


MULISSA Special Lecture—

509-02-2024

Health and

Environment Invitation for the

programme


ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ
ಗ್ರಂಥಾಲಯ ಮತ್ತು ಮಾಹಿತಿ ವಿಜ್ಞಾನ ಅಧ್ಯಯನ ವಿಭಾಗ
ಮಾನನಗಂಗೋತ್ರಿ, ಮೈಸೂರು - 570006

ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ ಗ್ರಂಥಾಲಯ ಮತ್ತು ಮಾಹಿತಿ ವಿಜ್ಞಾನ ವಿದ್ಯಾರ್ಥಿಗಳ ಸಂಘ (MULISSA)
2023-24

ಶುಕ್ರವಾರದ ಉಪನ್ಯಾಸ ಮಾಲಿಕೆ
ವಿಶೇಷ ಉಪನ್ಯಾಸ-5

ಆರೋಗ್ಯ ಮತ್ತು ಪರಿಸರ


ಸಂಪನ್ಮೂಲ ವ್ಯಕ್ತಿಗಳು
ಪ್ರೊ. ಎಸ್. ಎಸ್. ಮಾಲಿನಿ
ಅಧ್ಯಕ್ಷರು
ಜೆನಿಟಿಕ್ಸ್ ಮತ್ತು ಜಿನೋಮಿಕ್ಸ್ ಅಧ್ಯಯನ ವಿಭಾಗ
ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಮೈಸೂರು

ಅಧ್ಯಕ್ಷತೆ
ಪ್ರೊ. ಎಂ. ಚಂದ್ರಶೇಖರ
ಅಧ್ಯಕ್ಷರು
ಗ್ರಂಥಾಲಯ ಮತ್ತು ಮಾಹಿತಿ ವಿಜ್ಞಾನ ಅಧ್ಯಯನ ವಿಭಾಗ ಮತ್ತು
ಅಧ್ಯಕ್ಷರು, ಮುಲಿನಾ

ಸ್ಥಳ : ಡಾ. ಎಸ್. ಆರ್. ರಂಗನಾಥನ್ ಸಭಾಂಗಣ ದಿನಾಂಕ : ಫೆಬ್ರವರಿ 09, 2024
ಗ್ರಂಥಾಲಯ ಮತ್ತು ಮಾಹಿತಿ ವಿಜ್ಞಾನ ಅಧ್ಯಯನ ವಿಭಾಗ ಸಮಯ : ಸಾಯಂಕಾಲ 3.30
ಮಾನನಗಂಗೋತ್ರಿ, ಮೈಸೂರು.

ಎಲ್ಲರಿಗೂ ಆದರದ ಸ್ವಾಗತ

ಡಾ. ನಿವೇದಿತಾ ಬಿ. ಶ್ರೀ ಮನೋಹರ್ ಕುಮಾರ್ ಸಿ. ವಿ.
ಶಿಕ್ಷಕ ಸಲಹೆಗಾರರು, ಮುಲಿನಾ. ಕಾರ್ಯದರ್ಶಿ, ಮುಲಿನಾ
ಬೋಧಕ ಮತ್ತು ಬೋಧಕೇತರ ವರ್ಗ ಹಾಗೂ ವಿದ್ಯಾರ್ಥಿಗಳು


UNIVERSITY OF MYSORE
Department of Studies in Library and Information Science
Manasagangotri, Mysuru - 570006

Mysore University Library and Information Science Students' Association (MULISSA)
2023-24

Friday Talk Series
Special Lecture-5

Health and Environment

By
Dr. Malini S. S.
Professor and Chairperson
Department of Studies in Genetics and Genomics
University of Mysore, Mysuru

Presided by
Prof. Chandrashekara M.
Chairman
Department of Studies in Library and Information Science
University of Mysore and
President, MULISSA

Venue: Dr. S. R. Ranganathan Hall, Department of Studies in Library and Information Science, Manasagangotri, Mysuru. **Date:** February 09, 2024
Time: 03.30 PM

