Research Article

LITERATURE SEARCH AND ANALYSIS OF TOP 100 CITED ARTICLES IN ALOE VERA: A BIBLIOMETRIC ANALYSIS

Lubna Fathima[1], Dinesh Dhamodhar[2], PrabuD[3], Sindhu R[4], Nimmy P[5]

[1]Master of Dental Surgery, Senior Lecturer, Department of Public Health Dentistry, Madha Dental College and Hospital, Kundrathur, Chennai, India
[2]Master of Dental Surgery, Reader, Department of Public Health Dentistry, SRM Dental College, Ramapuram, Chennai, India
[3]Master of Dental Surgery, Professor and Head, Department of Public Health Dentistry, SRM Dental College, Ramapuram, Chennai, India
[4]Master of Dental Surgery, Senior Lecturer, Department of Public Health Dentistry, SRM Dental College, Ramapuram, Chennai, India
[5]Postgraduate (Master of Dental Surgery), Department of Public Health Dentistry, SRM Dental College, Ramapuram, Chennai, India

Received: 08-05-2022 / Revised: 12-06-2022 / Accepted: 10-07-2022
Corresponding author: Dr. Prabu D
Conflict of interest: Nil

Abstract

Background: There is a tremendous increase in the growth of researchers in the field of aloe vera over the years. Although they are numerous articles which are published every year, few of them provides an important and relevant conceptual advances in that particular field and are found to be influential in the evolution of the field. The number of Citations can always be a reflector as a proxy marker in that particular field.
Aim: The aim of the current bibliometric analysis is to assess the top cited articles (n=100) on herbal medicine as of august 2019.
Materials and Method: Google scholar database was searched using freely available software, Publish or Perish. Information related to number of citations, publication title, publication year, and name of the journal was assessed in the current analysis.

Result: Top 100 cited articles were analysed. Nearly 1000 articles were screened in which top 100 were selected according to the citation research. These citation classics provide an important insight into the historical developments.

Conclusion: Herbal medicine has gone its long way from 1900 to the trending topic of today's scenario. Hence this citation analysis will help the further research who works in the field of herbal medicine to get the best obtained result so far.

Key words: Herbal medicine, Citation classics, bibliometric analysis, publications, top-cited articles

Introduction

In recent years, ayurvedic medicine plays an important role in providing an effective alternative medicine which has been used throughout the world and this often represents the original source of most of the drugs available in commercial market [1-3]. According to world health organisation they are nearly 21,000 plant species available worldwide. These herbal extract is derived from the crude form available in the commercial market which includes in syrup form, ointment, powders, infusions and herbal teas. Evidence of use of herbal medicine goes back some 60 000 years to a burial site in a cave in northern Iraq, which was uncovered in 1960 [4]. A research conducted analysed that they are nearly eight species of plant pollen available in the soil seen around the bones of the human. Among the eight species found, seven medicinal plants are available throughout the world [5]. With the trending development in the medicines they have found some active species have been isolated and duplicates of some form of synthetic drugs [6]. Nevertheless, the preparation of some drugs is unknown and some drugs are practically impossible. For this reason, scientists contribute in the research work to test the herbal medicine with the little known knowledge available and conserve the herbal properties and become crucial to fight against the known and unknown disease. Herbal-5.

derived substances always remain in large proportion and are available as commercial medications and it is used in the treatment of various heart problems, pain, lung disease and high blood pressure. Aloe vera is one of the effective ayurvedic medicines which is used to treat various problems which includes wounds, digestive tract disturbance and sunburn. It is available in gel form and contributes nearly 75% of active agents [7]. The available gel form consist of water and other compounds like aloemodin, methylchromones are also incorporated [8, 9]. In this article, the top 100 citated articles of aloe vera was extracted and bibliometric analysis was done.

2. Materials and Method:

Study Design:

A bibliometric analysis was done to cite the top 100 articles about aloe vera.

Eligibility Criteria

Inclusion Criteria

1. All articles available in the search engine were included.
2. All full text and abstract available articles were included.
3. Articles in English were included.
4. Articles which include the field of herbal medicine were included.

Table 1:Top 100 articles cited about aloe vera for analysis

S.No	Publication year	Citation	Reference
1.	2006	1728	Chandran SP, Chaudhary M, Pasricha R, Ahmad A, Sastry M. Synthesis of gold nanotriangles and silver nanoparticles using Aloevera plant extract. Biotechnology progress. 2006 Jan 1;22(2):577-83.
2.	1999	977	Reynolds T, Dweck AC. Aloe vera leaf gel: a review update.

