Review Article

A Review on Medicinal Plants Used in the Treatment of Cataract

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ABSTRACT

Cataract is a clouding of the lens in the eye that normally affects vision. Cataract, the most common cause of blindness and visual impairment, is often related to ageing. According to the 2021 statistics by the Help Me See India Foundation, cataract contributes to 66.2% of overall blindness in people between 50 and 90 years of age. Traditional systems of medicine continue to be widely practised on many accounts. Population rise, inadequate supply of drugs, prohibitive cost of treatments, side effects of several synthetic drugs and development of resistance to currently used drugs for infectious diseases have led to increased emphasis on the use of plant materials as a source of medicines for a wide variety of human ailments. The demand for naturally produced chemicals from medicinal plants and their features that make them possible Anti-Cataract treatments are discussed in this review.

Keywords: Blindness, Cataract, Infectious Diseases, Medicinal Plants, Resistance.

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INTRODUCTION

Traditional medicine plays a crucial role in providing medical care. Most people in underdeveloped nations still rely mostly on indigenous traditional medicine to meet their demands for primary healthcare. One of the oldest and most popular forms of medicine is traditional medicine. The Indian Materia Medica has a wealth of knowledge on the folklore customs and traditional uses of natural plant remedies. Ayurveda, Siddha, and Unani are only a few of the systems upon which Indian traditional medicine is based**.** The Tannins, Alkaloids, Glycosides, Phenols, And Flavonoids that are present in medicinal plants are among the organic components that have definite physiological effects on humans. On the basis of their therapeutic properties, medicinal plants continue to be a significant source of pharmaceuticals and natural products in almost all civilizations. The plants have powerful bioactive chemicals that can both prevent and treat the majority of diseases caused by oxidative stress. [1-2]

The word cataract, which means "water fall," is derived from the Latin cataracta. A cataract develops when an opaque or hazy region forms in the eye's normally clear lens, which is in charge of the focusing mechanism. A clear image cannot be seen by the retina because the foggy area scatters and obstructs light as it travels through the lens. Cataract-related blurred vision is sometimes compared to looking out of a frosty or foggy window. Cataracts frequently form slowly, affecting one or both eyes, and reducing vision. Surgery to remove the cataract is advised when clouded vision makes it difficult to perform daily tasks like reading or driving a car. Cataract formation is primarily an ageing phenomenon, while socioeconomic and lifestyle factors such nutritional deficiencies, solar exposure, smoking, environmental factors, diabetes mellitus, and a lack of antioxidant consumption may also have an impact. [3-4]

VARIOUS PLANTS USED IN THE CATARACT TREATMENT

Abrus precatorius Linn

Abrus precatorius Linn is a member of the Fabaceae family of plants. Goat lenses are used to treat calcium-induced cataractogenesis with the seeds of this plant. Transparent isolated goat lenes were incubated in artificial aqueous humor and divided into seven experimental groups. The extracts were simultaneously treated with calcium chloride (10 mm) at doses of 100 and 200 g/ml for 16 hours. The standard drug was vitamin E (100 g/ml). As seen by the increased antioxidant potential, the results showed that concurrent incubation of the plant extracts reduced the preoxidative damage caused on by calcium. [5]

Abutilon hirtum

The goal of the current investigation was to evaluate *Abutilon hirtum* in vitro anticataract capability utilizing a goat eye lens that had undergone a glucose-induced cataract. The hydro ethanolic leaf extract of Abutilon hirtum was tested for its anti-inflammatory, antioxidant, and antioxidant properties. According to the phytochemical screening, tannins, flavonoids, saponins,

alkaloids, and phenols were present. The plant extract demonstrated significant antioxidant activity when diluted to a concentration of 100 g/ml (Total Phenol Content, DPPH Radical Scavenging Activity, SOD, Catalase Assay and Total Reducing Power). According to an in vitro investigation, the lens group treated with the plant extract (500 g/ml) had less opacity than the lens in the negative control group. The investigation of *Abutilon hirtum* anticataract potential revealed. [6]

Achyranthes aspera Linn

Achyranthes aspera Linn. The southern part of India is home to a shrub that is widely distributed and belongs to the Amaranthaceae family. Alkaloids, flavonoids, saponins, tannins, and phenolic chemicals are said to be present in the leaves. The leaves of this species have Anti-Fertility, Nephroprotective, Antioxidant, Reduce Inflammatory Swellings, Nephroprotective and Immunomodulatory Effects. They are used in Indian traditional medicine to treat ophthalmic and other eye illnesses. For its hypoglycemic effect, anti-cancer, anti-fungal, increase in thyroid hormone levels, and anti-cataract activity, several researches have been published. [7]

