3.2.1 Number of papers published per teacher in the Journals notified on UGC website during the year.

Session: 2023-2024

Sr. No.	Title of Paper	Name of Journal	ISSN Number	Indexing	Page No.
1	Forkhead box o (foxo) signaling in nsclc: Pathways to targeted therapies	EXCLI Journal	1611-2156	WOS/ Scopus	1
2	Post covid-19 Mucormycosis (black fungus): a cases report	Research Journal of Pharmacy and Technology	0974-3618	Scopus	2
3	Evaluation of anti-diabetic and anti-hyperlipidemic activity of prunusdulcis seed extract in streptozotocin induced diabetic rat	Pakistan Heart Journal	2227-9199	Scopus	3
4	Emerging trends of artificial intelligence in drug development	European Chemical Bulletin	2063-5346	Scopus	4

Letter to the editor:

FORKHEAD BOX O (FOXO) SIGNALING IN NSCLC: PATHWAYS TO TARGETED THERAPIES

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Cellular signaling pathways form a complex network crucial for the pathogenesis of most types of cancer, including lung cancer, which remains one of the most death-causing neoplasms worldwide. The Forkhead Box O signaling pathway has received considerable investigation due to its role in cell cycle regulation, apoptosis, DNA repair, and the response to oxidative stress (Abdelfatah et al., 2019; Al-Tamari et al., 2018). Recent investigations have proven the critical functions of FOXO proteins, particularly FOXO1 and FOXO3a, in lung carcinogenesis, opening prospects for using one of its components as a target for developing antitumor approaches. Cisplatin is the most commonly applied first-line chemotherapeutic agent for treating non-small-cell lung cancer (Chen et al., 2022). The drug has been shown to interact with the FOXO signaling pathway, which induces cancer cell death by apoptosis. The authors showed that cisplatin treatment induced the expression and nuclear translocation of FOXO1 and FOXO3a in NSCLC cells, making them susceptible to cisplatin-mediated apoptosis. Inhibition of FOXO1 and FOXO3a considerably decreased the susceptibility of those cells to the antineoplasm, both *in vitro* and *in vivo*, demonstrating the central function of these FOXOs in cisplatin cytotoxic action. This discovery indicates that targeting FOXO1 and FOXO3a might improve the efficacy of cisplatin-based NSCLC therapy (Gupta et al., 2017).

In addition, β-Elemene, a chemical with an anti-cancer effect, exhibited inhibitory lung cancer cell growth activity through regulation of the FOXO3a signaling pathway. It reduces Stat3 phosphorylation and miRNA155-5p mRNA and increases FOXO3a and IGFBP1

RESEARCH ARTICLE

Post Covid-19 Mucormycosis (Black fungus): A Cases Report

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ABSTRACT:
Objectives: COVID-19 (Coronavirus Disease 2019) infections have been related to a variety of fungal and bacterial co-infections. This case report includes the case of a COVID-19-infected patient who acquired rhino-orbital mucormycosis after undergoing COVID-19 treatment. We have discussed a COVID-19-infected patient who developed rhino-orbital mucormycosis during treatment in this case report[8]. **Case Report:** A 32-year-old female patient was admitted for treatment after testing positive for SARS-CoV-2 by reverse transcriptase polymerase chain reaction (RT-PCR). She was later diagnosed with rhino-orbital mucormycosis. She received dexamethasone i.v BD and on Oxygen over the course of the admission; she developed symptoms of orbital cellulitis after few days. Soft tissue edoema was found in the left eye and paranasal sinuses on magnetic resonance imaging (MRI). A nasal biopsy revealed broad aseptate filamentous fungal hyphae, which led to the diagnosis of mucormycosis. **Conclusions:** The use of steroids and oxygen therapy often may result in the development or worsening of a fungal infection. Doctors should be concerned about the possibility of secondary invasive fungal infections in patients who already have COVID-19 infection.

KEYWORDS: Covid-19 (Coronavirus Disease 2019), Oxygen therapy, Fungal infection, Mucormycosis, Black fungus.

INTRODUCTION:
The novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) viruses cause the coronavirus disease 2019 (COVID-19), It has been associated with a wide range of illnesses, from minor to life-threatening pneumonia[1,2]. Mucormycosis is an uncommon opportunistic fungal infection that is frequently linked to severe immunological dysfunction[3].

A number of bacterial and fungal co-infections, such as ventilator-related pneumonia, can be associated to pre-existing comorbidity or develops as a hospital-acquired infection[4,5]. Mucormycosis is the third most frequent invasive fungal infection, having an impact with immunosuppression, corticosteroid treatment, or metabolic derangement such as diabetes and higher amounts of accessible serum iron due to acidosis or desferoxamine use[6]. The fungus comes into contact with humans through a variety of channels which include rhino-orbital-cerebral, cutaneous, pulmonary, gastrointestinal, and disseminated forms. Among all mucormycosis instances, rhino-orbital-cerebral mucormycosis is quite rare[7]. We have discussed a COVID 19-infected patient who developed rhino-orbital mucormycosis during treatment in this case report[8].

