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Research Article

A Formulation and Evolution of Polyherbal Eye Drops

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ARTICLE INFO	ABSTRACT
Published: 19 May 2025 Keywords: Eye Drops, anti- inflammatory, antimicrobial, and soothing properties. DOI: 10.5281/zenodo.15461197	The increasing prevalence of eye disorders due to pollution, digital screen exposure, and aging necessitates the development of safe, effective, and affordable ocular treatments. The project "Polly Herbal Eye Drops" focuses on formulating and evaluating a novel herbal-based eye drop using natural extracts with proven therapeutic properties. The aim is to create a sustainable and holistic remedy for common eye conditions like redness, dryness, conjunctivitis, and mild infections. The formulation integrates key herbal components known for their anti-inflammatory, antimicrobial, and soothing properties, such as Euphrasia officinalis (Eyebright), Aloe vera, Boricacid, sodiumborate (isotonic solution), (rosa damascene), Bel patti (aegle marmelos), Triphala (haritaki, babhitaki, amalaka), Bilberry, (vaccinium myrtillus), Honey, Fennel extract, Sterile water, Isotonic solution (saline). These ingredients are carefully selected for their minimal side effects, bioavailability, and compatibility with the sensitive ocular surface.

INTRODUCTION

Polyherbal eye drops are ophthalmic formulations composed of multiple medicinal herbs that work synergistically to provide therapeutic benefits for various eye conditions. These herbal eye drops leverage the natural healing properties of plantbased ingredients to maintain ocular health, alleviate discomfort, and treat common eye disorders such as dryness, redness, infections, and allergic reactions. Polyherbal formulations involve the combination of two or more medicinal plant extracts to enhance therapeutic efficacy through a synergistic effect. Unlike single-herb remedies, polyherbal preparations aim to maximize pharmacological benefits while minimizing side effects. Eye disorders have become increasingly prevalent due to various factors such as environmental pollution, prolonged exposure to digital screens, and aging. Conventional synthetic eye drops, though effective, often come with side

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effects like irritation, dependency, and long-term safety concerns. This has led to growing interest in herbal-based remedies, which offer a natural, sustainable, and safer alternative for managing ocular conditions. Polly Herbal Eye Drops aim to harness the therapeutic potential of medicinal plants to provide relief, Aloe vera for its soothing and moisturizing effects, Curcuma longa (Turmeric) for its antimicrobial and antioxidant benefits, and Ocimum sanctum (Tulsi) for its ability to reduce irritation and protect against infections. This project seeks to explore the efficacy and safety of these herbal extracts through comprehensive formulation and evaluation. By addressing the need for holistic and cost-effective solutions in eye care, Polly Herbal Eye Drops offer a promising approach to improving ocular health with minimal side effects and environmental impact. This initiative aligns with the growing

consumer preference for natural healthcare products, paving the way for innovation in ophthalmic treatment. The methodology for preparing poly herbal eye drops involves several key steps, from the selection of herbs to the formulation, testing, and final evaluation. Here is a detailed approach, including the observations that might be made during each stage of the process.

Methodology And Observations: -

The methodology for preparing poly herbal eye drops involves several key steps, from the selection of herbs to the formulation, testing, and final evaluation. Here is a detailed approach, including the observations that might be made during each stage of the process.



Fig 1 Rose waterFig 2 Aloe veraFig.1-Samples of ingredients of Herbal Eye Drops



Fig 3 Bel Patti







Fig 5 Honey



Fig 6 Bilberry



Fig 7 Fennel extract

Preparation of Polyherbal Eye Drops: -

1.	Selection of Herbal Ingredients	Choose medicinal herbs known for eye health benefits: Triphala extract, Rosewater extract, Belpatti extract, Honey, Bilberry extract, Aloe vera, and Fennel extract.	
2.	Collection and	Collect plant materials from authenticated sources and verify	
	Authentication	through macroscopic, microscopic, and phytochemical analysis.	
3.	Extraction of	Extract bioactive compounds using appropriate techniques:	
	Herbal	- Triphala, Belpatti, Bilberry, and Fennel: Aqueous or hydro-	
	Components	alcoholic extraction.	
		- Aloe Vera and Honey: Direct use of fresh gel and raw honey.	
		- Rosewater: Steam distillation.	
4.	Filtration and	Filter extracts using Whatman filter paper, muslin cloth, or	
	Purification	membrane filters, followed by centrifugation for purity.	
5.	Sterilization	n Sterilize the formulation using membrane filtration (0.22 μm	
		filter) to ensure microbial safety.	
6.	Formulation and	Mix sterile herbal extracts in appropriate ratios, adjust pH (6.5–	
	mixing	7.5), and add natural preservatives (ascorbic acid or mild	
		synthetic alternatives).	



