

Report on "Potential Herbal Medicines for Chronic Stress-Triggered Pathologies: A Pre-clinical Study" Held on –
01/08/2021

Date of Event	1 st August 2021
Student Activity	"Potential Herbal Medicines for Chronic Stress-Triggered Pathologies: A Pre-clinical Study"
Conducted by	School of Pharmacy
No. Of Participant	64

"Potential Herbal Medicines for Chronic Stress-Triggered Pathologies: A Pre-clinical Study"

On 1st August 2021 **SCHOOL OF PHARMACY, AJU** ORGANIZED a webinar under the WEBINAR SERIES 2021 with **DR. AJIT KUMAR THAKUR** on topic **"Potential Herbal Medicines for Chronic Stress-Triggered Pathologies: A Pre-clinical Study"**. **DR. AJIT KUMAR THAKUR** is presently working as Assistant Professor of Pharmacology at Delhi Pharmaceutical Sciences and Research University, New Delhi. He has a large number of **research publications** and conferred with **G. Achari Award** in 2016 by Indian Pharmacological Society. His areas of research interests include **Neuropharmacology & Psychopharmacology**. He is also coordinating for works related to **AICTE, PCI, UGC** and Nodal Officer for **AISHE and NIRF** related works along with other administrative works at DPSRU, New Delhi. He has various professional life-memberships viz. Indian Pharmacological Society; Indian Academy of Neuroscience; Association of Pharmaceutical Teachers of India; Indian Pharmacy Graduates' Association etc. He is an active reviewer of various international journals viz. Pharmacology Biochemistry and Behavior; Natural Product Research; Journal of Basic and Clinical Physiology and Pharmacology; Pharmacognosy Magazine; Scientific Research Publishing etc.

Session was started at 11:30 AM. Dr. Thakur addressed the gathering and appreciated the effort of WEBINAR SERIES-2021 by School of pharmacy. In his talk he emphasized on Herbal Medicines and their medicinal effect and preclinical investigations. On chronic stress and pathology he taught that depending on the **nature, intensity, and duration of stress**, diverse spectrums of homeostatic alterations are induced.

- Short duration stress can be modulated by the physiological, biochemical and endocrine responses as **"Adaptive Mechanism"** to counter stress effects.
- Chronic stress-related illnesses like **gastric ulcerations, behavioural perturbations** together with **biochemical and endocrine imbalance**.
- Diverse spectrums of **co-morbid psychopathologies** and **neuro-inflammatory diseases**.
- Ayurvedic and other traditionally known systems of medicine consider **"Adaptogenic Herbs"** as potential medications.

EFFECTS OF CHRONIC STRESS ON HUMANS

BRAIN/SPINE

- volume reductions** of some structures (such as the PFC)
- decreased **neuronal plasticity** due to dendritic atrophy and neuronal death --decreased **spine density**
- Stressed Brains and Depressed brains look morphologically similar

IMMUNE SYSTEM

- psychological stress induces the same response as **infections** and causes **tissue damage**
- increase the levels of **circulating cytokines** and of various **biomarkers of inflammation**.

He also said about What Happens Cellularly with Stress

- Mitochondria: create **oxygen-containing radicals** that can damage native or repair proteins by distorting their 3-D structure
- With stressors: infection, cold, heat, radiation, physical load, emotional stress, a cascade of “**signalling**” **proteins/enzymes** (*i.e.* **JNK: c-Jun N-terminal kinases**).
- JNK: limits neuronal development, activates the immune system, and begins **programmed cell death (apoptosis)**.

About ADAPTOGENS he told that

- Increase the resistance to stress
- Decrease sensitivity to stressors (stress protection effect)
- Stimulate the body’s overall physiology
- Limit fatigue
- All of the above create “heterostasis” - a condition of the body better adapted than normal homeostasis.

Finally he concluded his speech assuring the students and faculties for any kind of possible research support. The session was inaugurated by VC of ARKA JAIN University Dr. S.S. Razi, Honourable Registrar of ARKA JAIN University Mr. Jasbir Singh Dhanjal and Dignitaries from different institutions. Dr Jyotirmaya Sahoo Dean of School of Pharmacy had given the welcome speech, Miss Khusboo Raj, Asst. Professor, School of Pharmacy had given the vote of thanks and Miss Yogita Kumari, Asst. Professor, School of Pharmacy had hosted the event.

