

Curriculum-vitae

Name : Dr. Narayan Prasad Yadav
Designation : **Senior Principal Scientist**
Division : Bio-prospection and Product Development Division
Institute : CSIR-Central Institute of Medicinal and Aromatic Plants,
Lucknow (U. P.) India 226015

Education : B. Pharm., M. Pharm., Ph.D. (Pharmaceutical Sciences),
Post. Doc. (Nano-medicine and Drug Delivery, Boston, USA)

Major Area of Research:

Herbal Formulation/Technology Development, Phytopharmacology (Psoriasis, Diabetes, Oral Submucous Fibrosis, Wound healing, Hepatoprotection, Nanomedicine and drug delivery of plant drugs

Honors/Awards

- ✓ **ICMR Prize** for Biomedical Scientist for Herbal Formulation/Technology Development by Indian Council of Medical Research, Govt. of India
- ✓ Department of Health Research/ICMR **International Fellowship award** for advance training in Boston, MA (USA) (April 2015- March 2016).
- ✓ **Outstanding research publication award** as team leader (2014-2015) from CSIR-CIMAP, Lucknow
- ✓ **Best Oral Presentation award** at 13th National Convention of Society of Pharmacognosy held at Department of Pharmacy, Barkatullah University, Bhopal (M.P.) India 15-16 Feb., 2009.
- ✓ **Best Poster Award** at British Pharmaceutical Conference 2008 held at **Manchester** 7-9 Sept., 2008 (Awarded by Academy of Pharmaceutical Sciences, **Great Britain**).
- ✓ **Appreciation award** on CIMAP Annual Day 26th March, 2008 in appreciation of bringing laurels to CIMAP by receiving Young Scientist Award in International Seminar at Tirupati, A. P.
- ✓ **Young Scientist Award** In International Seminar on Medicinal Plants and Herbal Products at Tirupati, A. P. (India) held on 7-9 March, 2008
- ✓ **Technology award** on 11th May, 2007 in appreciation of preparing know how of Mosquito Repellent Cream, which has been licensed to Industry

Patents

- PK Rout, CS Chanotiya, P Kumar, A Pal, **NP Yadav**, AD Nannaware, P Vasudev, 2022. Enantioselective catalyst system and synthesis of **mosquito repellent** (+)-p-menthane-3,8-diol [(+)-PMD] from lemongrass essential oil. Indian Patent, Application No. 202311003935; 2022-23
- Luqman S, **Yadav NP**, Chanotiya CS, Shanker K, Bawankule DU, Chanda D, Meena A, Pal A, Tandon S, Darokar MP, Trivedi PK, Kumari U KM, Singh S, Singh DK,

Hussain Y, Sinha P, Bhatt D, Kumar A, Yadav P, 2021. Novel composition of essential oil-based formulation for its use as room disinfectant and room freshener. Indian Patent, **Application No. 0174NF2021**; Dated: 13.10.2021

- **Yadav NP**, Rai VK, Bawankule DU, Khan F, Chanda D, Tandon S, Chanotiya CS, Shukla A, Saxena A. 2017. Anti-psoriatic composition and the process of preparation of the same. **Indian Patent 0038NF2017** (Application No. 201711031817)

Book Chapter:

- Yadav K, Singh MR, Rai VK, Srivastava N, Yadav NP, 2020. Commercial aspects and market potential of novel delivery systems for bioactives and biological agents. In: *Advances and Avenues in the Development of Novel Carriers for Bioactives and Biological Agents*, p.595-620, Academic Press, Editors: Singh MR, Singh D, Kanwar JR, Chauhan NS

Herbal Products/Technology Developed:

- Liquid vaporizer as room disinfectant and room freshener
- Anti-psoriatic cream
- Alcohol free and Aloe vera based After-shave Gel
- Plant molecule based Anti-acne Gel
- Herbal All Purpose Cream
- Herbal mosquito repellent cream

Representative Publications:

1. Parveen S, Kumar S, Pal S, **Yadav NP***, Rajawat J, Banerjee M. Enhanced therapeutic efficacy of Piperlongumine for cancer treatment using nano-liposomes mediated delivery. *International Journal of Pharmaceutics*. 2023 Jul 8;643:123212. doi: 10.1016/j.ijpharm.2023.123212 (**IF 5.8**)
2. Singh VK, Sahoo D, Agrahari K, Khan A, Mukhopadhyay P, Chanda D, **Yadav NP***. Anti-inflammatory, anti-proliferative and anti-psoriatic potential of apigenin in RAW 264.7 cells, HaCaT cells and psoriasis like dermatitis in BALB/c mice. *Life Sciences*. 2023 Jul 4;328:121909. doi: 10.1016/j.lfs.2023.121909 (**IF 6.1**)
3. Sahoo D, Singh VP, Agrahari K, Kumari KMU, Luqman S, Savita A, Gupta H, Rout PK, **Yadav NP***, 2023. Development of QbD-based mupirocin- β -cyclodextrin complex loaded thermosensitive in-situ gel for wound healing in mice, *Journal of Drug Delivery Science and Technology*, 2023May 86,104585, doi:10.1016/j.jddst.2023.104585 (**IF 5.0**)
4. Kumar D, Binwal M, Bawankule DU, **Yadav NP**, Rout PK, Modification of novel gymnemic acid enrich extract to Ag-nanoparticles and lipid soluble derivative for the amelioration of insulin impairment in L6 myoblasts, *Journal of Drug Delivery Science and Technology*, 2023 May, 83;104410. doi.10.1007/s10787-022-01119-3 (**IF 5.0**)
5. Pal S, Sharma D, **Yadav NP***. Plant leads for mitigation of oral submucous fibrosis: Current scenario and future prospect. *Oral Diseases*. 2022 Dec 24. doi: 10.1111/odi.14485 (**IF 3.8**)

6. Sharma D, Singh V, Yadav MK, Patil UK, Dixit VK, **Yadav NP***, Repellent Activity of Plant Extracts, Essential Oils and their Combinations against Different Mosquito Species: A Review, *Indian Journal of Natural Products*, 2022; 36(1):2-16 doi : 10.5530/ijnp.2022.1.7
7. Kumari KMU, **Yadav NP**, Luqman S. Promising Essential Oils/Plant Extracts in the Prevention and Treatment of Dandruff Pathogenesis. *Current Topics in Medicinal Chemistry*. 2022;22(13):1104-1133.doi.10.2174/1568026622666220531120226 (IF 3.4)
8. Kumar D, Singh VK, **Yadav NP**, Tandon S, Shanker K, Chanotiya CS, Kumar N, Khare P, Pal A, Chanda D, Saikia D, Hussain Y, Meena A, Dhawan SS, Rout PK, 2022. Green and proficient process for industrial-scale preparation of *Gymnema sylvestre* standardized-extract enriched with Gymnemic acids through polymer-matrix-adsorption to reduce hyperglycemia, *Journal of Industrial and Engineering Chemistry*, 116:229-238. (IF 6.76)
9. Rai VK, Chanda D, Chanotiya CS and **Yadav NP***, A combination of linalool and linalyl acetate synergistically alleviates imiquimod-induced psoriasis like skin inflammation in BALB/c mice. *Frontiers in pharmacology* .2022 Aug 13:913174. doi: 10.3389/fphar.2022.913174 (IF 5.6)
10. Yadav KS, Srivastava N, Rai VK, Ranjana, Tandon S, Mina PR, Chanda D, Kalleti N, Rath SK, Darokar MP, Ajayakumar PV, Shanker K, **Yadav NP***, Cliv-92-Loaded Glycyrrhetic Acid-Modified Chitosan Nanoparticles for Enhanced Hepatoprotection–Preparation, Characterization, and In Vivo Evaluation, *American Association of Pharmaceutical Scientists*. 2021 Oct 26;22(8):259. doi: 10.1208/s12249-021-02130-7.(IF 3.3)
11. Jaina A, Dasgupta N, Ranjan S, Singh V, Hemant Singh H, Purohit SD , Mishra NC , **Yadav NP**, Shafiul Haque S, Mishra BN, Samant SK. Whey protein based electrosprayed nanospheres for encapsulation and controlled release of bioactive compounds from *Tinospora cordifolia* extract, *Innovative Food Science and Emerging Technologies* 2021 may 69;102671. doi.10.1016/j.ifset.2021.102671 (IF 6.6)
12. Singh A, Srivastava N, Yadav KS, Sinha P, **Yadav NP**, Preparation, optimization, characterization and bioevaluation of rosmarinic acid loaded phytovesicles for anti-inflammatory activity, *Journal of Drug Delivery Science and Technology*, 2020 october 59: 101888.doi.10.1016/j.jddst.2020.101888 (IF 5.0)
13. Rai VK, Sinha P, Yadav KS, Shukla A, Saxena A, Bawankule DU, Tandon S, Khan F, Chanotiya CS, **Yadav NP***. Anti-psoriatic effect of *Lavandula angustifolia* essential oil and its major components linalool and linalyl acetate. *Journal of Ethnopharmacology* 2020 october 261:113127 DOI:10.1016/j.jep.2020.113127 (IF 5.4)
14. Sinha P, Srivastava N, Rai VK, Mishra R, Ajayakumar PV, **Yadav NP**, 2019. A novel approach for dermal controlled release of salicylic acid for improved anti-inflammatory action: Combination of hydrophilic-lipophilic balance and response surface methodology, *Journal of Drug Delivery Science and Technology*, 2019 june 52: 870–884.doi:10.1016/j.jddst.2019.06.007 (IF 5.06)
15. Yadav KS, Ranjana, Tandon S, **Yadav NP***, Shanker K, Pharmacokinetic study of hepatoprotective coumarinolignoids from *Cleome viscosa* in mice using validated high-performance liquid chromatography-photodiode array method. *Pharmacognosy Magazine*, 2019 march 15:270-6. doi: 10.4103/pm.pm_508_18 (IF 1.5)
16. Srivastava N, Patel DK, Rai VK, Pal A, **Yadav NP***. Development of emulgel formulation for vaginal candidiasis: Pharmaceutical characterization, *in vitro* and *in*