			Journal of ethnopharmacology. 1999 Dec 15;68(1-3):3-7.
3.	2008	805	Hamman JH. Composition and applications of Aloe vera leaf gel. Molecules. 2008 Aug;13(8):1599-616.
4.	1999	641	Vogler BK, Ernst E. Aloe vera: a systematic review of its clinical effectiveness. Br J Gen Pract. 1999 Oct 1;49(447):823-8.
5.	1986	592	Grindlay D, Reynolds T. The Aloe vera phenomenon: a review of the properties and modern uses of the leaf parenchyma gel. Journal of ethnopharmacology. 1986 Jun 1;16(2-3):117-51.
6.	2004	577	Eshun K, He Q. Aloe vera: a valuable ingredient for the food, pharmaceutical and cosmetic industries—a review. Critical reviews in food science and nutrition. 2004 Mar 1;44(2):91-6.
7.	2006	519	Boudreau MD, Beland FA. An evaluation of the biological and toxicological properties of Aloe barbadensis (miller), Aloe vera. Journal of Environmental Science and Health Part C. 2006 Jul 1;24(1):103-54.
8.	2008	475	Surjushe A, Vasani R, Saple DG. Aloe vera: a short review. Indian journal of dermatology. 2008;53(4):163.
9.	2000	434	Pecere T, Gazzola MV, Mucignat C, Parolin C, Dalla Vecchia F, Cavaggioni A, Basso G, Diaspro A, Salvato B, Carli M, Palu G. Aloe-emodin is a new type of anticancer agent with selective activity against neuroectodermal tumors. Cancer research. 2000 Jun 1;60(11):2800-4.
10.	2011	430	Sangeetha G, Rajeshwari S, Venckatesh R. Green synthesis of zinc oxide nanoparticles by aloe barbadensis miller leaf extract: Structure and optical properties. Materials Research Bulletin. 2011 Dec 1;46(12):2560-6.
11.	1991	427	Shelton RM. Aloe vera: its chemical and therapeutic properties. International journal of dermatology. 1991 Oct;30(10):679-83.
12.	1996	417	Vazquez B, Avila G, Segura D, Escalante B. Antiinflammatory activity of extracts from Aloe vera gel. Journal of ethnopharmacology. 1996 Dec 1;55(1):69-75.
13.	1999	380	Femenia A, Sánchez ES, Simal S, Rosselló C. Compositional features of polysaccharides from Aloe vera (Aloe barbadensis Miller) plant tissues. Carbohydrate polymers. 1999 Jun 1;39(2):109-17.
14.	2003	374	Choi S, Chung MH. A review on the relationship between Aloe vera components and their biologic effects. In Seminars in integrative medicine 2003 Mar 1 (Vol. 1, No. 1, pp. 53-62). WB Saunders.
15.	2005	374	Rajasekaran S, Sivagnanam K, Subramanian S. Antioxidant effect of Aloe vera gel extract in streptozotocin-induced diabetes in rats. Pharmacol Rep. 2005 Jan 1;57(1):90-6.
16.	2004	366	Ni Y, Turner D, Yates KM, Tizard I. Isolation and characterization of structural components of Aloe vera L. leaf pulp. International immunopharmacology. 2004 Dec