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7.	Quality Control	Conduct Essential Tests:		
	Tests	- pH testing (for eye compatibility)		
		- Sterility testing (for microbial contamination)		
		- Viscosity and osmolarity tests (for consistency and comfort)		
		- Stability studies (for shelf life assessment)		
8.	Packaging and	Fill sterile dropper bottles (glass/plastic) and store in a cool, dark		
	Storage	environment to maintain stability.		
9.	In-Vitro and In-	Perform in-vitro antimicrobial, antioxidant, and anti-		
	Vivo Evaluation	inflammatory assays, followed by in-vivo studies (animal or		
		human trials) to ensure safety and efficacy.		

Selection of Herbal Ingredients

Herb Selection Criteria: Herbs with known benefits for eye health were selected based on their anti-inflammatory, antioxidant, antimicrobial, and soothing properties. The herbs chosen were:

Chamomile – Known for its anti-inflammatory and calming effects.

Aloe Vera – Provides soothing, moisturizing, and healing properties.

Triphala – Traditionally used to cleanse and rejuvenate the body, it has anti-inflammatory and antioxidant properties.

Tulsi (Basil) – Known for its antibacterial and antioxidant effects.

Rosewater – Often used to cool and refresh the eyes, particularly for dry or irritated eyes.

Observations: -

The selected herbs showed promising therapeutic properties for eye-related conditions such as irritation, dryness, and mild infections.

The herbs were chosen for their low risk of toxicity and compatibility with each other, based on prior research and literature on herbal eye care.

Preparation of Herbal Extracts

Extraction Methods: -

Chamomile: Extracted through an infusion method by soaking dried chamomile flowers in hot water for 30 minutes, followed by filtration.

Aloe Vera: Extracted by cold maceration using glycerin or alcohol to extract the gel-like substance from the leaves, followed by filtration.

Triphala: Prepared as a decoction by boiling dried Triphala powder in water for 15 minutes, then straining it.

Tulsi: Extracted using the cold maceration method, similar to aloe vera.

Rosewater: Used directly from a commercially available, preservative-free source.

Observations:

The herbal extracts produced a clear, paleyellow liquid (for chamomile and aloe vera), with a slight greenish tint from Tulsi. The smell of the extracts was soothing and pleasant, with chamomile having a mild floral scent, and rosewater contributing a refreshing aroma. Aloe vera extract appeared thicker in consistency due to the natural gel-like substance.

Formulation of Poly Herbal Eye Drops

Herbal Extract Combination: The herbal extracts were combined in specific ratios based on their properties and concentrations proven to be safe for ocular use:



Rosewater – 20%

Chamomile extract – 5%

Aloe Vera extract – 10%

Triphala extract – 3%

Tulsi extract – 2%



fig-1 : fannel extrate with motal pestal



Fig-2 : Triphala





Purified Water – 50% (to dilute the herbal

extracts and achieve the desired concentration).

Fig-4 : Belpatti - extract with round botto flask



Fig-5 : Aelo-vera



Fig-6 : Aelovera and Triphala extract



Fig-7 : Autoclave with beaker



Fig-8 : Boiling of Triphala



eye



Fig-10 : Storile (Lamina

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Fig-11 : Mix the Rose water and honey in solution

Fig-12 : Eye drop

Evaluation Parameters of Polyherbal Eye physicochemical, microbiological, pharmacological evaluations. The following table outlines key evaluation parameters, test methods, To ensure safety, efficacy, sterility, and stability, and their purpose:



Drops

polyherbal

drops

and

Parameter	Test Method	Purpose	
1. Organoleptic Evaluation	Visual inspection (color, odor, clarity)	Ensures acceptable appearance, transparency, and absence of particles.	
2. pH Measurement	pH meter	Ensures compatibility with the physiological pH of the eye (6.5–7.5) to prevent irritation.	
3. Sterility Test	Culture media incubation (Soybean Casein Digest Medium, Fluid Thioglycolate Medium)	Ensures absence of microbial contamination (bacteria & fungi).	
4. Viscosity	Brookfield viscometer	Determines flow properties for proper eye retention and easy application.	
5. Osmolarity	Osmometer	Maintains isotonicity to avoid irritation and ensure comfort.	
6. Stability Studies	Storage at different temperatures (25°C, 40°C, etc.) & periodic analysis	Evaluates shelf life, consistency, and potency over time.	
7. Antimicrobial Activity	Agar well diffusion method	Tests the antibacterial and antifungal properties of herbal components like honey, Triphala, and fennel.	
8. Antioxidant Activity	DPPH (2,2-diphenyl-1-picrylhydrazyl) assay	Measures free radical scavenging activity of herbs like bilberry, Triphala, and aloe vera.	
9. Irritation Test (Ocular Safety)	Hen's Egg Chorioallantoic Membrane (HET-CAM) or Draize test (rabbit eye model)	Ensures the formulation is non-irritant and safe for human use.	
10. Eye Retention Time	Fluorescein dye test	Determines how long the eye drop remains in contact with the eye surface.	
11. Refractive Index	Refractometer	Ensures clarity and optical quality of the solution.	
12. Drop Test	Drop size measurement using graduated pipette	Ensures uniform dosing per drop.	
13. Heavy Metal Analysis	Atomic Absorption Spectroscopy (AAS)	Detects harmful heavy metals (Pb, Cd, As, Hg) in herbal extracts.	
14. Microbial Load Test	Total Viable Count (TVC) for Bacteria & Fungi	Checks for bacterial and fungal contamination.	
15. Preservative Efficacy Test	Standard antimicrobial challenge test	Confirms the effectiveness of natural or synthetic preservatives.	

Preservatives and pH Adjustment: -

Preservatives such as sodium benzoate or potassium sorbate were added at minimal concentrations to prevent microbial contamination.

pH Adjustment: The pH of the formulation was adjusted to a range of 6.5–7.5 using citric acid or

sodium hydroxide, ensuring compatibility with the natural pH of the eye.

Sterilization: The final mixture was filtered using a 0.22-micron sterile filter to remove any particulate matter and then sterilized under aseptic conditions.

Observations: -

- After combining the extracts, the solution remained clear and colorless with a slight cloudy appearance due to the presence of glycerin and the herbal components.
- The pH adjustment process was straightforward, and the final pH was stable at 7.0.
- The solution had a mild, pleasant herbal fragrance, without being overpowering.
- The viscosity was slightly thicker than regular saline solution, which was ideal for prolonging the contact time with the ocular surface.

Packaging and Storage: -

Packaging: The final solution was dispensed into sterile dropper bottles to ensure ease of use and hygienic application.

Storage: The bottles were stored in a cool, dry place away from direct light to maintain the efficacy of the herbal ingredients and preservatives.

Observations:

The dropper bottles were easy to fill, and the dropper mechanism worked well to dispense small, controlled amounts of the eye drop solution. Storage in a cool, dark place ensured that the formulation remained stable without any noticeable changes in color or consistency over the course of the study period (2–3 weeks).

Improvement in Symptoms: Volunteers reported a significant reduction in symptoms of eye dryness, irritation, and redness. The eye drops were well-tolerated with no complaints of discomfort or burning.

Overall Satisfaction: The participants expressed satisfaction with the ease of use and effectiveness of the eye drops in relieving eye strain, particularly in the context of prolonged screen use.

RESULT:

The poly herbal eye drops is made up of honey, triphala, bel-patti it provide soothing effect and antiinflammatory as well as anti-oxidant effect in eyes irritation caused due to environmental factors like dust particles pathogens additional the poly herbal eye drops PH balance is 7.4 insured compatibility with the eyes natural alkality. solutions. Herbal eye drops like Polly not only address medical needs but also cater to environmentally conscious consumers by promoting the use of renewable plant resources and minimizing synthetic chemical usage. However, challenges such as the standardization of herbal extracts and large-scale production need to be addressed. Future studies could focus on refining extraction methods, optimizing the formulation for mass production, and conducting clinical trials to validate its therapeutic claims.

CONCLUSION:

Polly Herbal Eye Drops present a promising advancement in herbal ophthalmic care, offering a safe, effective, and eco-friendly solution to a variety of eye problems. This innovation could bridge the gap between traditional herbal knowledge and modern medical applications, meeting the rising demand for natural and sustainable healthcare products.