- vivo* evaluation, *Journal of Drug Delivery Science and Technology*, 2018 october 48: 490–498. doi:10.1016/j.jddst.2018.10.013 (IF 5.0)
17. Rai VK, Mishra N, Yadav KS, **Yadav NP***. 2017. Nanoemulsion as pharmaceutical carrier for dermal and transdermal drug delivery: Formulation development, stability issues, basic considerations and applications, *Journal of Controlled Release*, January 2018 270: 203-225. doi:10.1016/j.jconrel.2017.11.049 (IF10.8)
 18. Maan P, Yadav KS, **Yadav NP***. Wound healing activity of *Azadirachta indica* A. juss stem bark in mice. *Pharmacognosy magazine*, 2017 July 13:S316-20. doi: 10.4103/0973-1296.210163 (IF 1.5)
 19. Mishra N, Yadav KS, Rai VK, **Yadav NP***. 2016. Polysaccharide Encrusted Multilayered Nano-Colloidal System of Andrographolide for Improved Hepatoprotection. *AAPS PharmSciTech*, 18:381-392 doi: 10.1208/s12249-016-0512-4. (IF 3.3)
 20. Jaya Gopal Meher, Magdaline Tarai, Ansuman Patnaik, Paresh Mishra, **Narayan Prasad Yadav***. 2016. Cellulose Buccoadhesive Film Bearing Glimperide: Physicomechanical Characterization and Biophysics of Buccoadhesion. *AAPS PharmSciTech*, 17:940–950 doi:10.1208/s12249-015-0419-5. (IF 3.3)
 21. Sinha P, Srivastava S, Mishra N, Singh DK, Luqman S, Chanda D, **Yadav NP***, 2015. Development, optimization, and characterization of a novel tea tree oil nanogel using response surface methodology. **Drug Development and Industrial Pharmacy**, 2016 42:9,1434-1445. doi:10.3109/03639045.2016.1141931 (IF 3.7)
 22. Mishra N, Rai VK, Yadav KS, Sinha P, Kanaujia A, Chanda D, Jakhmola A, Saikia D, **Yadav NP***. 2015. Encapsulation of Mentha Oil in Chitosan Polymer Matrix Alleviates Skin Irritation. *AAPS PharmSciTech*, 17(2):482-92. doi: 10.1208/s12249-015-0378-x. (IF 3.3)
 23. Meher JG, **Yadav NP***, 2015. Insight into the formulation and development of an emulsion: a key delivery system for pharmaceuticals *H&PC Today - Household and Personal Care Today*, 10(1): 43-48.
 24. Rai VK, Mishra N, Agarwal AK, Jain S, **Yadav NP***. Novel drug delivery system: an immense hope for diabetics, *Drug Delivery*, 2014 December 29:1-20. doi: 10.3109/10717544.2014.991001 (IF 6.00).
 25. **Yadav NP***, Rai VK, Mishra N, Sinha P, Bawankule DU, Pal A, Tripathi AK, Chanotiya CS, 2014. A novel approach for development and characterization of effective mosquito repellent cream formulation containing citronella oil. *BioMed Research International*, 2014 October 11.786084 doi:10.1155/2014/786084 786084.
 26. Sinha P, Srivastava S, Mishra N, **Yadav NP***, 2014. New Perspectives on Antiacne Plant Drugs: Contribution to Modern Therapeutics, *BioMed Research International*, 2014 July 19:301304, doi: 10.1155/2014/301304.
 27. Rai VK, **Yadav NP***, Sinha P, Mishra N, Luqman S, Dwivedi H, Kymonil KM, Saraf SA*, 2014. Development of cellulosic polymer based gel of novel ternary mixture of miconazole nitrate for buccal delivery. *Carbohydrate Polymers*, 2014 March 103:126– 133. doi.10.1016/j.carbpol.2013.12.019 (IF 11.2)
 28. Rai VK, Dwivedi H, **Yadav NP***, Chanotiya CS, Saraf SA*. Solubility enhancement of miconazole nitrate: binary and ternary mixture approach, *Drug Development and Industrial Pharmacy*, 2014 August 40: 1021–1029 doi: 10.3109/03639045.2013.801487 (IF 3.4).
 29. Gaur R, Yadav KS, Verma RK, **Yadav NP***, Bhakuni RS*, In vivo anti-diabetic activity of derivatives of isoliquiritigenin and liquiritigenin, *Phytomedicine*. 2014 March 21: 415–422, doi: 10.1016/j.phymed.2013.10.015 (IF 7.9)