			20;4(14):1745-55.
17.	2003	354	Hu Y, Xu J, Hu Q. Evaluation of antioxidant potential of Aloe vera (Aloe barbadensis Miller) extracts. Journal of agricultural and food chemistry. 2003 Dec 17;51(26):7788-91.
18.	2006	350	Martínez-Romero D, Alburquerque N, Valverde JM, Guillén F, Castillo S, Valero D, Serrano M. Postharvest sweet cherry quality and safety maintenance by Aloe vera treatment: a new edible coating. Postharvest Biology and Technology. 2006 Jan 1;39(1):93-100.
19.	1994	349	Davis RH, Donato JJ, Hartman GM, Haas RC. Anti-inflammatory and wound healing activity of a growth substance in Aloe vera. Journal of the American Podiatric Medical Association. 1994 Feb;84(2):77-81.
20.	2001	332	Choi SW, Son BW, Son YS, Park YI, Lee SK, Chung MH. The wound-healing effect of a glycoprotein fraction isolated from aloe vera. British Journal of Dermatology. 2001 Oct;145(4):535-45.
21.	2009	331	Arunkumar S, Muthuselvam M. Analysis of phytochemical constituents and antimicrobial activities of Aloe vera L. against clinical pathogens. World Journal of Agricultural Sciences. 2009;5(5):572-6.
22.	2006	328	Rajasekaran S, Ravi K, Sivagnanam K, Subramanian S. Beneficial effects of Aloe vera leaf gel extract on lipid profile status in rats with streptozotocin diabetes. Clinical and Experimental Pharmacology and Physiology. 2006 Mar;33(3):232-7.
23.	2010	322	Abiola OK, James AO. The effects of Aloe vera extract on corrosion and kinetics of corrosion process of zinc in HCl solution. Corrosion Science. 2010 Feb 1;52(2):661-4.
24.	2007	320	Maenthaisong R, Chaiyakunapruk N, Niruntraporn S, Kongkaew C. The efficacy of aloe vera used for burn wound healing: a systematic review. burns. 2007 Sep 1;33(6):713-8.
25.	1998	319	Chithra P, Sajithlal GB, Chandrakasan G. Influence of Aloe vera on the healing of dermal wounds in diabetic rats. Journal of ethnopharmacology. 1998 Jan 1;59(3):195-201.
26.	2004	310	Langmead L, Feakins RM, Goldthorpe S, Holt H, Tsironi E, De Silva A, Jewell DP, Rampton DS. Randomized, double-blind, placebo-controlled trial of oral aloe vera gel for active ulcerative colitis. Alimentary pharmacology & therapeutics. 2004 Apr;19(7):739-47.
27.	1998	307	Chithra P, Sajithlal GB, Chandrakasan G. Influence of Aloe vera on collagen characteristics in healing dermal wounds in rats. Molecular and cellular biochemistry. 1998 Apr 1;181(1-2):71-6.
28.	2006	274	Tanaka M, Misawa E, Ito Y, Habara N, Nomaguchi K, Yamada M, Toida T, Hayasawa H, Takase M, Inagaki M, Higuchi R.

			Identification of five phytosterols from Aloe vera gel as anti-diabetic compounds. Biological and Pharmaceutical Bulletin. 2006;29(7):1418-22.
29.	2001	273	Okyar A, Can A, Akev N, Baktir G, Sütlüpinar N. Effect of Aloe vera leaves on blood glucose level in type I and type II diabetic rat models. Phytotherapy Research. 2001 Mar;15(2):157-61.
30.	1988	272	Klein AD, Penneys NS. Aloe vera. Journal of the American Academy of Dermatology. 1988 Apr 1;18(4):714-20.
31.	1996	269	Syed TA, Ahmad SA, Holt AH, Ahmad SA, Ahmad SH, Afzal M. Management of psoriasis with Aloe vera extract in a hydrophilic cream: a placebo-controlled, double-blind study. Tropical Medicine & International Health. 1996 Aug;1(4):505-9.
32.	1996	261	Hutter JA, Salman M, Stavinoha WB, Satsangi N, Williams RF, Streeper RT, Weintraub ST. Antiinflammatory C-glucosyl chromone from Aloe barbadensis. Journal of natural products. 1996 May 22;59(5):541-3.
33.	1998	258	Chithra P, Sajithlal GB, Chandrakasan G. Influence of Aloe vera on the glycosaminoglycans in the matrix of healing dermal wounds in rats. Journal of ethnopharmacology. 1998 Jan 1;59(3):179-86.
34.	1996	258	Williams MS, Burk M, Loprinzi CL, Hill M, Schomberg PJ, Nearhood K, O'Fallon ;ljJR, Laurie JA, Shanahan TG, Moore RL, Urias RE. Phase III double-blind evaluation of an aloe vera gel as a prophylactic agent for radiation-induced skin toxicity. International journal of radiation oncology, biology, physics. 1996 Sep;36(2):345-9.
35.	1989	247	Vera A. Wound healing, oral & topical activity of Aloe vera. Journal of the American Podiatric Medical Association. 1989 Nov;79:559-62.
36.	2002	237	Yagi A, Kabash A, Okamura N, Haraguchi H, Moustafa SM, Khalifa TI. Antioxidant, free radical scavenging and anti-inflammatory effects of aloesin derivatives in Aloe vera. Planta medica. 2002 Nov;68(11):957-60.
37.	2008	237	Ramachandra CT, Rao PS. Processing of Aloe vera leaf gel: a review. American Journal of Agricultural and Biological Sciences. 2008;3(2):502-10.
38.	1996	235	Yongchaiyudha S, Rungpitarangsi V, BunyapraphatsaraN, Chokechaijaroenporn O. Antidiabetic activity of Aloe vera L. juice. I. Clinical trial in new cases of diabetes mellitus. Phytomedicine. 1996 Nov 1;3(3):241-3.
39.	1996	231	Bunyapraphatsara N, Yongchaiyudha S, Rungpitarangsi V, Chokechaijaroenporn O. Antidiabetic activity of Aloe vera L. juice II. Clinical trial in diabetes mellitus patients in combination with glibenclamide. Phytomedicine. 1996 Nov 1;3(3):245-8.

