



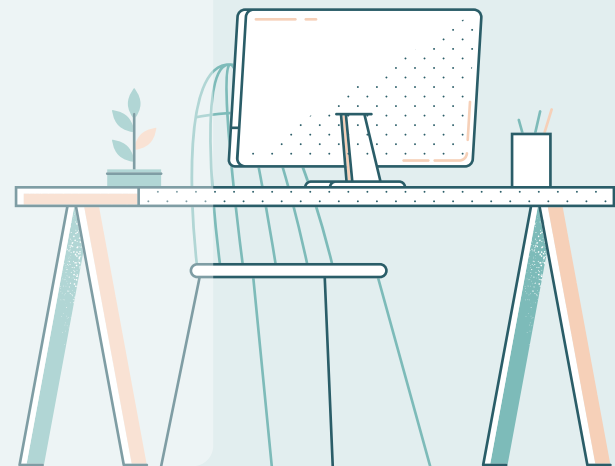
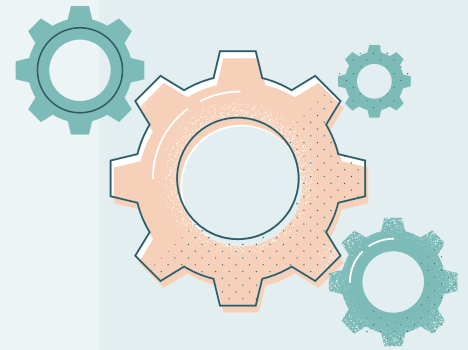
مركز الابتكار والريادة
Innovation and Entrepreneurship Center



University of Jordan Innovation and Entrepreneurship Center



UJIEC TECH BRIEFS



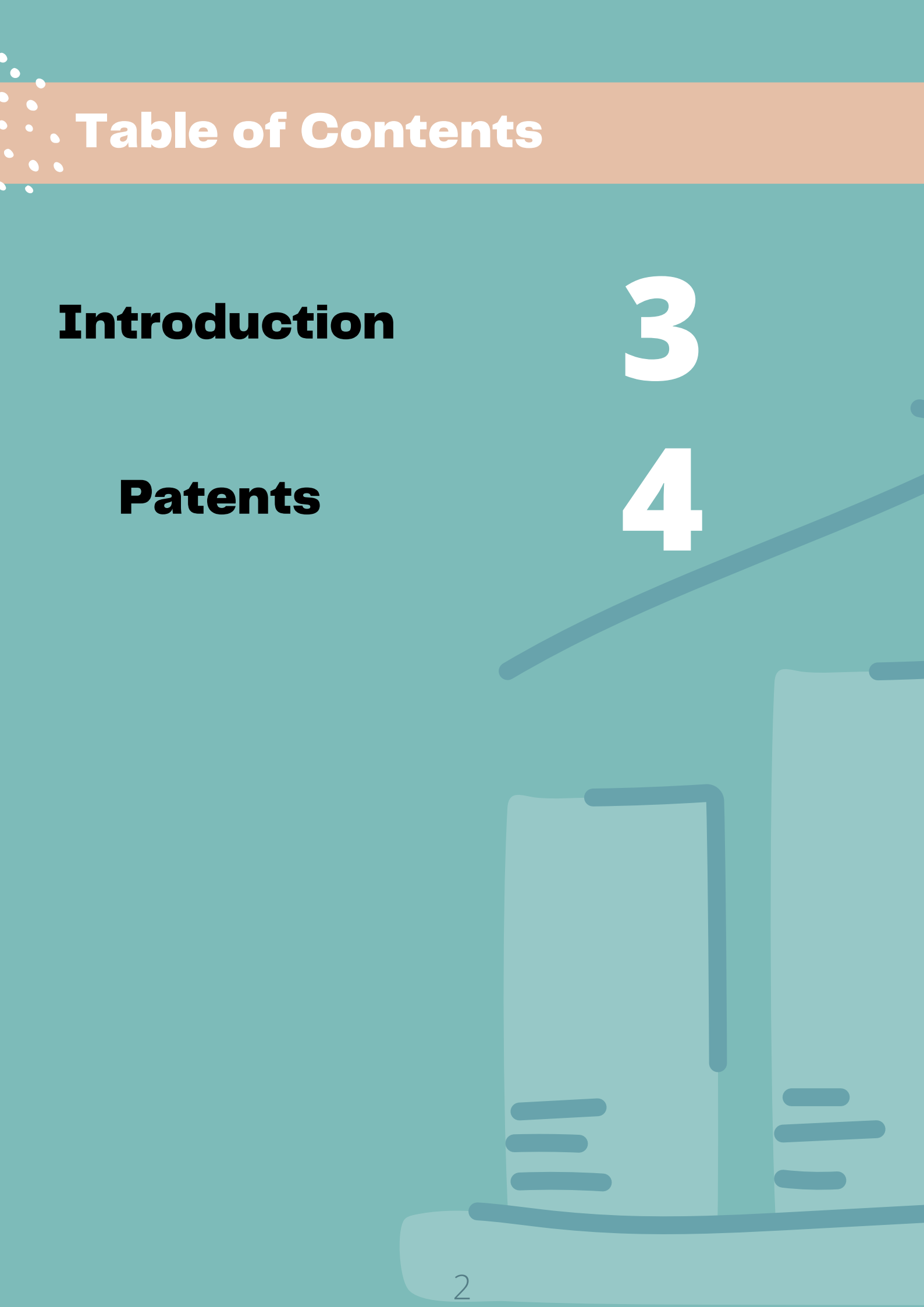


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Introduction

The University of Jordan Innovation and Entrepreneurship Center (UJIEC) aims to achieve an innovative and entrepreneurial university capable of contributing to a sustainable economic development.

The UJIEC aspires to support the entrepreneurs and innovators across the kingdom by providing them with the following services:

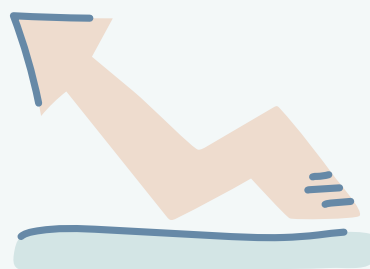
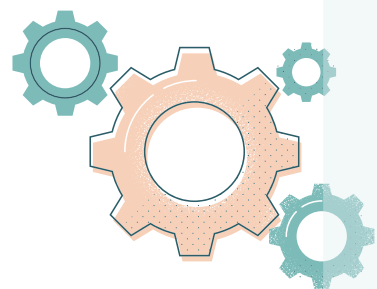
- Preincubation services
- Startup funding
- Mentorship services
- Entrepreneurship Training and education
- Patent registration support services
- Networking Events

This portfolio introduces the patents published by the University of Jordan through the UJIEC, with a brief description for each.

