European Journal of Research Development and Sustainability (EJRDS)
Available Online at: https://www.scholarzest.com
Vol. 7 No 05 May, 2026
ISSN: 2660-5570

HERBAL BIOLOGIC TREATMENT VARIETIES AND APPROACHES WITH THE SPECIFIC INCLINE OF BIOLOGICAL IMPACTS IN DEALING WITH THERAPEUTIC EFECTS OF PATIENTS WITH THE AQUIRED RESPONSES TOWARDS NUMEROUS NUMBER OF BREATH-RELATED OR RESPIRATORY DISEASES

Shirinova Inobat Anvarovna
Doctor of Sciences, Associate Professor, Gulistan State University,Faculty of Natural Sciences, Department of General Biology

Article history:
Received: 14th March 2026
Accepted: 11th April,2026

Abstract:
Biology as a science is interrelated with another sciences or disciplines, however this very article goes deeper and examines how the biological patterns can directly influence the medicinal issues, due to the fact biology deeply analyses natural possibilities to adjust to the matter of treatments, due to the facts related with the science to get to the correlation of the treatment possibilities of various patients by the biological ways i.e. through the herbal sources; which definitely bring a major devastatingly perfect effects on people's health and their well-being. Biology here stands as the main founder and exchanger and also a correlator, which can definitely cause positive changes in making people's health stronger.

Keywords: Essential, correlation, connection, biological roots, various patterns, definite results, treatment possibilities, natural sources, life expenditure, necessary elements, biological variabilities

The varieties of respiratory diseases are having a direct influence on the organs or tissues related with the air-breathing creatures. They are being incorporated into the steps of respiratory matters, including the types of windpipes, bronchi, bronchioles, alveoli, pleurae, pleural cavity, also the nerves and muscles of breath. Respiratory diseases range from gentle and self-restricting, like the normal cold, flu, and pharyngitis to dangerous illnesses like bacterial pneumonia, aspiratory embolism, tuberculosis, intense asthma, cellular breakdown in the lungs. The investigation of respiratory illness is known as pulmonology. The number of persistent respiratory disease (CRDs) are long going type of sicknesses of the aviation routes and different constructions of the lung. They are portrayed by a high incendiary cell enlistment (neutrophil) or potentially dangerous pattern of disease, (for example interceded by Pseudomonas aeruginosa). Probably the most widely recognized are asthma, ongoing obstructive aspiratory illness, and intense respiratory trouble disorder. CRDs are not reparable; nonetheless, different types of treatment that help expand significant air sections and improve windedness can help control indications and increment the personal satisfaction. Biological effects are undermined by the variabilities of the sensorics of the dynamics of the diseases to be properly inclined towards the medical establishments being as a specific science biology does represent its manifestations through the possibilities of treatments that are specifically done due to the richness of the variants of treatments applied in the biological settings in other words biological scientific approaches are seeking for the ways to eliminate unnecessaries or impossibilities of the adequate treatments and their possibilities. The lungs are the largest part of the respiratory system and have both "respiratory" and "non-respiratory" functions. The respiratory functionalities are determined by the innovative issues, which are beforehand seen as the most advantageous due to their application s through the herbal issues to find the possible ways of treatments specifically using the herbal procedures including the transfer of the exchanges through the direct transfers of oxygen from the air into the blood and the removal of carbon dioxide from the blood. it is also to note about the non-respiratory lung functions which are mechanical, biochemical, and physiological. The lungs provide a defense against bacterial, viral and other infectious agents; remove various metabolic waste products; control the flow of water, ions, and large proteins across its cellular structures; and manufacture a variety of essential hormones and chemical agents that have important biological roles. A number of respiratory diseases are possible to become actual as the diseases appear from a number of causes, including inhalation of toxic agents, accidents, and harmful lifestyles, such as smoking. Infections, genetic factors, and anything else that affects lung development, either directly or indirectly, can cause respiratory symptoms.

The possibilities of treatments in the medicine as the " knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, used in the maintenance of health and in the prevention, diagnosis, improvement or appropriate acquisition of the medical issues used the treatment of physical and mental illness. "There

are many different systems of traditional medicine, and the philosophy and practices of each are influenced by the prevailing conditions, environment, and geographic area within which it first evolve), however, a common philosophy is a holistic approach to life, equilibrium of the mind, body, and the environment, and an emphasis on health rather than on disease. Generally, the focus is on the overall condition of the individual, rather than on the particular ailment or disease from which the patient is suffering, and the use of herbs is a core part of all systems of traditional medicine, however the biological components of herbs are not studied properly enough yet, therefore these very effects which are caused by the removal of symptomatic diseases through biology are obviously as the most advantageous features. The most common reasons for using traditional medicine are that it is more affordable, more closely corresponds to the patient's ideology, allays concerns about the adverse effects of chemical (synthetic) medicines, satisfies a desire for more personalized health care, and allows greater public access to health information. Currently, herbs are applied to the treatment of chronic and acute conditions and various ailments and problems such as cardiovascular disease, prostate problems, depression, inflammation, and to boost the immune system, to name but a few.Herbs and plants can be processed and can be taken in different ways and forms, and they include the whole herb, teas, syrup, essential oils, ointments, salves, rubs, capsules, and tablets that contain a ground or powdered form of a raw herb or its dried extract. Plants and herbs extract vary in the solvent used for extraction, temperature, and extraction time, and include alcoholic extracts (tinctures), vinegars (acetic acid extracts), hot water extract (tisanes), long-term boiled extract, usually roots or bark (decoctions), and cold infusion of plants (macerates). There is no standardization, and components of an herbal extract or a product are likely to vary significantly between batches and producers.

