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	Application Details
APPLICATION NUMBER	202231069849
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	03/12/2022
APPLICANT NAME	<ol> <li>Dr. Prafulla Kumar Panda</li> <li>Dr. M. L. Narasimham</li> <li>Prof. (Dr.) I. V. Murali Krishna</li> <li>Prof. Sovan Sankalp</li> <li>Dr. Bibhuti Bhusan Sahoo</li> <li>Dr. Rajib Kumar Majhi</li> <li>Dr. Smruti Rekha Sahoo</li> <li>Dr. Rahul Adhikary</li> <li>Dr. Abinash Mohanta</li> <li>Dr. Arpan Pradhan</li> <li>Dr. Chitaranjan Dalai</li> <li>Dr. Aparupa Pani</li> <li>Dr. Monalisa Mallick</li> </ol>
TITLE OF INVENTION	A DISEASE VULNERABILITY AND COMBAT MAPPING MODEL FOR TRIBAL FORTIFICATION USING GEOSPATIAL
FIELD OF INVENTION	COMPUTER SCIENCE
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E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	
PUBLICATION DATE (U/S 11A)	30/12/2022

1 of 2 03-01-2023, 16:31





# भारत सरकार GOVERNMENT OF INDIA पेटेंट कार्यालय THE PATENT OFFICE

डिजाइन के पंजीकरण का प्रमाणपत्र CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No.

377851-001

तारीख / Date

23/01/2023

पारस्परिकता तारीख / Reciprocity Date\*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **IOT BASED FOOD WASTE RECYCLING MACHINE** से संबंधित है, का पंजीकरण, श्रेणी **09-09** में 1.Dr. Tridibesh Nag 2. Dr. Subrata Biswas 3.Mr. Silpi Bose 4.Dr. Prafulla Kumar Panda 5.Krushna Chandra Sethi 6.Laxmidhar Behera के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class **09-09** in respect of the application of such design to **IOT BASED FOOD WASTE RECYCLING MACHINE** in the name of 1.Dr. Tridibesh Nag 2. Dr. Subrata Biswas 3.Mr. Silpi Bose 4.Dr. Prafulla Kumar Panda 5.Krushna Chandra Sethi 6.Laxmidhar Behera.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में। In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

# INTELLECTUAL PROPERTY INDIA PATENTS | DESIGNS | TRADE MARKS GEOGRAPHICAL INDICATIONS

निर्गमन की तारीख/Date of Issue : 15/03/2023

महानियंत्रक पेंट्रेंट डिजाइन और व्यापार चिह्र Controller General of Patents, Designs and Trade Marks

पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति देश के नाम पर की गई है। डिजाइन का सत्त्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अविध के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

\*The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.

**ORIGINAL** 

मूल/No : 131058





# (http://ipindia.nic.in/index.htm)



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Application Details				
APPLICATION NUMBER	202241050364			
APPLICATION TYPE	ORDINARY APPLICATION			
DATE OF FILING	02/09/2022			
APPLICANT NAME	<ol> <li>Dr. SSSV Gopala Raju</li> <li>Mr. Aashish.A.Gadgil</li> <li>Dr. Saurav</li> <li>Mr. Vaibhav Shivhare</li> <li>Mr. Mayank Chauhan</li> <li>Abinaya Ishwarya G K</li> <li>Dr. Manik Deshmukh</li> <li>Mr. Akash Sood</li> <li>Mr. Krushna Chandra Sethi</li> <li>Mr. Ankeshit Srivastava</li> <li>Mr. L. Karthick</li> </ol>			
TITLE OF INVENTION	Design And Construction of Prefabricated Skeleton Structures			
FIELD OF INVENTION	BIOTECHNOLOGY			
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E-MAIL (UPDATED Online)				
PRIORITY DATE				
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# Application Status Awaiting Request for Examination View Documents Filed Published RQ Filed Under Examination Disposed In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in

(19) INDIA

(22) Date of filing of Application: 14/11/2022

(51) International classification B01J0020280000, A61P0035000000

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(61) Patent of Addition to

No

Number

(21) Application No.202241065250 A

(43) Publication Date : 25/11/2022

(54) Title of the invention: Magnetic spinel ferrite nanoparticles (SFNPs) for targeted drug delivery of cytotoxic drugs in disease treatment

:A61K0009510000, C07F0015000000, B82Y0005000000,

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4)Dr. M. Punithavathi

5)Dr. S. A. Sreenivas

6)Dr. S. Manimaran 7)Ms. Sucharita Babu

8)Dr. S. Vasthi Gnana Rani

9)Dr. J. Suresh

10)Mr. Nookala S S N Murty

11)Dr. P. Pavitra

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#### (57) Abstract:

A nanotherapeutic that contains platinum complexes contained inside a nanoformulation that contains at least one spinel ferrite of the formula CuFe2O4, NiFe2O4, CoFe2O4, and MnFe2O4 placed on mesoporous silica. A method for the preparation of the nanotherapeutic that involves forming a powdery mixture by combining a metal(II) salt and a Fe(III) salt with the mesoporous silica nanoparticles, calcining the powdery mixture to form the nanoformulation, and then combining the nanoformulation with the platinum complex.

