

Review Article

**A Review on Pharmacological activities and potential health benefits of  
*Moringa Oleifera***



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**Abstract:**

*Moringa oleifera* also called as a drumstick and horseradish tree. This plant is of medicinal value & exhibit so many pharmacological activities such as analgesic, anti-inflammatory, antipyretic, nootropic, antiasthmatic, anticancer, antidiarrheal gastro protective, antiepileptic, anti-urolithiatic, antioxidant, hepatoprotective, anti-ulcer, antimicrobial, cardiovascular, anti-obesity, antidiabetic, diuretic, local anesthetic, antidiarrheal, anti-allergic, anthelmintic, wound healing, and immunomodulatory, properties. This plant has wide range of the phytoconstituents that showing above pharmacological activities. The present review showed the literature of the traditional uses, phytochemical properties with therapeutic uses of drumstick tree and in promoting human health. Thus this plant has most popularity as curing different diseases relating to human health.

**Keywords:** *Moringa oleifera*, drumstick tree, pharmacological actions, traditional uses

**Introduction:**

*Moringa oleifera* is a fast-growing, drought-resistant tree of the family Moringaceae, native to the Indian subcontinent. Common names include drumstick, horseradish tree and ben oil tree. Different parts of plant such as leaves, stem, root & bark possess therapeutic value. It tolerates a wide range of soil conditions like well-drained, loamy or sandy soil but prefers a neutral to slightly acidic (pH 6.3 to 7.0) soil, *Moringa* is a heat and sun-loving tree, and does not growing in freezing or frost environment<sup>1</sup>.

**Active phytoconstituents**

Whole plant contains l-rhamnose, d-glucuronic acid, d-galactose, leucodelphinidin-3-O-B-D-galactopuranosy (1->4)-O-B-D-glucopyranoside, l-arabinose, d-mannose, and d-xylose. Its stem contains moringine and moringinine alkaloids, octacosanoic acid, 4-hydroxymellein, and  $\beta$ -sitosterol. Flowers contain sucrose, amino acids, alkaloids, and flavonoids, such as rhamnetin, isoquercitrin, and kaempferitrin. Fruits and seeds contains cytokines benzylglucosinolate,

benzylisothiocyanate, phenylacetone nitrile, and benzyl carbamate. Leaves are rich in beta-carotene, vitamin C, vitamin E, and polyphenols and are a good source of natural antioxidants. It also contains various nutraceuticals like dietary fiber, carbohydrates, protein, fat, vitamins (riboflavin, thiamine, pantothenic acid, niacin, folate, vitamin C, provitamin A and vitamin K) and minerals (iron, calcium, manganese, magnesium, phosphorus, sodium, potassium and zinc). Apart from these, there are Glycosides-carbamate, isothiocyanate, thiocarbamate, oestrogenic substances, ascorbic acid,  $\beta$ -sitosterol, iron, phosphorus, calcium, copper, vitamin A, B, C,  $\alpha$ -tocopherol, riboflavin, nicotinic acid, pyridoxine, folic acid, cystine, tryptophan,  $\beta$ -carotene and proteins<sup>2-5</sup>.

### Traditional Uses of *M. oleifera*:

This plant is of medicinal value & exhibit so many pharmacological activities such as anti-ulcer, gastroprotective, analgesic, anti-urolithiatic, antipyretic, anticancer, antioxidant, antidiabetic, nootropic, anti-inflammatory, hepatoprotective, cardiovascular, anti-obesity, antiepileptic, antiasthmatic, antidiarrheal, diuretic, local anesthetic, anti-allergic, anthelmintic, wound healing, antimicrobial, and immunomodulatory, properties<sup>6-7</sup>.

