

Curriculum Vitae



Dr. Akash Kedia

Area of Expertise: Post harvest protection of food commodities against fungal, mycotoxin and insect contamination by phytochemicals

PERSONAL PROFILE

Name: **Dr. Akash Kedia**
Father's Name: Binod Kedia
Nationality: Indian
DOB: 25/11/1986
Marital status: Married
Current Position: Assistant Professor of Botany, Government General Degree College at Mangalkote, P.O. Maigram-713132, Purba Bardhaman, W.B. (W.B.E.S.)
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HIGHER EDUCATION

- Post doctoral Fellow at Gauhati University, Guwahati, Assam (from 30 April 2015 to 21 Nov, 2015).
- Ph.D. in Botany from Banaras Hindu University, Varanasi, U.P., India in 2014.
- M.Sc. in Botany (first division, CGPA 8.51), 80.6% from Banaras Hindu University, Varanasi, U. P., India in 2010.
- B.Sc. Hons. in Botany (first division, 67.9%) from The University of Burdwan, West Bengal, India in 2008.
- Intermediate, W. B. Board (first division 69.4%) in 2005.
- High school, W. B. Board (first division 80.5%) in 2003.

OTHER QUALIFICATIONS/ AWARDS/ FELLOWSHIPS

- Summer Research Fellowship Programme (2 months) from May 2009 to June 2009 jointly conducted by IASc, INSA and NASI
- CSIR/UGC- NET exam (Jun. 2010) for UGC-JRF
- CSIR/UGC- NET exam (Dec. 2010) for Lecturership
- UGC Research Fellowship from Sept. 2010 to Dec. 2010
- One year 'Higher Diploma in Computer Application'-2012
- One year (part time) certificate course in Statistical Methods-2013
- 'Certificate of Merit' award for the best paper in the 36th Annual Botanical Conference-2013
- 'Best Poster Presenter' award in National e-conference on Sustainable Development: Challenges & Opportunities Post COVID-19
- Five year teaching experience in UG & PG courses

RESEARCH PUBLICATIONS

Research Papers: 24 – Published
Book Chapters: 8 – Published, 1 - Accepted

Ph.D. thesis title: "Efficacy of some plant products against losses of food commodities from storage pests"
Supervisor: Prof. N. K. Dubey, Dept. of Botany, B.H.U., Varanasi (U.P.)

PDF research title: “Evaluation of essential oils from selected aromatic higher plants of North-Eastern region of India against food spoiling fungi, aflatoxin secretion and the nano encapsulation of oils to enhance their activity and stability”

Supervisor: Prof. D. K. Jha, Dept. of Botany, Gauhati University, Guwahati (Assam)