ALL ARE CORDIALLY INVITED

Dr. Niveditha B. Faculty Advisor, MULISSA **Sri. Manoj Kumar C. V.** Secretary, MULISSA

Faculty Members, Staff, Research Scholars and Students

Agenda for the programme

ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ
ಗ್ರಂಥಾಲಯ ಮತ್ತು ಮಾಹಿತಿ ವಿಜ್ಞಾನ ಅಧ್ಯಯನ ವಿಭಾಗ
ಮಾನಸಗಂಗೋತ್ರಿ, ಮೈಸೂರು

ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ ಗ್ರಂಥಾಲಯ ಮತ್ತು ಮಾಹಿತಿ ವಿಜ್ಞಾನ ವಿದ್ಯಾರ್ಥಿಗಳ ಸಂಘ (MULISSA)
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ಶುಕ್ರವಾರದ ಉಪನ್ಯಾಸ ಮಾಲಿಕೆ
ವಿಶೇಷ ಉಪನ್ಯಾಸ-5

ಆರೋಗ್ಯ ಮತ್ತು ಪರಿಸರ

09-02-2024, ಸಾಯಂಕಾಲ 3:30 ಗಂಟೆ

ಕಾರ್ಯಕ್ರಮದ ವಿವರ

ಪ್ರಾರ್ಥನೆ	ಗೀತಾ ಡಿ.
ಸ್ವಾಗತ	ಅನುಷ್ ಕೆ. ಸಿ.
ವಿಭಾಗದ ಕಿರು ಪರಿಚಯ	ಪವಿತ್ರ
ಮುಲಿಸಾದ ಕಿರು ಪರಿಚಯ	ಕಾವ್ಯ ಎಂ.
ಮುಖ್ಯ ಅತಿಥಿಗಳ ಕಿರುಪರಿಚಯ	ಆಶಾ ಎಸ್.
ಮುಖ್ಯ ಅತಿಥಿಗಳ ಭಾಷಣ	ಪ್ರೊ. ಮಾಲಿನಿ ಎಸ್. ಎಸ್. ಅಧ್ಯಕ್ಷರು ಜೆನಿಟೆಕ್ಸ್ ಮತ್ತು ಜೆನೋಮಿಕ್ಸ್ ಅಧ್ಯಯನ ವಿಭಾಗ ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಮೈಸೂರು
ಅಧ್ಯಕ್ಷರ ಭಾಷಣ	ಪ್ರೊ. ಚಂದ್ರಶೇಖರ ಎಂ. ಅಧ್ಯಕ್ಷರು ಗ್ರಂಥಾಲಯ ಮತ್ತು ಮಾಹಿತಿ ವಿಜ್ಞಾನ ಅಧ್ಯಯನ ವಿಭಾಗ ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಮೈಸೂರು
ವಂದನಾರ್ಪಣೆ	ಮನೋಜ್ ಕುಮಾರ್ ಸಿ. ವಿ. ಕಾರ್ಯದರ್ಶಿ, ಮುಲಿಸಾ.
ನಿರೂಪಣೆ : ಪ್ರೀತಿ ಎಸ್.	
ಶಿಕ್ಷಕ ಸಲಹೆಗಾರರು : ಡಾ ನಿವೇದಿತಾ ಬಿ.	
ಕಾರ್ಯಕ್ರಮದಲ್ಲಿ ಉಪಸ್ಥಿತರು : ಪ್ರೊ. ಎನ್. ಎಸ್. ಹರಿನಾರಾಯಣ, ಪ್ರೊ. ಆದಿತ್ಯಕುಮಾರಿ ಎಚ್. ಮತ್ತು ಡಾ. ಸುನೀಲ್ ಕುಮಾರ್ ಎಂ.	

Report on “Health and Environment”

Human genetic disorders represent a complex array of medical conditions that have fascinated and challenged scientists for centuries. The intricate interplay between genetic predispositions and environmental influences underscores the multifaceted nature of these disorders. Dr. S.S. Malini's presentation on Human Genetic Disorders and Environmental Impact offers a comprehensive exploration of this intricate relationship, delving into the nuances of genetic mutations, classification of disorders, environmental teratogens, prevention and management strategies, and the significance of prenatal genetic testing. Dr. Malini emphasized the growing importance of understanding the interplay between genes and the environment.