## Pharmacological Activities

### Hepatoprotective Activity

- ❖ Gilani AH, *et al.* (1997) investigated the Quercetin exhibits hepatoprotective activity in rats<sup>8</sup>.
- ❖ Ruckmani K, *et al.* (1998) investigated Effect of *drum stuck* plant on paracetamol induced hepatotoxicity<sup>9</sup>.
- ❖ Pari L, *et al.* (2002) investigated Liver protective activity of *Moringa oleifera* on isoniazid induced liver damage in rats<sup>10</sup>.
- ❖ Fakurazi S, *et al.* (2008) investigated *Moringa oleifera* Lam. stops acetaminophen producing hepatic injury<sup>11</sup>.
- ❖ Umaya SR, *et al.* (2009) investigated Efficacy of *Moringa oleifera* and aloe vera on aflatoxin b1-induced hepatotoxicity in rats<sup>12</sup>.
- ❖ Patel RK, *et al.* (2010) investigated, *In vitro* hepatoprotective activity of *Moringa oleifera* Lam. They used leaves of plant on isolated rat hepatocytes<sup>13</sup>.
- ❖ Hamza AA. (2010) investigated improvement effects of *drum stick* seeds extract on liver fibrosis in rats<sup>14</sup>.
- ❖ Nanjappaiah HM, *et al.* (2012) investigated Prophylactic and curative effects of *Moringa oleifera* Lam. pods in CCl<sub>4</sub> damaged rat liver<sup>15</sup>.
- ❖ Das N, *et al.* (2012) investigated *Moringa oleifera* Lam. ethanolic leaf extract prevents early liver injury and restores antioxidant status in mice fed with high-fat diet<sup>16</sup>.
- ❖ Toppo R, *et al.* (2015) investigated Hepatoprotective activity of *Moringa oleifera* against cadmium toxicity in rats<sup>17</sup>.

- ❖ Eldaim MA, *et al.* (2017) investigated an antidiabetic activity of aqueous extract of *Moringa oleifera* leaves with reducing liver toxicity in alloxan-induced diabetic rats<sup>18</sup>.
- ❖ Adeyemi OS, *et al.* (2017) investigated liver protective effect of *Moringa oleifera*-containing food against nickel-induced liver toxicity in Swiss albino rats<sup>19</sup>.

### Antiulcer Activity

- ❖ Devaraj VC, *et al.* (2007) investigated that leaves and fruits extract of *Moringa oleifera* is very effective on gastric and duodenal ulcers<sup>20</sup>.

### Antidiarrheal Activity:

- ❖ Saralaya MG, *et al.* (2010) investigated Antidiarrheal activity of methanolic extract of *Moringa oleifera* Lam. roots in experimental animal models<sup>21</sup>.
- ❖ Lakshminarayana M, *et al.* (2011) investigated Antidiarrhoeal activity of leaf extract of *Moringa oleifera* in experimentally induced diarrhoea in rats<sup>22</sup>.
- ❖ Choudhury S, *et al.* (2013) investigated Anti-diarrhoeal potentiality of leaf extracts of *Moringa oleifera*<sup>23</sup>.

### Anti-pyretic, Anti-inflammatory and Analgesic activity:

- ❖ Ezeamuzie IC, *et al.* (1996) investigated that root extract of *Moringa oleifera* act as Anti-inflammatory effects<sup>24</sup>.

- ❖ Venkateshwara KN, *et al.* (1999) investigated Antiinflammatory action of *Moringa oleifera* Lam<sup>25</sup>.
- ❖ Ndiaye M, *et al.* (2002) investigated the anti-inflammatory activity of *Moringa oleifera* (Moringaceae)<sup>26</sup>.
- ❖ Kumbhare M, *et al.* (2011) investigated Anti-inflammatory and analgesic activity of stem bark of *Moringa oleifera*<sup>27</sup>.
- ❖ Manaheji H, *et al.* (2011) investigated that methanolic extracts of the root and leaves of *Moringa oleifera* is very effective as Analgesic effects on complete Freund's adjuvant-induced arthritis in rats<sup>28</sup>.
- ❖ Sharma R, *et al.* (2011) investigated that leaves extracts of *Moringa oleifera* is used as Anti-inflammatory activity against carrageenan induced paw edema in albino mice<sup>29</sup>.
- ❖ Jurairat K, *et al.* (2012) investigated *Moringa oleifera* leaves extract attenuates neuropathic pain induced by chronic constriction injury<sup>30</sup>.
- ❖ Gurvinder PS, *et al.* (2012) investigated evaluation of Anti-inflammatory activity of leaf extract of *Moringa oleifera*<sup>31</sup>.
- ❖ Bhattacharya A, *et al.* (2014) investigated that leaves extract of drumstick tree showing anti-inflammatory, Anti-pyretic, and analgesic effects<sup>32</sup>.
- ❖ Saini RK, *et al.* (2014) investigated that *Moringa oleifera* leaves extract having antioxidant activity<sup>33</sup>.

