



# HINDU COLLEGE, GUNTUR

(Re-accredited by NAAC as Grade 'A' with CGPA 3.07)  
Main Road, Opp. Sri Venkateswara Vignan Mandir, Guntur-522003

20-04-2022

To  
The Co-ordinator,  
Joint Science Education Panel  
Indian Academy of Science  
C.V. Raman avenue  
Post Box No – 8005, Sadashivanagar  
Bangalore – 560080  
Karnataka

Respected Sir,

This is to bring your notice that, Department of Botany organised 2 day Science Academy Lecture Work Shop, 6<sup>th</sup> & 7<sup>th</sup> April, 2022, your sanctioned letter dated 8<sup>th</sup> Feb, 2022. The Sanctioned amount Rs. 1,63,645/- and the amount received from you is Rs. 87,000/- in advance. The total expenditure is Rs. 1,76,235/- along with audit statement from chartered accountant is enclosed here with. The Statement along with original bills, time schedule brochure & Resource Person list etc., is also enclosed.

Please pay the balance amount of rupees 89,235/- at the earliest .

Thank you



(P.M. PRASAD)  
Principal (FAC)  
PRINCIPAL  
HINDU COLLEGE  
GUNTUR



20/04/22

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that we have verified and found correct that the amount of rupees 1,76,235/- (Rupees One lakh Seventy six Thousand Two hundred and thirty five) has been incurred by Hindu College, Guntur towards SCIENCE ACADEMIES LECTURE WORK SHOP on "BIOLOGY AND MANKIND: MARCHING A HEAD IN THE NEW ERA".



For SRIGIRIRAJU AND ASSOCIATES  
CHARTERED ACCOUNTANTS

Prop: CA S.V.V. PRADEEP  
M.No: 245649, FRN. No:019033S

22245649 AH/KRNU6439

## UTILIZATION CERTIFICATE

It is verified that the amount of rupees 1,63,645 (Rupees One lakhsixty three thousand six hundred fourty five ) has been incurred by Hindu College, Guntur towards SCIENCE ACADEMIES LECTURE WORK SHOP on "BIOLOGY AND MANKIND: MARCHING A HEAD IN THE NEW ERA" for which the college has received an amount of Rs. 87,000 (Rupees Eighty Seven Thousand) from Indian Academy of Science (IAS) wide letter no SEP/LW/Apr, 2022, The Sanctioned grant is Rs 1,16,000/- wide letter no SEP/ LW/ February/2022, Dt-08-February, 2022. We further certify that, the grant received has been utilized for the purpose which the grant was sanctioned and in accordance with the terms and conditions laid down by the Commission.

If, as a result of check (or) audit objection, some irregularities are noticed at a later stage action will be taken to refund, adjust (or) regularize the objected amount.

  
Co-ordinator

**KVS Durga Prasad**  
Co-ordinator  
Science Academy Lecture Workshop  
Hindu College, GUNTUR.

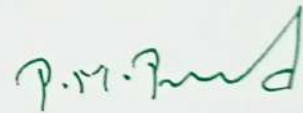
  
Auditor

Registration no

Seal

For **SRIGIRIRAJU AND ASSOCIATES**  
**CHARTERED ACCOUNTANTS**

Prop: **CA S.V.V. PRADEEP**  
M.No: 245649, FRN. No:019033S



Principal

Hindu College  
**HINDU COLLEGE**  
GUNTUR  
Seal





**SCIENCE ACADEMY LECTURE WORK SHOP ON “ BIOLOGY AND MANKIND:  
MARCHING A HEAD IN NEW ERA”**

ON 6<sup>TH</sup> AND 7<sup>TH</sup> APRIL, 2022.

SANCTIONED VIDE LETTER NO SEP/ LW/ APRIL/ 2022 DT: 8<sup>TH</sup> FEBRUARY, 2022  
RS. 1, 16,000/- SANCTIONED AND RELEASED RS 87,000 ON 05/04/2022 (   
CREDITED VIDE NEFT TO PRINCIPAL UNION BANK OF INDIA, HINDU  
COLLEGE CAMPUS, GUNTUR.

SI. No	Budget head/amount sanctioned (Rs)	Particulars (name of payee/item)	Amount spent (for submission of expenditure)
1	Publicity Rs.6000 Banners, circular, registration forms, programme cards invitation cards, letter of attendance, etc	a) Padmaja digitals b) Murthy Graphics  <b>Total</b>	3,640 ✓ 2,360 ✓ <b>= 6000</b>
2	Registration and Stationary Rs.10,000 (Pads, pencil, pencil, photostat copies etc)	a) Pens-Raynars b)Files-Raynars c)Pads-Raynars d)Program-Raynars  <b>Total</b>	1,250 ✓ 6,250 ✓ 1,250 ✓ 1,250 ✓ <b>=10,000</b>
3	Food Rs.60,000  Breakfast, lunch, tea/coffee biscuits	Hotel Ruchi, Guntur for supplying lunch,breakfast, tea and biscuits 6 <sup>th</sup> ,April, 2022	30,000 ✓
		Hotel Ruchi, Guntur for supplying lunch,breakfast, tea and biscuits 7 <sup>th</sup> ,April, 2022  <b>Total</b>	30,000 ✓ <b>=60,000</b>
4	a) Honorarium for Resource Persons Rs.22,500	a) Prof. C. Manohara Chary b) Prof. S. R. Niranjana c) Prof. M. Muralidhar d) Dr. M. Sanjappa	4,000 ✓ 4,000 ✓ 4,000 ✓ 4,000 ✓
	b) Honorarium for Convener Co-ordinator	a) Prof. C. Manohara Chary b)KVS. Durga Prasad	2,500 2,000 ✓
	c) Honorarium for supporting staff	a) Dr. M. Madhavi b) GVS. Subramanyam c) Dr. N. Krishna d) Dr. G. Ramesh  <b>Total</b>	500 ✓ 500 ✓ 500 ✓ 500 ✓ <b>= 22,500 ✓</b>