Defining Genetic Disorders: Dr. Malini provided a clear definition of genetic disorders, explaining how mutations in genes lead to various conditions. She also discussed the structure and function of genes, including the role of DNA.

Categorization of Genetic Disorders: Dr. Malini delved deeper into the different categories of genetic disorders with specific examples:

- **Single-gene disorders:** She explained the concept of dominant and recessive inheritance patterns using examples like Huntington's disease (dominant) and cystic fibrosis (recessive).
- **Polygenic disorders:** She discussed the complex interaction of multiple genes and environmental factors in causing diseases like heart disease and diabetes. She explained with examples polygenic disorders and their associated risk factors.
- **Chromosomal disorders:** She explained how errors in chromosome number or structure can lead to conditions like Down syndrome and Turner syndrome. She explained them with visuals like karyotypes to illustrate these abnormalities.
- **Mitochondrial disorders:** She discussed the unique inheritance pattern of mitochondrial disorders and their impact on cellular energy production and mentioned examples like Leber's hereditary optic neuropathy.
- **Imprinting disorders:** She briefly introduced the concept of imprinting, where gene expression depends on the parent of origin and mentioned Prader-Willi syndrome as an example.

Environmental Impact on Genetic Disorders: Dr. Malini expanded on the role of environmental factors in influencing the expression of genetic disorders and discussed them with specific examples.

- **Teratogens:** She explained how teratogens like alcohol, drugs, and radiation can disrupt fetal development, leading to birth defects and provided specific examples of teratogens and their associated risks.
- **Nutritional deficiencies:** She discussed how deficiencies in essential nutrients like folic acid can increase the risk of neural tube defects and mentioned the importance of prenatal vitamins.
- **Socioeconomic factors:** She briefly touched upon how factors like poverty and lack of access to healthcare can exacerbate the challenges faced by individuals with genetic disorders.

Detailed Exploration of Specific Genetic Disorders: Dr. Malini delved deeper into the specific characteristics of various genetic disorders.

- **Single-gene disorders:** She explained three disorders (cystic fibrosis, sickle cell anaemia, Tay-Sachs disease) and provide detailed information on their symptoms, diagnosis, treatment options, and prognosis. She included relevant statistics on prevalence and carrier rates.
- **Polygenic disorders:** She focussed on two disorders (e.g., heart disease, cancer) and discussed the complex interplay of genes and environmental factors that contribute to their development. She explained how lifestyle modifications can help reduce risk.
- **Chromosomal disorders:** She explained two disorders (e.g., Down syndrome, Klinefelter syndrome) in detail, explaining their chromosomal abnormalities, associated symptoms, management strategies, and potential complications.

Prenatal Testing and Genetic Counselling:

Prenatal Testing Options: Dr. Malini explained the various methods available for prenatal testing, including their advantages and limitations:

- **Non-invasive methods:** She discussed maternal serum screening, ultrasound, and fetal cell isolation from maternal blood and explained the types of abnormalities these methods can detect and their limitations.
- **Invasive methods:** She explained amniocentesis, chorionic villus sampling (CVS), and cordocentesis and discussed the risks associated with these procedures and the types of information they provide.

The Role of Genetic Counsellors: Dr. Malini explained the role of genetic counsellors in helping individuals and families understand their risk for genetic disorders. She discussed how genetic counsellors can provide information on prenatal testing options, interpret test results, and offer support in decision-making.

Ethical Considerations: Dr. Malini briefly discussed the ethical considerations surrounding prenatal testing, such as the potential for discrimination and termination of pregnancy based on genetic abnormalities.

Management and Treatment of Genetic Disorders:


Current Treatment Approaches: Dr. Malini discussed the different strategies used to manage and treat genetic disorders.