List of Published papers:-

1. **A. Kedia**, B. Prakash, P. K. Mishra and N. K. Dubey (2014). Antifungal and antiaflatoxicogenic properties of *Cuminum cyminum* (L.) seed essential oil and its efficacy as a preservative in stored commodities. **International Journal of Food Microbiology** 168-169: 1-7 (**Impact Factor: 3.451 ISSN: 0168-1605**).
2. **A. Kedia**, B. Prakash, P. K. Mishra, C. S. Chanotiya and N. K. Dubey (2014). Antifungal, antiaflatoxicogenic and insecticidal efficacy of Spearmint (*Mentha spicata* L.) essential oil. **International Biodeterioration and Biodegradation** 89: 29-36 (**Impact Factor: 4.074 ISSN: 0964-8305**).
3. **A. Kedia**, D. S. Ivanoh and N. K. Dubey (2014). Fungal contamination of stony endocarp (Rudraksha) of *Elaeocarpus* spp. from three different countries. **Indian Journal of Natural Products and Resources** 5(1): 97-100 (**Impact Factor: 0.27 ISSN: 0976-0512**).
4. **A. Kedia**, B. Prakash, P. K. Mishra, P. Singh and N. K. Dubey (2015). Botanicals as eco-friendly biorational alternatives of synthetic pesticides against *Callosobruchus* spp. (Coleoptera: Bruchidae) – A review. **Journal of Food Science and Technology** 52(3): 1239-1257 (**Impact factor 1.849 ISSN: 0975-8402**).
5. **A. Kedia**, B. Prakash, P. K. Mishra, A. K. Dwivedy and N. K. Dubey (2015). *Trachyspermum ammi* L. essential oil as plant based preservative in food system. **Industrial Crops and Products** 69: 104-109 (**Impact Factor: 4.244 ISSN: 0926-6690**).
6. **A. Kedia**, B. Prakash, P. K. Mishra, A. K. Dwivedy and N. K. Dubey (2015). Biological activities of *Cuminum cyminum* seed oil and its major components against *Callosobruchus chinensis* and *Sitophilus oryzae*. **Journal of Asia-Pacific Entomology** 18(3): 383-388 (**Impact Factor: 1.101 ISSN: 1226-8615**).
7. **A. Kedia**, A. K. Dwivedy, A. K. Pandey, R. R. Kumar, P. Regmi and N. K. Dubey (2015). Efficacy of chemically characterized *Foeniculum vulgare* Mill seed essential oil in protection of raw tobacco leaves during storage against fungal and aflatoxin contamination. **Journal of Applied Microbiology** 119: 991-998 (**Impact Factor: 3.066 ISSN: 1365-2672**).
8. **A. Kedia**, A. K. Dwivedy, D. K. Jha and N. K. Dubey (2016). Efficacy of *Mentha spicata* essential oil in suppression of *Aspergillus flavus* and aflatoxin contamination in chickpea with particular emphasis to mode of antifungal action. **Protoplasma** 253(3): 647-653 (**Impact Factor: 2.751 ISSN: 1615-6102**).
9. B. Prakash, P. Singh, **A. Kedia**, A. Singh and N. K. Dubey (2012). Efficacy of essential oil combination of *Curcuma longa* L. and *Zingiber officinale* Rosc. as a postharvest fungitoxicant, aflatoxin inhibitor and antioxidant agent. **Journal of Food Safety** 32: 279-288 (**Impact factor 1.665 ISSN: 1745-4565**).
10. P. K. Mishra, R. Shukla, P. Singh, B. Prakash, **A. Kedia** and N. K. Dubey (2012). Antifungal, anti-aflatoxicogenic, and antioxidant efficacy of Jamrosa essential oil for preservation of herbal raw materials. **International Biodeterioration & Biodegradation** 74: 11-16 (**Impact factor 4.074 ISSN: 0964-8305**).