A PHARMACEUTICAL COMPOSITION OF SUBSTITUTED QUINOLONE DERIVATIVES FOR TREATING CANCER

The present invention relates to the use of certain substituted quinolone derivatives with dual anti-inflammatory and anti-proliferative properties for the treatment of different types of cancer cells.

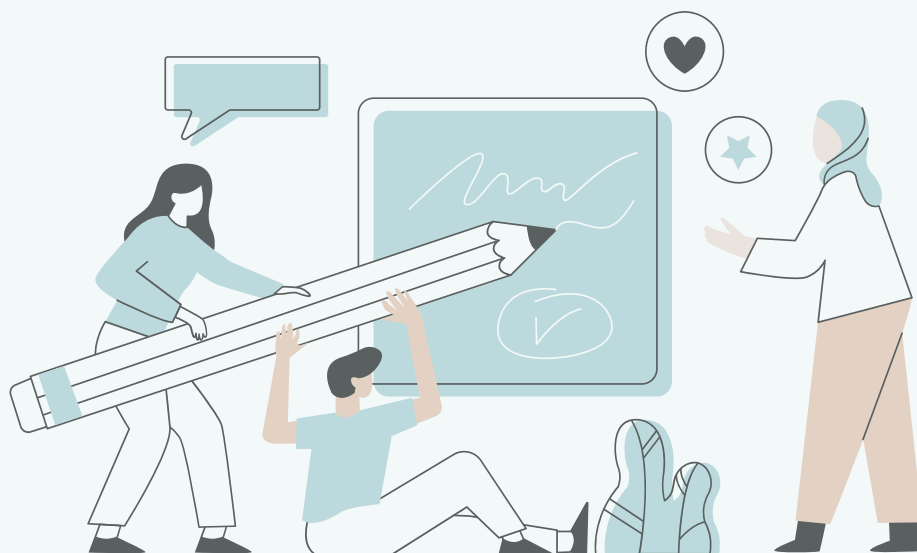
PCT filing number: PCT/JO2022/050004



NOVEL SUBSTITUTED QUINOLONE DERIVATIVES, METHODS OF PREPARATION THEREOF, AND THEIR USE FOR TREATING MICROBIAL INFECTIONS

Novel substituted quinolone derivatives were synthesized and evaluated in vitro against Gram positive bacteria, Gram negative bacteria.

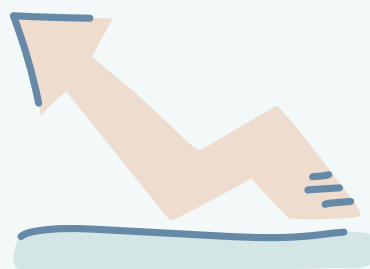
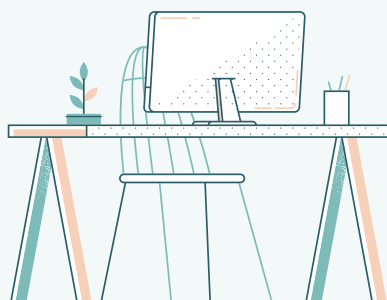
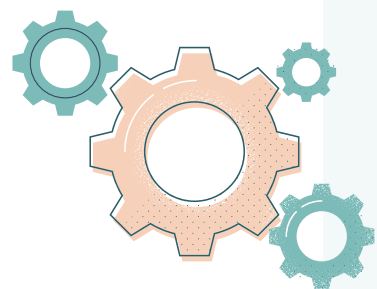
PCT filing number: PCT/JO2020/050006



A PHARMACEUTICAL COMPOSITION, AND THE USE THEREOF FOR THE TREATMENT OF CANCER

A pharmaceutical composition for the treatment of cancer. The pharmaceutical composition demonstrated superior activity against breast cancer cells and acted as a safer, and more effective alternative than the clinically used drug.

PCT filing number: PCT/JO2022/050001



1,8-NAPHTHYRIDINE GLUCOSAMINE DERIVATIVES, THEIR USE IN THE TREATMENT OF MICROBIAL INFECTIONS, AND A METHOD FOR PREPARATION

Novel 1,8-Naphthyridine glucosamine derivatives were synthesized and evaluated in vitro against Gram positive bacteria, Gram negative bacteria and fungi. The developed antimicrobial agents showed enhanced bacterial uptake and improved cytotoxic profile in comparison to the parent drug.

JO filing number: JO2018/000097

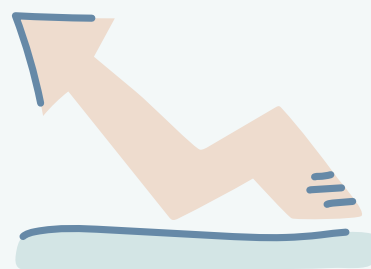
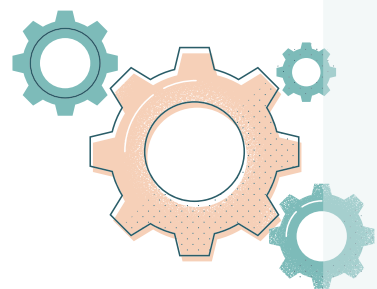
PCT filing number: PCT/JO2019/050010



HEALING HAND

A tool that is used to deliver topical medication to the required area by utilizing the natural process of scratching where the scratching process is converted into a targeted therapy to the affected area without any risk of infection. The developed tool is particularly beneficial to eczema patients and children/adults which suffer from unconscious scratching.