- ❖ Bhattacharya A, *et al.* (2014) investigated Anti-inflammatory effect of ethanolic extract of *Moringa oleifera* leaves on albino rats<sup>34</sup>.
- ❖ McKnight M, *et al.* (2014) investigated that Moringa tea prevent acute lung inflammation<sup>35</sup>.
- ❖ Bhattacharya A, *et al.* (2014) investigated that ethanolic leaves extract of *Moringa oleifera* having Antipyretic effect in albino rats<sup>36</sup>.
- ❖ Medhi HN, *et al.* (1996) investigated Analgesic, anti-inflammatory and local anesthetic activity of Moringa in laboratory animals<sup>37</sup>.

#### Anticancer Activity:

- ❖ Guevara AP, *et al.* (1999) investigated that *Moringa oleifera* leaves extract showing antitumor activity in albino rats<sup>38</sup>.
- ❖ Bose CK. (2007) investigated that *Moringa oleifera* root extract is very effective in epithelial ovarian cancer<sup>39</sup>.
- ❖ Mojzis J, *et al.* (2008) investigated Antiangiogenic effects of flavonoids and chalcones<sup>53</sup>.
- ❖ Purwal L, *et al.* (2010) investigated Anti-tumour activity of crude extracts of leaves of *Moringa oleifera* (Moringaceae)<sup>40</sup>.
- ❖ Budda S, *et al.* (2011) investigated Suppressive effects of *Moringa oleifera* Lam pod against mouse colon carcinogenesis induced by azoxymethane and dextran sodium sulfate<sup>41</sup>.
- ❖ Sreelatha S, *et al.* (2011) investigated that *Moringa oleifera* leaf extract having Antiproliferative effect on human cancer cells by induction of apoptosis<sup>42</sup>.
- ❖ Tiloke C, *et al.* (2013) investigated that aqueous leaf extract of *Moringa oleifera* showing antiproliferative effect on cancerous human alveolar epithelial cells<sup>43</sup>.
- ❖ Bhattacharya A, *et al.* (2014) investigated Analgesic and anticancer effect of ethanolic leaf extract of *Moringa oleifera* on albino mice<sup>44</sup>.
- ❖ Charoensin S. (2014) investigated Antioxidant and anticancer activities of *Moringa oleifera* leaves<sup>45</sup>.
- ❖ Jung IL, *et al.* (2015) investigated A potential oral anticancer drug candidate, *Moringa oleifera* leaf extract, induces the apoptosis of human hepatocellular carcinoma cells<sup>46</sup>.
- ❖ Al-Asmari AK, *et al.* (2015) investigated that leaves extract of *Moringa oleifera* is very effective in breast and colorectal cancer<sup>47</sup>.
- ❖ Pachava VR, *et al.* (2017) investigated that ethyl acetate leaves extract of *Moringa oleifera* is used as anti-angiogenic<sup>48</sup>.

#### Antioxidant Activity:

- ❖ Siddhuraju P, *et al.* (2003) investigated that drumstick tree leaves containing total phenolic phytoconstituents which having antioxidant properties<sup>49</sup>.
- ❖ Ranira G, *et al.* (2005) investigated role of antioxidants of *Moringa oleifera* in Alzheimer's disease<sup>50</sup>.

