



**Kanoria  
PG Mahila  
Mahavidyalaya  
Jaipur**

## **4. National Seminar on Lead Toxicity: Issues, Significance & Challenges**

**Date: 28-01-2017**

### 1. Brochure:

**Date & Venue**  
Date: 28 January, 2017  
Venue: Auditorium, Kanoria PG Mahila Mahavidyalaya, Jaipur

**Call for Papers/ Posters**  
Papers/ Posters are invited on thrust areas of the seminar. Full length paper along with abstract and poster abstract should be submitted in an electronic form by E-mail ([lifescience.kmm@gmail.com](mailto:lifescience.kmm@gmail.com)) along with hard copy by 15<sup>th</sup> January, 2017.

**Guidelines for Abstract/ Poster Submission**  
Abstract: Maximum 500 words in Times New Roman, font size 12, Double Space using Microsoft Word.  
Poster Presentation: Poster size should not exceed 1 x 1 Meter.

**Oral Presentation**  
Time limit for Oral Presentation will be 10 minutes for a delegate. Standard audio-visual equipment will be provided for presentation.

**Organizing Committee**

**Chairperson**  
Dr. Rashmi Chaturvedi  
(Director, Kanoria College)

**Convener**  
**Dr. Varsha Sharma**  
(Principal, Kanoria College)

**Organizing Secretary**  
Dr. Sunita Shekhawat  
Asst. Professor  
Department of Zoology  
Mob. : +91-9414279556

**Co-Organizing Secretaries**  
Dr. Chetna Sharma  
Asst. Professor  
Department of Zoology  
Mob. : +91-8233807827

Dr. Farah Syed  
Asst. Professor  
Department of Zoology  
Mob. : +91-9829281875



### **National Seminar on Lead Toxicity: Issues, Significance & Challenges January 28, 2017**

Sponsored by  
**InSLAR, Bengaluru**  
(Indian Society for Lead Awareness & Research, Bengaluru)



Organized by  
**Department of Zoology**  
**Kanoria PG Mahila Mahavidyalaya, Jaipur**  
J.L.N. Marg, Jaipur- 302015, Rajasthan.  
Phone: 0141- : +91-141-2707539, +91-141-2706672  
E-Mail- [admin@kanoriacollege.in](mailto:admin@kanoriacollege.in)

*Seema*  
**PRINCIPAL**  
KANORIA PG MAHILA MAHAVIDYALAYA  
JAIPUR



**Kanoria  
PG Mahila  
Mahavidyalaya  
Jaipur**

Dear Friends,

Kanoria PG Mahila Mahavidyalaya, Jaipur takes pleasure in inviting you to register, contribute and participate in National Seminar on "Lead Toxicity: Issues, Significance & Challenges". The seminar will provide an opportunity to researchers, environmentalists, academicians and policy makers for a scientific interaction on this emerging issue.

Lead Toxicity has a deadening mental and physical impact on children which is now a major problem worldwide, but, has received scant attention in India. Kanoria College, Jaipur under the aegis of NRCLPI, Bangalore and AIIMS, Jodhpur has taken an initiative to bring about a greater public awareness of this critical health issue and to take urgent steps to put the brakes on this menace. Lead enters in the environment either naturally or due to anthropogenic activities. The deleterious effects of lead in the environment and its consequential impact on the health of millions of people is being increasingly recognized all over the world. Recently in the year 2014, WHO has reported that childhood lead exposure is estimated to contribute to about 6,00,000 new cases of children developing intellectual disabilities and accounting to about 1,43,000 deaths every year with highest burden in developing region. Government has passed number of Laws/Policies/Acts on lead but without our awareness towards lead toxicity, it is not possible to combat the trauma of lead poisoning in our children.

**Objectives**

- To enhance the Lead Toxicity awareness among individuals throughout India.
- To identify new and innovative approaches for reducing lead poisoning.
- To broaden and deepen knowledge regarding health hazards due to lead intake at governmental, community, non-governmental, industry and professional levels through the medium of conference and compiled research material.
- To provide research and technical inputs to the preparatory process.
- To foster multi-sectoral collaboration to encourage and mobilize participation of students and researchers in various environmental conservation activities.
- To promote community action for socio-economic and eco-development.
- To spread wide awareness about ill-effects of lead intake and sensitize schools as well as local communities to the necessity of preserving a good healthy environment.
- To promote the involvement of youth in spreading awareness at the grass root level.