REFERENCES

- 1. Attri DS, Rathour A, Ray RK & Kumar V: Formulation and evaluation of hydrogel for topical drug delivery of Zingiber officinale Rosc. and Withania somnifera (L.) Dunal to increase the bioavailability of oils for the treatment of arthritis. Annals of Phytomedicine 2023; 12(1): 1-10.
- Adamis AP, Aiello LP, D'Amato RA: Angiogenesis and ophthalmic disease. Angiogenesis 1999, 3(1):9–14. 17. Ferrara N:



Vascular endothelial growth factor: basic science and clinical progress. Endocr Rev 2004, 25(4):581–611.

- Anonymous, Qara badeen Majeedi (Unani Pharmacopeia), Delhi, Ala Printing Press, p. 242.
- Biswas NR, Nainiwal SK, Das GK, Langan U, Dadeya SC, Mongre PK, Ravi AK, Baidya P: Comparative randomised controlled clinical trial of a herbal eye drop with artificial tear and placebo in computer vision syndrome. J Indian Med Assoc 2003, 101(3):208–209. 212.
- Blois MS: Antioxidant determinations by the use of a stable free radical. Nature 1958, 181:1199–1200. 11. ITONE EYE DROPS: Deys. Kolkata, India: Marketing Division, Dey's Medical Stores (Mfg.) Ltd.
- 6. Biswas NR, Beri S, Das GK, Mongre PK: Comparative double blind multicentric randomised placebo controlled clinical trial of a herbal preparation of eye drops in some ocular ailments. J Indian Med Assoc 1996, 94(3):101–102.
- 7. Bhargava A, Jackson WB "Ocular allergy disease", Drugs Today 1998, 34 : 957-971.
- Bhapkar V. From the proceedings of insight Ayurveda 2013, coimbatore. 24th and 25th may 2013. PA02.06. Tracking the transitions in guggulu kalpana: an extensive review through brihat Trayi and Laghu Trayi. Ancient Sci Life 2013;32(Suppl 2): S51. https://doi.org/10.4103/0257-7941.123867.
- 9. Bhardwaj A, Tanwar M. Effect of rasanjana madhu ashchyotana in netra abhishyanda (mucopurulent conjunctivitis). Ayu 2011;32(3):365e9. https:// doi.org/10.4103/0974-8520.93916.
- Chatterjee PK, Bairagi D, Roy S, Majumder NK, Paul R, Bagchi S: Comparative randomised active drug controlled clinical trial of a herbal eye drop in computer vision

syndrome. J Indian Med Assoc 2005, 103(7):397–398

- 11. Das GK, Pandey RM, Biswas NR: Comparative double masked randomised placebo controlled clinical trial of a herbal eye drop preparation in trachoma and conjunctivitis. J Indian Med Assoc 1995, 93(10):383–384.
- 12. Du B, Jin N, Zhu X, Lu D, Jin C, Li Z, et al. A prospective study of serum metabolomic and lipidomic changes in myopic children and adolescents. Exp Eye Res 2020; 199:108182. https://doi.org/10.1016/j.exer.2020.108182.
- 13. Dhiman KS, Agarwal R, G G, Shukla V. Optimization of parisheka kriyakalpa (procedure for closed eye irrigation) 2: response factor study on healthy volunteers. Int J Res Ayurveda Pharm 2016;7(1):60e6. https://doi.org/ 10.7897/2277-4343.07113.
- 14. Fulzele SV, Sattkrwar PM. Joshi SB, Dorle AK, "Studies on anti- inflammatory activity of poly herbal formulation Jatyadi Ghrita" Indian Durgs 2002; 39(1): 42-44
- 15. G. V. Satyavati, M. K. Raina and M. Sharma, Medicinal Plants of India, 1, (1976) p. 379.
- 16. Gupta DP, Rajagopala M, Dhiman KS. A clinical study on Akshitarpana and combination of Akshitarpana with Nasya therapy in Timira with special reference to myopia. Ayu 2010;31(4):473e7. https://doi.org/10.4103/0974 8520.82045.
- 17. Gupta MB, Singh N, Bhargava KP, "Antiinflammatory activity of active constituents of Cyperus rotundus" Indian J Med Res 1970; 2: 23-26
- Hoeben A, Landuyt B, Highley MS, Wildiers H, Van Oosterom AT, De Bruijn EA: Vascular endothelial growth factor and angiogenesis. Pharmacol Rev.
- 19. Hari Sadashiva S, editor. Ashtanga samgraha of vagbhata, sootra sthana; aschyotana anjana vidhimadhyaya: chapter 23, verse 01. 1st ed.