40.	2004	223	Langmead L, Makins RJ, Rampton DS. Anti-inflammatory effects of aloe vera gel in human colorectal mucosa in vitro. Alimentary pharmacology & therapeutics. 2004 Mar;19(5):521-7.
41.	2003	214	Femenia A, García-Pascual P, Simal S, Rosselló C. Effects of heat treatment and dehydration on bioactive polysaccharide acemannan and cell wall polymers from Aloe barbadensis Miller. Carbohydrate polymers. 2003 Mar 1;51(4):397-405.
42.	1991	211	Schmidt JM, Greenspoon JS. Aloe vera dermal wound gel is associated with a delay in wound healing. Obstetrics and gynecology. 1991 Jul;78(1):115-7.
43.	2005	210	Olaleye MT, Bello-Michael CO. Comparative antimicrobial activities of Aloe vera gel and leaf. African journal of biotechnology. 2005;4(12).
44.	1996	208	Heggers JP, Kucukcelebi A, Listengarten D, Stabenau J, Ko F, Broemeling LD, Robson MC, Winters WD. Beneficial effect of Aloe on wound healing in an excisional wound model. The Journal of Alternative and Complementary Medicine. 1996 Jun 1;2(2):271-7.
45.	1995	207	Visuthikosol V, Chowchuen B, Sukwanarat Y, Sriurairatana S, Boonpucknavig V. Effect of aloe vera gel to healing of burn wound a clinical and histologic study. J Med Assoc Thai. 1995 Aug 1;78(8):403-9.
46.	2005	201	Im SA, Oh ST, Song S, Kim MR, Kim DS, Woo SS, Jo TH, Park YI, Lee CK. Identification of optimal molecular size of modified Aloe polysaccharides with maximum immunomodulatory activity. International Immunopharmacology. 2005 Feb 1;5(2):271-9.
47.	2007	198	Bozzi A, Perrin C, Austin S, Vera FA. Quality and authenticity of commercial aloe vera gel powders. Food chemistry. 2007 Jan 1;103(1):22-30.
48.	2007	191	Chandan BK, Saxena AK, Shukla S, Sharma N, Gupta DK, Suri KA, Suri J, Bhadauria M, Singh B. Hepatoprotective potential of Aloe barbadensis Mill. against carbon tetrachloride induced hepatotoxicity. Journal of Ethnopharmacology. 2007 May 22;111(3):560-6.
49.	2006	182	Dal'Belo SE, Rigo Gaspar L, Berardo Gonçalves Maia Campos PM. Moisturizing effect of cosmetic formulations containing Aloe vera extract in different concentrations assessed by skin bioengineering techniques. Skin Research and Technology. 2006 Nov;12(4):241-6.
50.	2008	176	Choonhakarn C, Busaracome P, Sripanidkulchai B, Sarakarn P. The efficacy of aloe vera gel in the treatment of oral lichen planus: a randomized controlled trial. British journal of dermatology. 2008 Mar;158(3):573-7.