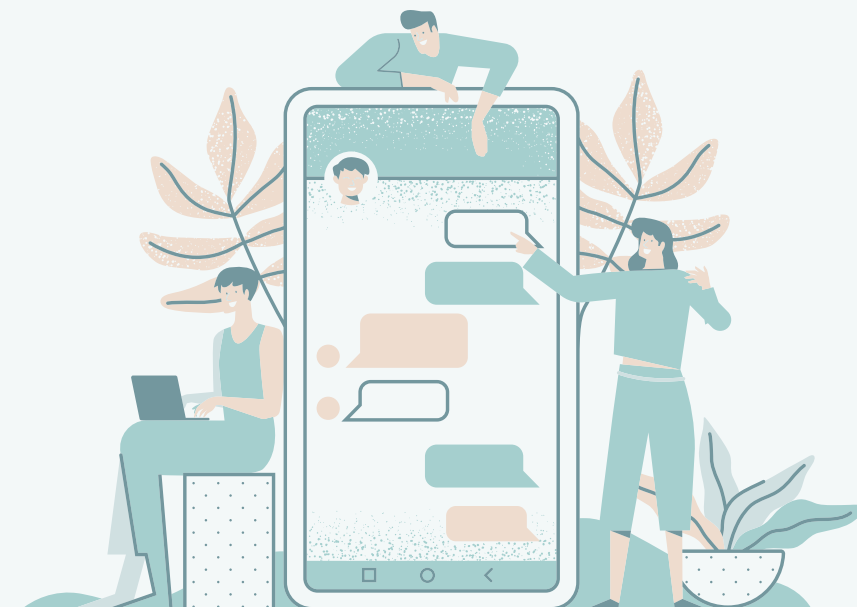
PCT filing number: PCT/JO2017/050001



ELLIPTICAL ANTI-ROTATIONAL DENTAL IMPLANT FIXTURE

Researchers have successfully developed an innovative implant design fixture that is characterized by an elliptical shape. The proposed design demonstrated lower mechanical stresses compared to the technology available in the market, improved stability, and faster osteointegration.

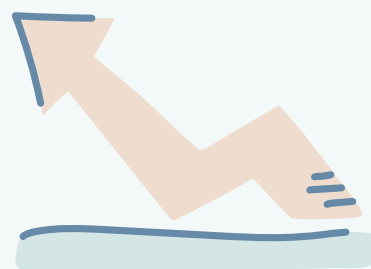
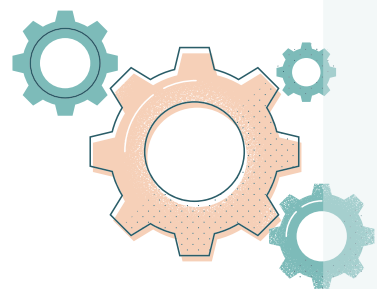
Publication Number: JOP/2011/0290



PIPE HOLDING AND TURNING DEVICE

A self-locking, grasping device that is used to hold and rotate pipes in order to facilitate minor processing of the external surface of pipes. This type of technology can be implemented for petroleum piping systems, water piping systems, painting, etc.

JO filing number: JOP/2011/0291

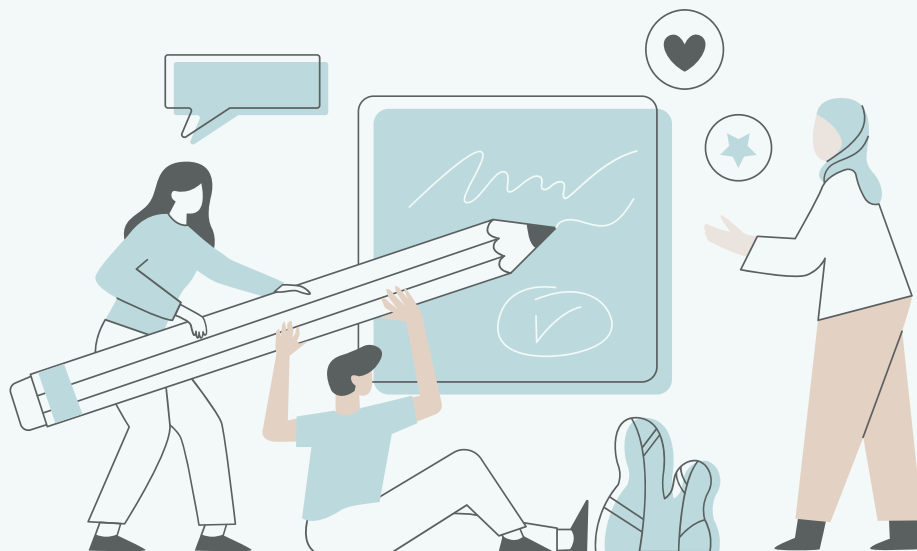


LOW-PROTEIN FLOUR MIX COMPOSITION

A low-protein flour mix composition is formulated by different processes to prepare bread and various sorts of confectionary for people with metabolic imbalances of amino acids.

**International Application Number
PCT/JO2019/050009**

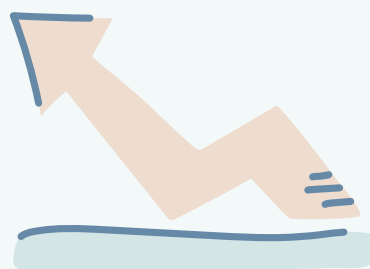
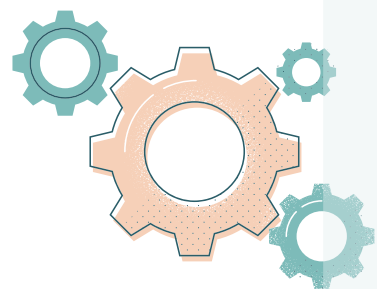
**International Publication Number
WO/2019/211884**



METRONIDAZOLE DERIVATIVES AS ANTIPARASITIC AGENTS

The present invention relates to the preparation of certain metronidazole derivatives and their use as effective anti-parasitic and antibacterial agents.

Publication Number: EP2085394



TRACTOR – DRIVEN INTERMITTENT FURROW OPENER FOR WATER HARVESTING SYSTEMS (JERKING PLOW)

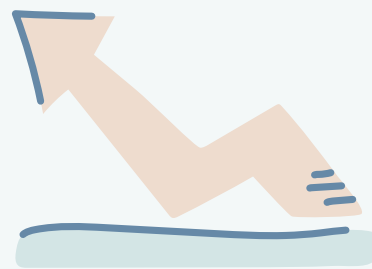
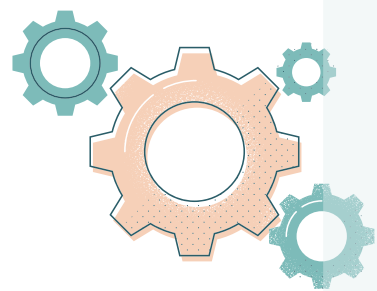
A tractor-driven intermittent furrow opener that can open, on each run, half-moon-shape pits of different lengths (adjustable) is developed to harvest lost runoff water and utilize the harvested water for revegetation and combating desertification in arid regions. This plowing machine with its simple design and low fabrication cost can replace the costly tedious manual work, the combination of manual and mechanized work using traditional plows, or the use of complicated high-cost high-power pitting machines.