**SCIENCE ACADEMY LECTURE WORK SHOP ON " BIOLOGY AND MANKIND:  
MARCHING A HEAD IN NEW ERA"**

**ON 6<sup>TH</sup> AND 7<sup>TH</sup> APRIL, 2022.**

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CREDITED VIDE NEFT TO PRINCIPAL UNION BANK OF INDIA, HINDU  
COLLEGE CAMPUS, GUNTUR.**

SI. No	Budget head/amount sanctioned (Rs)	Particulars (name of payee/item)	Amount spent (for submission of expenditure)
5	a) Boarding & Lodging of Resource Persons	a)Hotel Geetha Regency Prof. C. Manohara Chary	8,462 ✓
		b)Hotel Geetha Regency Prof. S. R. Niranjana	5,310 ✓
		c)Hotel Geetha Regency Dr. M. Sanjappa	6,319 ✓
	b) Local transport	City cabs, Guntur	7,345 ✓
		<b>Total</b>	<b>=27,436</b>
6	Travel expenses for Resource Persons	a) Prof. C. Manohara Chary	6,187 ✓
		b)Dr. M. Sanjappa	6,993 ✓
		c)Prof. S. R. Niranjana	27,319 ✓
		d)Prof. K. Muralidhar	7,166 ✓
		<b>Total</b>	<b>=47,645</b>
7	Miscellaneous (Photocopy, photography)	a) Padmaja Digitals Photocopy	1,380 ✓
		b)Padmaja Digitals Photo graphy	1,275 ✓
		<b>Total</b>	<b>=2,655 ✓</b>
		<b>Total</b>	<b>=1,76,235</b>

For SRIGIRIRAJU AND ASSOCIATES  
CHARTERED ACCOUNTANTS

*Pradeep S.V.*  
Prop: CA S.V.V. PRADEEP  
M.No: 245649, FRN. No:019033S



*Deepa Prasad*  
**Co-ordinator**  
Co-ordinator  
Science Academy Lecture Worksh  
Hindu College, GUNTUR

*P. V. Prasad*  
**Principal**  
HINDU COLLEGE  
GUNTUR





6<sup>TH</sup> & 7<sup>TH</sup> APRIL, 2022

**TWO DAY SCIENCE ACADEMICS LECTURE WORK  
SHOP ON**  
*BIOLOGY AND MANKIND: MARCHING A HEAD  
IN THE NEW ERA*

**FUNDED BY**

**INDIAN ACADEMY OF SCIENCES, BANGALORE,  
INDIAN NATIONAL SCIENCE ACADEMY, NEW  
DELHI, INDIAN NATIONAL ACADEMY OF  
SCIENCE, ALLAHABAD**

*Organised by*

**Department of Botany**

**INAUGURAL**



SVS Lakshmana Rao, Vice president  
Honoured with a bouquet



Ch. Ramakrishna Murthy, Secretary  
and correspondent honoured with a  
bouquet



**Prof. C. Manohara Chary - Convenor & Resource Person, NASI Senior scientist, Dept. Of Botany, Osmania University, Hyderabad honoured with a bouquet**



**Prof. S. R. Niranjana, Former, Vice Chancellor. Gulbarga University, Mysore Honoured with a bouquet**



**Dr. M. Sanjappa, Former Director, BSI, Bangalore honoured with a bouquet**



**Nalini Mohan Denduluri - IFS Cheif Guest honoured with a bouquet**





Prayer Song



Lighting of the lamp





## Registration



**Ch. Ramakrishna Murthy, Secretary and correspondent addressing the gaathering**



**K.V.S. Durga Prasad H.O.D of Botany, Hindu College, Co-ordinator of the work shop addressing the gaathering**



**Prof. C. Manohara Chary addressing the gaathering**



**Prof. S.R. Niranjana addressing the gaathering**





Dr. M. Sanjappa, Resource Person addressing the gaathering



Cheif Guest Nalini Mohan garu addressing the gaathering

## TECHINAL SESSION DAY 1



Prof.C. Manohara Chary NASI Senior scientist, Dept. Of Botany, Osmania University, Hyderabad. Taking session on Biology- Biotechnology



Dr. M. Sanjappa, Former, Director,BSI- Banagalore taking session on Floristic diversity in India



Prof.S.R. Niranjana, DNA, Visiting Professor, University of Hyderabad taking session on Genetically modified crops for food security