51.	2006	174	Serrano M, Valverde JM, Guillén F, Castillo S, Martínez-Romero D, Valero D. Use of Aloe vera gel coating preserves the functional properties of table grapes. Journal of agricultural and food chemistry. 2006 May 31;54(11):3882-6.
52.	2005	168	Vinson JA, Al Kharrat H, Andreoli L. Effect of Aloe vera preparations on the human bioavailability of vitamins C and E. Phytomedicine. 2005 Nov 15;12(10):760-5.
53.	2000	168	Djeraba A, Quere P. In vivo macrophage activation in chickens with Acemannan, a complex carbohydrate extracted from Aloe vera. International journal of immunopharmacology. 2000 May 1;22(5):365-72.
54.	2007	167	Habeeb F, Shakir E, Bradbury F, Cameron P, Taravati MR, Drummond AJ, Gray AI, Ferro VA. Screening methods used to determine the anti-microbial properties of Aloe vera inner gel. Methods. 2007 Aug 1;42(4):315-20.
55.	2001	167	Olsen DL, Raub W, Bradley C, Johnson M, Macias JL, Love V, Markoe A. The effect of aloe vera gel/mild soap versus mild soap alone in preventing skin reactions in patients undergoing radiation therapy. InOncology nursing forum 2001 Apr 1 (Vol. 28, No. 3).
56.	2004	167	Can A, Akev N, Ozsoy N, Bolkent S, Arda BP, Yanardag R, Okyar A. Effect of Aloe vera leaf gel and pulp extracts on the liver in type-II diabetic rat models. Biological and pharmaceutical Bulletin. 2004;27(5):694-8.
57.	2010	163	Joseph B, Raj SJ. Pharmacognostic and phytochemical properties of Aloe vera linn an overview. International journal of pharmaceutical sciences review and research. 2010;4(2):106-10.
58.	1998	162	Chithra P, Sajithlal GB, Chandrakasan G. Influence of Aloe vera on collagen turnover in healing of dermal wounds in rats. Indian Journal of Experimental Biology. 1998 Sep;36(9):896-901.
59.	1999	158	Moon EJ, Lee YM, Lee OH, Lee MJ, Lee SK, Chung MH, Park YI, Sung CK, Choi JS, Kim KW. A ncovel angiogenic factor derived from Aloe vera gel: β-sitosterol, a plant sterol. Angiogenesis. 1999 Jun 1;3(2):117-23.
60.	1988	156	Rodriguez-Bigas M, Cruz NI, Suarez A. Comparative evaluation of aloe vera in the management of burn wounds in guinea pigs. Plastic and reconstructive surgery. 1988 Mar;81(3):386-9.
61.	2015	155	Dinesh D, Murugan K, Madhiyazhagan P, Panneerselvam C, Kumar PM, Nicoletti M, Jiang W, Benelli G, Chandramohan B, Suresh U. Mosquitocidal and antibacterial activity of green-synthesized silver nanoparticles from Aloe vera extracts: towards an effective tool against the malaria vector Anopheles stephensi?. Parasitology research. 2015 Apr 1;114(4):1519-29.
62.	2012	151	Fani M, Kohanteb J. Inhibitory activity of Aloe vera gel on some clinically isolated cariogenic and periodontopathic bacteria.

			Journal of oral science. 2012;54(1):15-21.
63.	2004	151	Parihar MS, Chaudhary M, Shetty R, Hemnani T. Susceptibility of hippocampus and cerebral cortex to oxidative damage in streptozotocin treated mice: prevention by extracts of Withania somnifera and Aloe vera. Journal of clinical neuroscience. 2004 May 1;11(4):397-402.
64.	2009	149	Kim K, Kim H, Kwon J, Lee S, Kong H, Im SA, Lee YH, Lee YR, Oh ST, Jo TH, Park YI. Hypoglycemic and hypolipidemic effects of processed Aloe vera gel in a mouse model of non-insulin-dependent diabetes mellitus. Phytomedicine. 2009 Sep 1;16(9):856-63.
65.	2004	149	Talmadge J, Chavez J, Jacobs L, Munger C, Chinnah T, Chow JT, Williamson D, Yates K. Fractionation of Aloe vera L. inner gel, purification and molecular profiling of activity. International Immunopharmacology. 2004 Dec 20;4(14):1757-73.
66.	1961	149	Morton JF. Folk uses and commercial exploitation of Aloe leaf pulp. Economic Botany. 1961 Oct 1;15(4):311-9.
67.	2014	145	Manikandan A, Sridhar R, Antony SA, Ramakrishna S. A simple aloe vera plant-extracted microwave and conventional combustion synthesis: morphological, optical, magnetic and catalytic properties of CoFe2O4 nanostructures. Journal of Molecular Structure. 2014 Nov 5;1076:188-200.
68.	2001	144	Abrie AL, Van Staden J. Micropropagation of the endangered Aloe polyphylla. Plant Growth Regulation. 2001 Jan 1;33(1):19-23.
69.	2008	143	Jia Y, Zhao G, Jia J. Preliminary evaluation: the effects of Aloe ferox Miller and Aloe arborescens Miller on wound healing. Journal of Ethnopharmacology. 2008 Nov 20;120(2):181-9.
70.	1993	143	Heggers JP, Pelley RP, Robson MC. Beneficial effects of Aloe in wound healing. Phytotherapy research. 1993 Mar;7(7):S48-52.
71.	2000	142	Adams SP, Leitch IJ, Bennett MD, Chase MW, Leitch AR. Ribosomal DNA evolution and phylogeny in Aloe (Asphodelaceae). American Journal of Botany. 2000 Nov;87(11):1578-83.
72.	2007	141	Rosca-Casian O, Parvu M, Vlase L, Tamas M. Antifungal activity of Aloe vera leaves. Fitoterapia. 2007 Apr 1;78(3):219-22.
73.	2009	141	Khorasani G, Hosseinimehr SJ, Azadbakht M, Zamani A, Mahdavi MR. Aloe versus silver sulfadiazine creams for second-degree burns: a randomized controlled study. Surgery today. 2009 Jul 1;39(7):587-91.
74.	2000	140	Lee KY, Weintraub ST, Yu BP. Isolation and identification of a phenolic antioxidant from Aloe barbadensis. Free radical biology and medicine. 2000 Jan 15;28(2):261-5.
75.	1999	138	Kim KH, Hwang YJ, Bai SC. Resistance to Vibrio alginolyticus