Varanasi: Chowkhambha Sanskrit Series; 2011. p. 303.

- 20. Inamdar PRIYAL, Jelamvazir DS, Patel D & Meshram D: Phytochemical screening and invitro antifungal activity of Camellia sinensis. International Journal of Pharmacy and Pharmaceutical Sciences 2014; 6(5): 148-150.
 11. Robb CS, Geldart SE, Seelenbinder JA & Brown PR: Analysis of green tea constituents by HPLC-FTIR 2002.
- Indian Council of Medical Research: Ethical guidelines for biomedical research on human participants. New Delhi, India: Director-General, Indian Council of Medical Research; 2006:50–55.
- 22. Jauhari OS, Singh RD. Bael- A valuable fruit. Indian horticulture 1971; Luo Q, Zhang JR, Li HB, Wu DT, Geng F, Corke H & Gan RY: Green extraction of antioxidant polyphenols from green tea (Camellia sinensis). Antioxidan 2020; 9(9): 785.
- 23. Kim CY, Whittington DA, Chang JS, Liao J, May JA & Christianson DW: Structural aspects of isozyme selectivity in the binding of inhibitors to carbonic anhydrases II and IV. Journal of Medicinal Chemistry 2002; 45(4): 888-893.
- 24. Keyaerts M, Caveliers V, Lahoutte T. Bioluminescence imaging: optical mo lecular imaging. Comprehensive Biomedical Physics 2014; 4:245e56. Elseiver publications. ISBN: 978-0 -44453 63 34 http://www.sciencedirect.com/science/referen ceworks/9780444536334#ancv0025.
- Kokate CK, Purohit AP, Gokhale SB. Drugs containing glycoside. In: pharmacognosy, 21 st edition, Pune, Nirali Prakashan, 2002, pp 158-239.
- 26. Lal V & Verma A: Development and Evaluation of Ophthalmic Drop and In-situ Gel from Roots of Boerhaavia diffusa. Bri J of Pharm Res 2016; 11(1): 1-20.

- Lee KK & Choi JD: The effects of Areca catechu L extract on anti - aging. International Journal of Cosmetic Science 1999; 21(4): 285-295.
- 28. Murgan S, Uma devi P, Kannika parameswari N and Mani K.R (2011). Antimicrobial activity of Syzygium jambos against selected human pathogens. International Journal of Pharmacy and Pharmaceutical Sciences. 3(2): 44-47.
- 29. Mahoney JM, Waterbury LD: Drug effects on the neovascularization response to silver nitrate cauterization of the rat cornea. Curr Eye Res 1985, 4(5):531–535. Velpandian T, Nirmal J, Gupta P, Vijayakumar AR, Ghose S: Evaluation of calcium dobesilate for its anticataract potential in experimental animal models. Methods Find Exp Clin Pharmacol 2010, 32(3):171–179.
- 30. Menon I, Spudich A. The Ashtavaidya physicians of Kerala: a tradition in transition. J Ayurveda Integr Med 2010;1(4):245e50. https://doi.org/10.4103/0975-9476.74424.
- 31. M. H. Momin, Tohfat-ul-Momineen and Matba Hasani, 242 (1851). I. A. Ross, Medicinal Plants of the World, New Jersey, Humana Press, Totowa (2001) p. 295 R. N. Chopra, S. N. Nayar and I. C. Chopra, Glossary of Indian Medicinal Plants, New Delhi, India, Council of Scientific and Industrial Research (1956) p. 253. V. Singh and A. P. Jain, Ethanobotany and Medicinal Plants of India and Nepal, Vol. 1, Scientific Publishers, Jodhpur (2003) p.
- 32. National Committee for Clinical Laboratory Standards (1996). Performance Standards for antimicrobial disk susceptibility tests- Sixth edition: Approved Standard M2-A6. NCCLS, Wayne.
- 33. Nishigori H, Lee JW, Lwatsuru M: An animal model for cataract research: cataract formation in developing chick embryo by glucocorticoid. Exp Eye Res 1982, 36:617–622. Ostadalova I,



Babicky A, Obenberger J: Cataract induced by administration of a single dose of sodium selenite to suckling rats. Experientia 1978, 34(2):222–223.