Prof. K. Muralidhar FNA, Visiting Professor University of Hyderabad taking session on Embryo transfer technology in water buffaloes- problems and progress

### Lunch break



### Poster Presentation







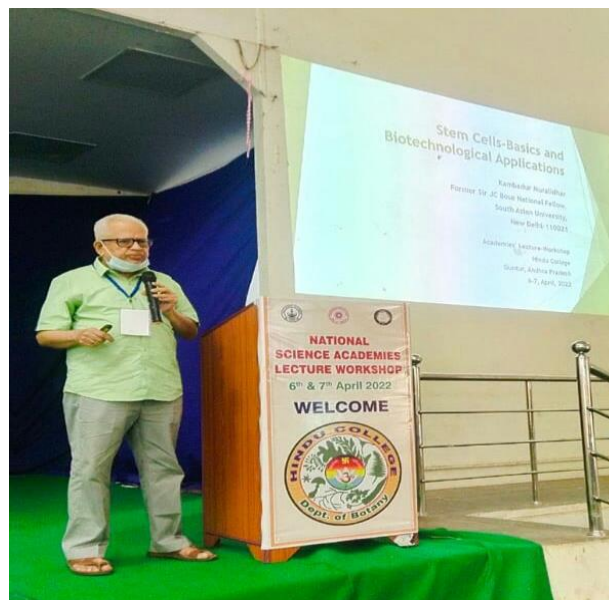
## TECHINAL SESSION DAY 2



Inviting dignitaries on to the Dias by Niloufer  
M.Sc Botany Final year



Introduction of Cheif Guest Dr. Audipudi  
Amrutha Valli







## Lunch time





## Felicitation to Resource Person



Felicitation to Prof.C. Manoahara Chary



Felicitation to Prof. K. Muralidhar



Felicitation to Dr. M. Sanjappa



Felicitation to Prof.S.R. Niranjana





Feed back from Students



Giving Certificates to the Participants





**Student's Interaction  
with Resource Person**





Vote of thanks by Meghana M.Sc Botany Final year

## Newspaper Clippings

గురువారం  
07-04-2022  
బిజినెస్ ప్రచురణ  
సంఖ్య: 70, 6006-283  
వేల: 8, రూ 605.00  
Simultaneously published from Vijayawada,  
Hyderabad, Visakhapatnam, Kurnool,  
Tirupathi, Karimnagar, Khammam



### మానవ జీవన విధానంలో జీవశాస్త్రం ప్రముఖ పాత్ర

విశాలాంధ్ర-గుంటూరు వైద్యం : మానవ జీవన విధానంలో జీవశాస్త్రం ప్రముఖ పాత్ర పోషిస్తుందని ఆంధ్రప్రదేశ్ రాష్ట్ర జీవ వైవిధ్య మండలి-జీవ వైవిధ్యం (ఐఎఫ్ఎస్)మెంబర్, సెక్రటరీ డాక్టర్ డి.నళిని మోహన్ అన్నారు. స్థానిక హిందూ కళాశాల వృక్షశాస్త్రం విభాగం వారు రెండు రోజుల జాతీయ స్థాయి వర్క్ షాపు ప్రారంభోత్సవం బుధవారం జరిగింది. ఈ సందర్భంగా మోహన్ జీవ వైవిధ్యం ప్రాధాన్యత, దాని సంరక్షణ అందులో విద్యార్థుల పాత్ర గురించి వివరించారు. వర్క్ షాపు కన్వీనర్ ప్రొఫెసర్ సి.మనోహరాచారి నేషనల్ సైన్స్ అకాడమి ఏవిధంగా విద్యార్థిని, కళాశాల ప్రిన్సిపల్ పీఎం ప్రసాద్ మాట్లాడుతూ వివిధ కళాశాల నుంచి వచ్చిన విద్యార్థులకు ఈ వర్క్ షాపు ఎంతో ఉపయోగపడుతుందన్నారు. కళాశాల కార్యదర్శి సీహెచ్ రామకృష్ణ మూర్తి రిసోర్స్ పర్సన్స్ ప్రొఫెసర్ ఎన్.నిరంజన్, ప్రొఫెసర్ కె.మురళీధర్, డాక్టర్ ఎం.నన్జప్పాలను సన్మానించారు. ఈ కార్యక్రమంలో వర్క్ షాపు సంచాలకులు కెవిఎస్ దుర్గాప్రసాద్, డాక్టర్ ఎం.మాధవి, జీవి సుబ్రహ్మణ్యం, డాక్టర్ ఎన్.కృష్ణ, డాక్టర్ జి.రమేష్, పి.సాయిలు పాల్గొన్నారు.