			in juvenile rockfish (Sebastes schlegeli) fed diets containing different doses of aloe. Aquaculture. 1999 Oct 1;180(1-2):13-21.
76.	2005	138	Tian B, Hua Y. Concentration-dependence of prooxidant and antioxidant effects of aloin and aloe-emodin on DNA. Food Chemistry. 2005 Jul 1;91(3):413-8.
77.	2000	137	Simal S, Femenıa A, Llull P, Rossello C. Dehydration of aloe vera: simulation of drying curves and evaluation of functional properties. Journal of Food Engineering. 2000 Feb 1;43(2):109-14.
78.	2014	137	Baradaran A, Nasri H, Nematbakhsh M, Rafieian-Kopaei M. Antioxidant activity and preventive effect of aqueous leaf extract of Aloe Vera on gentamicin-induced nephrotoxicity in male Wistar rats. La clinica terapeutica. 2014;165(1):7-11.
79.	2008	137	Maensiri S, Laokul P, Klinkaewnarong J, Phokha S, Promarak V, Seraphin S. Indium oxide (In2O3) nanoparticles using Aloe vera plant extract: Synthesis and optical properties. J Optoelectron Adv Mater. 2008 Mar 1;10(3):161-5.
80.	2011	136	Ahlawat KS, Khatkar BS. Processing, food applications and safety of aloe vera products: a review. Journal of food science and technology. 2011 Oct 1;48(5):525-33.
81.	1998	135	Atherton P. Aloe vera: magic or medicine?. Nursing Standard (through 2013). 1998 Jul 1;12(41):49.
82.	1982	133	Robson MC, Heggers JP, Hagstrom WJ. Myth, magic, witchcraft, or fact? Aloe vera revisited. The Journal of Burn Care & Rehabilitation. 1982 May 1;3(3):157-63.
83.	1981	131	Winters WD, Benavides R, Clouse WJ. Effects of aloe extracts on human normal and tumor cells in vitro. Economic botany. 1981 Jan 1;35(1):89-95.
84.	2010	131	El-Shemy HA, Aboul-Soud MA, Nassr-Allah AA, Aboul-Enein KM, Kabash A, Yagi A. Antitumor properties and modulation of antioxidant enzymes' activity by Aloe vera leaf active principles isolated via supercritical carbon dioxide extraction. Current medicinal chemistry. 2010 Jan 1;17(2):129-38.
85.	1995	130	Karaca K, Sharma JM, Nordgren R. Nitric oxide production by chicken macrophages activated by Acemannan, a complex carbohydrate extracted from Aloe vera. International journal of immunopharmacology. 1995 Mar 1;17(3):183-8.
86.	2006	129	Eamlamnam K, Patumraj S, Visedopas N, Thong-Ngam D. Effects of Aloe vera and sucralfate on gastric microcirculatory changes, cytokine levels and gastric ulcer healing in rats. World Journal of Gastroenterology: WJG. 2006 Apr 7;12(13):2034.
87.	2003	128	West DP, Zhu YF. Evaluation of aloe vera gel gloves in the treatment of dry skin associated with occupational exposure. American Journal of Infection Control. 2003 Feb 1;31(1):40-2.
88.	1998	127	Capasso F, Borrelli F, Capasso R, Carlo GD, Izzo AA, Pinto L,