***Alstonia Scholaris* L**

To evaluate the ex vivo anticataract activity of *Alstonia scholaris* leaf ethanolic extract on dexamethasone-induced cataract using isolated goat lens. Anticataract activity is conducted out using a single goat lens. Lenses made from goats were divided into four groups. The lenses in Group I were incubated in artificial aqueous humor (normal control). The lenses were incubated with 10 mg of dexamethasone in Group II (toxic control). For Groups III and IV, the lens was homogenized with Tris-phosphate buffer, and the levels of sodium, potassium, total protein, and catalase were assessed. Dexamethasone and EEAS (50 g and 100 g) were incubated on the lens before it was put under a camera to be photographed to check for opacity. The relative opacity grades for groups I, II, III, and IV were 0, 1, and 1. [8]

Asparagus racemosus

The *In- vitro* goat lens model to assess the anticataract efficacy of *Asparagus racemosus* root extract. In experiment, goat lenses were cultured for 72 hours at room temperature in artificial aqueous humor containing 55 mM glucose (cataractogenesis) and aqueous extract of *Asparagus racemosus* root (AEAR) at various doses of 250 g/ml and 500 g/ml. The lens's biochemical characteristics were also examined. Additionally, a photo examination was performed. Lens compared to model control group. [9]

***Caesalpinia bonducella* (L.)**

To investigate the in-vitro anti catataract activity of *Caesalpinia bonducella* (L.) using isolated goat lens. The *Caesalpinia bonducella* (L.) Fleming seed kernel is extracted with ethanol using the percolation process. A synthetic aqueous humor was made, and 250% Streptomycin and 32% Penicillin G were added to it. This was separated into six groups, and in accordance with the groups formed, Glucose, Enalapril, and EESKCB (1 mg/kg, 1.5 mg/kg, and 2 mg/kg) were added to each group. Lenses were then incubated in them for the following 72 hours at Room Temperature. After 72 hours of incubation, the lens was placed on a graph paper for visual examination. The current study showed that *Caesalpinia bonducella* (L.) possesses Anti-Cataract properties, resulting in cataract avoidance. [10]

Cineraria maritima

Cineraria maritima has a long history of usage in the homoeopathic medical system for the treatment of cataract and other eye-related issues. One of the primary underlying reasons of cataract, which occurs in the precipitation of natural protein existing in the lenses with ageing, is high oxidative stress. This study used a variety of antioxidant approaches, including 1, 1-diphenyl-2-picrylhydrazyl, nitric oxide, hydrogen peroxide, and investigations in an ex vivo cataract model, to investigate the anti-cataract activity of *Cineraria maritima*. According to the study's findings, alkaloids, phenols, flavonoids, and other phytoconstituents were present in the ethanolic extract *Cineraria maritima* aerial parts (leaves and stems). Goat eye lenses were also used to explore the anti-cataract activity. Results from this study demonstrated clearly the plant's significant antioxidant potential and anti cataract properties. [11]

Coleus forskohlii

Coleus forskohlii is an important medicinal plant of family Lamiaceae, growing wild in the subtropical climate of India, Nepal, Bhutan, Thailand, Burma, and Sri Lanka. India is considered to be native place of the plant. The tuberous roots are found to be rich source of the labdane diterpenoid forskolin (FS). In Central India, the plant roots are used as condiments and for making pickles also. CF has been used to treat hypertension, congestive heart failure, eczema, colic, respiratory disorders, painful urination, insomnia and convulsions, asthma, bronchitis, intestinal disorders, burning sensation, constipation, epilepsy, and angina. According to measurements of lens transparencies with photographic evaluation and lens galactitol levels, CF and FS inhibited the establishment and progression of cataract by glucose. [12]

Cyanadon dactylon

Cyanadon dactylon is a perennial grass in the Poaceae family that has a number of therapeutic benefits. The *Cyanadon dactylon* aqueous and ethanolic extracts have been shown to have hypoglycemic and anti-diabetic properties in recent investigations. The major components of *Cyanadon dactylon* crude proteins, carbohydrates, mineral components, oxides of magnesium, phosphorous, calcium, sodium, and potassium, -sitosterol, flavonoids, alkaloids, glycosides, triterpenoids, vitamin C, carotene, lipids, and palmitic acid, among others, were described. Based on information gathered from numerous studies on diabetes mellitus and the anti-diabetic properties of