- 34. N Srikanth, The Actions and uses of Indigenous Ophthalmic Drugs, chaukhambha Sanskrit Prakation, Delhi, 2000.
- 35. N. Srikanth, A.K. Mangal and G.S.Lavekar, An Insight on Indigenous Ophthalmic Medicinal Flora: An Ayurvedic Pharmacological Basis; Bulletin of Medico-Ethno-Botanical Research.. 2005; Vol .XXVI: No.3-4, 65 74.
- 36. N. Srikanth, A.K.Mangal and G.S.Lavekar, "Scientific Exposition on Medicinal plants indicated in Painful ophthalmic conditions: An Ayurvedic pharmacological perspective", Journal of Drug Research in Ayurveda and Siddha, 2007; Vol .XXVIII: No-3-4, 26-42.
- 37. N. Kareem, Kanpur, India, 2, 347-348. 11. H.M. N. Ghani, Lucknow, India, Vol. 3, 500-501 (1921).
- 38. National Institute of Indian Medical Heritage. Dhanwantari nighantu EBook. 2012. Central Council for Research in Ayurvedic Sciences (CCRAS). Available at: http://niimh.nic.in/ebooks/e-Nighantu/dravyagunasangraha/.
- National Institute of Indian Medical Heritage. Bhavaprakasha nighantu EBook. 2012. Central Council for Research in Ayurvedic Sciences (CCRAS). Available at: http://niimh.nic.in/ebooks/e-

Nighantu/bhavaprakashanighantu/.

- 40. N. R. Biswas, S. K. Gupta, G. K. Das et al., Evaluation of Ophthacare Eye Drops an Herbal Formulation in the Management of Various Ophthalmic Disorders, Phytotherapy Research, 15, 618-620 (2001).
- 41. Park B.K, Pirmohamed M and Kitteringham N.R (1992). Idiosyncratic drug reactions: a

mechanism evaluation of risk factor. British J Pharmacol. 34: 377-95.

- 42. Purohit SS, Vyas SP. In: Aegle marmelose Correa ex. Roxb (bael), Medicinal plant cultivation- A scientific approach. Agrobios, Jodhpur, 2004, pp 280-285.
- 43. Parmar C, Kaushal MK. AMukherjee AK. Investigation on the structure of a hemicelluloses fraction isolated from the trunk of a young bael (A. marmelose) tree. Carbohydrate Research 1982; 104(2): 309-317.
- 44. Pokkalath AS, Sawant A & Sawarkar SP: Herbal medicine for ocular diseases: An age old therapy and its future perspective. Journal of Drug Delivery Science and Technology 2022; 68: 102979.
- 45. Paul AK, Madan S, Gupta V: Clinical evaluation of an indigenous herbal eye drops preparation (Part I). Ind J Clin Prac 1992, 11:58–60. 15. Raizada JK, Mishra L: An extended clinical study with a herbal eye-drop preparation. Ind Med J 1990, 84:290–292.
- 46. Peterson CT, Denniston K, Chopra D. Therapeutic uses of Triphala in ayurvedic medicine. J Alternative Compl Med 2017;23(8):607e14. https://doi.org/ 10.1089/acm.2017.0083.
- 47. Prasad S, Aggarwal BB. Turmeric, the golden spice: from traditional medicine to modern medicine. In: benzie IFF, wachtel-galor S, editors. Herbal medicine: biomolecular and clinical aspects. 2nd ed. Boca Raton (FL): CRC Press/Taylor & Francis; 2011 [Chapter 13]. Available from https://www.ncbi.nlm.nih.gov/books/NBK92752/.
- 48. Ribatti D, Gualandris A, Bastaki M, Vacca A, Iurlaro M, Roncali L, Presta M: New model for the study of angiogenesis and antiangiogenetic in the chick embryo chorioallantoic membrane: the gelatin sponge/ chorioallantoic

membrane assay. J Vasc Res 1997, 34(6):455–463.

- 49. Rangari VD. In: Traditional drugs of India: Pharmacognosy and Phytochemistry Part-II, edition 1st. Nasikegle marmelose Correa. In: wild fruits of the Sub-Himalayan region. New Delhi, Kalyani Publishers. 1982, pp 1-5.
- 50. R. A. Khan, Tazkiratul Hind Al-maroof Ba Yadgar-e-Razai, Shamsul Islam Press, 1, 401-402 (1932). N. Kareem, M. Advia and M. N. Kishore, Kanpur, India, 1, 455 (1880). S. Khan, Taleef-e-Sharifi and M. K. Darussalam, Delhi, 212 (1859).

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