			Mascolo N, Castaldo S, Longo R. Aloe and its therapeutic use. Phytotherapy Research: An International Journal Devoted to Pharmacological and Toxicological Evaluation of Natural Product Derivatives. 1998;12(S1):S124-7.
89.	2009	126	Feily A, Namazi MR. Aloe vera in dermatology: a brief review. Giornale italiano di dermatologia e venereologia: organo ufficiale, Societa italiana di dermatologia e sifilografia. 2009 Feb;144(1):85-91.
90.	2003	125	Duansak D, Somboonwong J, Patumraj S. Effects of Aloe vera on leukocyte adhesion and TNF-α and IL-6 levels in burn wounded rats. Clinical hemorheology and microcirculation. 2003 Jan 1;29(3, 4):239-46.
91.	2010	125	Castillo S, Navarro D, Zapata PJ, Guillén F, Valero D, Serrano M, Martínez-Romero D. Antifungal efficacy of Aloevera in vitro and its use as a preharvest treatment to maintain postharvest table grape quality. Postharvest Biology and technology. 2010 Sep 1;57(3):183-8.
92.	2006	125	Zhang XF, Wang HM, Song YL, Nie LH, Wang LF, Liu B, Shen PP, Liu Y. Isolation, structure elucidation, antioxidative and immunomodulatory properties of two novel dihydrocoumarins from Aloe vera. Bioorganic & medicinal chemistry letters. 2006 Feb 15;16(4):949-53.
93.	2004	122	Leung MY, Liu C, Zhu LF, Hui YZ, Yu B, Fung KP. Chemical and biological characterization of a polysaccharide biological response modifier from Aloe vera L. var. chinensis (Haw.) Berg. Glycobiology. 2004 Jan 22;14(6):501-10.
94.	2006	121	Wu JH, Xu C, Shan CY, Tan RX. Antioxidant properties and PC12 cell protective effects of APS-1, a polysaccharide from Aloe vera var. chinensis. Life Sciences. 2006 Jan 2;78(6):622-30.
95.	2003	120	Muller MJ, Hollyoak MA, Moaveni Z, Brown TL, Herndon DN, Heggers JP. Retardation of wound healing by silver sulfadiazine is reversed by Aloe vera and nystatin. Burns. 2003 Dec 1;29(8):834-6.
96.	2005	119	Rajasekaran S, Sivagnanam K, Subramanian S. Modulatory effects of Aloe vera leaf gel extract on oxidative stress in rats treated with streptozotocin. Journal of pharmacy and pharmacology. 2005 Feb;57(2):241-6.
97.	1979	118	Gowda DC, Neelisiddaiah B, Anjaneyalu YV. Structural studies of polysaccharides from Aloe vera. Carbohydrate Research. 1979 Jul 1;72:201-5.
98.	2003	118	Ferro VA, Bradbury F, Cameron P, Shakir E, Rahman SR, Stimson WH. In vitro susceptibilities of Shigella flexneri and Streptococcus pyogenes to inner gel of Aloe barbadensis Miller. Antimicrobial agents and chemotherapy. 2003 Mar 1;47(3):1137-9.

99.	1989	117	Van den Berg AJ, Kuis L, Van Dijk H, Labadie RP. An anti-complementary polysaccharide with immunological adjuvant activity from the leaf parenchyma gel of Aloe vera. Planta medica. 1989 Dec;55(06):509-12.
100.	2005	117	Paulsen E, Korsholm L, Brandrup F. A double-blind, placebo-controlled study of a commercial Aloe vera gel in the treatment of slight to moderate psoriasis vulgaris. Journal of the European Academy of Dermatology and Venereology. 2005 May;19(3):326-31.

