



**Report on Life Science Skill Development Training Workshop on
Entrepreneur Development in Herbal Drug Industry
(Characterization, formulation and Analysis)**

Botany Department with Skill Development cell

Date of Event : 20-22 October, 2016

Venue : Botany Department

**LIFE SCIENCE SKILL DEVELOPMENT
TRAINING WORKSHOP**

on

**Entrepreneur development in Herbal
drug Industry**

(Characterization Formulation & Analysis)

20-22 October, 2016

Organized by

Skill Development Cell & School of Life Science
GURU GHASIDAS VISHWAVIDYALAYA,
Bilaspur (Chhattisgarh), India.

Organizing Committee

CHIEF PATRON

Prof. Anjila Gupta, Honorable, Vice Chancellor.
Guru Ghasidas Vishwavidyalaya, Bilaspur.

PATRON

Prof. BN Tewari, Registrar
Guru Ghasidas Vishwavidyalaya, Bilaspur

Dean, School of Life Science

Guru Ghasidas Vishwavidyalaya, Bilaspur.

Head, Department of Botany

Guru Ghasidas Vishwavidyalaya, Bilaspur.

CONVENER & COURSE CO-ORDINATOR

Dr. Sushil K Shahi, Member Skill Development Cell,
Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur.

Registration fee: 300/-from each participant
Target group: UG/PG students, Research Scholars, young researchers
Number of participants: 50-60

Program schedules

20/10/2016	
09:00 - 10:00	Registration of participants
10:00 AM-12:00 AM	Inauguration session
12:00 AM-01:00 PM	Tea Break
01:00 PM-02:30 PM	Technical session I
02:30 PM-03:00 PM	Lunch Break
03:00 PM-05:30 PM	Practical session I
21/10/2016	
10:00 PM-02:00 PM	Technical session II
02:00 PM-03:00 PM	Lunch Break
03:00 PM-05:30 PM	Practical session II
22/10/2016	
10 AM- onwards	Proposed visit to herbal industry, Bilaspur and instrumentation trip
05 PM-06 PM	Valedictory function

Background

The workshop will cover practical aspects of herbal drug analysis which include preparation of samples, selection of method of analysis, application of proper method of analysis, interpretation of analytical data, nature of phyto-constituents, application of spectral methods of analysis, etc. The candidates will be exposed to hands on experience on Organoleptic, macroscopically, Microscopically, TLC, Spectrophotometer, GLC, HPLC and other related technique etc.

This is an intensive 3 day program strategically designed to provide participants with a comprehensive overview of core start-up carrier issues related to the sciences and herbal industries. If the students have ever dreamed of creating own carrier in herbal medicine field that program may be useful for that students.

Objectives of the Workshop

1. The main purpose of the workshop is to understand the complexity of herbal drugs analysis and to find out the appropriate and scientific solution for the same.
2. This will help the ayurvedic/Herbal/botanical and pharmaceutical Industry to grow faster and gain more recognition worldwide.
3. It will also help candidates to master the art of analyzing and understanding the complex structure of the ayurvedic/ herbal drugs.
4. It will also help candidates to master the art of formulation of different herbal formulation and to visit the herbal industry for entrepreneurship development.



Details of Event Proceedings

Date (DD-MM-YYYY)	Details of the Session	Details of Resource Person	Number of Participants
20-10-2016	Herbal drug development issues for medicinal plant based products	Prof V.D. Rangari Pharmacy Department, GGV, Bilaspur	108
20-10-2016	Students came to know about extraction and preliminary phytochemical testing of medicinal plants therapeutically important secondary metabolites such as flavanoid ,tannins, saponins, terpenoids	Practical Session by Dr. MP Shahi Botany Department, GGV, Bilaspur.	108
21-10-2016	For understanding the growing habits of the different medicinal plants such as Ashk, Giloi, Hadjad, Sarpganda, Satavari, Akash Neem, Acorus	Field Visit by Dr SK Shahi Botany Department, GGV, Bilaspur	108
21-10-2016	<i>Insilico</i> techniques and bioinformatics uses towards herbal drug development, protein targeted	Dr. DVSK Kaladhar Microbiology and Bioinformatics Department, Atal Bihari Vajpayee Vishwavidyalaya, Bilaspur	108
21-10-2016	Data representation on herbal drug industry and systematic approach	Dr. Depandra Singh University Institute of Pharmacy Pt. Ravishankar Shukla University, Raipur	108
22-10-2016	Medicinal plant based herbal drug their development, and cultivation	Dr. Nirmal Awasthi Prampragat Gyan and Vanoushadhi Vikas Foundation, Bilaspur	108
22-10-2016	Collection, selection, preservation and herbal drug formulation units their registration and planning strategies for small scale industry.	Field Visit drug manufacturing unit Unit Dongarnala pali by Dr SK Shahi Botany Department, GGV, Bilaspur	108