Cyanadon dactylon, the current study was carried out to examine the anti-cataract potential of *Cyanadon dactylon* in vitro, utilising goat lens culture. [13]

Drynaria quercifolia

As a potential treatment for lens cataracts, the cataractostatic efficacy of *Drynaria quercifolia* tuber methanolic and ethylacetate extracts was examined here. In this study, an in vitro model of glucose-induced cataract generated in isolated goat lenses was used. When tested with extracts, it was discovered that the tuber's ethylacetate extracts, when applied to the lenses at a final concentration of 20 g/ml, were able to prevent cataractogenesis. However, at an 80 g/ml concentration, the tuber's methanolic extract had a mild anticataract action. These findings suggested that *Drynaria quercifolia* tuber ethylacetate extract is an effective cataractostatic agent and may be able to prevent diabetic cataract. [14]

Ervatamia Coronaria

Wistar albino rats were used to test the *Ervatamia coronaria* leaf extract's ability to prevent cataracts caused by naphthalene. For the study, 30 rats were divided into 5 groups. Vitamin E (50 mg/kg) and *Ervatamia coronaria* leaf extract (200 and 400 mg/kg, respectively) were utilised as conventional medications, with liquid paraffin serving as the control. Using an ophthalmoscope, the incidence rate of cataracts and the opacity index were assessed. At different phases, naphthalene caused a noticeable mature cataract and an increase in the opacity index. Based on the findings, it was determined that *Ervatamia coronaria* leaf extract had anticataract effect and prevented the cataract maturation caused by naphthalene. [15)]

Erythrina stricta

The Anticataract efficacy of *Erythrina stricta* leaves against naphthalene-induced cataractogenesis was studied in Wistar albino rats. For 28 days, different leaf extract fractions were given orally (200 mg/kg) along with naphthalene (1 g/kg). Malondialdehyde, lipid hydroperoxides, carbonyl and sulfhydryl content, as well as enzymatic and non-enzymatic anti-oxidants, were all measured in the lens homogenate at the conclusion of the experiment. Naphthalene administration caused a mature cataract and a rise in the opacity index. When compared to the usual control, there was a considerable rise in lipid peroxidation and a fall in antioxidant enzymes. According to ophthalmoscopic observation, the simultaneous administration of the fractions postponed the development and onset of cataract. [16]

Foeniculum Vulgare

For its carminative and mouth-freshening effects, fruits of the *Foeniculum vulgare* plant are frequently ingested. Aldose reductase inhibition and anti-diabetic effects of the plant were assessed. Trans-anethole, with an IC50 value of 3.8 g/ml, was identified as the bioactive ingredient with the most powerful aldose reductase inhibitory action by bioguided fractionation employing silica gel column chromatography, HPLC, and GC-MS analysis. On in vitro incubation of the eye lens with 55 mM glucose, trans-anethole may successfully demonstrate anti-cataract activity through the increase in soluble lens protein, reduced glutathione, catalase, and SOD activity. Trans-anethole showed noncompetitive to mixed type lens aldose reductase inhibition. [17]

Garcinia Indica

According to the previous taxonomy, Garcinia indica, often known as kokum, is a member of the Clusiaceae family. Fruit rinds are the portion of kokum that can be used medicinally and provide a variety of health advantages. Garcinol, isogarcinol, and camboginol, Anthocyanins, Hydroxycitric acid (HCA), HCA Lactone, Polyphenols, citric acid, and oxalic acid are some of the main phytoconstituents in it. For its Anti-Oxidative, Anti-Glycation, Free Radical Scavenging, Anti-Ulcer, Antibacterial, Hepatoprotective, Antidiabetic, Anti-Hypercholesterolemic, Anticancer, Anti-Inflammatory and Antidepressant Properties. The plant is pharmacologically investigated rats with cataracts caused by naphthalene are used in this study to examine the anti-cataract effect of an Aqueous extract of *Garcinia indica* (AGI) fruit rinds. [18)]