### మానవ మనుగడలో జీవశాస్త్రానికి అపార ప్రాధాన్యత

గుంటూరు ఎడ్యుకేషన్ మానవ జీవన విధానంలో జీవశాస్త్రం ఎంతో ప్రాముఖ్యమైనదని ఆంధ్రప్రదేశ్ రాష్ట్ర జీవ వైవిధ్య మండలి మెంబర్ సెక్రటరీ డాక్టర్ డి. నళినిమోహన్ పేర్కొన్నారు. మార్కెట్ సెంటర్లోని హిందూ కళాశాలలో వృక్షశాస్త్ర విభాగ ఆధ్వర్యంలో రెండు రోజుల జాతీయ సదస్సును బుధవారం ప్రారంభించారు. ముఖ్య అతిథిగా పాల్గొన్న నళినిమోహన్ మాట్లాడుతూ జీవ వైవిధ్య ప్రాధాన్యత, సంరక్షణపై విద్యార్థులు అవగాహన పెంచుకుని, తమ వంతు పాత్ర పోషించాలని సూచించారు. జీవ వైవిధ్య మనుగడలోనే మానవ సమాజ మనుగడ ఆధారపడి ఉందని అన్నారు. వర్క్ షాప్ కన్వీనర్ ప్రొఫెసర్ మనోహరాచారి మాట్లాడుతూ విద్యార్థుల్ని ఉన్నత చదువులలో తాము సైన్స్ పరిశోధనల దిశగా ప్రోత్సహించడం లో నేషనల్ సైన్స్ అకాడమీ చేస్తున్న కృషిని వివరించారు. కళాశాల కార్యదర్శి చెరువు రామకృష్ణమూర్తి మాట్లాడుతూ విద్యార్థులకు జీవ వైవిధ్య ప్రాధాన్యతను తెలియజేయడంలో వర్క్ షాప్ ఎంతగానో ఉపయోగపడుతుందని తెలిపారు. వర్క్ షాప్ లో కళాశాల ప్రిన్సిపల్ పి.ఎం.ప్రసాద్, వర్క్ షాప్ డైరెక్టర్ కె.వి.ఎస్. దుర్గాప్రసాద్, డాక్టర్ ఎం.మాధవి, వృక్షశాస్త్ర అధ్యాపకులు జి.వి.సుబ్రహ్మణ్యం, డాక్టర్ ఎన్. కృష్ణ, డాక్టర్ జి. రమేష్, పి.సాయి, మాట్లాడుతూ విద్యార్థులకు జీవ వైవిధ్య ప్రాధాన్యతను తెలియజేయడంలో వర్క్ షాప్ ఎంతగానో ఉపయోగపడుతుందని తెలిపారు. వర్క్ షాప్ లో కళాశాల ప్రిన్సిపల్ పి.ఎం.ప్రసాద్, వర్క్ షాప్ డైరెక్టర్ కె.వి.ఎస్. దుర్గాప్రసాద్, డాక్టర్ ఎం.మాధవి, వృక్షశాస్త్ర అధ్యాపకులు జి.వి.సుబ్రహ్మణ్యం, డాక్టర్ ఎన్. కృష్ణ, డాక్టర్ జి. రమేష్, పి.సాయి, మాట్లాడుతూ విద్యార్థులకు జీవ వైవిధ్య ప్రాధాన్యతను తెలియజేయడంలో వర్క్ షాప్ ఎంతగానో ఉపయోగపడుతుందని తెలిపారు.



సమావేశంలో మాట్లాడుతున్న ఏపీ జీవ వైవిధ్య మండలి మెంబర్ సెక్రటరీ నళినిమోహన్



**జీవశాస్త్రం పాత్ర కీలకం**

గుంటూరు సాంస్కృతికం, న్యూస్ టుడే: మానవ జీవన వికాసంలో జీవ శాస్త్ర ప్రాముఖ్యం ఎంతో ఉందని ఆంధ్రప్రదేశ్ రాష్ట్ర జీవవైవిధ్య మండలి కార్యదర్శి డాక్టర్ డి.నళినీమోహన్ అన్నారు. స్థానిక హిందూ కళాశాల వృక్షశాస్త్ర విభాగం ఆధ్వర్యంలో బుధవారం రెండు రోజుల పాటు నిర్వహించే జాతీయ కార్యశాల ప్రారంభోత్సవ సభకు ఆయన ముఖ్య అతిథిగా పాల్గొని ప్రసంగించారు. సభకు కళాశాల ప్రెస్బిటల్ ఫులిపాటి మల్లికార్జున ప్రసాద్ అధ్యక్షత వహించారు. కార్యశాల సంచాలకుడు కేవీఎస్ దుర్గాప్రసాద్, కార్యశాల సమన్వయకర్త ముజోహరాచారి మాట్లాడారు. కార్యక్రమంలో కళాశాల కార్యదర్శి సీహెచ్



**మాట్లాడుతున్న డాక్టర్ డి.నళినీమోహన్**

రామకృష్ణమూర్తి, కార్యశాల రిసోర్స్ పర్సన్లు ఆచార్య ఎన్.నిరంజన్, ఆచార్య కె.మురళీదర్, డాక్టర్ ఎం.సంజయ్లను సత్కరించారు. డాక్టర్ ఎం.మాదవి కార్యక్రమాన్ని నిర్వహించారు. వృక్ష శాస్త్ర విభాగం అధ్యాపకులు జీవీ సుబ్రహ్మణ్యం, డాక్టర్ ఎన్.కృష్ణ, డాక్టర్ జి.రమేష్, పి.సాయి తదితరులు ప్రసంగించారు.