11. B. Prakash, P. Singh, **A. Kedia** and N. K. Dubey (2012). Assessment of some essential oils as food preservatives based on antifungal, antiaflatoxin, antioxidant activity and *in vivo* efficacy in food system. **Food Research International** 49: 201-208. (Impact factor 4.972 ISSN: 0963-9969)
12. B. Prakash, P. Singh, **A. Kedia**, A. K. Dwivedy, A. Singh and N. K. Dubey (2012). Mycoflora and aflatoxin analysis of *Arachis hypogaea* L. and assessment of *Anethum graveolens* L. seed and leaf essential oils against isolated fungi, aflatoxin production and their antioxidant activity. **Journal of Food Safety** 32: 481–491 (Impact factor 1.665 ISSN: 1745-4565)
13. P. K. Mishra, P. Singh, B. Prakash, **A. Kedia**, N. K. Dubey and C. S. Chanotiya (2013). Assessing essential oil components as plant-based preservatives against fungi that deteriorate herbal raw materials. **International Biodeterioration & Biodegradation** 80: 16-21 (Impact factor 4.074 ISSN: 0964-8305)
14. B. Prakash, P. K. Mishra, **A. Kedia** and N. K. Dubey (2014). Antifungal, antiaflatoxin and antioxidant potential of chemically characterized *Boswellia carterii* Birdw essential oil and its *in vivo* practical applicability in preservation of *Piper nigrum* L. fruits. **LWT-Food Science and Technology** 56: 240-247 (Impact factor 3.714 ISSN: 0023-6438)
15. B. Prakash, **A. Kedia**, P. K. Mishra and N. K. Dubey (2014). Plant essential oils as food preservatives to control molds, mycotoxin contamination and oxidative deterioration of Agri-food commodities – Potentials and Challenges. **Food Control** 47: 381-391 (Impact factor 4.258 ISSN: 0956-7135)
16. P. K. Mishra, B. Prakash, **A. Kedia**, A. K. Dwivedy, N. K. Dubey and S. Ahmad (2015). Efficacy of *Caesulia axillaris*, *Cymbopogon khasans* and *Cymbopogon martinii* essential oils as plant based preservatives against degradation of raw materials of *Andrographis paniculata* by fungal spoilage. **International Biodeterioration & Biodegradation** 104: 244-250 (Impact factor 4.074 ISSN: 0964-8305)
17. B. Prakash, P. K. Mishra, **A. Kedia**, A. K. Dwivedy and N. K. Dubey (2015). Efficacy of some essential oil components as food preservatives against food contaminating molds, aflatoxin B1 production and free radical generation. **Journal of Food Quality** 38: 231-239 (Impact Factor: 0.841 ISSN: 1745-4557)
18. B. Prakash, **A. Kedia**, P. K. Mishra, A. K. Dwivedy and N. K. Dubey (2015). Assessment of chemically characterised *Rosmarinus officinalis* L. essential oil and its major compounds as plant-based preservative in food system based on their efficacy against food-borne moulds and aflatoxin secretion and as antioxidant. **International Journal of Food Science and Technology** 50: 1792–1798 (Impact Factor: 2.773 ISSN: 1365-2621)
19. A. K. Dwivedy, **A. Kedia**, P. K. Mishra, N. K. Dubey (2015). □□□□□□□□ □□□□□□ □□□□□□ □□□□ □□□□ □□ □□□□□□. **Prajna** 60(2): 293-295 (Impact Factor: 0.0 ISSN: 0554-9884).
20. B. Prakash, **A. Kedia**, A. Singh, S. Yadav, A. Singh, A. Yadav, Deepika And N. K. Dubey (2016). Antifungal, antiaflatoxin and antioxidant activity of plant essential oils and their *in vivo* efficacy in protection of chickpea seeds. **Journal of Food Quality** 39(1):36-44 (Impact Factor: 0.841 ISSN: 1745-4557).

21. A. K. Dwivedy, **A. Kedia**, M. Kumar, N. K. Dubey (2016). Essential oils of traditionally used aromatic plants as green shelf-life enhancers for herbal raw materials from microbial contamination and oxidative deterioration. **Current Science** 110(2): 143-145 (**Impact Factor: 0.756 ISSN: 0011-3891**).
22. P. K. Mishra, **A. Kedia** and N. K. Dubey (2016). Chemically characterized *Cymbopogon martinii* (Roxb.) Wats. essential oil for shelf life enhancer of herbal raw materials based on antifungal, antiaflatoxicogenic, antioxidant activity and favorable safety profile. **Plant Biosystems** 150(6):1313-1322 (**Impact Factor: 2.060 ISSN: 1724-5575**).
23. A. K. Dwivedy, M. Kumar, **A. Kedia**, P. K. Mishra, C. S. Chanotiya and N. K. Dubey (2017). Assessment of chemically characterised *Abelmoschus moschatus* Medik. seed essential oil as shelf life enhancer of herbal raw materials based on antifungal, antiaflatoxicogenic and antioxidant efficacy. **Plant Biosystems** 151(1):139-147 (**Impact Factor: 2.060 ISSN: 1724-5575**).
24. A. K. Chaudhari, V. K. Singh, **A. Kedia**, S. Das and N. K. Dubey (2021). Essential oils and their bioactive compounds as eco-friendly novel green pesticides for management of storage insect pests: prospects and retrospects. **Environmental Science and Pollution Research** 28:18918-18940 (**Impact Factor: 3.056 ISSN: 1614-7499**).