- ❖ Ganguly R, and Guha D. (2008) investigated that *Moringa oleifera* leaves extract is very effective to treat Alzheimer's disease<sup>51</sup>.
  - ❖ Singh BN, *et al.* (2009) investigated potentials of *Moringa oleifera* in Oxidative DNA damage protective activity and antioxidant activity<sup>52</sup>.
  - ❖ Atawodi SE, *et al.* (2010) investigated Evaluation of the polyphenol content and antioxidant properties of methanol extracts of the leaves, stem, and root barks of *Moringa oleifera* Lam<sup>53</sup>.
  - ❖ Sinha M, *et al.* (2011) investigated Leaf extract of *Moringa oleifera* prevents ionizing radiation-induced oxidative stress in mice<sup>54</sup>.
  - ❖ Paliwal R, *et al.* (2011) investigated Elucidation of free radical scavenging and antioxidant activity of aqueous and hydro-ethanolic extracts of *Moringa oleifera* pods<sup>55</sup>.
  - ❖ Wangcharoen W, *et al.* (2011) investigated Antioxidant capacity and total phenolic content of *Moringa oleifera*<sup>56</sup>.
  - ❖ Luqman S, *et al.* (2012) investigated *Moringa oleifera* leaves and fruits extracts are used as antistress, antioxidant, and free radicals scavenging potential<sup>57</sup>.
  - ❖ Satish A, *et al.* (2014) investigated that *Moringa oleifera* root extracts showing Antioxidative effect and DNA protecting property<sup>58</sup>.
  - ❖ Karthivashan G, *et al.* (2016) investigated the modulatory effect of *Moringa oleifera* leaf extract on endogenous antioxidant systems and inflammatory markers in an acetaminophen-induced nephrotoxic mice model<sup>59</sup>.
  - ❖ Aa AB, *et al.* (2017) investigated Preliminary phytochemical screening, antioxidant and antihyperglycaemic activity of *Moringa oleifera* leaf extracts<sup>60</sup>.
  - ❖ Vergara-Jimenez M, *et al.* (2017) investigated Antioxidants effect of *Moringa oleifera* leaves that protect against chronic disease<sup>61</sup>.
  - ❖ He TB, *et al.* (2018) investigated Structural elucidation and antioxidant activity of an arabinogalactan isolated from *Moringa oleifera* leaves<sup>62</sup>.
- Memory Enhancer activity:**
- ❖ Mohan M, *et al.* (2005) investigated that *Moringa oleifera* leaves extract also showing Nootropic activity<sup>63</sup>.
- Cardioprotective activity:**
- ❖ Gilani AH, *et al.* (1994) investigated that *Moringa oleifera* seeds extract having hypotensive and spasmolytic activities<sup>64</sup>.
  - ❖ Faizi S, *et al.* (1998) investigated blood pressure lowering phytoconstituents from the pods of *Moringa oleifera*<sup>65</sup>.
  - ❖ Dangi SY, *et al.* (2002) investigated Antihypertensive activity of the total alkaloids of *Moringa oleifera* leaves<sup>66</sup>.
  - ❖ Nandave M, *et al.* (2009) investigated leaf extract of *Moringa oleifera* is very effective to prevents myocardial damage induced by isoproterenol in rats<sup>67</sup>.

❖ Randriamboavonjy JI, *et al.* (2016) investigated that seeds extract of *Moringa oleifera* is very effective as Cardiac protective effects in hypertensive rats<sup>68</sup>.

#### Antiobesity Activity

- ❖ Bais S, *et al.* (2014) investigated that *Moringa oleifera* leaves extract showing anti-obesity and hypolipidemic activity of against high fat diet-induced obesity in rats<sup>69</sup>.
- ❖ Nahar S, *et al.* (2016) investigated Antiobesity activity of *Moringa oleifera* leaves against high fat diet-induced obesity in rats<sup>70</sup>.
- ❖ Metwally FM, *et al.* (2017) find out the Molecular mechanisms of *Moringa oleifera* as anti-obesity potential effect<sup>71</sup>.

#### Antiasthmatic:

- ❖ Anita M, and Babita A., *et al.* (2008) find out the mechanism of action of *Moringa oleifera* for its anti-asthmatic activity<sup>72</sup>.

#### Anticonvulsant activity:

- ❖ Ray K, and Guha D., *et al.* (2005) investigated that root extract of *Moringa oleifera* is very effective to treat penicillin-induced epilepsy in rats<sup>73</sup>.
- ❖ Amrutia JN, *et al.* (2011) investigated anticonvulsant activity of *Moringa oleifera* leaf<sup>74</sup>.

#### CNS depressant and muscle relaxant Activity:

- ❖ Bhattacharya A, *et al.* (2014) investigated that ethanolic leaf extract of *Moringa oleifera* having CNS depressant and muscle relaxant effect in albino rats<sup>75</sup>.
- ❖ Kaur G, *et al.* (2015) investigated the Combination *Moringa oleifera* and fluoxetine showing antidepressant activity<sup>76</sup>.

#### Anti-anxiety activity:

- ❖ Lakshmi BV, *et al.* (2014) investigated that *Moringa oleifera* showing anti-anxiety activity in anxiety models in mice<sup>77</sup>.
- ❖ Bhattacharya A, *et al.* (2016) investigated that ethanolic extract of drumstick tree leaves showing anxiolytic effect in albino mice<sup>78</sup>.