EVALUATION OF ANTI-DIABETIC AND ANTI-HYPERLIPIDEMIC ACTIVITY OF PRUNUSDULCIS SEED EXTRACT IN STREPTOZOTOCIN INDUCED DIABETIC RAT

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ABSTRACT

Amygdaline is naturally occurring chemical compound, it also known as laetrile or vitamin B17 Best known for being falsely promoted as a cancer cure. Amygdaline is a bitter substance and most found in the seed of apples, apricots, peaches, bitter almond and plums. In Indian cultural system of medicine the herbal remedies are prescribed for the treatment of various diseases including diabetes mellitus. In recent year plant are being effectively tried in a variety of pathophysiological state, Bitter Almond is one of them. PDWA extract is prepared by sox halation extraction process with 50% of ethanol and characterized by High Performance Thin Layer Chromatography and Infra Red Spectroscopy. Non insulin dependent diabetes mellitus was induced in Wistar albino rats by intraperitoneal administration of streptozotocin (60mg/kg). At the end of experiment period of 21 days reduction in the fasting blood glucose level, serum insulin, serum lipid parameter and renal function biomarker were estimated in the controlled and treated rats. Histopathological examination of liver, kidney, and pancreas were also carried out.PDWA extract were given (250mg/kg and 500mg/kg) orally for the duration of 21 days as per protocol of treatment. Blood glucose level and various biochemical parameters were measured by glucometer and respective diagnostic kit. Such as cholesterol, triglyceride, LDL, HDL, VLDL and antioxidant parameter by using diagnostic kitsOn administration of PDWA seed extract, studied blood glucose level of animal showed a significant decrease (P<0.001) in elevated blood glucose level along with biochemical parameter it shows significant to antihyperlipidemic activity and Antioxidant effects. The result showed promising effect of PDWA seed extract treatment as compared to treatment with the standard drug Metformin for Antidiabetic.

Keywords: Antidiabetic, Antihyperlipidemic, Antioxidant, Amygdaline, PDWA.

1. INTRODUCTION

The term diabetes mellitus is impairment to structural and functional proteins due to which it fails to maintain blood glucose homoeostasis .Many research work and evidence state that oxidative stress play a pivotal role as carrier of Diabetes mellitus and its related complications, also it effective for both insulin action and insulin secretion[1]. After cardiovascular and cancer the diabetes is third most life threaten disorder to mankind. Therefore it's necessary to go through various dependent complications in patient with type 2 diabetes.

Nowadays in the field of herbal treatment and nutraceuticals plants play a very effective role for treatment of hyperglycemic activity till now about 800 plants are found to be helpful in diabetes mellitus[2]. Among this Bitter Almond is found to be miraculous to hyperglycemic activity and may possess potential to antidiabetic the presence of Amygdaline or vitamin B17 as a main constituent is a reason for supporting this plant as boom for antidiabetic activity. Bitter almond contains cynogenic glycoside.[3], [4] There are many fruit which contain cynogenic glycoside and on chewing, digestion there is release of hydrogen cyanide[5].

In some families of plant mostly cynogenic glycoside are found, such as Rosaceae, fabaceae, leguminosae, linaceac, and compositae and also it is mostly useful tool for informative taxonomic markers. There are about 25 known cynogenic glycoside which are mainly found in various edible part of plant such as Almond, plums, cherries, bamboo shoot, chick peas, cashew, cassava etc. Amygdaline is naturally occurrence chemical compound. Mainly it present in plant such as bitter almond, apricot, plum, peaches, black cherry and Nanking cherry[6], [7].

It classified as cynogenic glycoside. It include nitrile group by the action of a beta glycosidase it can release pestilential cyanide anion[8]. Amygdalus plant belonging to family Roseaceae. It contain flavonoids, phenols, antioxidant properties, glycosides and many more phytochemical, vitamins, minerals, unsaturated fatty acid, fiber which help to reduce the risk of chronic disease[9], [10]. A study by much researcher state that it is milestone helpful in many disease and disorder.It posesas memory enhancer and promotes change in dementia, provide antioxidant properties to reduce oxidative stress and elevating free radical formation[11], [12], antiatherogenic inhibition of renal

EMERGING TRENDS OF ARTIFICIAL INTELLIGENCE IN DRUG DEVELOPMENT

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Abstract

Drug discovery is an extended and challenging procedure with four primary stages: (i) target selection and validation; (ii) compound screening and lead optimization; (iii) preclinical research; and (iv) clinical trials. The combination of artificial intelligence (AI) with new experimental technologies is intended to improve the search for novel drugs faster, cheaper, and more effective. AI is the term used to describe the intelligence produced by human-made machines. It is a broad field of study that encompasses languages, cybernetics, neuro-physiology, psychology, and computer science. The drug development company is attracted to Artificial Intelligence technologies because of their robotic nature, predictive powers, and the resulting anticipated gain in productivity. Using feature-finding strategies, unsupervised machine learning can provide outcomes such as disease target and illness subtype detection. A new AI diagnostic tool is aware of when to consult a doctor. The ability of a new artificial intelligence diagnostic system to acknowledge its own limitations and seeks the aid of a carbon-based lifeform that may be able to make a more accurate judgment. The pharmaceutical and medical industries are anticipated to undergo a revolution due to artificial intelligence, according to a forecast rise of 40 percent from 2017 to 2024.Global pharmaceutical industry is working with artificial intelligence organization to build not only vital healthcare tools and drug molecules for rare disease but also for market research.

Keywords: Artificial intelligence, unsupervised machine, diagnostic tool, medical industries, rare disease

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