Publication Number: JOP20090083

ENFORCING RESOURCE SHARING IN PEER-TO-PEER SYSTEMS BY MEANS OF RANDOM AUDITS

A system to enforce sharing of resources in distributed Peer-to-Peer (P2P) systems by quickly and accurately identifying free-riding peers (i.e., those peers who do not share resources with the other peers in the P2P system). The method of the invention is applicable for controlling various types of P2P systems including, but not limited to, P2P file sharing networks.

Publication Number: JOP20120029



A PROCESS FOR PRODUCTION OF PURE PHASE ZEOLITE ZSM-5 FROM RAW KAOLINITE

A process for the production of pure phase zeolite ZSM-5 which utilizes high silica raw kaolinite as a source of silicon and aluminum. The process allows the high yield production of pure phase zeolite ZSM-5 with variable SiO_2 -to- Al_2O_3 ratios.

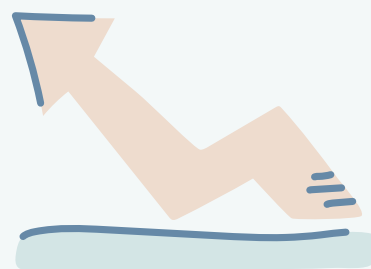
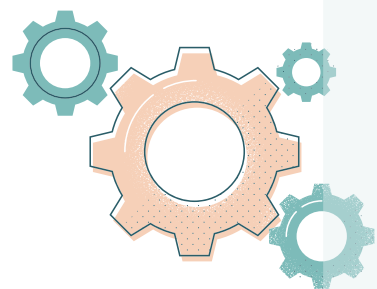
Publication Number: JOP/2017/0177



A PROCESS FOR PRODUCTION OF PURE ZEOLITE 4A FROM RAW KAOLINITE

A process for the production of pure zeolite 4A crystals which utilizes raw kaolinite as a source of silicon and aluminum

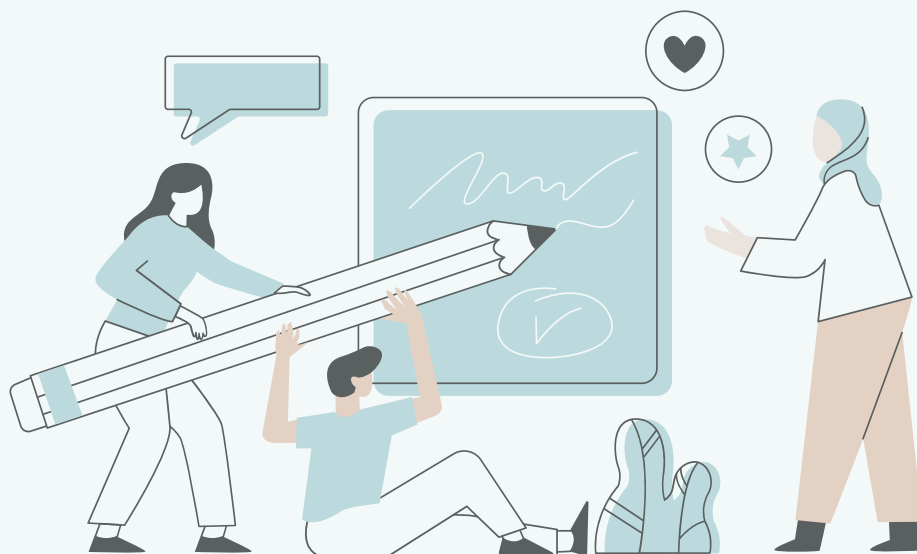
Publication Number: JOP/2009/0111



SAFETY SYSTEM FOR DETECTION AND ELIMINATION OF TOXIC GASES

A high efficiency safety system that can be implemented for detecting the presence and concentration of toxic gases within a predefined target space for a healthy, safe, and risk-free environment.

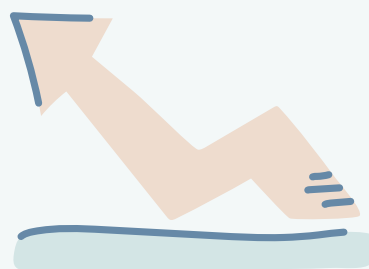
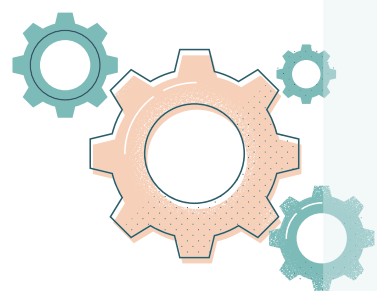
Publication Number: US20130281004



TETRACYCLIC FLUOROQUINOLONES: PART 1. NOVEL 4-OXOPYRIDO [2,3-A] CARBAZOLE-3 CARBOXYLIC ACID DERIVATIVES AS ANTIBACTERIAL AND ANTITUMOR AGENTS

A series of novel tetracyclic fluoroquinolones derivatives, particularly 4-oxopyrido[2,3-a] carbazole-3 carboxylic acid derivatives, were synthesized for potential use as anticancer and antibacterial chemotherapeutics.

Publication Number: JOP20100260



U-SHAPED LINKS

A U-shaped link that can be fixed on alternating walls of the concrete filled steel tube in order to form uniform squeezing mechanism all along the length of the steel tube member in both orthogonal directions of the cross section.

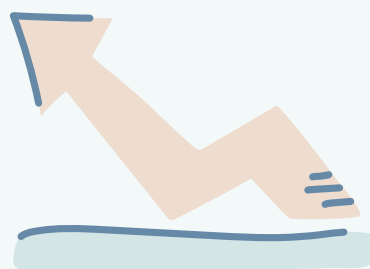
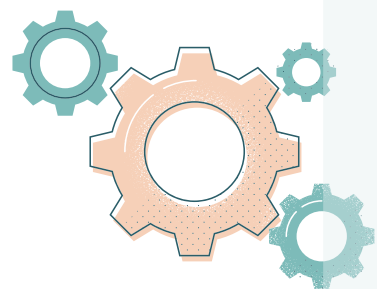
Publication Number: JOP20050144



PYRIDO [2,3-f] QUINOXALINES-8-CARBOXYLIC ACID DERIVATIVES AND THEIR ISOMERIC PYRIDO [2,3-g] QUINOXALINES. A PROCESS FOR THEIR PREPARATION AND THEIR USE AS POTENTIAL ANTIBACTERIAL COMPOUNDS.