**Trust Areas**

- Impact of Lead Toxicity on human health
- Lead in Consumables and Food Products
- Adverse effects of Lead on Environment
- Guidelines for Laboratories
- Lead Toxicity Awareness and Management.
- National and International Laws on Lead Standards
- Lead related Programs and Strategies

**National Seminar**

ON

**Lead Toxicity: Issues, Significance & Challenges**

**January 28, 2017**

**Registration Form**

Name: .....

Designation: .....

Organization: .....

Address: .....

.....

Phone No. : ..... Mobile: .....

E-mail: .....

Paper Presentation: Yes / No

Title of Paper: .....

Accommodation Required: Yes / No

Category: .....

Payment Mode: Cash

Upto 15<sup>th</sup> Jan, 17 After 15<sup>th</sup> Jan, 17

Academicians & Research Scholar: Rs. 400/- Rs. 600/-

Students: Rs. 200/- Rs. 200/-

Date: ..... Signature

Photocopy of this form can be used.

*Seen*  
PRINCIPAL  
KANORIA PG MAHILA MAH  
JAI PUR

## 2. List of resource person/guests:


1. Sh. K.C.A. Arun Prasad, Member Secretary- Rajasthan Pollution Control Board
2. Prof. T. Venkatesh, National Chairmen-InSLAR
3. Prof. Abbas Ali Mahdi, President-InSLAR, King George Medical University, Lucknow
4. Prof. Praveen Sharma, Director-NRCLPI, Western Region and Head, Department of Biochemistry, AIIMS, Jodhpur
5. Prof. Shankar Rao, Director & Head, Department of Rasa Shastra, National Institute of Ayurveda
6. Dr. Shailja Chambial, Asst. Prof., Department of Biochemistry, AIIMS, Jodhpur
7. Dr. Vinod Rai, Chief Medical Officer, HZL