Herbal medicines contain active ingredients. The active ingredients of many herbal preparations are as yet unknown. Some pharmaceutical medications are based on a single active ingredient derived from a plant source. Practitioners of herbal medicine believe that an active ingredient can lose its impact or become less safe if used in isolation from the rest of the plant.

For instance, salicylic acid is found in the plant meadowsweet and is used to make aspirin. Aspirin can cause the lining of the stomach to bleed, but meadowsweet naturally contains other compounds that prevent irritation from salicylic acid.

According to herbal medicine practitioners, the effect of the whole plant is greater than its parts. Critics argue that the nature of herbal medicine makes it difficult to give a measured dose of an active ingredient.

Herewith it is possible to observe how the biology is interrelated with the components of the appropriate treatments of diseases.

Herbal medicine aims to return the body to a state of natural balance so that it can heal itself. Different herbs act on different systems of the body.

Some herbs that are commonly used in herbal medicine, and their traditional uses, include:

Echinacea – to stimulate the immune system and aid the body in fighting infection. Used to treat ailments such as boils, fever and herpes.

Dong quai (dang gui) – used for gynaecological complaints such as premenstrual tension, menopause symptoms and period pain. Some studies indicate that dong quai can lower blood pressure.

Garlic – used to reduce the risk of heart disease by lowering levels of blood fats and cholesterol (a type of blood fat). The antibiotic and antiviral properties of garlic mean that it is also used to fight colds, sinusitis and other respiratory infections.

Ginger – many studies have shown ginger to be useful in treating nausea, including motion sickness and morning sickness.

Ginkgo biloba – commonly used to treat poor blood circulation and tinnitus (ringing in the ears).

Ginseng – generally used to treat fatigue, for example during recovery from illness. It is also used to reduce blood pressure and cholesterol levels, however overuse of ginseng has been associated with raised blood pressure.

The processes, related with the herbal features of the appropriate treatments lie in the range of the developed possibilities to treat diseases well, herbal remedies have been developed and used since the dawn of human civilization. Herbal medicines preponderantly deal with the medicinal application of a broad spectrum of plant regimes in order to provide cure effects and to be specific here it is to note the seeds of black cumin, which is exceedingly strong in dealing with the varieties of diseases. Regarding health management and disease prevention with wider varieties of algae, fungus, and lichen exudates, which have also been considered for herbal medicine. using traditional methods such as infusion, decoction, maceration, distillation, expression, fractionation, and purification. However, conventional channels are insufficiently successful to generate significant demand for industrial-scale manufacture of herbal medicines. Systems synthetic biology and metabolic engineering have proved important in boosting productivity and cutting costs in the production of herbal drugs in this area. Additionally, there are regulatory and bioethical problems for health management and illness prevention at the current state of the art that make it difficult to mass-produce herbal medications. Based on this current scenario, current chapter deals with general outline on herbal medicines; its impact on health management and disease prevention; impact of system synthetic biology and metabolic engineering to accelerate herbal medicine development; and brief outline on regulatory-bioethical aspects upon usage of herbal medicine for health management and disease control.

Therefore, Black cumin is possible to offer massive changes in person's health with very strong effects primarily causing the appropriate effects on the health benefits, being as an antioxidant, anti-inflammatory, and a great immune booster. It is used to manage blood sugar, reduce cholesterol, aid weight loss, and support exactly the respiratory health. The

key active compounds, especially thymoquinone, contribute to its medicinal properties, though, which should be used in moderation to avoid digestive issues. The Nigella Sativa (black cumin) plant has been used in various civilizations since ancient times and is believed to have positive effects on health. N. Sativa is an annual flowering plant that typically grows in Western Asia.

What is Black Cumin?

The Nigella Sativa (black cumin) plant has been used in various civilizations since ancient times and is believed to have positive effects on health. N. Sativa is an annual flowering plant that typically grows in Western Asia, the Mediterranean North Sea region, and western-southern Europe. Its flowers are white, pink, yellow, or lavender in color, and its fruits consist of capsules containing black seeds. The fixed oil content of black cummin seeds is approximately 28.36%, of which 12.5% is composed of linolenic, oleic, and palmitic acids, while the remaining fatty acids are various unsaturated fatty acids such as arachidonic and eicosadienoic acids. In contrast, the saturated fatty acids are myristic, stearic, and palmitic acids. It contains bioactive phytochemicals such as thymochinone, flavonoids, alkaloids, and tannins. The bioactivities of this compound include analgesic (pain-relieving) effects, anti-arthritic (anti-inflammatory) effects against joint inflammation (anti-arthritic) effect, antibacterial effect, anti-inflammatory effect, antifungal effect, anticancer effect, antioxidant effect by neutralizing free radicals that damage cells (antioxidant) effect, stomach-protective (gastroprotective) effect, liver-protective (hepatoprotective) effect, heart-protective (cardioprotective) effect, kidney-protective (nephroprotective) effect, and nerve-protective (neuroprotective) effect.