A process for the synthesis of pyrido[2,3-f] quinoxalines-8-carboxylic acid derivatives and their isomeric pyrido [2,3-g] quinoxalines which can potentially be administered as antibacterial drugs.

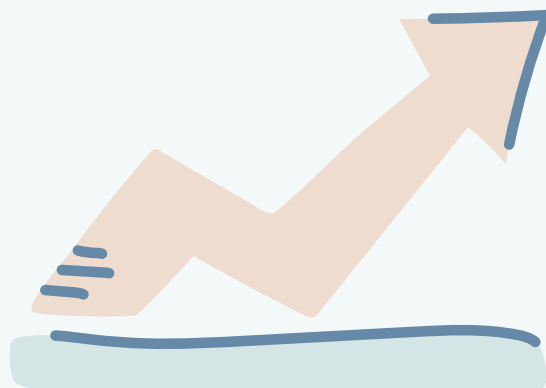
Publication Number(s): JOP20050060; EP1721898



REGENERATIVE VEHICLE SUSPENSION SYSTEM

A regenerative vehicle suspension system that may be used as semi-active suspension system which harnesses vibrational energy by recovering some of lost energy in the suspension system and/or utilizing the reactive suspension system to create passengers' riding comfort.

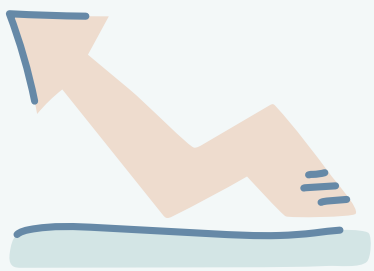
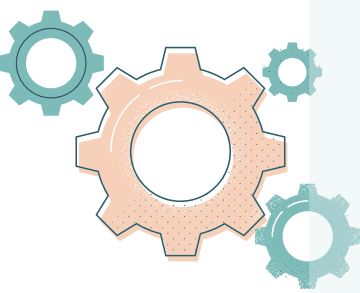
International	Application	Number
PCT/JO2020/050002		
International	Publication	Number
WO/2021/166007		



GLYCOSYLATED 3-SUBSTITUTED FLUOROQUINOLONE DERIVATIVES, PREPARATION METHODS THEREOF, AND THEIR USE IN THE TREATMENT OF ANTIMICROBIAL INFECTIONS

A novel method of preparation of a series of 3-substituted fluoroquinolone derivatives, and more particularly to glycosylated 3-substituted fluoroquinolone derivatives, for treatment of microbial infections.

International	Application	Number
PCT/JO2019/050011		
International	Publication	Number
WO/2020/202239		



METHOD AND APPARATUS FOR ENERGY EFFICIENT MEDIUM ACCESS CONTROL IN A WIRELESS BROADBAND SYSTEM

A method for the development of an apparatus which aims to efficiently save energy in a wireless downlink channel.

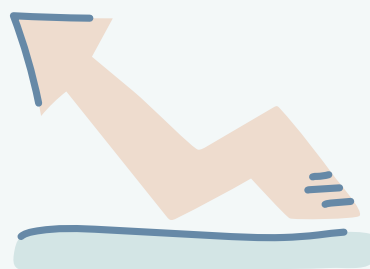
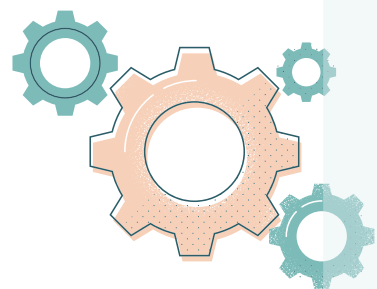
Publication Number: JOP/2013/0146



QUINOLINE AND PYRIDOQUINOXALINE DERIVATIVES USEFUL AS ANTICANCER AND/OR ANTIBACTERIAL DRUGS

A series of novel pyrido [2,3 -f] quinoxaline-2-carboxylic acid derivatives and isomeric pyrido[3,2-g] quinoxaline carboxylic acid derivatives were prepared for potential use as anticancer and antibacterial agents.

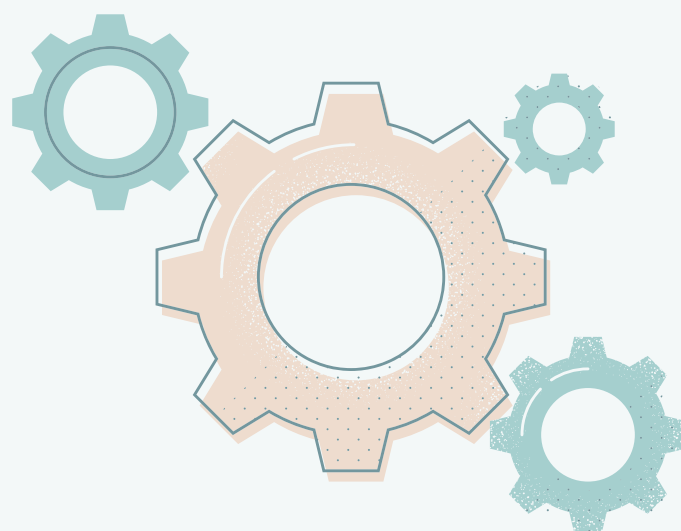
Publication Number: GB2442951



A VEHICLE CHARGING STATION

An off-grid vehicle charging station system is configured to aid with the charging of electric vehicles in remote areas.

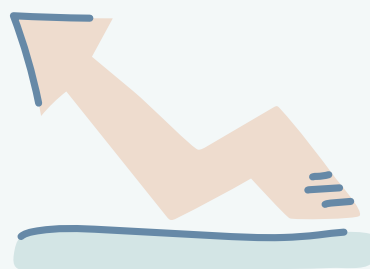
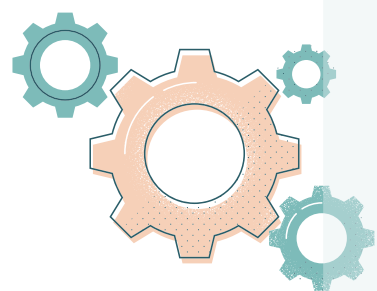
**International Application Number:
PCT/JO2021/050009**



OPHTHALMIC NANO-DISPERSION COMPOSITION, A METHOD OF PREPARATION THEREOF, AND FORMULATION FOR CORNEAL EPITHELIAL WOUND HEALING

An ophthalmic pharmaceutical preparation is developed in the form of a solid-in-oil nano-dispersion in order to enhance and speed up the healing process of corneal epithelial wounds.