A Brief Abstract of the Event (Maximum 500 Words):

The purpose of the workshop was to provide information about medicinal plants that are used to prepare herbal drugs. The Outcome Mapping workshop took place over three (3) days from 20/10/2016 to 22/10/2016. Some sessions within the workshop were held at herbal garden, RTSD department GGV Bilaspur and herbal product manufactured unit Dongarnala, Pali, Bilaspur. On the first day of workshop after inauguration there was small medicinal plant exhibition for some 30 medicinal important plants mostly from C.G. region with their high demand in herbal drug industry for participants. The lecture was delivered by Prof V.D. Rangari on Herbal drug development issue for medicinal plant based products, Along with basic ideas about herbal drug; he gave detailed information about-how we can utilize medicinal plant for the product development. The practical session was also conducted by Dr. MP Shahi for participants, their they learned the techniques of extraction of some therapeutically important secondary metabolites with soxhlet apparatus, Clevenger apparatus, and chemical extraction. In this session students came to know about extraction and preliminary phytochemical testing of medicinal plants therapeutically important secondary metabolites such as flavanoid, tannins, saponins, terpenoids. On the second day, field trip was organized by Dr. SK Shahi, Botany Department for understanding the growing habits of the different medicinal plants such as Ashk, Giloi, Hadjad, Sarpganda, Satavari, Akash Neem, Acorus, and many more and their uses in different medicinal uses. The lecture was also conducted by Dr. DVSK Kaladhar, he provided information on the *insilico* techniques and bioinformatics uses towards herbal drug development, protein targeted and different aspects of research in the field of herbal drug development to enhance the standardization of herbal drug by application of new and advance technology for successful entrepreneurship. Furthermore, Dr. Deepandra Singh, provided knowledge about data representation on herbal drug industry and systematic approach in this field.

During last day, lecture was delivered by Dr. Nirmal Awasthi on medicinal plant based herbal drug their development, cultivation and problem related to their maintenance and application in different plant species of economic importance and the scope of it's as a herbal medicinal product. After the final lecture a field was organized for the participants to herbal product manufacturing Unit Dongarnala, Pali, Bilaspur for understand collection, selection, preservation and herbal drug formulation units their registration and planning strategies for small scale industry in this field the different application strategies of herbal drug industry in the Cg and for our nation. At last, students from different departments of G.G.V and Bilaspur University learned about the use and production of herbal drug, isolation, purification, and maintenance of medicinal plants, the mass production and formulation, in addition to the instructions for field application through practical hands-on sessions, lectures and field trip. Meanwhile, they stressed that this kind of workshop needs to be continued in the future too. Although, participants need to apply the skills they learned during the workshop to their respective areas, the workshop met its objectives as very positive response was received from the participants on the usefulness of the workshop.

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(केन्द्रीय विश्वविद्यालय अधिनियम 2009 क्र. 25 के अंतर्गत स्थापित केन्द्रीय विश्वविद्यालय)
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Inaugural function of the Workshop on 20 October 2016



Top left: lecturer of Prof. VD Rangari on 20 October 2016
Top right: Practical session by Dr. MP Shahi on 20 October 2016
Bottom left: lecturer of Dr. Kaladhar on 21 October 2016
Bottom right: lecturer of Dr. Deependra Singh on 21 October 2016

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