No. of Pages: 23 No. of Claims: 4



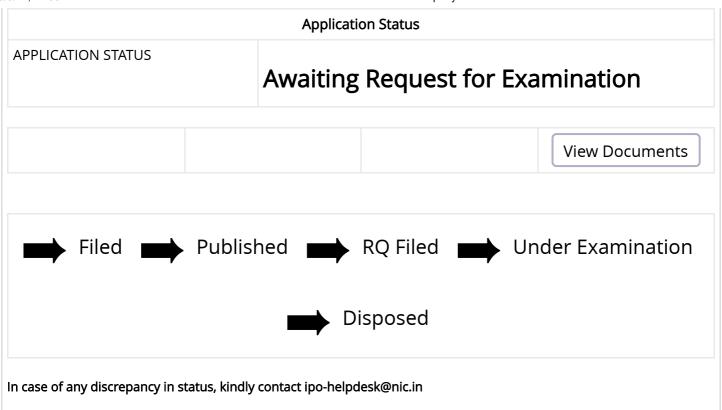
Office of the Controller General of Patents, Designs & Trade Marks Department for Promotion of Industry and Internal Trade Ministry of Commerce & Industry, Government of India

# (http://ipindia.nic.in/index.htm)



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Application Details				
APPLICATION NUMBER	202231063610			
APPLICATION TYPE	ORDINARY APPLICATION			
DATE OF FILING	08/11/2022			
APPLICANT NAME	<ol> <li>Centurion University of Technology and Management</li> <li>NANDA, Ashirbad</li> <li>SAHOO, Rudra Narayan</li> <li>PATTNAIK, Gurudutta</li> <li>KANHAR, Satish</li> <li>PANDA, Brajabihari</li> <li>SAMANTARAY, Biswajit</li> <li>ROUT, Sagar</li> <li>PANDA, Himansu Sekhor</li> <li>BISWAL, Snehanjana</li> <li>SAHOO, Smruti Smaranika</li> <li>PRIYANKA, Kumari</li> <li>PRIYADARSHINI, Priyanka</li> </ol>			
TITLE OF INVENTION	PHARMACEUTICAL COMPOSITION COMPRISING AMLODIPINE FOR RETINAL TRANSSYNAPTIC NEURONAL PROTECTION AND METHODS THEREOF			
FIELD OF INVENTION	CHEMICAL			
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(51) International classification

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(22) Date of filing of Application :27/11/2022

(21) Application No.202231068193 A

(43) Publication Date: 02/12/2022

# (54) Title of the invention : A METHOD FOR ADVANCED TUMOR RECOGNITION BASED ON IOT AND AI IMAGE PROCESSING

:G16H0010600000, G06T0007000000, G16Z0099000000,

A61B0005050700, G06Q0030000000

:PCT// :01/01/1900

: NA

:NA

:NA

:NA

:NA

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3)Dr.Prafulla Kumar Sahu

4)Dr.Ashirbad Nanda

5)Dr.Debasmita Dubey

6)Dr.Subrat Kumar Tripathy

7)Dr.Santosh Kumar Swain

8)Dr.Gopal Krishna Purohit

9)Dr. Santosh Kumar Ranajit

10)Dr. Rajesh Kumar Meher

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#### (57) Abstract

The present invention relates to a method for advanced tumor detection based on internet of things (IoT) and artificial intelligence (AI) image processing. The method comprising the following steps: receiving a sample scan of head of a patient. Retrieving electronic health records (EHRs) related to the sample scan; comparing the sample scan with a standard brain scan for abnormalities; evaluating brain anomalies based on comparing, wherein the brain anomalies vary according to the comparison with the standard brain scan; and diagnosing a tumor when the brain anomalies are below or above a certain threshold with respect to the standard brain scan.

No. of Pages: 14 No. of Claims: 3

:A61B0005000000, A61B0005020000, A61K0036000000,

A61K0031122000, B82Y0005000000

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(22) Date of filing of Application :01/12/2022

## (21) Application No.202231069269 A

(43) Publication Date: 09/12/2022

# (54) Title of the invention: APPLICATION OF NANOROBOTICS IN HIGH-DENSITY PHARMACEUTICAL ASSAY PROCESS

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7)Dr.Gopal Krishna Purohit

8)Dr.Ishwar Chandra Behera 9)Dr.Sashi Bhusan Biswal

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#### (57) Abstract

The present invention relates to the field of the nanorobotics in pharmaceutical sciences. The invention more particularly relates to application of nanorobotics in high-density pharmaceutical assay process. Nanorobotics is the technology of making machines or robots at or near the scale of a nanometre (10-9 metres). Machines built at the molecular level (nanomachines) may be utilised to remedy the human body's numerous diseases. Nanorobot's toolkit includes a medicine cavity, probes, knives, and chisels to remove blockages and plaque, microwave emitters and ultrasonic signal generators to destroy cancerous cells, two electrodes to heat the cell until it dies, and powerful lasers to burn away harmful material like arterial plaque. A cream incorporating nanorobots can remove the proper quantity of dead skin, excess oils, missing oils, natural moisturising components, and even achieve 'deep pore cleansing' Other uses include treating wounds, kidney stones, gout, parasites, cancer, and arteriosclerosis.