**International Application Number
PCT/JO2021/050007**



CONCRETE COMPOSITION AND A METHOD OF PREPARATION THEREOF

A method for the production of ultrahigh strength concrete by preparation of a novel concrete composition.

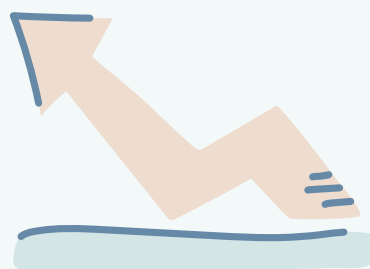
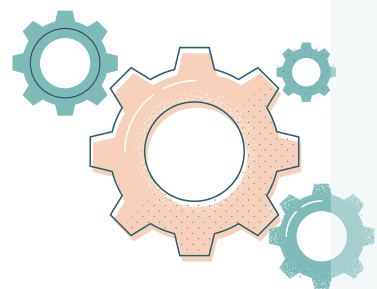
International Application Number
PCT/JO2021/050014



DENTAL PLURIPOTENT STEM CELLS

The present disclosure provides a method for isolating, sorting, and expanding dental pluripotent stem cells.

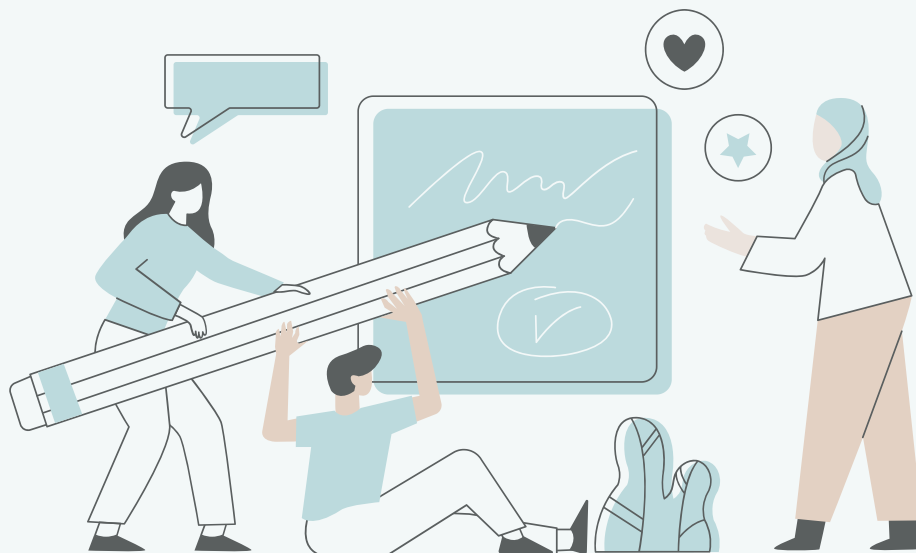
**International Application Number
PCT/JP2021/050015**



THE USE OF IONIC LIQUIDS FOR STABILIZING INSULIN

A pharmaceutical preparation for chemical stabilization of insulin at room temperature by dissolving it in ionic liquids with acceptable biological and pharmacological properties. An advantage of the developed method lies in its ability to increase and facilitate the chemical stability of insulin at room temperature for at least one year.

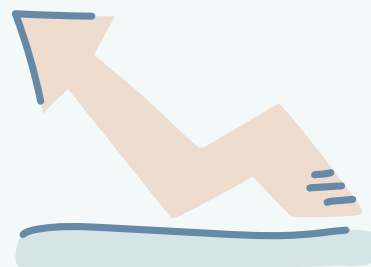
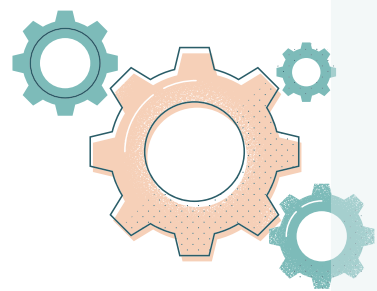
Publication Number: JOP/2014/0166



LIGHT-ASSISTED PATH PLANNING

A method for planning paths which can help in finding a point-to-point path in map assisted driving and controlling movements of autonomous vehicles and virtual characters in computer games. The developed method is capable of planning paths much more efficiently compared to conventional path planning methods, especially in the presence of obstacles in the map.

Publication Number: JOP/2009/0477



APTAMERS AS JAK2 KINASE INHIBITORS

This invention discloses selection of nucleic acid ligands (APTAMERS) which are capable of binding with Janus Kinase 2 (JAK2) enzyme and blocking its kinase activity via inhibition.

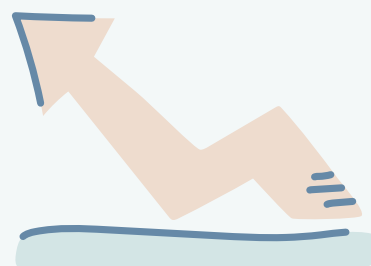
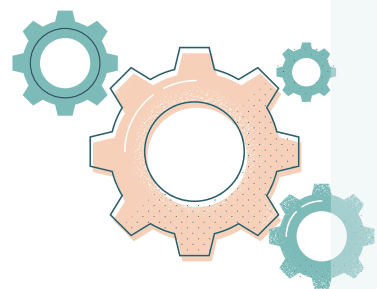
Publication Number: JOP/2008/0505



SILICON NANOPARTICLE FORMATION BY ELECTRODEPOSITION FROM SILICATE

A method for the formation of silicon nanoparticles, in sizes that fluoresce, by electrodeposition of silicon material onto a non- reactive metal surface from silicate.