Date : 07/04/2022 EditionName : ANDHRA PRADESH( AMARAVATI GUNTUR ) PageNo : 03





# BROCHURE

**Convener & Resource Person**  
**Prof. C. Manohara Chary**  
 NASI Senior scientist  
 Dept. of Botany, Osmania University,  
 Hyderabad.

**Co-ordinator**  
**K.V.S. Durga Prasad**  
 H.O.D. of Botany, Hindu College, Guntur.  
 Phone: 9848110174  
 e-mail: durgaprasad.katrapati@gmail.com

**Resource Person**  
**Prof. K. Muralidhar FNA,**  
 Visiting Professor  
 University of Hyderabad

**Resource Person**  
**Prof. S.R. Niranjana**  
 Former, Vice Chancellor,  
 Gulbarga University, Mysore,

**Resource Person**  
**Dr. M. Sanjappa**  
 Former Director,  
 BSI, Bangalore.

## TERMS OF PARTICIPATION

- No registration fee.
- Limited number of participants will be entertained.
- Tea and lunch will be served to the participants.
- No accommodation will be provided.
- Participation restricted to students, research Scholars, faculty members and Industry people.

## ABOUT THE ACADEMIES



### INDIAN ACADEMY OF SCIENCES

The Indian Academy of Sciences (IASc), Bangalore was found in 1934 by C.V. Raman. Its objectives include promoting the Progress of science in pure and applied branches. Major activities include organizing meetings for discussions on important topics, publication of scientific journals, recognizing scientific talent, improvement of science education and taking up other issues of concern to the scientific community.



### INDIAN NATIONAL SCIENCE ACADEMY

The Indian National Science Academy (INSA), New Delhi found in 1935 is a premier science academy in the country, INSA plays crucial role in promoting, recognizing and rewarding excellence.



### INDIAN NATIONAL ACADEMY OF SCIENCE

The National Academy of Sciences (NASI), Allahabad was found in 1930. The main objective of the academy is to provide a national forum for the publication of research work carried out by Indian scientists.



## HINDU COLLEGE GUNTUR

### DEPARTMENT OF BOTANY



## SCIENCE ACADEMIES LECTURE WORKSHOP

ON

### BIOLOGY AND MANKIND : MARCHING A HEAD IN THE NEW ERA

Date : 6-4-2022 & 7-4-2022

FUNDED BY



## ABOUT THE COLLEGE



Our college was established in the year 1936 to cater the educational needs of urban and rural students. More than 80% of the students belongs to SC/ST/BC categories and majority of them are from socially and economically weaker sections. The college has good infrastructure and adequate faculty. The workshop proposed at our college would provide a platform for the faculty and students to exchange their ideas and views.

### About the Department

Department of Botany was established in the year 1936 with the efforts of Prof. C.VENKATA RAO & Prof. C. RAMAKRISHNA RAO. The department flourished with the tireless efforts of Dr. T.S. RAMANAO, other faculty members and students. At present the department of botany is offering B.Sc., with various combinations and M.Sc- Botany with overall student strength of 500. Since its inception faculty members have been involved in teaching, mentoring the students as well as pursuing research. The department has well equipped and modernized laboratories, enriched with excellent collection of library, specimens, herbarium, slides, models and charts. Modern facilities like computer, internet, LCD, help the student in independent learning. The unique feature is, having a medicinal garden and cultivable agricultural farm. We encourage students to organize plant exhibitions, field trips and study projects. The department has organized number of national seminars and workshops. Currently the department comprises of 6 faculty members who are all having a teaching experience of 25 years.

The department is committed to achieve academic excellence and research towards strengthening student's competence to reach more and more opportunities in the field of plant science.

## ABOUT THE WORKSHOP

The proposed workshop focuses on the latest developments and emerging trends in Life Science and highlight the inherent interface between the fields of taxonomy, biotechnology, genetics and conservation biology (recently emerging). Such lecture series are expected to highlight the importance of science behind developing viable technologies. Therefore, the participants have opportunity to gain insights on translational research. Biology plays an important role in the mankind. In the recent years, several discussions have been made, which refers to human welfare, particularly in Public health and agriculture, Biotechnology, Taxonomy of Flora and Fauna is important. From the point of restorant, sustainability of national resources and eco-system balance. Therefore, the title proposal deals with Biodiversity, Taxonomy, Conservation Utility and Biotechnical aspects. Keeping in view, the future sustainable resources of natural resources. Further, the lectures will be useful to the students, research scholars, faculty and policy makers of rural India and also of urban areas. The following names are suggested along with lecture titles, "BIOLOGY AND MANKIND: MARCHING A HEAD IN THE NEW ERA".

### Scope of the Workshop

1. Systematics and Phylogeny
2. Modern trends and Techniques in Biotechnology.
3. Microbial diversity
4. Stem Cell Technology
5. Conservation of Biodiversity
6. New approaches in Biology.

Please visit our college website  
[www.hcg.ac.in](http://www.hcg.ac.in)  
 for application form and details.