Garcinia Mangostana

Garcinia mangostana Linn (GML) (mangosteen, Clusiaceae) has an extensive record of use as a medical plant, mainly in Southeast Asia. Mangosteen has excessive quantities of xanthones, a class of poly phenolic compounds which were shown to have significant biological activities. Water extracts of mangosteen possesses as the scavenging activity of the free-radical DPPH and neuro protective activity by inhibiting oxidative stress in vitro and inhibition of pentosidine formation *In-Vivo* . Ethanol extract of GML pericarp potentially showed antioxidant, anti-glycation, DDIT3 inhibitor, and anti-apoptotic activity in Goat cultured lenses. [19]

Glycerrhiza glabra

Galactose-induced cataract in rats. Isoliquiritigenin-rich Fraction of *Glycerrhiza glabra* (IFGG). 18-day-old, 40–50 gm Sprague Dawley suckling rats of either sex were randomly divided into six groups (n=6): normal control, model control, standard treated with vitamin E (36 mg/kg), and the remaining three groups treated with IFGG (5 mg/kg, 10 mg/kg, and 20 mg/kg P.O., once daily, respectively). All animals, with the exception of the normal control group, were fed a diet high in galactose for 18 days beginning on the 21st postpartum day. Animals were pre-treated with vitamin E and IFGG beginning three days before the galactose feeding and continuing through the study's conclusion. Throughout the trial, regular checks were made to see if cataracts had developed in any of the animals. Tropicamide (0.8%) was used to dilate the eyes. and was looked at and captured on camera. In order to assess levels of Aldose Reductase (AR), Total Protein, Sulfhydryl Group (-SH), Malondialdehyde (MDA), Calcium, Soluble Protein Content, and Reduced Glutathione

Content, lenses from all animals were separated and homogenised at the conclusion of the study (GSH). The effects of galactose on the levels of AR, total protein, GSH, MDA, SH, and calcium were dramatically reversed by IFGG. By inhibiting the conversion of extra glucose into sorbitol, IFGG reduced the aldose reductase activity and postponed the development of cataracts. As a result, it can be utilised as an option for cataract prevention. [20]

Heliotropium Indicum

On galactose-induced cataract in rats, the anticataract effect of an ethanolic leaf extract of *Heliotropium indicum* was investigated. Rats cataracts were induced using galactose. Four groups of six animals each were formed from the total number of animals. Group II received 30% while Group I acted as the vehicle control group. A galactose diet was used as a cataract control, and groups III and IV received a galactose diet along with 200 mg/kg of an ethanolic leaf extract of *Heliotrope indicum* and 50 mg/kg of vitamin E, respectively. All of the following groups were treated for 40 days. All of the animal's lenses were removed on the 41st day in order to measure the amount of glutathione, lens soluble protein, and lens water to determine the severity of cataract development. The findings demonstrated that, in comparison to the galactose control group, the groups of *Heliotropium indicum* and vitamin E treated mice had significantly higher levels of lens glutathione, soluble protein, and water. Based on these findings, it was shown that galactose-induced cataract in rats might be prevented by a leaf extract of Heliotropium indicum. [21]

Hibiscus rosa-sinensis Linn

To investigate the impact of an ethanolic extract from the leaves of *Hibiscus rosa-sinensis* Linn (EEHRS) on a glucose-induced cataract in a goat lens in vitro model. By using the percolation method, ethanolic extracts of Hibiscus rosa-sinensis Linn leaves were created (EEHRS). A local slaughterhouse provided the goats for the lenses, which were manufactured in 6 groups of 5 lenses apiece. They were incubated in artificial aqueous humor with 5.5 mM glucose (negative control group), 55 mm glucose (cataractogenesis group), enalapril (standard drug group), and 3 dosages of EEHRS (1 mg, 1.5 mg, 2 mg) with 55 mm glucose for 72 hours at room temperature (test drug groups). By counting the number of transparent squares when a graph paper was placed over the lens, the degree of opacification was determined. Parameters Examined in the lens homogenate were the catalase and superoxide dismutase (SOD) activity, tissue malondialdehyde (MDA), and total and water soluble protein. One-way ANOVA and Bonferroni corrections were used to compare all of the data pertaining to biochemical parameters. Results: The glucose-induced opacification of the lens began 10–12 hours after incubation and was finished in 72 hours. When compared to the positive control, lenses treated with the EEHRS at dosages of 1 mg, 1.5 mg, and 2 mg revealed significantly (p 0.05) reduced opacity and tissue MDA level, elevated catalase and SOD activity, and elevated total protein and water soluble protein levels. As a result, the study concluded that EEHRS has significant antioxidant activity, which is explained by its antioxidant property. [22]