No. of Pages: 22 No. of Claims: 7

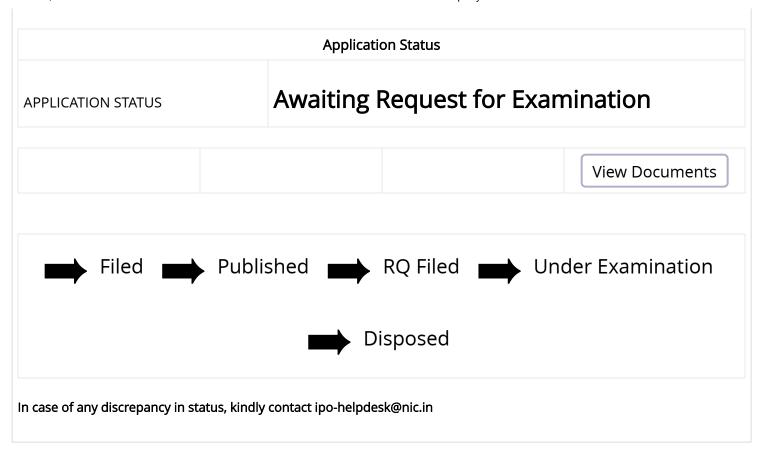


# (http://ipindia.nic.in/index.htm)



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	Application Details
APPLICATION NUMBER	202231064985
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	14/11/2022
APPLICANT NAME	<ol> <li>Dr.Ashish Kumar Sarangi</li> <li>Dr.Rudra Narayan Sahoo</li> <li>Dr.Gurudutta Pattnaik</li> <li>Dr.Sovan Pattanaik</li> <li>Dr.Jasmin Panda</li> <li>Dr.Gyanranjan Mahalik</li> <li>Mr.Yashwant Giri</li> <li>Mrs.Nabani Mahato</li> <li>Mr.Sujit Kumar Patro</li> <li>Ms.B.Jyotirmayee</li> </ol>
TITLE OF INVENTION	A CRITICAL APPRAISAL OF ARTIFICIAL INTELLIGENCE BASED RETINA SCAN FOR THE DETERMINATION OF CARDIOVASCULAR PATHOLOGY IN A PATIENT AND METHOD THEREOF
FIELD OF INVENTION	COMPUTER SCIENCE
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E-MAIL (UPDATED Online)	
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(19) INDIA

(22) Date of filing of Application: 08/12/2022

(51) International classification (A61P0029000000, A61P0037000000

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(86) International Application

(87) International Publication

(61) Patent of Addition to

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Number

:A23L0033135000, A61P0037020000, A61K0035747000,

(21) Application No.202241070733 A

(43) Publication Date: 16/12/2022

# (54) Title of the invention: COMPOSITION FOR IMMUNOMODULATING AND NUTRACEUTICAL AND METHOD OF USE

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#### (57) Abstract:

COMPOSITION FOR IMMUNOMODULATING AND NUTRACEUTICAL AND METHOD OF USE A method for composition for immunomodulating and nutraceutical and method of use, wherein the method comprises an isolated Bacteroides fragilis combined with a nutritional source, so that the combination is a nutraceutical in that it is a food product is appropriate for oral consumption by a human subject. Composition or medicament further comprises a culture of probiotic bacteria Lactobacillus pentosus and composition or said medicament is in solid form for oral administration. Nutraceutical or medical food product for the treatment, prophylaxis and / or alleviation of a disease or disorder associated with a disease associated with an immune response. Immunomodulating agent comprising isolated polysaccharide fractions from the plant Chlorophytum borivillianum consisting of water extractable easily water-soluble polysaccharides.

No. of Pages: 13 No. of Claims: 1

# पेटेंट कार्यालय शासकीय जर्नल

# OFFICIAL JOURNAL OF THE PATENT OFFICE

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पेटेंट कार्यालय का एक प्रकाशन PUBLICATION OF THE PATENT OFFICE

(19) INDIA

(22) Date of filing of Application :22/09/2022

(51) International classification (A61K0045060000, A61K0031190000

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(86) International Application

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Number

(21) Application No.202211054445 A

(43) Publication Date: 30/09/2022

# (54) Title of the invention: DEVELOPMENT AND EVALUATION OF BOSWEELIC ACID FOR TREATING RHEUMATOID **ARTHRITIS**

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:A61K0036324000, A61K0031000000, A61K0038000000,

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A method for development and evaluation of bosweelic acid for treating rheumatoid arthritis. The investigation was aimed to formulate transdermal films incorporating herbal drug components. The allopathic system of medicine includes two conventional lines of treatment for rheumatoid arthritis, which come along with certain side effects, a special extract of the gum resin of Boswellia serrata (BS) is effective in the treatment of rheumatoid arthritis (RA). These findings were obtained in more than 260 patients by using a range of different clinical approaches for evaluation. The criteria for assessment were mainly joint swelling, pain, erytrocyte sedimentation rate (ESR), stiffness, additional use of NSAID, side effects and tolerance.

No. of Pages: 15 No. of Claims: 1

# पेटेंट कार्यालय शासकीय जर्नल

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# पेटेंट कार्यालय का एक प्रकाशन PUBLICATION OF THE PATENT OFFICE

(19) INDIA

(22) Date of filing of Application :29/08/2022

(21) Application No.202241049325 A

(43) Publication Date: 09/09/2022

# (54) Title of the invention : THE EFFECT OF GRAVITY AND CENTRIFUGAL FORCE ON PLANT DEVELOPMENT AND FRUIT PRODUCTION

:A01C0001000000, A01G0031000000, B04B0005040000, (51) International classification A01C0001060000, A01G0022000000 (86) International Application No :PCT// Filing Date :01/01/1900 (87) International Publication No. : NA (61) Patent of Addition to ·NA Application Number :NA Filing Date (62) Divisional to Application :NA Number Filing Date

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(57) Abstract :

ABSTRACT THE EFFECT OF GRAVITY AND CENTRIFUGAL FORCE ON PLANT DEVELOPMENT AND FRUIT PRODUCTION The method to investigate the effect of centrifugal force on the growth of maize, an important cereal crop in Nigeria. The maize seeds were subjected to centrifugation for three revolutions. The seeds were planted and observed for germination and early growth for seven days. Results revealed that seeds treated with 1000g centrifugal force for 4hrs had the highest germination percentage (70%), while 50% of the control seeds germinated at the end of the 7th day. The radicle length in the 10,000g/2hrs treatment was also the highest (24 cm). However, the highest shoot length was observed in the control plants. The method is carried until the yield or maturity stage in order to have more profound observation on this centrifugal force effect on the maize plants