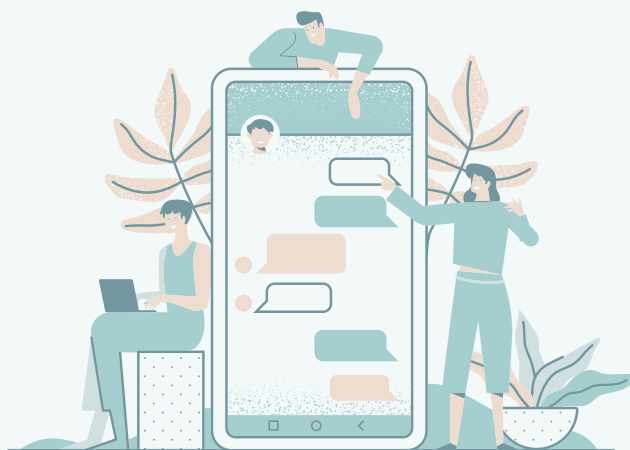
Publication Number: WO2007100314



GUNDELIA TOURNIFORTII L.A NATIVE JORDANIAN EDIBLE PLANT TO CONTROL NEMATODES

A composition involving Gundelia Tournifortii L.A edible plant alone or in combination with other environmentally safe control measures for the control of root knot nematodes in order to minimize the use of hazardous chemicals which could eventually reflect positively on human health, environment, and aid with exporting a produce that meets global standards.

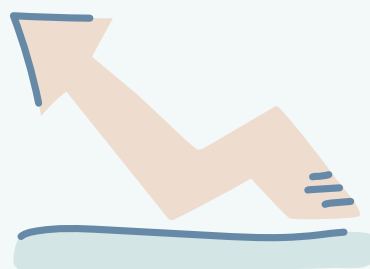
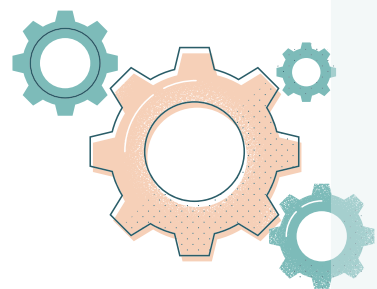
Publication Number: JOP20050082



USE OF PHENOBARBITAL FOR THE TREATMENT OF WOUNDS

A method for preparation of a novel phenobarbital formulation for the topical treatment of wounds.

Publication Number: JOP20090434



HEXACHLOROPLATINIC ACID ASSISTED SILICON NANOPARTICLE FORMATION METHOD

A method for formation of substantial quantities of silicon nanoparticles, which are readily recoverable for subsequent uses.

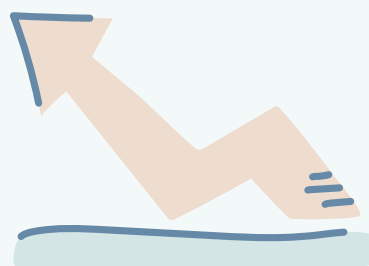
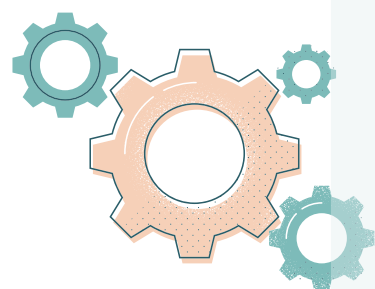
Publication Number: WO/2007/018959



FUSED HETEROCYCLIC-PYRIDO[2,3-f] QUINOXALINE-2-CARBOXYLIC ACID DERIVATIVES AND THEIR PYRIDO[3,2-g] ANALOGS, A PROCESS FOR THEIR PREPARATION AND THEIR POTENTIAL USES AS ANTICANCER AND ANTIBACTERIAL AGENTS.

A series of novel fused heterocyclic-pyrido [2,3- f] quinoxaline-2-carboxylic acid derivatives and their pyrido[3.2-g] analogs were prepared for potential use as anticancer and antibacterial agents.

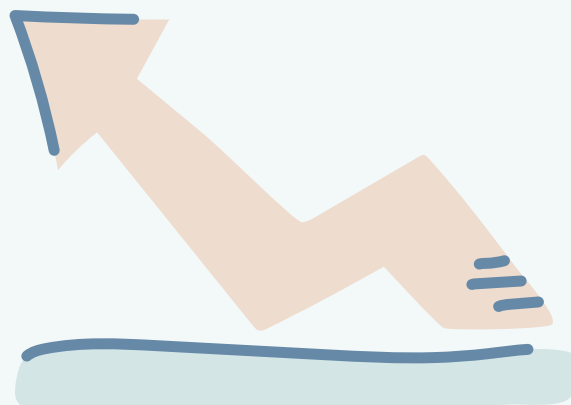
Publication Number: JOP/2005/0047



METHOD FOR PRODUCING GEOPOLYMERIC MATERIALS

A high-performance method for the production of geopolymeric materials with different levels of improvements in the mechanical, dimensional and chemical properties of the end products.

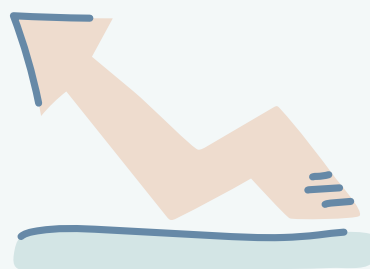
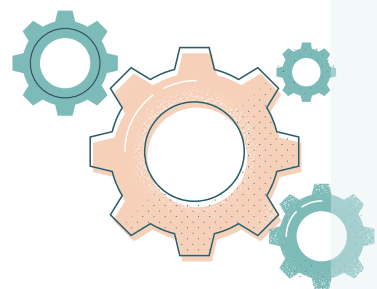
Publication Number: JOP20090373



SOLAR BATH-LIKE SYSTEM FOR PHOTOCATALYTIC DEGRADATION OF ORGANIC POLLUTANTS

A solar bath-like system which allows the reduction and high degradation of organic pollutants within a short period of time. This system can be utilized for photocatalytic treatment of wastewater, particularly that of individual small factories.