Mentha spicata

The *Mentha spicata* leaf extract's (ME) anticataract efficacy against glucose-induced cataractogenesis in isolated goat lenses. The newly isolated goat lenses were divided into five experimental groups, each of which received 55 mM glucose for 72 hours: Group I received 55 mM glucose alone, Group II received 100 g/ml ME plus 55 mM glucose, Group III received 300 g/ml ME plus 55 mM glucose, Group IV received 500 g/ml ME plus 55 mM glucose, and Group V received 12 ng/ml Enalapril plus 55 mM glucose. After incubation, the lens homogenate was tested for a number of biochemical factors including total protein, H2 O2, malondialdehyde (MDA), reduced glutathione, Cu2+-induced lipoprotein dienes, and enzymatic antioxidants such catalase and guaiacol peroxidase. Complete opacity was seen in Group 1, which had glucose-induced cataractogenesis in contrast to Group II, associated with high levels of MDA, lower levels of total protein, and enzymatic and non-enzymatic antioxidants. The presence of ME in Group II shielded the lenses from the pre-oxidative harm that glucose could have induced. Accordingly, it was discovered that *Mentha spicata* leaf extract inhibited glucose-induced oxidative damage to the lenses, which may aid in delaying the onset of cataract. [23]

Nigella sativa

To determine whether an ethanolic extract of *Nigella sativa* seeds could prevent a cataract in a goat eye lens that had been caused by high glucose levels. Goat lenses were evaluated photographically in the in vitro investigation, and biochemical factors like protein, GSH, MDA, NA+/K+ ATPase, sodium, and potassium were also measured. A photographic examination of the eyes revealed that using *Nigella sativa* extracts to treat the eyes slowed the development of lens opacification. *Nigella sativa* treatment of cataract lenses increased the activity of Na+ K+ ATPase, total and water soluble proteins, and K+ ions to normal levels while lowering Na+ ion concentrations. While the level of GSH was much higher in the N. sativa-treated groups, the MDA levels were significantly lower. The current study evaluated the effectiveness of *Nigella sativa* ethanolic extract seeds against glucose-induced cataract in goats at high glucose (55 mM), *Nigella sativa* treated groups displayed higher levels of GSH compared to the normal control group. These findings provide credence to the idea that, at least in this in vitro model, an ethanolic extract of N. sativa seeds may somewhat mitigate the effects of glucose on cataract formation. [24]

Phyllanthus Niruri

To compare the Anti-Cataract effects of *Phyllanthus niruri* (PN) and galactose-induced cataract. Aqueous PN extract was tested for cataract caused by galactose both and Rats were given a diet containing 300g/L of galactose to develop Galactosaemic cataract. Three oral doses of PN—

75, 150, and 300 mg/kg of body weight—were given. By adding galactose (30 mmol/L) to the culture media, rat lenses were put under osmotic stress. It was investigated how PN (720 and 880 /mL) affected the levels of polyols and glutathione (GSH). The beginning and development of cataract were greatly postponed by PN. Stage IV did not emerge at lower doses until the end of the study period, in addition to the delay in reaching the various phases of the development of cataract. [25]

Piper betle

A tiny climber or ground cover with green leaves that has growth patterns remarkably similar to peppers. Although it can handle some drought, the ideal circumstances for plant growth are warm and humid. The betel leaf is utilised in a variety of conventional treatments for infections, stomach disorders, and as a general tonic. It is frequently chewed alongside betel nuts (Areca catechu) as a stimulant. Betel leaves may enhance the immune system and fight cancer, according to some research. Using glucose-induced goat eye lenses as in-vitro models, the current study sought to evaluate the efficacy of several ethanolic extracts of piper betle leaves for anticataract activity. In this investigation, goat lenses were exposed to a glucose-induced cataract. It has been established that *Piper betle*. Phytoconstituents primarily possess antioxidant qualities and are what provide the plant its potent anti-inflammatory effects. [26]