No. of Pages: 14 No. of Claims: 1

# पेटेंट कार्यालय शासकीय जर्नल

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# पेटेंट कार्यालय का एक प्रकाशन PUBLICATION OF THE PATENT OFFICE

(22) Date of filing of Application :09/12/2022

(19) INDIA

(21) Application No.202241071288 A

(43) Publication Date: 30/12/2022

# (54) Title of the invention: A METHODOLOGY TO MONITOR THE EXHALED BREATH OF COVID 19 PATIENTS SUFFERING FROM ACUTE KIDNEY INJURY FOR DETECTION OF AMMONIA USING FABRICATED GAS SENSOR BASED ON POLYPYRROLE AND SILVER NANOPARTICLE

:G01N0033497000, A61B0005080000, A61P0013120000, (51) International classification A61B0005097000, G01N0033000000 (86) International Application No :01/01/1900 Filing Date (87) International Publication No : NA (61) Patent of Addition to :NA Application Number :NA Filing Date (62) Divisional to Application :NA

:NA

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12)Dr. ANSHU R. DUDHE

Number

Filing Date

A methodology to Monitor the Exhaled Breath of COVID 19 Patients Suffering from Acute Kidney Injury for Detection of ammonia using fabricated gas sensor based on Polypyrrole and Silver nanoparticle is the proposed invention. The invention focuses on monitoring the breath that is exhaled by covid-19 patients who are suffering from acute kidney failure. The breath is tested for presence of ammonia using fabricated gas sensor that is based on polypyrrole and sliver nanoparticle.

No. of Pages: 13 No. of Claims: 5

REPUBLIC OF SOUTH AFRICA	REGISTER OF	PATENTS	PAT	TENTS ACT, 1978	
Official application No.	Lodging date: I	Provisional	Acc	eptance date	
21 01 2021/10561	22		47	2022/03/30	
International classification	Lodging date:	Complete	Gra	nted date	
51 B09C	23 2021/12/1	7		2022/05/25	
71 Full name(s) of applicant(s)/Patentee(	s):				
CENTURION UNIVERSITY OF TECHNOLOGY Centurion University of Technology and Manage		dia			
71 Applicant substitued:			Dat	e registrered	
71 Assignee(s):			Dat	e registrered	
72 Full name(s) of inventor(s):					The same of the sa
SAHOO, Shraban Kumar					
PANIGRAHI, Gagan Kumar PRADHAN, Arun Kumar					
SAHOO, Annapurna					
SATAPATHY, Kunja Bihari					
DALBEHERA, Anuesha					
Priority claimed: Coun	try	Number		Date	
ATTION ATTI	and the second				-10
				12	-
54 Title of invention		_		_	
A SYSTEM FOR SYNTHESIZING ZNO-ZI	NFE2O4 NANOPARTI	CLES AND INVESTIGATIN	IG THEIR I	ROLE IN THE WASTE	WATER
REMEDIATION					
At the state of th					
Address of applicant(s)/patentee(s):					MAN
Centurion University of Technology and Manage INDIA	ment~Odisha 752050				
74 Address for service			1		
Wolmarans and Susan Inc. Corner of Barry Hertzog Avenue and Emp SOUTH AFRICA	ire Road, Johannesbu	rg, 2092		1	
Reference No.		Data at an al-		No.	
61 Patent of addition No.		Date of any change			
Fresh application based on.		Date of any change			
approacorr sadda orr.		Sate of any origings			
25		1			

# RENEWAL SHEET

Year	Payment Date	Receipt Number	Amount	

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Date entry made	Description	
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2022-03-30	Application accepted on 30/3/2022.	
2022-05-24	Correction of clerical errors consisting of to correct the applicant address filed on 24/02/2022, by CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT.	
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(19) INDIA

(51) International classification

(86) International Application

(87) International Publication

(61) Patent of Addition to

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Application Number

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Number

(22) Date of filing of Application: 12/11/2022

(21) Application No.202241064889 A

(43) Publication Date: 25/11/2022

# (54) Title of the invention: Advanced Nano Phyto formulations based targeted drug delivery

:A61K0009700000, A61P0025280000, A61K0036886000,

A61P0017020000, A61K0036906600

:PCT//

: NA

·NA

:NA

:NA

:NA

:01/01/1900

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9)Mr. Yagnambhatla Rajendra

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#### (57) Abstract

This invention pertains to a pharmaceutical preparation and a method of preparation for treating challenged tissue in humans and animals, such as skin wounds and ulcers. The pharmaceutical preparation may be used to treat skin wounds and ulcers. This anti-cancer transdermal patch for melanoma treatment also refers to the multifunctional natural matrix that is intended for the treatment of impaired tissues. In addition, the invention includes a method for the treatment of Alzheimer's disease in addition to multiple sclerosis. The composition is made up of a water-solubilized nano-sized formulation of a non-aqueous solvent extract of phyto-pharmaceuticals in a herbal, animal, or synthetic biocompatible gel or on matrix coated, or both. In the most advantageous implementation, the composition is implemented as a topical device for the purpose of treating damaged tissues.

