooks and reference books.

The college is offering the following courses:

1.B.Pharmacy (100seats)

2. Pharm.D (32)

3.M.Pharmacy (Pharma.Chemistry,Pharmaceutics,Pharm.Analysis and Pharmacology).

## VISION

To be a National Women Pharmacy Professional leader in transforming lives through innovative, vigorous and compassionate approach to Pharma education.

#### MISSION

RBVRRWCP preparing and empowering girl students by providing continuous awareness programmes to succeed in changing world apart from regular curriculum

## **OBJECTIVES**

- To familiarize with green chemistry.
- To learn about green reagents, green solvents, green catalysts and reaction conditions.
- To know about greener technologies and alternative energy sources.
- To learn about renewable resources and greenhouse effect.
- To know the importance of catalysis in green synthesis.
- To know various techniques in green chemistry based on current needs.
- To learn the various green techniques and the technology behind them.

#### Value added course

## **Course: Green Chemistry in Drug Discovery**

Code: APCCC001

**Credits: 4** 

**Total No. of Hours: 30** 

The aim of conducting this certificate course is to raise awareness on the role of green chemistry in drug design and development. The Course is focusing on basic principles of green chemistry, designing, alternate energy sources, catalysis in green synthesis and current updates in Green chemistry.

#### **UNIT I: PRINCIPLES AND CONCEPTS OF GREEN CHEMISTRY**

Introduction, principles of green chemistry, sustainable development and green chemistry. Atom economic reactions- rearrangement and addition reactions. Atom un-economic reactions- substitution, elimination reactions.

#### **UNIT II: DESIGNING A GREEN SYNTHESIS**

Role of green synthesis in drug discovery Green discoveries; greener reagents, role of green catalysts in organic synthesis, Sustainable synthesis of pharmaceuticals. Development of Photo enzymatic Strategies for Selective Organic Synthesis–Focus on Advantages and Challenges

**UNIT -III: GREENER TECHNOLOGIES AND ALTERNATIVE ENERGY SOURCES 6 HOURS** Chemistry using Microwaves: Microwave heating and microwave-assisted reactionsreactions in water, reactions in organic solvents, solvent free reactions. Sonochemistry & Electrochemical synthesis with examples.

#### UNIT IV: RENEWABLE RESOURCES AND GREENHOUSE EFFECT

Biomass as a renewable resource: Fossil fuels, biomass, solar power, fuel cells and other forms of renewable energy. Chemicals and polymers from renewable feedstock. Greenhouse effect and Global Warming – Introduction - How the greenhouse effect is produced - Major sources of greenhouse gasses - Emissions of CO2 - Impact of greenhouse effect on global climate. Control and remedial measures of greenhouse effect. Global warming- A serious threat to life on earth.

#### UNIT V: CATALYSIS IN GREEN SYNTHESIS.

The design of Nano-catalysts for energy and environmental applications. Phase Transfer Catalysts: Introduction, mechanism of catalytic action, type of catalysts and its advantages, Application of Phase transfer catalysis in green synthesis. Biocatalysts: Introduction, Biochemical oxidations and reductions.

#### 8 HOURS

7 HOURS

# 4 HOURS

**5 HOURS** 

# **PROGRAMME SCHEDULE**

DATE	MORNING SESSION	AFTERNOON SESSION
	10.30AM-1.00PM	2.00PM-4.30PM
18/12/23	10.00-10.30AM: Inaugural Session Dr. Srinivas Nanduri Professor, Department of Chemical Sciences, NIPER Hyderabad	<b>Dr. Bhoomi Reddy Rama Devi</b> Professor & Head of the Department, Chemistry JNTUH University College of Engineering, Science & Technology, Hyderabad
19/12/23	<b>Dr. V. Naveen Reddy</b> Assistant Professor, Department of Chemistry, Nizam College, Hyderabad.	<b>Dr. K. Premalatha</b> Assistant Professor Department of Chemistry, University College for Women, Osmania University
20/12/23	<b>Dr. GunaSekar G.H.</b> Scientist & Assistant Professor AcSIR, Department Of Catalysis & Fine Chemicals. CSIR-IICT Hyderabad	<b>Dr. T. Saravanan</b> Assistant Professor School of Chemistry University of Hyderabad Hyderabad
21/12/23	Hands on Training on Microwave Synthesizer	Hands on Training on Microwave Synthesizer
22/12/23	<b>Prof. B.M. Reddy</b> FNAE, FNASC, FRSC, FTASC, FAPASC Senior Professor Emeritus Department of Chemistry BITS Pilani, Hyderabad Campus Hyderabad	<b>Dr. Jeevana Jyothi</b> HOD, Associate Professor RBVRR Women's College Department of Chemistry & Forensic Science Barkatpura
23/12/23	<b>Prof. M Thirumala Chary</b> Professor of Emeritus, Chemistry JNTUH University College of Engineering , Science & Technology Hyderabad	<b>Prof. M. Sumakanth</b> Principal, RBVRR Women's College of Pharmacy Valedictory Session

# **SUBJECT EXPERTS**



MR. DR. SRINIVAS NANDURI Professor, Department of Chemical Sciences, NIPER Hyderabad



DR. BHOOMI REDDY RAMA DEVI Professor & Head of the Department, JNTUH



**DR.G.H.GUNASEKAR** Scientist & Assistant Professor AcSIR, Department Of Catalysis & Fine Chemicals. CSIR-IICT.



**PROF. B.M. REDDY** Senior Professor Emeritus Department of Chemistry BITS Pilani, Hyderabad Campus



DR. T. SARAVANAN Assistant Professor School of Chemistry University of Hyderabad



DR. V. NAVEEN REDDY Assistant Professor, Department of Chemistry, Nizam College.



DR. K. PREMALATHA Assistant Professor Department of Chemistry University College for Women Osmania University



PROF. M THIRUMALA CHARY Professor of Emeritus Chemistry JNTU Hyderabad JNTUH University College of Engineering , Science & Technology Hyderabad



DR. JEEVANA JYOTHI Associate Professor RBVRR Women's College, Barkathpura.



PROF. M. SUMAKANTH Principal RBVRR Women's College of Pharmacy

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Gpay Number : 7702236567

## **Program Coordinator**

# Dr. M.Vijaya Bhargavi

Associate Professor & Head Department of Pharmaceutical Chemistry RBVRR Women's College of Pharmacy. 98480 54391

> For Queries Contact Mrs. V. Padmaja: 9849583030 Mrs. P. Archana : 8660723852 Mrs. Sajida Afreen : 7702236567