Table 2: Journals contributing maximum citation article in top 100-cited in the field herbal medicine

Rank	Journal
1.	Journal of biotechnology progress
2.	Journal of ethno pharmacology
3.	Journal of molecules
4.	British journal of general practice
5.	Journal of ethno pharmacology
6.	Journal of Critical reviews in food science and nutrition
7.	Journal of Ultrasonics sonochemistry

3. Discussion:

This comprehensive and well-illustrated article includes information about the top 100 citied articles on aloe vera which will be useful to analysis and gather information about the aloe vera and will be helpful for all the researchers who are interested in carrying out studies and this article will create a platform to master the topic of aloe vera. In the current bibliometric analysis, the highest citation of article which was 1728 was published in the Journal of biotechnology analysis and the article was about the use of aloe vera leaf extract in forming the gold nano-triangles and silver nanoparticles and found that aloe vera extract may increase the size of the nano-particle and if the aloe vera extract were decreased it found they is a reduction in the size of the nano-particle formed [10]. Followed to this the second highest citation was 1530 citation which was published in the journal of ethno pharmacology and this article explained about the use of aloe vera extract in curing various health disease which includes its role in cancer, diabetic and also act as anti-oxidant property. It's available in gel form which is found to be effective in curing the disease [11]. The third highest was 805 citation published in the journal of molecules in which the article mainly focussed on composition and application of aloe vera leaf extract in which the potential of whole leaf extract filled with gel liquid preparation was used to enhance the bioavailability and absorption of intestine as well as used for skin permeation. In addition, important pharmaceutical uses and application overall was also discussed [9]. The lowest citation in top 100 cited articles had a citation score of 117 which was published in the Journal of the European Academy of Dermatology and Venereology [12].

4. Conclusion:

This paper has enlighten all the article with citation score and all information regarding

the about the top 100 citied articles on aloe vera which will be useful to analysis and gather information about the aloe vera and will be helpful for all the researchers who are interested in carrying out studies and this article will create a platform to master the topic of aloe vera.

Source of Funding: Nil.

Reference:

1. Baylor, N.W., T. Fu, Y.D. Yan and F.W. Ruscetti. Inhibition of human T cell leukemia virus by the plant flavonoid baicalin (7-Glucuronic acid, 5,6-dihydroxyflavone). J. Infect. Dis. 165: 433–437, 1992.
2. Briem, H. and I.D. Kuntz. Molecular similarity based on DOCK-generated fingerprints. J. Med Chem. 39: 3401–3408, 1996.
3. Brinkworth, R.I., M.J. Stoermer and D.P. Fairlie. Flavones are inhibitors of HIV-1 proteinase. Biochem. Biophys. Res. Commun. 188: 631–637, 1992.
4. Buimovici-Klein, E., V. Mohan, M. Lange, E. Fenamore, Y. Inada and L.Z. Copper. Inhibition of HIV replication in lymphocyte cultures of virus-positive subjects in the presence of Sho-saiko-to, an oriental plant extract. Antivir. *Res.* 14: 279–286, 1990.
5. Bures, G.M. Integration of molecular modeling and database searching. In: *Designing* Bioactive Molecules: Three-Dimensional Techniques and Applications. Martin, Y.C. and P. Willett. (Ed) American Chemical Society. 1998, pp. 97–117.
6. Chu, C.K. and H.G. Cutler. Natural products as antiviral agents. Plenum Press. 1992.
7. Silver LL, Bostian KA. Discovery and development of new antibiotics: the problem of antibiotic resistance. Antimicrobial agents and chemotherapy. 1993 Mar;37(3):377.
8. Vaghasiya Y, CHANDA S. Screening of methanol and acetone extracts of fourteen Indian medicinal plants for antimicrobial activity. Turkish Journal of Biology. 2007 Dec 12;31(4):243-8.
9. Hamman JH. Composition and applications of Aloe vera leaf gel. Molecules. 2008 Aug;13(8):1599-616.
10. Chandran SP, Chaudhary M, Pasricha R, Ahmad A, Sastry M. Synthesis of gold nanotriangles and silver nanoparticles using Aloevera plant extract. Biotechnology progress. 2006 Jan 1;22(2):577-83.
11. Reynolds T, Dweck AC. Aloe vera leaf gel: a review update. Journal of ethnopharmacology. 1999 Dec 15;68(1-3):3-7.
12. Paulsen E, Korsholm L, Brandrup F. A double-blind, placebo-controlled study of a commercial Aloe vera gel in the treatment of slight to moderate psoriasis vulgaris. Journal of the European Academy of Dermatology and Venereology. 2005 May;19(3):326-31.