## Programme Schedule

6 - 4 - 2022

09.00 - 10.00 a.m. Registration  
 10.00 - 11.00 a.m. Inauguration

DURATION	SPEAKER	TITLE
11.00-12.00a.m.	<b>Prof. C. Manohara Chary</b> NASI Senior scientist, Dept. of Botany Osmania University, Hyderabad.	Biology - Biotechnology
	<b>Tea Break</b>	
12.15-1.15p.m	<b>Dr. M. Sanjappa</b> Former, Director, BSI - Bangalore	"Floristic diversity in India "
	<b>Lunch Break</b>	
2.15 - 3.15 p.m	<b>Prof. K. Muralidhar FNA</b> Visiting Professor University of Hyderabad	"Embryo transfer technology in water buffaloes - problems and progress"
	<b>TEA Break</b>	
3.30- 4.30 p.m	<b>Prof. S.R. Niranjana FNA</b> Former, Vice Chancellor, Gulbarga University, Mysore.	"Genetically modified crops for food security"
	<b>7 - 04 - 2022</b>	
10.00- 11.00 a.m	<b>Dr. M. Sanjappa</b> Former, Director, BSI - Bangalore	"Conservation of Flowering plants in India"
	<b>TEA Break</b>	
11.15- 12.15 p.m	<b>Prof. K. Muralidhar. FNA,</b> Visiting Professor University of Hyderabad	"Stem Cell Technology Principles and Applications"
12.15- 1.15 p.m	<b>Prof. S. R. Niranjana FNA</b> Former, Vice Chancellor, Gulbarga University, Mysore.	"Conservation of Biodiversity and future strategies in India"
	<b>Lunch Break</b>	
2.15- 2.15 p.m	<b>Prof. C. Manohara Chary</b> NASI Senior scientist, Dept. of Botany Osmania University, Hyderabad.	"Curiosities in Fungi "
	<b>TEA Break</b>	
3.30- 4.30 p.m	Valedictory function	

## TWO DAY SCIENCE ACADEMIES NATIONAL WORKSHOP ON

### “BIOLOGY AND MANKIND: MARCHING AHEAD IN THE NEW ERA”

Organised By

**Department of Botany, Hindu College, Guntur.**

## **REPORT**

Department of Botany organized “ Biology and Mankind: Marching ahead in the new Era” on 06<sup>th</sup> and 7<sup>th</sup> April, 2022 funded by Indian Academy of Sciences, Bangalore, Indian National Science Academy, New Delhi, and The National Academy of Sciences, Allahabad.

The Resource persons are

1. Prof. C. Manoharachary, Convener, NASI Senior Scientist, Department of Botany, Osmania University, Hyderabad.
2. Dr. M. Sanjappa, Former, Director – BSI Bangalore.
3. Prof. K. Muralidhar, Visiting professor, University of Hyderabad.
4. Prof. S. R. Niranjana, Former, Vice chancellor, Gulbarga University Mysore.

The Chief guest Dr. D. Nalini Mohan, IFS. Member Secretary AP State Biodiversity Board, has attended the conference and given the valuable speech about conservation of rare and endangered plant and animal species in the state of Andhra Pradesh, and gave valuable advices to students and participants about biodiversity board importance and its functions performing in conservation aspect.

The local organizers are K. V. S. Durga prasad, HOD of Botany and Coordinator of the workshop, and other faculty members of botany Dr. M. Madhavi, G.V.S.Subrahmanyam , Dr.N. Krishna and Dr.G.Ramesh . The resource persons emphasized on Taxonomy , Biotechnology , Stem cell technology and Genetically modified crop techniques. The workshop on each day has 4 sessions and each sessions is for 1 hour. Students from various colleges, research scholars and teaching staff from college and



universities came to the workshop, they are well satisfied and learned new techniques in plant biology.

## **DAY – 1 : TECHNICAL SESSION – 1 – RESOURCE PERSON - Prof.C.**

### **MANOHARACHARY**

#### **Topic : Biology – Biotechnology**

THEME : Prof.C.Manoharachary explained about the techniques that are involved in biotechnology for the development of plants use in industrial and human need. Biotechnology is playing major role in extracting the biproducts from plants and animals, and also he explained about role of micro organisms in industrial applications. The production of new varieties of high yielding and diseases resistant varieties by using new biotechnological methods. The new varieties such as TN1,HHZ and 9311 were moderately susceptible to BPH while IR64 and B5 were highly resistant to BPH.

## **TECHNICAL SESSION –II – RESOURCE PERSON - Dr. N. SANJAPPA**

#### **Topic : Floristic diversity in India**

THEME : DR. N. Sanjappa explained about the floristic diversity of India , dwelling briefly on its ecosystem diversity,vegetative pattern, species richness in various taxonomic groups traditionally dealt with as plants (Angiosperms,Gymnosperms, Pteridophytes, Bryophytes, Algae , Fungi and Lichens) And also he explained about endemism and primitive angiosperms and phytogeographical analysis of flora. He explained about the overall flora comparative analysis of which 18532 species are angiosperms , representing 10 percent of all known flowering plants in the world . The largest angiosperm

Family in no.of species is Leguminosae [ with 1421 species ]. Orchidaceae [ 1251 spp] , Asteraceae [1,120 spp] and Rubiaceae [ 679 spp ]. The largest genus is Inpatients [ with 729 spp ]. In India about 4300 of flowering plant species are endemic [ 18,532 ].