No. of Pages: 21 No. of Claims: 3

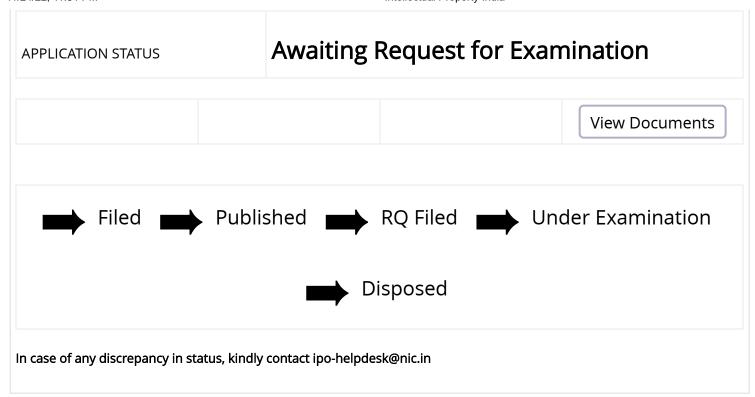


# (http://ipindia.nic.in/index.htm)



(http://ipindia.nic.in/index.htm)

	Application Details
APPLICATION NUMBER	202241065549
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	16/11/2022
APPLICANT NAME	<ol> <li>Dr. P. Pavitra</li> <li>Mrs. Madhavi M. N</li> <li>Dr. P. Srinivasan</li> <li>Dr. R. Thirumurthy</li> <li>Mr. G. Muthuboopathi</li> <li>Mr. Tapan Kumar Sahu</li> <li>Dr. Gyanranjan Mahalik</li> <li>Mrs. Itishree Jogamaya Das</li> <li>Mr. Madhusudana T.</li> <li>Dr. Himansu Bhusan Samal</li> </ol>
TITLE OF INVENTION	Novel nano formulations-based drugs for enhanced bioavailability
FIELD OF INVENTION	CHEMICAL
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ADDITIONAL-EMAIL (As Per Record)	03mrmanoj@gmail.com
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PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	
PUBLICATION DATE (U/S 11A)	25/11/2022



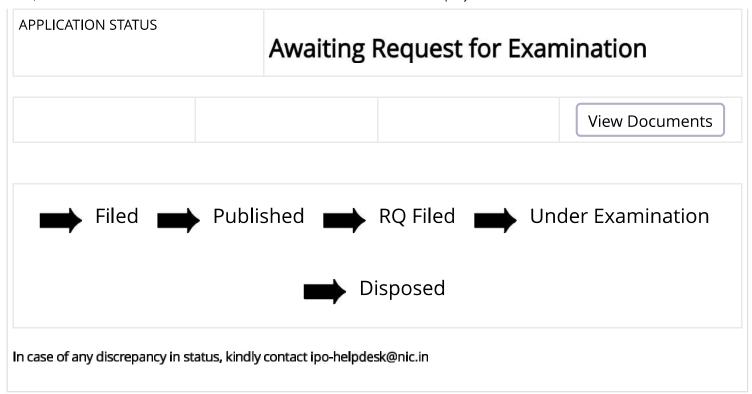


# (http://ipindia.nic.in/index.htm)



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	Application Details
APPLICATION NUMBER	202241072402
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	14/12/2022
APPLICANT NAME	<ol> <li>Dr. Jyothi Hiremath</li> <li>Dr. Shivaveerakumar S.</li> <li>Dr. Kalpita Bhatta</li> <li>Dr. B. Dhanalakshmi</li> <li>Dr. Vipul Bhardwaj</li> <li>Mr. Sujay Kumar Parida</li> <li>Dr. Rahul Kumar</li> <li>Ms. L. Jyothika</li> <li>Mr. Sanjeev Kumar Rajput</li> <li>Mr. Gnyana Ranjan Parida</li> </ol>
TITLE OF INVENTION	A biomimetic nanoparticle for synergistic anti-infective therapy
FIELD OF INVENTION	CHEMICAL
E-MAIL (As Per Record)	03mrmanoj@gmail.com
ADDITIONAL-EMAIL (As Per Record)	03mrmanoj@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	
PUBLICATION DATE (U/S 11A)	30/12/2022



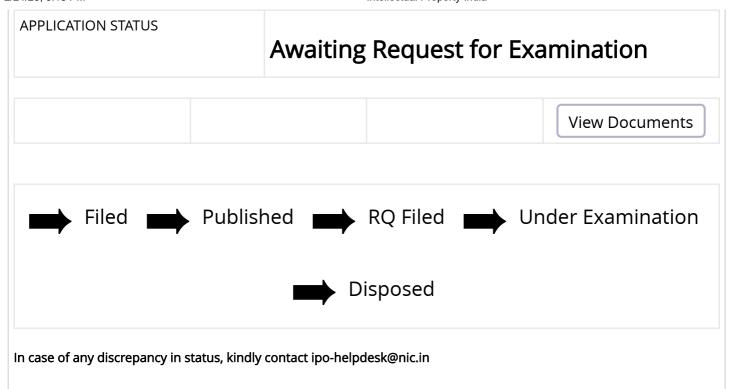


# (http://ipindia.nic.in/index.htm)



(http://ipindia.nic.in/index.htm)

Application Details				
APPLICATION NUMBER	202241043129			
APPLICATION TYPE	ORDINARY APPLICATION			
DATE OF FILING	27/07/2022			
APPLICANT NAME	<ol> <li>Dr. Nellore Manoj Kumar</li> <li>Dr. Ajit Kumar Patro</li> <li>Dr. Jagana Bihari Padhy</li> <li>Dr. Bibhu Prasad</li> <li>Dr. Tusharkant Panda</li> <li>Dr. Hari Kishan Chapala</li> <li>Dr. Grandhi Prasuna</li> <li>Mr. K. Shyam Sundar Rao</li> <li>Dr. D. V. Lokeswar Reddy</li> </ol>			
TITLE OF INVENTION	An Al & ML based system for tagging for connected devices in a wireless network and method thereof			
FIELD OF INVENTION	COMPUTER SCIENCE			
E-MAIL (As Per Record)	03mrmanoj@gmail.com			
ADDITIONAL-EMAIL (As Per Record)	03mrmanoj@gmail.com			
E-MAIL (UPDATED Online)				
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REQUEST FOR EXAMINATION DATE				
PUBLICATION DATE (U/S 11A)	19/08/2022			