#### Antimicrobial Activity:

- ❖ Jabeen R, *et al.* (2008) investigated Microscopic evaluation of the antimicrobial activity of seed extracts of *Moringa oleifera*.<sup>79</sup>
- ❖ Rahman MM, *et al.* (2009) investigated Antibacterial activity of leaf juice and extracts of *Moringa oleifera* Lam. against some human pathogenic bacteria<sup>80</sup>.
- ❖ Mensah JK, *et al.* (2012) investigated Phytochemical nutritional and antibacterial properties of dried leaf powder of *Moringa oleifera* (Lam) from Edo Central Province, Nigeria<sup>81</sup>.
- ❖ Kumar V, *et al.* (2012) investigated Antibacterial and antioxidant activity of different extract of *Moringa oleifera* leaves an *in vitro* study<sup>82</sup>.



- ❖ Patel P, *et al.* (2014) investigated Phytochemical analysis and antifungal activity of *Moringa oleifera*<sup>83</sup>.
- ❖ Devendra BN, *et al.* (2011) investigated that leaf extract of *Moringa oleifera* showing antimicrobial activity against different bacterial and fungal strains<sup>84</sup>.
- ❖ Abalaka ME, *et al.* (2012) investigated that *Moringa oleifera* leaf extracts showing the antibacterial effect on bacterial pathogens<sup>85</sup>.
- ❖ Elangovan M, *et al.* (2014) investigated that leaves extract of *Moringa oleifera* is very effective as antibacterial and antioxidant activities<sup>86</sup>.
- ❖ Jha N, *et al.* (2009) investigated Antifungal investigation of the constituents of *Moringa oleifera* Lam. root bark extract<sup>87</sup>.
- ❖ Zaffer M, *et al.* (2015) investigated Antifungal efficacy of *Moringa oleifera* Lam<sup>88</sup>.
- ❖ Ferreira PM, *et al.* (2009) investigated that *Moringa oleifera* seeds extract is very effective as Larvicidal against *Aedes aegypti*<sup>89</sup>.
- ❖ Kaur A, *et al.* (2014) investigated Isolation of Antileishmanial phyto constituents from *Moringa oleifera*<sup>90</sup>.
- ❖ Dasgupta S, *et al.* (2016) investigated Evaluation of antimicrobial activity of *Moringa oleifera* seed extract as a sustainable solution for portable water<sup>91</sup>.
- ❖ Abdalla AM, *et al.* (2016) investigated Evaluation of antimicrobial activity of *Moringa oleifera* leaf extracts against pathogenic bacteria isolated from urinary tract infected patients<sup>92</sup>.
- ❖ Rockwood JL, *et al.* (2013) investigated Potential uses of *Moringa oleifera* and an examination of antibiotic efficacy conferred by *Moringa oleifera* seed and extract using crude extraction techniques available to undeserved indigenous populations<sup>93</sup>.
- ❖ Oluduro AO. *et al.* (2012) investigated Evaluation of antimicrobial properties and nutritional potentials of *Moringa oleifera* Lam. leaf in south-western Nigeria<sup>94</sup>.
- ❖ Alozie YE, and Sonye CU., *et al.* (2015) investigated Antimicrobial activity of *Moringa oleifera* leaf against isolates of beef offal<sup>95</sup>.
- ❖ Singh K, and Tafida GM., *et al.* (2014) investigated that leaves extract of *Moringa oleifera* is very effective as Antibacterial action against some bacteria<sup>96</sup>.
- ❖ Vinoth R, *et al.* (2012) investigated that antibacterial activity and analysis of Phytochemicals isolated from *Moringa oleifera*<sup>97</sup>.
- ❖ Pinal P, *et al.* (2014) investigated Phytochemical analysis and antifungal activity of *Moringa oleifera*<sup>98</sup>.

### Immunomodulatory Activity

- ❖ Sudha P, *et al.* (2010) investigated Immunomodulatory activity of methanolic leaf extract of *Moringa oleifera* in animals<sup>99</sup>.
- ❖ Nfambi J, *et al.* (2015) investigated Immunomodulatory activity of methanolic leaf

extract of *Moringa oleifera* in Wistar albino rats<sup>100</sup>.

- ❖ Jayanthi M, *et al.* (2015) investigated Some newer marker phytoconstituents in methanolic extract of *Moringa oleifera* leaves and evaluation of its immunomodulatory and splenocytes proliferation potential in rats<sup>101</sup>.