30. Mishra N, **Yadav NP***, Rai VK, Sinha P, Yadav KS, Jain S, Arora S, 2013. Efficient Hepatic Delivery of Drugs: Novel Strategies and Their Significance, *BioMed Research International*, 2013 August, 20:382184, 2013. doi:10.1155/2013/382184.
31. **Yadav NP***, Meher JG, Pandey N, Luqman S, Yadav KS, Chanda D, 2013. Enrichment, Development, and Assessment of Indian Basil Oil Based Antiseptic Cream Formulation Utilizing Hydrophilic-Lipophilic Balance Approach, *BioMed Research International*, 2013 July,9:410686,doi:10.1155/2013/410686.
32. Meher JG, Tarai M, **Yadav NP***, Patnaik A, Mishra P, Yadav KS. 2013. Development and characterization of cellulose-polymethacrylate mucoadhesive film for buccal delivery of carvedilol, *Carbohydrate Polymers*, 2013 July 1;96:172-80 doi: 10.1016/j.carbpol.2013.03.076. (IF 11.2)
33. Meher JG, **Yadav NP***, Sahu JJ, Sinha P. 2013. Determination of Required Hydrophilic Lipophilic Balance of Citronella Oil and Development of Stable Cream Formulation, *Drug Development and Industrial Pharmacy*, 2012 March 39:1540-1546. doi:10.3109/03639045.2012.719902 (IF 3.4)
34. **Yadav NP***, Luqman S, Meher JG, Sahu AK. 2012. Effect of different pharmaceutical vehicles on antimicrobial action of essential oils, *Planta Medica*, 2012 July 78:44, doi: 10.1055/s-0032-1320591. (IF 2.7)
35. Mishra N, **Yadav NP***, Meher JG, Sinha P, 2012. Phyto-vesicles: Conduit between Conventional and Novel drug delivery system, *Asian Pacific Journal of Tropical Biomedicine*, 2012 December S1728-S1734, doi:10.1016/S2221-1691(12)60485-7 (IF 1.514)
36. **Yadav NP***, Chanda D, Chattopadhyay SK, Gupta AK, Pal A. 2010. Hepatoprotective Effects and Safety Evaluation of Coumarinolignoids Isolated from *Cleome viscosa* Seeds. *Indian Journal of Pharmaceutical Sciences*, 72:759-765. doi:10.4103%2F0250-474X.84589 (IF 0.97)
37. **Yadav NP***, Khatri R, Bawankule DU, Pal A, Shanker K, Srivastava P, Gupta AK, Chanda D. 2009. Topical anti-inflammatory effects of *Ocimum basilicum* leaf extract in the phorbol-12,13-dibutyrate model of mouse ear inflammation. *Planta Medica* 2009 75,923, doi: 10.1055/s-0029-1234397 (IF 2.7)
38. **Yadav NP**, Dixit V K, 2008. Recent Approaches in Herbal Drug Standardization. *International Journal of Integrative Biology*, June 2008 (3): 195-203
39. **Yadav NP**, Pal A, Shankar K, Bawankule DU, Gupta AK, Darokar MP, Khanuja SPS. 2008. Synergistic effect of Silymarin and Standardized extract of *Phyllanthus amarus* against CCl₄ induced hepatotoxicity in *Rattus norvegicus*. *Phytomedicine* 2008 December 15,1053-1061.doi:10.1016/j.phymed.2008.08.002. (IF 7.9)
40. **Yadav NP**, Dixit V K, 2003. Hepatoprotective activity of leaves of *Kalanchoe pinnata* Pers., *Journal of Ethnopharmacology*, 2003 June 86:197-202 doi:10.1016/S0378-8741(03)00074-6 (IF 5.4)