- **Dietary modifications:** She explained how specific dietary changes can help manage disorders like phenylketonuria and galactosemia and provided information on metabolic diets and their role in treatment.
- **Medications:** She mentioned how medications can be used to treat symptoms or slow the progression of genetic disorders and included examples like enzyme replacement therapy for Gaucher disease.
- **Environmental adaptations:** She explained how environmental modifications can improve the quality of life for individuals with genetic disorder and discussed examples like assistive devices, physical therapy, and modifications for learning disabilities.
- **Gene therapy:** She briefly introduced the concept of gene therapy.

In conclusion, Dr. S. S. Malini's presentation on Human Genetic Disorders and Environmental Impact offers a comprehensive and insightful exploration of the intricate relationship between genetic factors and environmental influences in shaping human health. By delving into the mechanisms of genetic mutations, classification of disorders, environmental teratogens, prevention and management strategies, and the significance of prenatal genetic testing, Dr. Malini provides a comprehensive framework for understanding and addressing genetic disorders in clinical practice. Her insights underscore the importance of interdisciplinary approaches that integrate genetics, environmental health, and public policy to promote optimal health outcomes and mitigate the burden of genetic disorders on individuals and society.



LIST OF PARTICIPANTS


UNIVERSITY OF MYSORE
 Mysore University Library and Information Science Students Association
 (MULISSA)

FRIDAY TALK

PROGRAMME: ^{Friday Talk} Special Lecture Series - 5 DATE: 09-02-2024

Sl. No.	Speaker	Designation	Signature
1	Dr. Malini S. S.	Professor and Chairman, Department of Genetics and Genomics	

Sl. No.	Name	Designation	Signature
1	Dr. Chandrashekara M.	Professor and Chairman	
2	Dr. Harinarayana N. S.	Professor	
3	Dr. Adithya Kumari H.	Professor	
4	Dr. Sunil Kumar M.	Guest Faculty	
5	Dr. Niveditha B.	Guest Faculty	


Sl. No.	Name (Research Scholars)	Signature
1	Mr. Pradeep Kumara B.	
2	Mr. Murtala Ismail Adakawa	
3	Mr. Nandeesh M. G.	

Sl. No.	Name of the student (II Year)	Signature
1	Anusha K. C.	
2	Asha S.	
3	Basavaraju M.	
4	Likitha S.	
5	Mahadevaswamy M.	
6	Mamatha M.	
7	Manoj Kumar C. V.	
8	Nagarjuna Y. K.	
9	Nagendra S.	

Nikhitha M. N.	
Pavan B. N.	
Pooja G.	
Pramod Chakravarthi K. M.	
Pranusha M. P.	
Priya G. N.	
Pruthvi J. D.	
Raghu K.	
Rakshitha N.	
Ramya K. R.	
Ranjitha	
Sachin K.	
Sadhanasree G.	
Santhosh S.	
Somesha	
Sukanya N.	
Veerendra A. V.	
Venkatesha S.	
Vishwa C.	
Shivakumar M.	

No.	Name of the student (I year)	Signature
1	Abhi M.	
2	Anjali M.	
3	Arun V. G.	
4	Balan M.	
5	Chinna G. K.	
6	Chinnaraju N.	
7	Chitra S.	
8	Darshan Raj H. N.	
9	Dileep Nayaka H. S.	
10	Geetha D.	
11	Govindaraju N.	
12	Kavya M.	
13	Kiran B. Dalapathi	
14	Lokesh M. R.	
15	Madan D. D.	
16	Mahendra M.	
17	Nisarga A. P.	
18	Palaniswamy A.	

19	Pashupati M.	
20	Pavan Kumar Yadav S. C.	
21	Pavithra	
22	Praveen T. M.	
23	Praveena M. V.	
24	Preethi S.	
25	Priyanka K. M.	
26	Rajeshwari S.	
27	Raghu	
28	Rohini H.	
29	Saidappa	
30	Sanjay P.	
31	Saraswathi K. M.	
32	Sathisha R.	
33	Shashwatha	
34	Sudeep Kumar	


Chairman
 Chairman
 Department of Studies in Library
 and Information Science
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