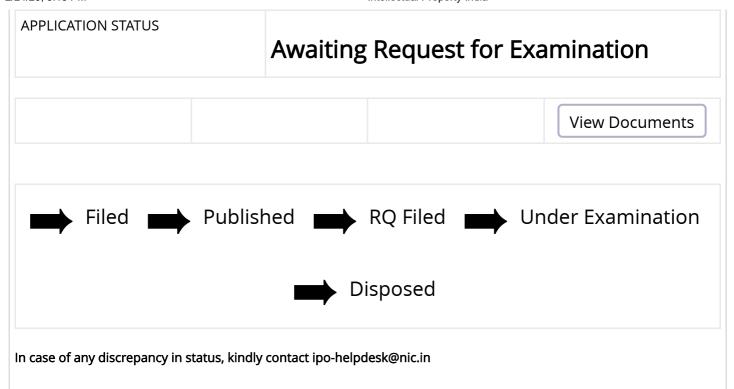
# (http://ipindia.nic.in/index.htm)



(http://ipindia.nic.in/index.htm)

	Application Details
APPLICATION NUMBER	202241054973
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	26/09/2022
APPLICANT NAME	<ol> <li>Dr. DIBYA LOCHAN MOHANTY</li> <li>Mr. DEEPANKAR RATH</li> <li>Ms. RUPALI RUPASMITA</li> <li>Miss. PALLISHREE BHUKTA</li> <li>Miss. SUCHARITA BABU</li> <li>ASWINI KUMAR SETHI</li> </ol>
TITLE OF INVENTION	FORMULATION AND CHARACTERIZATION OF TRANSDERMAL PATCHES OF AMLODIPINE BESYLATE USING OLIVE OIL AS THE NATURAL PERMEATION ENHANCER
FIELD OF INVENTION	CHEMICAL
E-MAIL (As Per Record)	
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E-MAIL (UPDATED Online)	
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PUBLICATION DATE (U/S 11A)	07/10/2022

Ann	lication	Status
, vpp		Julia



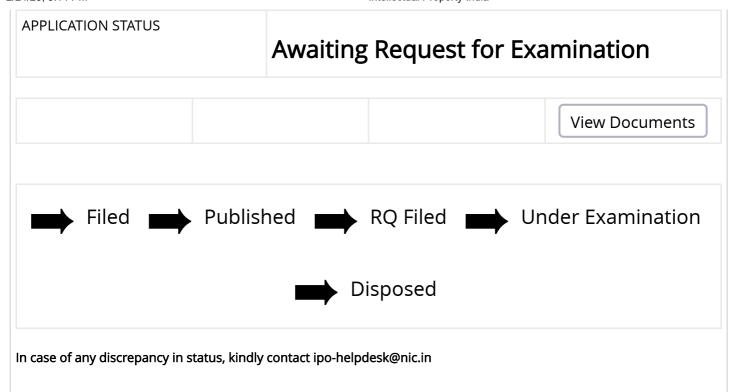


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(http://ipindia.nic.in/index.htm)

	Application Details
APPLICATION NUMBER	202241059048
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	17/10/2022
APPLICANT NAME	<ol> <li>Mrs. Shanti Sagar</li> <li>Dr. K. Selvaraju</li> <li>Mr. Yagnambhatla Rajendra</li> <li>Dr. Nihar Ranjan Kar</li> <li>Ms. Nidhi Bongirwar</li> <li>Mrs. Oleti Navneetha</li> <li>Mr. Shyama Sundar Sahu</li> <li>Dr. Kumara Swamy Jella</li> <li>Dr. Y. Ganesh Kumar</li> </ol>
TITLE OF INVENTION	A FORMULATION BASED ON PYRIDINE DERIVATIVE AND PREPARATION METHOD THEREOF
FIELD OF INVENTION	CHEMICAL
E-MAIL (As Per Record)	03mrmanoj@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	
PUBLICATION DATE (U/S 11A)	28/10/2022



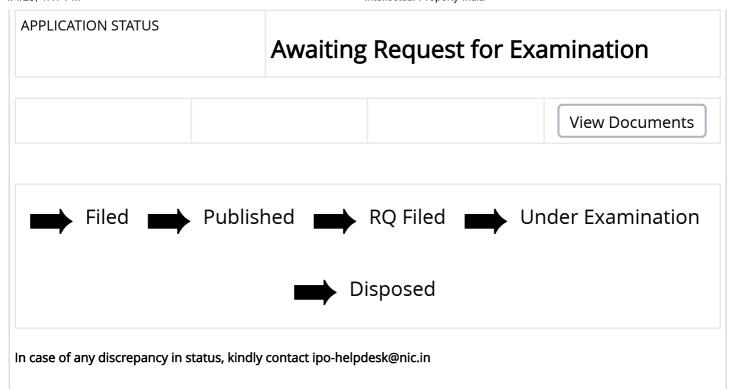


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(http://ipindia.nic.in/index.htm)