List of published Book chapters:-

1. **A. Kedia**, B. Prakash, P. K. Mishra and N. K. Dubey (2013). Current status and impediments preventing India from becoming a herbal giant. In: Keshri, JP, Mukhopadhyay, R. (Eds.), Medicinal Plants: Various Perspectives. CAS, Department of Botany, The University of Burdwan, Burdwan, West Bengal, India (pp 254-263) (**ISBN 81-87259-85-X**)
2. **A. Kedia**, D. K. Jha and N. K. Dubey (2015). Plant essential oils as natural fungicides against stored product fungi. In: Méndez-Vilas, A (Ed.), The Battle Against Microbial Pathogens: Basic Science, Technological Advances and Educational Programs, Formatex Research Centre, Spain (pp 208-214) Vol. 1 (**ISBN 978-84-942134-6-5**)
3. **A. Kedia** and N. K. Dubey (2018). Nanoencapsulation of essential oils: A possible way for an eco friendly strategy to control postharvest spoilage of food commodities from pests. In: D. K. Tripathi et al., (Eds.), Nanomaterials in plants, algae and microorganisms. Elsevier, UK (pp 501-522). (**ISBN 978-0-12-811487-2**)
4. **A. Kedia**, A. K. Dwivedy and N. K. Dubey (2020). Essential oils as next generation fungicides: Contrivances and challenges. In: A. Arya (Ed.), Environment at Crossroads: Challenges and Green Solutions, Scientific Publishers, India (pp 249-261). (**ISBN: 978-93-89184-93-8**)
5. N. K. Dubey, P. K. Mishra, **A. Kedia** and B. Prakash (2014). Fungal and mycotoxin contamination of herbal raw materials and prospects of higher plant products as plant based preservatives during post-harvest processing. In: R.N. Kharwar et al., (Eds.), Microbial diversity and biotechnology in food security. Springer, India (pp. 495-504). (**ISBN 978-81-322—1800-5**)
6. N. K. Dubey, **A. Kedia**, B. Prakash and N. Kishore (2015). Plants of Indian traditional medicine with antioxidant activity. In: Dubey, NK (Ed.), Plants as a source of natural antioxidants. CAB International, UK (pp. 1-14). (**ISBN 978-1-78064-266-6**).

7. A. Singh, **A. Kedia** and N. K. Dubey (2015). Ethnomedicinal plants of Mirzapur & Sonebhadra forests, Uttar Pradesh. In: G. K. Mishra et al., (Eds.), Plant Diversity of Uttar Pradesh. Birbal Sahni Institute of Palaeobotany, Lucknow, India (pp. 79-128). (ISBN 978-93-83247-29-5).

8. A. K. Dwivedy, V. K. Singh, S. Das, S. Tiwari, B. K. Singh, **A. Kedia**, B. Prakash and N. K. Dubey (2020). Nanoencapsulation technology for management of postharvest biodeterioration of stored food commodities. In: P. C. Trivedi (Ed.), Biotechnology for Plant Disease Diagnostics and Management, Pointer Publishers, India (pp. 234-258). (ISBN 978-81-7132-914-4).

List of accepted Book chapters:-

1. **A. Kedia** and N. K. Dubey (2021). Essential oil of *Trachyspermum ammi* (L.) Sprague ex Turrill – Phytochemistry and Therapeutics. In: T. Pullaiah (Ed.), Bioactives and Pharmacology of Medicinal plants, Apple Academic Press, USA.

SYMPOSIA / CONFERENCE / WORKSHOP/WEBINAR

Total No. of Symposia/Conference attended : 19 (International 7, National 12)

Total No. of papers presented in Symposia/Conference : 15 (International 6, National 9)

Total No. of Workshops attended : 02

Total No. of papers presented in Webinar : 05 (International 3, National 2)

(Dr. Akash Kedia)