## **TECHNICAL SESSION – III – RESOURCE PERSON Prof. K. MURALIDHAR**

#### **Topic – Embryo transfer technology in water buffaloes – problems and progress.**

THEME : Prof. k. Muralidhar has explained about embryo transfer technology in buffaloes , the use of assisted reproductive technologies such as superovulation and in vivo embryo production [ IVEP ], has increased rapidly in recent years and is now applied worldwide for genetic improvement in beef and dairy buffaloes. Although in-vivo embryo production has been shown to be feasible in buffalo . He also explained low efficiency and limited commercial application which has been documented which results could be associated with low antral follicle populations, high levels of follicular atresia and/ or failures of the oocytes to enter the oviduct after superovulation. He explained about the new techniques of [ OPU ] ovum pick-up along with IVEP in buffaloes. Further more technologies applied to control follicular wave emergence and ovulation at pre determined times, without the need of estrus detection in recipients, has facilitated management and improved the efficiency of embryo transfer programs in buffalo herds. conclusively, with the considerable evidence of poor results with in- vivo embryo production in buffaloes.

#### **TECHNICAL SESSION – IV – RESOURCE PERSON – Prof. S.R.NIRANJANA**

Topic : Genetically modified crops for food security

THEME : Prof. S.R.Niranjana explained about the importance of genetically modified crops (GMC), the plants used in agriculture, the DNA of which has been modified using genetic engineering methods. In most cases the aim is to introduce a new trait to the plant. Examples in food crops includes the resistance to certain pests, diseases, environmental conditions, reduction of spoilage, resistance to chemical treatments are also explained by him. He explained about the present day scientific consensus that currently available food derived from GM crops poses no greater risk to human health than conventional foods. He given a brief note on food safety mechanism by GM crops, the legal and regulatory status of GM foods varies by country, with some nations banning or restricting them, and others permitting them. The maize GM containing high fructose corn syrup and corn starch, highly grown in Portugal, Spain, Slovakia and Romania.

Day - II-07-04-2022-Technical session – I: Resource person – Dr. M. Sanjappa

Topic: Conservation of flowering plants in India

THEME : Dr. M. Sanjappa has explained the efficiency of flowering plants in India, he also stated that India is the one of the 12 mega diversity countries all over the world. India is renowned for its variety of environments and ecosystems. In addition he explained the essential of conservation to the healthy functioning of our biosphere – The living world



which Human's inhabit, the synthesize oxygen from carbon dioxide in the atmosphere. He also explained the conservation implications of orchids in and around the world. Orchids are standing the second largest position in the world. The flowers of orchids are more beautiful and can last long for 15-20 days, they are having good market value globally. Paphilopidium orchid is endangered and it is present only in Tamilnadu- Agasthamalai hills, which is pride to our India. He explained the importance and hybrid varieties of orchids, In-situ and Ex-situ conservations are well explained for the floral plants.

**Day-II– Technical session–II: RESOURCE PERSON Prof. K.MURALIDHAR Topic : Stem cell Technology Principles and Applications.**

THEME : Prof. K. Muralidhar has explained the advance techniques in stem cell multiplication, the embryonic stem cells used in research today came from unused embryos. These embryonic stem cells are pluripotent that means that they can turn into more than one type of cells. These are adult stem cells that have been changed in lab to be more like embryonic stem cells. The stem cells may help the health in future in many ways for many treatments, the other treatments could target illness such as type-1 diabetes, spinal cord injuries, Alzheimer disease and rheumatoid arthritis. And he explained the pluripotent stem cells will bring a great change that they could contain DNA problems.

**Day-II– Technical session–III: RESOURCE PERSON- Prof. S. R. Niranjana Topic : Conservation of Biodiversity and Future strategies in India**

THEME : Prof. S.R. Niranjana has stated that Biodiversity is the variation among living organisms from different sources including terrestrial, marine and desert ecosystems, and the ecological complexes of which they are a part. Biodiversity is estimated that there exists 5-50 million species of living forms on the earth. However, only 1.7 million have been identified so far. These include 4, 27,205 species of green plants, fungi, bacteria and viruses; 61,917 species of vertebrates and protochordata and 12, 32,490 species of invertebrates including Protista. And also he has the data After 10,000 years of sedentary agriculture and the discovery of 50,000 varieties of edible plants, only 15 crop species represent today 90% of the food of the world. Rice, wheat and maize are the basic food for two thirds of the population. Continuous genetic erosion of wild species of cultivated plants

poses a risk for plant breeding programmes. By 2025 about 60,000 plant species – a quarter of the total world plant capital might be lost. FAO – 69% of marine commercial fish supplies get depleted.

## **Day-II– Technical session–IV: RESOURCE PERSON – Prof. C. Manoharachary**

Topic : Curiosities in Fungi

THEME : Prof. C. Manoharachary has explained the various types and functions of fungi in the industrial and human welfare. He given the key note on many individual species of fungi. **Stemonitis**- Feather like, Sporophore development epiphythallic , Stalk present, hollow or filled with strands, Spores violet brown, lilac, Aphanoplasmodium present.

**Allomyces**- Sirenin is secreted by female gametangia, Bicyclic ketone carotenoid pigment is present, Emerson (1941) studied life cycle.