**Kanoria  
PG Mahila  
Mahavidyalaya  
Jaipur**


### 3. Geotagged photograph of the event:



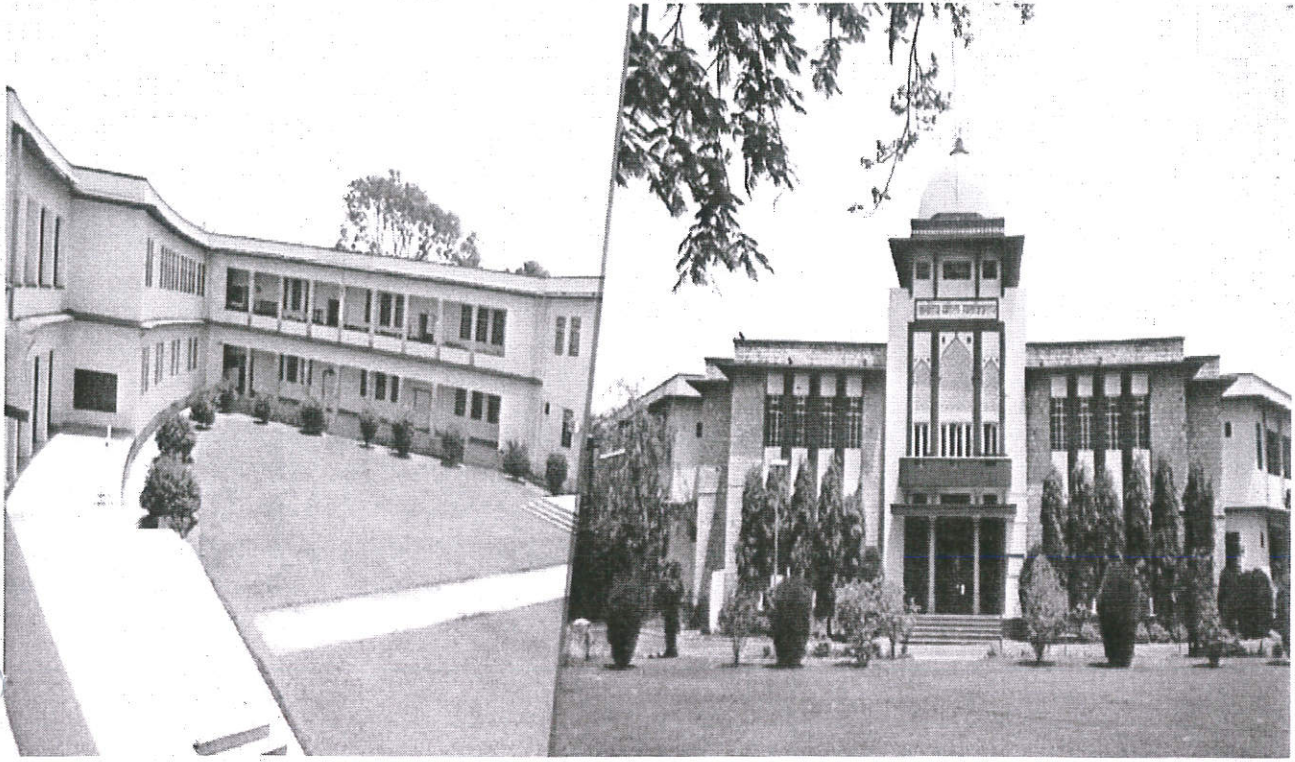
 26.88635, 75.81223

**Dr. Shailja Chambial interacting with participants**



 26.88635, 75.81223

**Participants during session**



### Organizing Committee

**Chairperson**

**Dr. Rashmi Chaturvedi**  
(Director, Kanoria College)

**Convenor**

**Dr. Varsha Sharma**  
(Principal, Kanoria College)

**Organizing Secretary**

**Dr. Sunita Shekhawat**  
Asst. Professor  
Department of Zoology  
Mob. : +91-9414279556

### **Co-Organizing Secretaries**

Dr. Farah Syed  
Asst. Professor  
Department of Zoology  
Mob. : +91-9461629751

*Jeenu*  
**PRINCIPAL**  
KANORIA PG MAHILA MAHAVIDYALAYA  
JAIPUR

Dr. Chetna Sharma  
Asst. Professor  
Department of Zoology  
Mob. : +91-9829281875

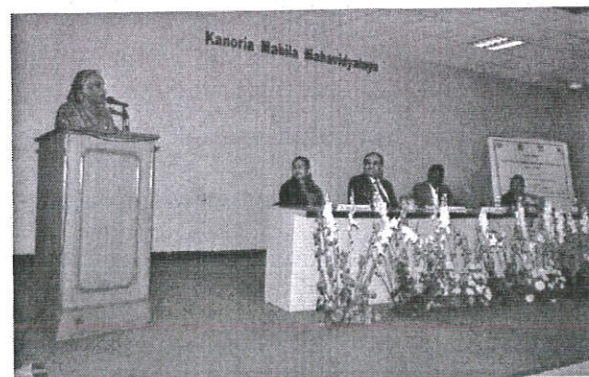
Report of  
**National Seminar**  
on  
**Lead Toxicity : Issues, Significance and Challenges**  
January 28, 2017

Generating awareness about hazards of lead on human health and environment was the core issue discussed in a one day National Seminar on 'Lead Toxicity: Issues, Significance Challenges' organized by Kanoria PG Mahila Mahavidyalaya, Jaipur under the aegis of **Indian Society for Lead Awareness and Research (InSLAR)** and **National Referral Centre for Lead Projects in India (NRCLPI)** on 28<sup>th</sup> January, 2017. Unless the civil society, parents, children and teachers are aware about the ill-effects of lead, we cannot lead a better healthy lead- free life. The objective was to spread the light of awareness so as to save our future generations.

A total of 190 participants from various sections of the society like College Faculty, School Teachers, Post Graduate and Under Graduate Students, NGO Volunteers participated in the seminar.