The primary phytochemical that makes black cumin valuable for medicinal use is thymoquinone. Research has shown that thymoquinone reduces inflammation and oxidative stress, supports the immune system, cell health, and energy metabolism.In the ancient times and is believed to have positive effects on health. N. Sativa is an annual flowering plant that typically grows in Western Asia, the Mediterranean North Sea region, and western-southern Europe. Its flowers are white, pink, yellow, or lavender in color, and its fruits consist of capsules containing black seeds.

The phytochemical composition of black cumin varies depending on the growing region, stage of maturity, processing methods, and isolation techniques, as is the case with many plants.

In general, it is rich in fiber, protein, and healthy fats. It also contains many minerals such as iron, zinc, and calcium, as well as B vitamins (N. Sativa per kg: 84 g fiber, 216 g protein, 249 g free nitrogen extract, 406 g fat, 15.4 mg thiamine, 18 mg copper, 57 mg niacin, 0.16 mg folic acid, 45 g ash, 38 g moisture, 60 mg zinc, 105 mg iron, 527 mg phosphorus, and 1860 mg calcium). Highly effective in providing the effects on the stomach-protective (gastroprotective) effect, liver-protective (hepatoprotective) effect, heart-protective (cardioprotective) effect, kidney-protective (nephroprotective) effect, and nerve-protective (neuroprotective) effect.

As it was mentioned beforehand the cumulative effects of these very components cause then real impact on the well-being of a person, therefore providing the influential health matters to the person, whereas a person would be very healthy The primary phytochemical that makes black cumin valuable for medicinal use is thymoquinone. Research has shown that thymoquinone reduces inflammation and oxidative stress, supports the immune system, cell health, and energy metabolism.

LIST OF USED/APPLIED REFERENCES

1. Carroll, S. (2023), Endless Forms Most Beautiful (an excellent introduction to the diversity of life and its genetic basis, from an eloquent writer on the subject)
2. Leroi, A. (2023), Mutants (an excellent introduction to genetics and the formation of the phenotype, illustrated with the extraordinary range of human mutations: it links together genes, cells and organismal form).
3. Darwin C. (1859), On the Origin of Species (needs no introduction! This is a long, dense read but of course a foundational text in the life sciences)
4. Holland, P. (2021), The Animal Kingdom: A very short introduction (this one is relatively close to the diversity of life strand of the first year course, or at least the zoological part of it, and provides an insightful yet accessible introduction to the diversity of animal life)
5. Dawkins, R. & Yang, W. (2023), The Ancestor's Tale: A Pilgrimage to the Dawn of Life (no Balliol Biology reading list is complete without a Dawkins. This one is a beautifully written journey through evolutionary history, from our own perspective as a species)
6. Coyne, J. (2021), Why Evolution is True, Oxford University Press (an authoritative account of the evolutionary process and its underlying evidential basis)
7. Davies, N. (2016), Cuckoo: Cheating by Nature, Bloomsbury (a lovely insight into animal behaviour)
8. Shubin, N. (2008) Your Inner Fish, London: Penguin (this explores the evolutionary ancestry of vertebrates from an author who has combined expertise in palaeontology, genetics and embryo development)
9. Lane, N. (2002) Oxygen: The Molecule that Made the World, Oxford University Press (combines biochemistry, cell biology, physiology and evolution)
10. Gottesmann C. GABA mechanisms and sleep. Neuroscience. 2002;111(2):231-. [PubMed]
11. Murillo-Rodríguez E, Arias-Carrión O, Sanguino-Rodríguez K, González-Arias M, Haro R. Mechanisms of sleep-wake cycle modulation.
12. Watson CJ, Baghdoyan HA, Lydic R. Neuropharmacology of Sleep and Wakefulness. Sleep Med Clin. 2023 Dec;5(4):513-528.
13. Achebe, Chinua, Arrow of God or Things Fall Apart (English)

14. Adichie, Chimamanda Ngozi, Half of a Yellow Sun, Americans (English)
15. Aitmatov, Chingiz, The Day Lasts More Than A Hundred Years, Jamila, and The Place of the Skull (Russian)
16. Ashbourn, J. (2014) Biometrics in the new world: the cloud, mobile technology and pervasive identity. 2nd edn. Springer.
17. Environment Agency (2020) The flood and coastal erosion risk management strategy action plan 2021. Environment Agency.
18. Mintel (2024) Sports and energy drinks - UK. Available at: http://www.academic.mintel.com (Accessed: 5th July 2025).
19. Nasta, S. and Stein, M.U. (ed.) (2020) The Cambridge history of Black and Asian British writing. Cambridge University Press.