Poster of the Event

**ARKA JAIN**
University
Jharkhand (Jamshedpur)

SCHOOL OF PHARMACY
Organizes
WEBINAR SERIES 2021

**"POTENTIAL HERBAL MEDICINES FOR
CHRONIC STRESS-TRIGGERED
PATHOLOGIES:
A PRE-CLINICAL STUDY"**



**DR. AJIT KUMAR THAKUR**
Assistant Professor of Pharmacology
Delhi Pharmaceutical Sciences &
Research University New Delhi

 **1st August 2021**
 **11:30 Onwards**

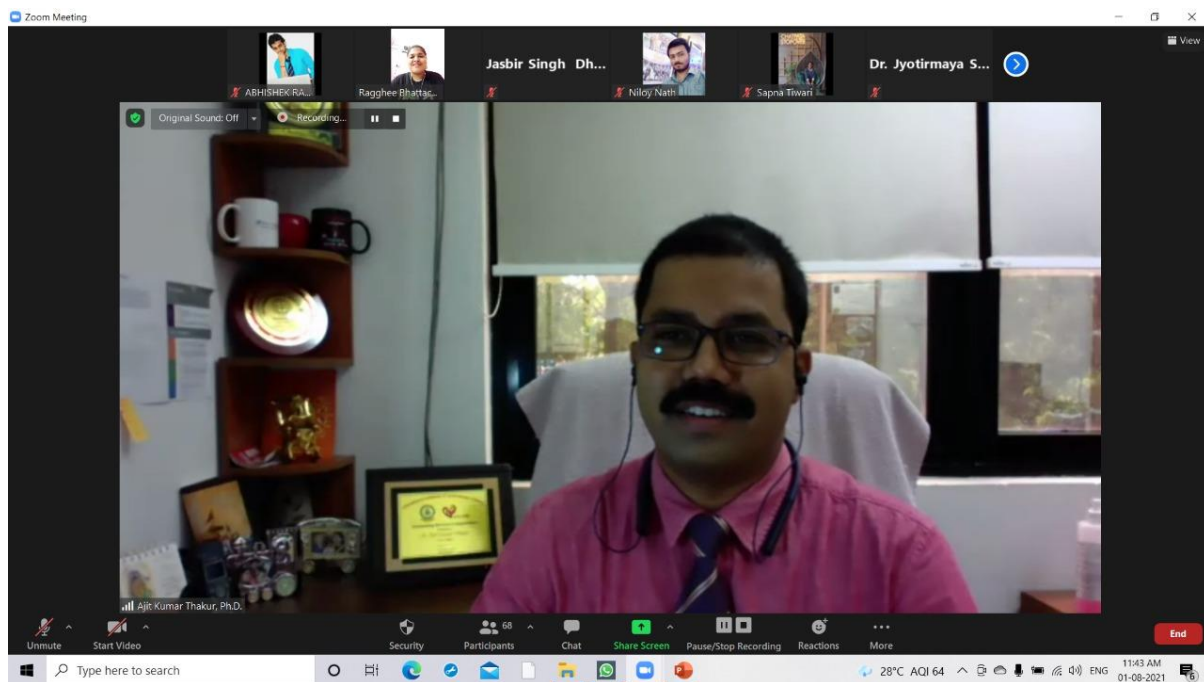


We wish your Good Health and Long Life

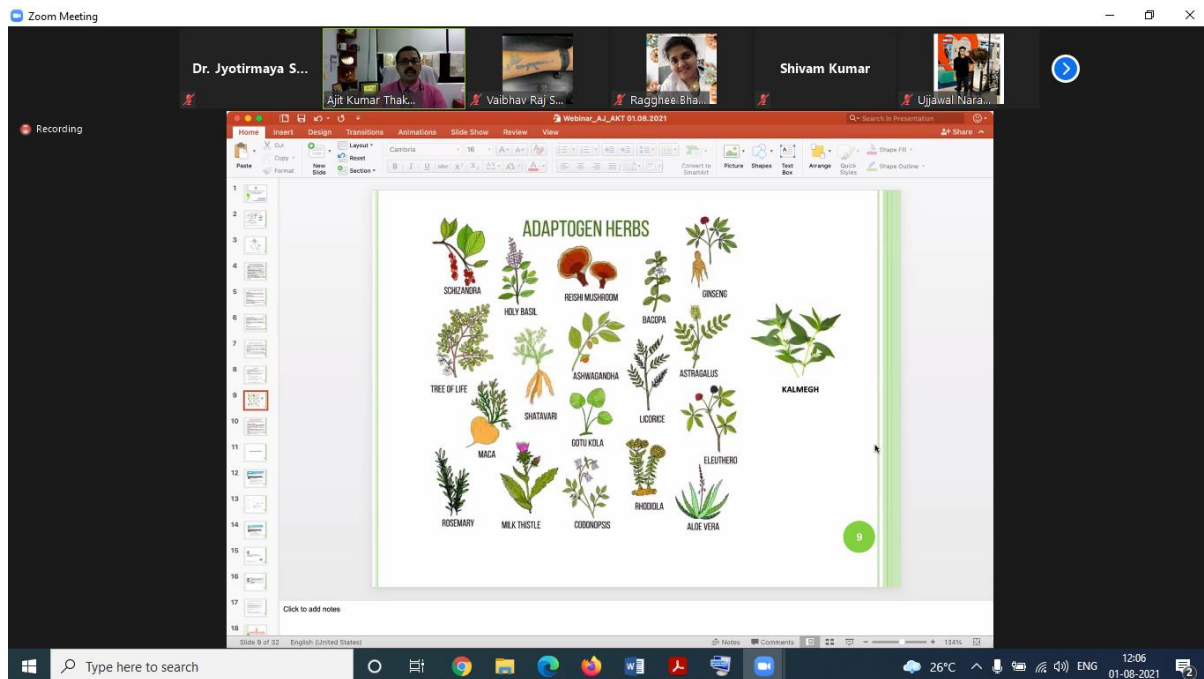
Invitation

	 <small>Est. Under Jharkhand State Private University Act</small>
Ref. No. <u>AJU/A/20-21</u>	Date <u>25/07/2021</u>
<hr/>	
<p>To, <u>Dr. Ajit Kumar Thakur</u> M.Pharm., Ph.D., DST-INSPIRE Fellow Assistant Professor of Pharmacology Delhi Pharmaceutical Sciences and Research University M.B. Road, Pushp Vihar Sector-III, New Delhi-110 017, India</p> <p>Phone: +91-9935824795; Phone: +91-11-29553481 E-mail: ajit.thakur@dpsru.edu.in</p>	
<p><u>Subject: Invitation as a Resource Person to Webinar Series-2021</u></p>	
<p>Respected Sir/Madam,</p> <p>We are glad to introduce School of Pharmacy, ARKA JAIN University, Jamshedpur, Jharkhand promoted by the JGI Group, Bangalore situated at Tatanagar (Jamshedpur). Since you have over 30 years of industry