The inaugural session began with the welcome speech and introduction of the seminar theme by Principal, **Dr. Varsha Sharma**. **Shri K.C.A Arun Prasad**, Member Secretary, Rajasthan Pollution Control Board. His in talk, emphasized the need to

*Jeena*  
**PRINCIPAL**  
**KANORIA PG MAHILA MAHAVIDYALAYA**  
**JAIPUR**

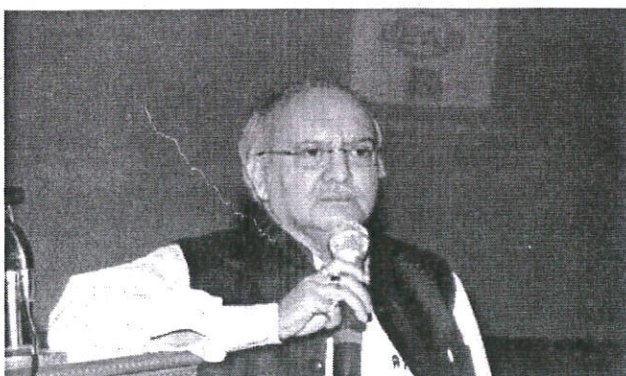


develop the technology by which lead can be recycled and reused. He apprised about the startup policy of the board for undertaking projects to combat pollution.

We were fortunate enough to have amongst us stalwart of National and International repute, **Prof. T. Venkatesh, National Chairman, InSLAR**, who is the pioneer of this subject in India. Prof. Venkatesh in his simple and lucid talk threw light on hazards of lead in our daily lives. Talking about its causes, evaluation and prevention in developing countries, he stressed the need to understand the seriousness of lead intake resulting in poisoning which is preventable and hence requires awareness and care.

The keynote address was followed by the Presidential Remarks by **Prof. Abbas Ali Mahdi, President InSLAR and Head, Department of Biochemistry, King George Medical University, Lucknow**. He threw light on the intensity of lead toxicity in our country citing various cases that he had dealt with. Prof. Mahdi explained the various routes of lead exposure, its mode of action and importance of dietary supplements in ameliorating the problem.

The first Technical Session was chaired by **Prof. Praveen Sharma, Director, NRCLPI (Western Region) and Head,**



*Jeetu*  
**PRINCIPAL**  
**KANORIA PG MAHILA MAHAVIDYALAYA**  
**JAIPUR**

Department of Biochemistry, AIIMS, Jodhpur and Prof. Abbas Ali Mahdi. The first invited talk of the session was delivered by Prof. Shankar Rao, Director and Head, Department of Rasa Shastra, National Institute of Ayurveda, Jaipur. Prof. Rao's talk on "Studies of lead with special reference to toxicity, efficacy and significance" discussed the toxic manifestations of lead in biological systems viz. anaemia, vascular diseases, infertility, and osteoporosis. His talk focused on the use of Ayurvedic preparations in overcoming lead toxicity. He also mentioned about conversion of toxic lead into non-toxic metal so that it can be used in a beneficial form. The next invited speaker of the session was Dr. Shailja Chambial, Convener, NRCLPI (Western Region) and Asst. Professor, Department of Biochemistry, AIIMS, Jodhpur in her talk on "Lead and human health" discussed the effects of lead on human health and shared her experiences of various awareness programmes conducted in communities and schools. She spoke about the various strategies to be adopted to minimize lead poisoning. She stressed on the need of adopting preventive measures in order to reduce exposure of children to lead. Dr. Vinod Rai, Chief Medical Officer, Hindustan Zinc Limited, spoke on "Occupational health



*Jeeva*  
PRINCIPAL  
KANORI PG MAHILA MAHAVIDYALAYA  
JAIPUR

services and challenges in lead industry”.

During his deliberation, he drew attention of the audience on occupational health challenges and hazards in lead based industries. He pointed out the threats associated with occupational exposures to various toxic chemicals, emphasizing the need to undertake preventive measures in order to overcome them. In his talk, he also mentioned various policies, rules and regulation related to lead.