	Application Details
APPLICATION NUMBER	202241070566
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	07/12/2022
APPLICANT NAME	<ol> <li>Ms. Samreen Kausar Abdul Rauf</li> <li>Dr. Rubina Sahin</li> <li>Dr. T. Vidyasagar</li> <li>Mr. Wasim Ahmed Khan</li> <li>Dr. Gopal Krishna Padhy</li> <li>Mrs. P. Madhuri</li> <li>Dr. Shobha Thakur</li> <li>Dr. S. Manimaran</li> <li>Mrs. Vinod Vijaykumar Patil</li> <li>Mrs. Nilam Shivaji Devkar</li> </ol>
TITLE OF INVENTION	A hybrid nanosensor based on novel fluorescent iron oxide nanoparticles for highly selective determination of Hg2+ ions in environmental samples
FIELD OF INVENTION	MECHANICAL ENGINEERING
E-MAIL (As Per Record)	03mrmanoj@gmail.com
ADDITIONAL-EMAIL (As Per Record)	03mrmanoj@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	
PUBLICATION DATE (U/S 11A)	30/12/2022



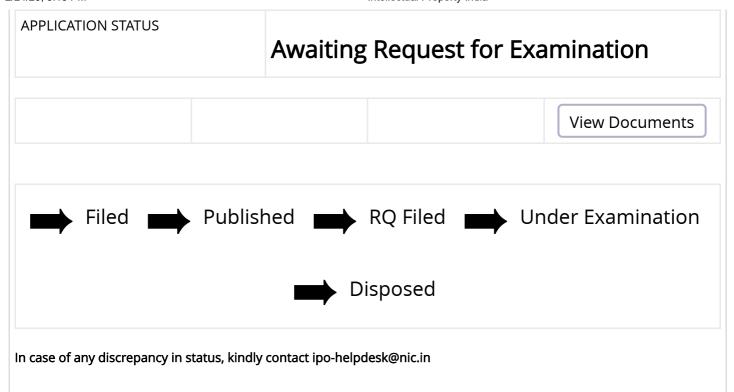


# (http://ipindia.nic.in/index.htm)



(http://ipindia.nic.in/index.htm)

	Application Details
APPLICATION NUMBER	202241065536
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	15/11/2022
APPLICANT NAME	1 . Ms.PUTTA HEMALATHA 2 . Dr. T. ARUNKUMAR 3 . Dr. VANISREE RAMANATHAN 4 . SACHIN SHARMA 5 . Dr. SANKAR K 6 . Mr. LADI ALIK KUMAR 7 . Dr. SUSHIL KUMAR 8 . Dr. MOUSMITA DEVI 9 . Dr. P. ARULPRAKASH 10 . Prof Dr.VIVEK SINGH KISHWAH 11 . Dr. KOGILA PALANIMUTHU 12 . Dr YOGESH ARUN PUND
TITLE OF INVENTION	ARTIFICIAL INTELLIGENCE BASED APPROACH TO EARLY PREDICTION OF NATURAL COMA BASED ON BRAIN MAPPING TECHNIQUES
FIELD OF INVENTION	BIO-MEDICAL ENGINEERING
E-MAIL (As Per Record)	sgowthami12@gmail.com
ADDITIONAL-EMAIL (As Per Record)	sgowthami12@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	
PUBLICATION DATE (U/S 11A)	02/12/2022



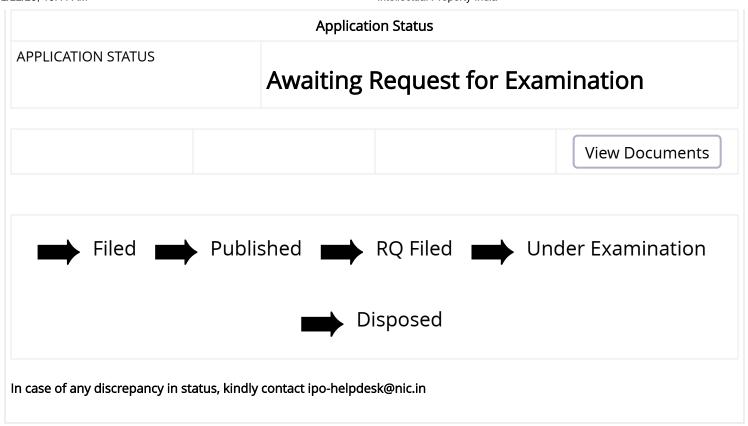


# (http://ipindia.nic.in/index.htm)



(http://ipindia.nic.in/index.htm)

Application Details		
APPLICATION NUMBER	202231073569	
APPLICATION TYPE	ORDINARY APPLICATION	
DATE OF FILING	19/12/2022	
APPLICANT NAME	1 . Dr. CHANDRA SEKHAR PATRO 2 . Dr. FAIZAN SAYEED 3 . Dr. PARESH MISHRA 4 . Dr. NIRANJAN PANDA 5 . Mr. SANJAY KUMAR GUPTA 6 . Dr. SAROJ KUMAR RAUL 7 . Mr. DEBGOPAL GANGULY 8 . Dr. KETAN VINAYAKRAO HATWARE 9 . Mr. KAILASH CHANDRA JENA 10 . Mr. SATYABRATA JENA	
TITLE OF INVENTION	NANO-BASED DRUG DELIVERY SYSTEMS: RECENT DEVELOPMENTS AND FUTURE PROSPECTS	
FIELD OF INVENTION	CHEMICAL	
E-MAIL (As Per Record)	c.patro@rediffmail.com	
ADDITIONAL-EMAIL (As Per Record)		
E-MAIL (UPDATED Online)		
PRIORITY DATE		
REQUEST FOR EXAMINATION DATE		
PUBLICATION DATE (U/S 11A)	23/12/2022	