experience in leadership roles in the area of Pharmaceutical research, Regulatory Affairs and Quality Assurance, working for small, mid-sized, and large pharmaceutical organizations, therefore it's our privilege to invite you as Chief Speaker on the eve of Webinar Series-2021 to share your expertise and to motivate our students. Your session will be held on 1st August 2021 at 11:30 AM. We are expecting a long association with you and hope that jointly we can do better for the society as well as for the pharma fraternity. A line of confirmation is awaited from your end. Please join the meeting with the link https://us02web.zoom.us/j/87551451793?pwd=N1ltN3ZDYmplVmczU2xlRjR4MkptQT09.</p> <p>Thank you with warm regards.</p> <p> Registrar ARKA JAIN University, Jharkhand</p>	
<hr/>	
<p>Campus Opp.to Kerala Public School, Mohanpur, Gamharia, Dist. Seraikela Kharsawan, Jharkhand - 832108 www.arkajainuniversity.ac.in info@arkajainuniversity.ac.in</p>	<p>Admission Office D-28, Danish Arcade, Opp. to Asian Inn Hotel, Dhatkidih, Jamshedpur, Jharkhand - 831001 0657 - 2220285 / Toll Free : 1800 - 1200 - 200</p>

Dr. Ajit K. Thakur Addressing the Participants



Dr. Ajit K. Thakur Explaining Adaptogen Herbs



Token of Appreciation offered to Dr. Ajit K. Thakur