The session was then open for oral presentations which highlighted the different aspects of lead toxicity. **Dr. Chandra Shekhar Yadav** of Department of Zoology, University of Rajasthan, Jaipur in his paper on “**Heavy metal levels in Adolescent and Maternal Blood: Association with risk of hypospadiasis**” spoke on sources of heavy metal exposure and their effects on reproductive potential, infertility and congenital anomalies. He discussed the association of heavy metals like cadmium, lead with increased risk of hypospadias.

**Dr. Anuja Vajpaee** from The IIS University, Jaipur presented a paper entitled “**Amelioration of Lead (Pb) Induced Changes In Biochemical Parameters Of The Kidney Of Swiss Albino Mice By *Tribulusterrestris*. L. Root Extract**”. She



*Jeetu*  
PRINCIPAL  
KANORIA PG MAHILA MAHAVIDYALAYA  
JAIPUR



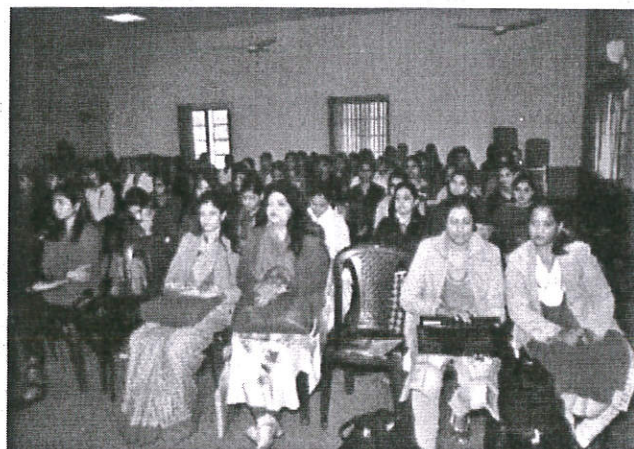
talked about the **Chelation therapy**, which is a preferred medical treatment for reducing the toxic effects of metals. Her experiments revealed that exposure to Pb toxicity significantly disturbed the antioxidant system as revealed by the increased levels of thiobarbituric acid reactive substance (TBARS) and reduced glutathione (GSH) ( $p < 0.05$ ) in the kidney tissue of Swiss albino mice. She concluded by saying that **T. terrestris** root extract treatment reversed the compromise of renal function that was induced by Pb toxicity in Swiss albino mice model.

**Dr. Rachna Bansal** from National Institute of Ayurveda, Jaipur in her paper entitled "**Evaluation, diagnosis and treatment of lead poisoning**" discussed the effects of lead on the development of neurological problems like poor motor skills, reduced memory, depression etc. during childhood. She pointed out that lead toxicity resulting in deficits in intellectual functioning, academic performance, problem solving skills, motor skills, memory and executive functioning are consistently observed in lead-exposed children, in addition to an increased likelihood of experiencing ADHD and having conduct problems in childhood and decreased brain volume in adulthood. **Dr. Jagriti Sharma** from National Institute of Ayurveda,



*Seema*  
**PRINCIPAL**  
**KANORIA PG MAHILA MAHAVIDYALAYA**  
**JAIPUR**

Jaipur in her paper on "Lead toxicity and ayurvedic medicines: Tip of the iceberg", talked about the origin and regulation of ayurvedic medicines. She emphasized that it is generally believed that herbal and natural products are safer than the synthetic or modern medicines but studies show that even some indigenous herbal products contain heavy metals as essential ingredients. Thus, the expanded use of herbal medicine has led to concerns relating to its safety, quality, and effectiveness especially for *Bhasmas* and *Rasyogas* as these are usually made of heavy metals like arsenic, mercury, copper, zinc, gold, and silver. Prolonged exposure to heavy metals such as cadmium, copper, lead, nickel, and zinc can cause deleterious health effects in humans. She further pointed out the benefits of ayurvedic preparations in combating lead toxicity.