**Blastocladiella emersonii** - It fixes CO<sub>2</sub> more rapidly in the light than in the dark, Photoreceptor is a yellowish substance, neither carotenoid nor chlorophyll.

**Dictyophora**- Veiled lady mushroom, Attracts insects with disgusting smell. **Cyathus**- Bird's nest fungi, Rain drops fall into cups, The funicular cord swells, stretching for 2-3 mm, peridioles attach to twigs etc.





SEP / LW / April / 2022

Indian Academy of Sciences, Bengaluru  
Indian National Science Academy, New Delhi  
The National Academy of Sciences India, Prayagraj

## SCIENCE ACADEMIES' EDUCATION PROGRAMME

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### JOINT SCIENCE EDUCATION PANEL

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D G Kanhare (Co-Chairman)  
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Amitabha Chattopadhyay  
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T Pradeep  
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#### Indian National Science Academy, New Delhi

Madhu Dikshit  
I B S Passi  
Diptiman Sen  
K D Sen

#### The National Academy of Sciences, India, Prayagraj

V P Dimri  
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Dr K.V.S. Durga Prasad  
Dept. of Botany  
Hindu College  
Guntur 522 001

Sub: Lecture Workshop on "Biology and mankind: marching ahead in the new era" at Hindu College, Guntur during 06-07 April 2022.

Dear Dr Durga Prasad,

This has reference to the letter forwarding a proposal and budget for organizing a two-day Lecture Workshop at Hindu College, Guntur. The Joint Science Education Panel of the three Academies will be happy to sponsor and support the Lecture Workshop. We note that Dr C. Manoharachary (NASI Senior Scientist) will be the workshop Convener and that you will be the Workshop Co-ordinator.

(a) Your budget of Rs. 1,16,000/- excluding travel expenses. (Resource Persons travel expenses will be paid following the guidelines ie. 2-tier A/C for RPs below the age of 60; air fare for RPs aged above 60 yrs. Please note that contingency budget head which is limited to Rs.10,000/-) for 125 participants has been approved by the Science Education Panel. As per the guidelines, the ideal number of participants in a Lecture Workshop should be **between 100 and 125** and in any case **should not exceed 150**, to maximize interaction between participants and resource persons. Please note that you have to adhere to our guidelines and the approved amount is strictly following the budget heads in the guideline.

(b) Please note that only the names of Convener and Coordinator of the Workshop should be included in brochure/invitation etc. Names of members of the management, organizing committees, patrons etc should be strictly avoided.

(c) Please ensure that the expenditure on individual items does not exceed the sanctioned BUDGET HEAD. If the actual expenditure exceeds the sanctioned budget, THE HOST INSTITUTION SHOULD TAKE CARE OF THE DIFFERENCE.

(d) Lecture Workshops are sponsored and supported by the three National Science Academies – IASc, INSA and NASI. The names of INDIAN ACADEMY OF SCIENCES (BENGALURU), INDIAN NATIONAL SCIENCE ACADEMY (NEW DELHI) and THE NATIONAL ACADEMY OF SCIENCES, INDIA (PRAYAGRAJ) should therefore be mentioned in all publicity material such as programme sheet, invitation cards, etc.

(e) It may be noted that no formal certificates should be issued to participants. A letter of attendance signed by Coordinator may be issued to those who need it.

(f) The Workshop should be called Science Academies' Lecture Workshop in "Biology and mankind: marching ahead in the new era".

(g) You should send us three copies of the printed programme cards once it is printed.

(h) We urge you to open a new bank account in the name of the lecture workshop or in the name of the principal and provide full details of the account:

1. Account No;
2. Name of the Account Holder;
3. Name of the Bank;
4. Name of the Branch;
5. IFS code for non-SBI accounts.

Alternatively, you can provide us the existing college bank account number to which we can transfer the amount.

The audited expenditure statement/utilization certificate duly signed by competent authority (CA or Financial Controller) in GFR 19 A format to be sent along with the report, once the Course is over. This is required for the Audit compliance.

You can go ahead with organizing the Workshop in consultation with Dr C. Manoharachary.

With regards,

Yours sincerely,



C S Ravi Kumar  
Coordinator

Science Education Programme

Strictly follow all COVID19 related rules and abide by it.

Please find below a note about the 75th year of Indian independence (Azadi ka Amrut Mahotsav). We would like you to include this note in all the publication material about the workshop. You might even consider displaying this prominently at the venue.

The Science Academies have been supporting two/three-day lecture workshops and fifteen-day refresher courses on topics of current interest throughout the country. All the programmes conducted by the Joint Science Education Panel of the Academies are fully supported by the Department of Science and Technology, Govt. DST has undertaken a series of activities to mark 75 years of India's Independence (Azadi ka Amrut Mahotsav). The Mahotsav is a series of S&T programmes and events to be organised to commemorate the 75th anniversary of India's Independence. The curtain raiser activities began from 12 March, 75 weeks prior to 15 August 2022. The lecture workshops/refresher courses are part of the series in these programmes. The Academy will also organize periodic lectures by eminent scientists. These programs will be adequately expanded in the celebration of the 75 years of Indian Independence.