#### Anthelmintic Activity:

- ❖ Cabardo DE, *et al.* (2017) investigated Anthelmintic activity of *Moringa oleifera* seed aqueous and ethanolic extracts against *Haemonchus contortus* eggs and third stage larvae<sup>102</sup>.
- ❖ Rathi B, *et al.* (2004) investigated Evaluation of aqueous extract of pulp and seeds of *Moringa oleifera* for wound healing in albino rats<sup>103</sup>.
- ❖ Rathi BS, *et al.* (2006) investigated Evaluation of aqueous leaves extract of *Moringa oleifera* Linn. For wound healing in albino rats<sup>104</sup>.
- ❖ Momoh MA, *et al.* (2013) investigated Natural healing compound for the treatment of excision and incision wound in rat's model<sup>105</sup>.

#### Wound healing Activity

- ❖ Lambole V, and Kumar U. (2012) investigated Effect of *Moringa oleifera* Lam. on normal and dexamethasone suppressed wound healing<sup>106</sup>.
- ❖ Muhammad AA, *et al.* (2016) investigated Evaluation of wound healing properties of

bioactive aqueous fraction from *Moringa oleifera* Lam. on experimentally induced diabetic animal model<sup>107</sup>.

- ❖ Gothai S, *et al.* (2016) investigated Wound healing properties of ethyl acetate fraction of *Moringa oleifera* in normal human dermal fibroblasts<sup>108</sup>.

#### Antidiabetic activity:

- ❖ Manohar VS, *et al.* (2012) investigated that freshly prepared aqueous leaves extract of *Moringa oleifera* as antihyperglycemic effect in normal and diabetic rabbits<sup>109</sup>.
- ❖ Jaiswal D, *et al.* (2009) investigated that aqueous leaves extract of *Moringa oleifera* therapy is very effective in hyperglycemic rats<sup>110</sup>.
- ❖ Yassa HD, and Tohamy AF., *et al.* (2014) investigated Extract of *Moringa oleifera* leaves ameliorates streptozotocin-induced diabetes mellitus in adult rats<sup>111</sup>.
- ❖ Sugunabai J, *et al.* (2014) investigated Antidiabetic efficiency of *Moringa oleifera* and *Solanum nigrum*<sup>112</sup>.
- ❖ Sai MD, *et al.* (2012) investigated Evaluation of antidiabetic and antihyperlipidemic potential of aqueous extract of *Moringa oleifera* in fructose fed insulin resistant and STZ induced diabetic Wistar rats<sup>113</sup>.
- ❖ Khan W, *et al.* (2017) investigated Hypoglycemic potential of aqueous extract of *Moringa oleifera* leaf and *in vivo* GC-MS metabolomics<sup>114</sup>.



- ❖ Jangir RN, and Jain GC., (2016) investigated Antidiabetic and antioxidant potential of hydroalcoholic extract of *Moringa oleifera* leaves in streptozotocin-induced diabetic rats<sup>115</sup>.
- ❖ Odedele LO, *et al.* (2017) investigated Effect of aqueous Moringa seed extract on oxidative stress in alloxan-induced gestational diabetic rats<sup>116</sup>.
- ❖ Al-Malki AL, *et al.* (2015) investigated the antidiabetic effect of low doses of *Moringa oleifera* Lam. seeds on streptozotocin induced diabetes and diabetic nephropathy in male rats<sup>117</sup>.

#### Antiuro lithiatic activity:

- ❖ Karadi RV, *et al.* (2006) investigated Effect of *Moringa oleifera* Lam. root-wood on ethylene glycol induced urolithiasis in rats<sup>118</sup>.
- ❖ Karadi RV, *et al.* (2008) investigated Antiuro lithiatic property of *Moringa oleifera* root bark<sup>119</sup>.

#### Antiallergic activity

- ❖ Hagiwara A, *et al.* (2016) investigated that aqueous leaves extract of *Moringa oleifera* is very effective as Anti-allergic action in mice<sup>120</sup>.

#### Conclusion

This review study revealed that *Moringa oleifera* plant possesses various pharmacological activities like gastroprotective, anti-ulcer, anti-urolithiatic, analgesic, anti-inflammatory, antipyretic,

anticancer, antioxidant, antidiarrheal, nootropic, local anesthetic, anti-allergic, hepatoprotective, cardiovascular, anti-obesity, antiepileptic, antiasthmatic, antidiabetic, diuretic, anthelmintic, wound healing, antimicrobial, and immunomodulatory. These activities are exerted by different phytochemicals present in various parts of this plant such as leaves, bark, root, fruit, & pods. *Moringa oleifera* also offers immense value, which can form the basis of drug supplementation, and should be used for the promotion of public health. It may also be considered for the treatment of different diseases as an alternative therapy.

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