After the lunch break, we began with the II Technical Session of the seminar, which dealt with environmental issues related to lead. This session was chaired by Prof. T. I. Khan, Director, Indira Gandhi Centre for Human Ecology and Environmental Population Studies, University of Rajasthan, Jaipur. Dr. Anita Sharma, Professor, Medical Jurisprudence and Toxicology, National Institute of Ayurveda, Jaipur delivered her



*Scene*  
**PRINCIPAL**  
KANGRA DE MAHILA MAHILAYALAYA  
JAIPUR

on “Lead toxicity, prevention in today's world and its Ayurvedic management”. In her presentation, she spoke on the different levels of lead toxicity (mild, average and severe) and the associated symptoms and ailments. Followed by a brief introduction to Ayurveda, she described various lines of treatment undertaken in the Ayurvedic system of medicine. **Dr. Reema Vastava**, Asst. Professor, Kanoria PG Mahila Mahavidyalaya, Jaipur presented her paper on “Effects of lead (Pb) pollution on plants”. She talked about the occurrence of Lead and its effects on main cereal crops viz. Maize, Rice and Wheat. Lead is taken up by plants mainly through the root system and in minor amounts through the leaves. She explained the various toxic effects that lead exerts on plants like inhibition of ATP production, seed germination, transpiration, cellular damage, over production of reactive oxygen species and stunted root growth due to inhibition of all division in roots, which are important for plant survival.

**Dr. Kamakshi Tomar**, Asst. Professor, Kanoria PG Mahila Mahavidyalaya, Jaipur talking about “Minimizing consequences of lead by consuming plants and related products rich in calcium: an ecofriendly approach” pointed out the



*Seema*  
**PRINCIPAL**  
 KANORIA PG MAHILA MAHAVIDYALAYA  
 JAIPUR

calcium intake in reducing lead absorption in the body. She talked about the accumulation of lead in various body parts and how it affects the overall mechanism of body. She focused on calcium rich diet and its advantage. She also highlighted the absorption of lead and its related disorders. She concluded her presentation with the name of some plants rich in calcium, like Broccoli, Cabbage, Aniseeds, Coriander and Spinach.

**Dr. Bhawana Mittal** of National Institute of Ayurveda, Jaipur presented a paper entitled "**Prevention and Ayurveda Management of Lead Poisoning**". She said that according to Ayurveda, *Nidanparivarjan* is the first prevention of disease. Due to prolong exposure of toxic metabolites in day today life, these toxic substances accumulate in the body and produce symptoms like- abnormal growth & development, impaired neuro-behavioral function etc. Screening is an important method in preventive medicine strategies. *Sanshodhan Chikitsa (Shunhyadi GudPanak)* which is described by *Acharya Charaka* removes the toxic metabolites, *Sansaman Chikitsa (Dushivishariagad)* neutralise the toxins from the body. She concluded by saying that with the help of ayurvedic concept *Nidanparivarsan*, *sanshodhan & sanshamanchikitsa*, we can



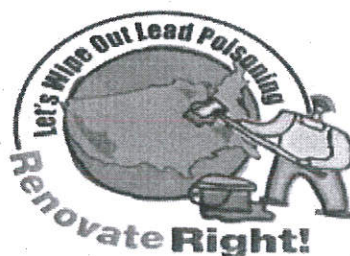
*Jeetu*  
PRINCIPAL  
KANORIA PG MAHILA MAHAVIDYALAYA  
JAIPUR

minate the toxic metabolites from the body & the living beings from toxic exposure.

**Ms. Akansha Hada** of S.S. Jainodh P.G. College, Jaipur presented a paper titled “**Effects of lead on children**” in which she gave a comparative review of effects of Lead on children and adult. She talked about the different sources of lead exposure like paints, batteries, jewellery, cosmetics. She pointed out that lead is mainly distributed and stored in the soft tissues of the body like kidney, stomach, and blood. She also suggested various preventive and control measures to reduce lead toxicity in children.

**Prof. T. I. Khan** concluded the seminar by his remarks. He stressed the need to reduce the chemical load from the world in order to combat pollution and protect the environment.

A brief report of the seminar was presented by the Co-Organizing Secretary **Dr. Farah Syed**. The seminar was concluded by a vote of thanks by the Organizing Secretary, **Dr. Sunita Khawat**.



*Devi*  
PRINCIPAL  
KANORIA PG MAHILA MAHavidyalaya  
JAIPUR