Solanum surattense

To investigate the in-vitro anti-oxidant and ex-vivo anti-cataract activity of ethanolic extract of *Solanum surattense* (EESS) leaves on glucose induced cataract and hydrogen peroxide induced cataract using isolated goat lenses. Anti-oxidant activity done by using specific free radical scavenging methods like DPPH free radical, H2O2 free radical scavenging methods and the Anti-cataract activity done by using glucose induced cataract and hydrogen peroxide induced cataract using isolated goat lenses. Results of the study conducted in the ethanolic extract of leaves of *Solanum surattense* revealed the presence of numerous phytochemicals such as alkaloids, glycosides, saponins, tannins, flavonoids, proteins etc, which revealed that the plant contains several phytochemical constituents and hence possesses good anti-oxidant activity. From all the methods gave strong evidence regarding the anti-oxidant potential of this plant. Anti-cataract activity was also investigated using isolated goat lens and promising results were obtained which speak voluminously about its anti-cataract potential and support it well prescribed use. Results obtained with the study clearly supported the significant anti-oxidant potential and anticataract activity of this plant. Further, this plant demands great attention for the development of suitable novel dosage forms for the effective treatment of cataract. [27]

Syzygium cumini

Syzygium cumini is a member of the Myrtaceae family. In India, it is also referred to as an amblang, Jambul, Jambolan, and Kala Jamun. Health organizations from throughout the world endorse Syzygium cumini as a secure medication for treating a number of ailments. The purpose of the current study was to assess the effectiveness of several *Syzygium cumini* seed powder extracts against glucose-induced cataract in goat and chicken lens. In this in vitro investigation, the biochemical parameters total proteins, water soluble proteins, malondialdehyde, glutathione, total ATPases, and catalase levels were measured in goat lenses as well as chick lenses. A photographic examination of the eyes revealed that application of various *Syzygium cumini* seed powder extracts slowed the development of lens opacification. [28]

Tamarindus Indica

In vitro cataract formation prevention using a galactose-induced cataract model was tested using an antioxidant like *Tamarindus indica* Linn. Goat lenses were cultured for 72 hours at room temperature in artificial aqueous humor containing 55mM galactose (cataractogenesis) and *Tamarindus indica* Linn. extract at various doses. Malondialdehyde (MDA), lipid peroxidase, and proteins were among the biochemical factors present in the lens homogenate that were investigated. Galactose started to opacify the goat lens 8–10 hours after incubation, and it took 72–80 hours to finish. MDA and water-soluble protein concentration were increased in cataractous lenses (P 0.001). Biochemical data showed that lenses treated with *Tamarindus indica* Linn. Extract at concentrations of 50 and 75 g/ml had increased protein (total protein) content and had less galactose-induced cataract development and progression. [29]

Trianthema Decandra

Trianthema decandra has been used to treat a variety of illnesses in many regions of Asia, Africa, Australia, and South America. The herb has a long history of use for fever, toothaches, skin conditions, and wound healing in various African nations. It is employed in India to treat ocular conditions. Applying the root to the eye heals corneal ulcers, irritation, vision deterioration, and night blindness. The current study sought to determine whether a methanolic extract of *Trianthema decandra* leaves might prevent galactose cataract in rats as well as morphological and biochemical alterations caused by the substance in vitro. Together, these findings suggest that METD might be investigated as a diabetic cataract anti-cataractogenic drug. [30]

Ziziphusxylo Pyrus

Zizyphusxylo pyrus is a member of the Rhamnaceae family and is widespread in North-Western India, Pakistan, and China. It can grow to a height of 4–7 metres. Turkish folk medicine uses this herb frequently as a strong sedative. In addition to the fruit being utilised for urinary issues, the leaves are chewed for 15 days. Animal models demonstrate analgesic and anti-inflammatory effects of the methanolic extract. According to reports, bark's chloroform extract contains anthelmintic properties. The

fruit of the *Zizyphusxylo pyrus* is also used to cure hypoglycemia and to treat conditions like Bronchitis, Fever, Diarrhoea and Tuberculosis. Besides being an antioxidant, it is also utilised as an antibacterial. *Zizyphusxylo pyrus* fruits methanolic extract was tested for its anti-cataract properties in the current study utilising a variety of animal lenses. [30]

CONCLUSION

According to the results of the current review, herbal medicinal plants and their derivatives have cataract-fighting properties. The scientific community has focused a great deal of interest on plant-derived substances with anti-cataract properties. They are essential in the prevention and treatment of cataracts. The majority of secondary metabolites come from plants, which are also a significant source of pharmaceutical medications. The development of anti-cataract substances from medicinal plants has been crucial in the treatment of cataracts. Because of their antioxidant capabilities, medicinal herbs are known to have great anti-cataract potential. Therefore, in this research, several plants have been chosen and their biological activity has been investigated; however, more work is still needed to identify powerful anti-cataract plants in nature.

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