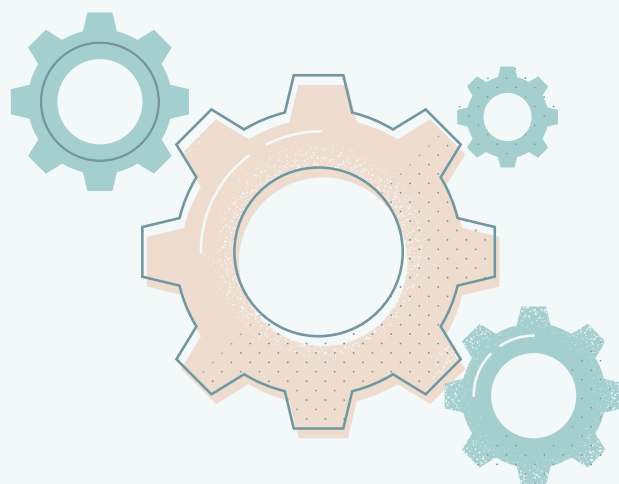
Publication Number: JOP/2009/0206



THERMAL OLIVE CAKE FERTILIZER

A new organic fertilizer, thermal olive cake fertilizer, was invented which increases the weight of treated plants very efficiently. This organic fertilizer can be used safely and easily for fruit trees, vegetable, and ornamentals.

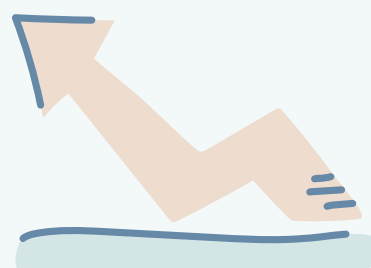
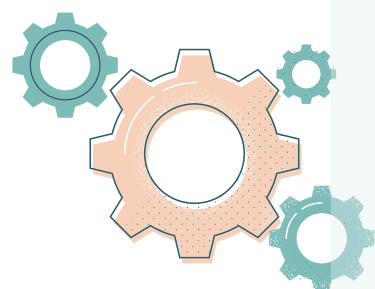
Publication Number: JOP/2009/0003



THIADIAZOLO [3,4-h] QUINOLINE-7-CARBOXYLIC ACID SALTS AND ESTERS PROCESSES FOR THEIR PREPARATION AND THEIR USE AS ANTIVIRAL ANTITUMOR AGENTS

A process for the production of the thiadiazol quinolone [3.4-h] quinolone – 7- carboxylic acid salts and esters which can be used as antitumor, antibiotic, or antiviral agents.

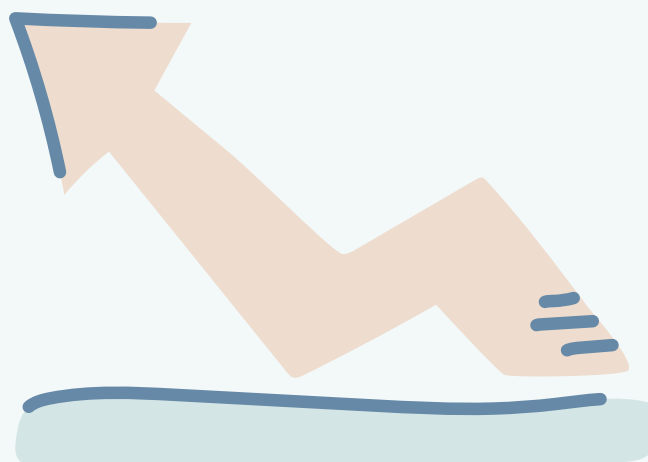
Jordanian Patent No.2703



TETRACYCLIC FLUOROQUINOLONES: PART 2. NOVEL 4-OXOTHIENO [2', 3':4, 5] PYRROLO [3,2-H] QUINOLINE-3- CARBOXYLIC ACID DERIVATIVES AS ANTIBACTERIAL AND ANTITUMOR AGENTS

A series of novel tetracyclic fluoroquinolones derivatives, particularly 4-oxothieno [2', 3':4, 5] pyrrole [3,2-h] quinoline-3- carboxylic acid derivatives, were synthesized for potential use as anticancer and antibacterial chemotherapeutics.

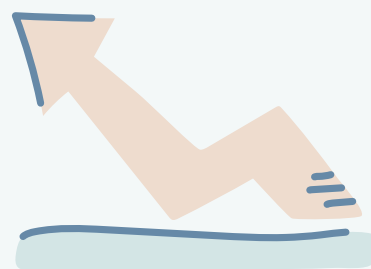
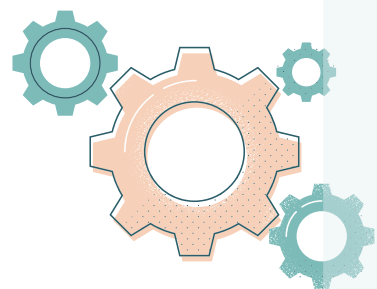
Publication Number: JOP/2010/0277



MECHANICAL SIZE GRADING SYSTEM FOR OLIVE FRUITS

The present invention relates to designing of an olive fruits size grader that matches the requirements of the locally small and medium sized farms and industries.

Publication Number: JOP/2011/0138



**NEW HYBRID GLUCOSAMINE SUBSTITUTED
SULFONYLUREAS AS POTENTIAL A – GLUCOSIDASE
AN AMYLASE AND DPP4-INHIBITORS AND
RADICAL**

A method for preparation of glucosamine substituted sulfonylureas which function as inhibitors for the treatment of type II diabetes and control of lipid profile with minimal complications.

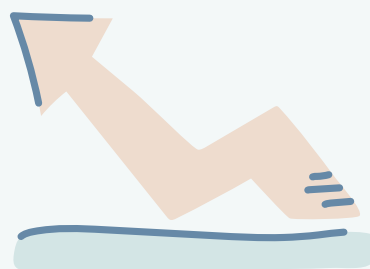
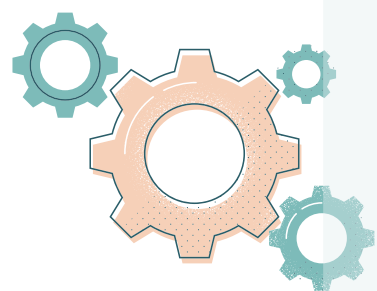
Provisional application filing: 22/6/2021



THUJONE CORRECTS CHOLESTEROL AND TRIGLYCERIDE PROFILES IN DIABETIC RATE MODEL

An oral treatment consisting of thujone which provides a correcting effect on the lipid profile, particularly cholesterol and triglycerides, of diabetic rats. This invention provides promising means of finding new agents to treat diabetic complications.

Publication Number: JOP/2009/0321



USE OF ETHOSUXIMIDE FOR THE TREATMENT OF WOUNDS

A novel formulation comprising of ethosuximide for topical treatment of wounds.

Publication Number: JOP/2009/0433