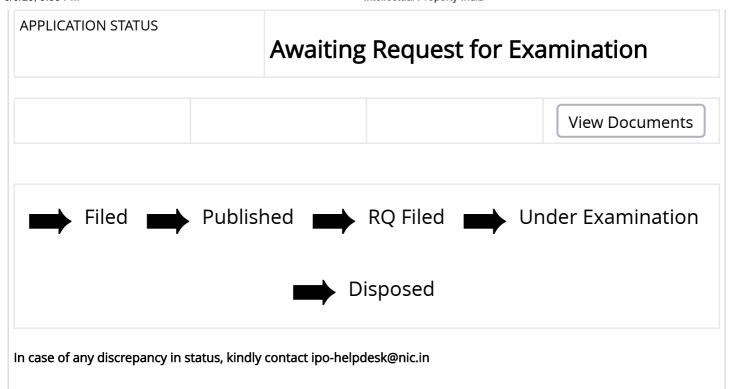
# (http://ipindia.nic.in/index.htm)



(http://ipindia.nic.in/index.htm)

	Application Details				
APPLICATION NUMBER	202341001561				
APPLICATION TYPE	ORDINARY APPLICATION  07/01/2023  1 . SATYABRATA JENA 2 . Dr. SUDARSHAN NARAYAN NAGRALE 3 . ASHA SAMBHAJI JADHAV 4 . MOHAMMAD KASHIF NOORANI 5 . AJAY SINGH 6 . Dr. P. VAMSI KRISHNA 7 . Dr.MANOJ KUMAR KATUAL 8 . PUSHPENDRA KUMAR KURRE 9 . Mr. LADI ALIK KUMAR 10 . MOHD ASIF SHAH 11 . PRAVAT KUMAR SWAIN 12 . Dr VIJAY KUMAR SALVIA				
DATE OF FILING					
APPLICANT NAME					
TITLE OF INVENTION	IMPLEMENTATION OF EFFECTIVE DRUG DELIVERY SYSTEM FOR CANCER IMMUNOTHERAPY USING POROUS NANOMATERIALS				
FIELD OF INVENTION	CHEMICAL				
E-MAIL (As Per Record)	sgowthami12@gmail.com				
ADDITIONAL-EMAIL (As Per Record)	sgowthami12@gmail.com				
E-MAIL (UPDATED Online)					
PRIORITY DATE					
REQUEST FOR EXAMINATION DATE					
PUBLICATION DATE (U/S 11A)	27/01/2023				

#### **Application Status**



(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application: 14/01/2023

(21) Application No.202341002964 A

(43) Publication Date: 17/02/2023

#### (54) Title of the invention: Nano formulations-based drug delivery to reach blood brain barrier

(51) International classification
(86) International Application No
Filing Date
(87) International Publication No
(61) Patent of Addition to
Application Number
Filing Date
(62) Divisional to Application
Number
Number
Sing Date
(82) Divisional to Application
Number
Filing Date
(83) International Publication No
(84) Publication No
(85) International Publication No
(86) International Application No
(87) International Publication No
(87) International Publication No
(88) International Application No
(87) International Publication No
(87) Internatio

(71)Name of Applicant: 1)Dr. Kiran Kumar Y Address of Applicant : Professor & Principal, Department of Pharmaceutics, Sana College of Pharmacy, Kodad, Telangana, India, Pincode: 508206 2)Mrs. E. Navya Pravala 3)Dr. Gopal Krishna Padhy 4)Ms. Annada Kar 5)Dr. Reddy Sunil 6)Ms. Ipsita Priyadarsini Samal 7)Dr. Y. Ganesh Kumar 8)Mrs. V. Anusha 9)Dr. Gvanranian Mahalik 10)Dr. K. Jagadeeswaraiah 11)Mr. Sumanta Bhattacharya Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor: 1)Dr. Kiran Kumar Y Address of Applicant :Professor & Principal, Department of Pharmaceutics, Sana College of Pharmacy, Kodad, Telangana, India, Pincode: 508206 --------2)Mrs. E. Navya Pravala 3)Dr. Gopal Krishna Padhy Address of Applicant: Associate Professor, Department of Pharmaceutical Chemistry, Centurion University of Technology and Management, Rayagada, Odisha, India, Pincode: 765001 -------4)Ms. Annada Kar Address of Applicant :Assistant Professor, Department of Pharmaceutical Chemistry, Royal College of Pharmacy and Health Sciences, Berhampur, Odisha, India, Pincode: 760002 5)Dr. Reddy Sunil Address of Applicant :Professor & HOD- Pharmaceutics, Department of Pharmacy, SVS Group of Institutions, Hanmakonda, Telangana, India, Pincode: 506015 - 6)Ms. Ipsita Priyadarsini Samal Address of Applicant :Ph.D. Scholar, Department of Botany, School of Applied Sciences, Centurion University of Technology and Management, Bhubaneswar, Odisha, India, Pincode: 752050 7)Dr. Y. Ganesh Kumar Address of Applicant : Professor & HOD, Department of Pharmaceutics, KVK College of Pharmacy, Surmaiguda (V), Lashkarguda (G.P), Abdullapurmet (M), R.R Dist., Telangana, India, Pincode: 501512 --Address of Applicant :Department of Pharmaceutics, KVK College of Pharmacy, Surmaiguda (V), Lashkarguda (G.P), Abdullapurmet (M), R.R Dist., Telangana, India, Pincode: 501512 - 9)Dr. Gyanranjan Mahalik Address of Applicant :Associate Professor, Department of Botany, School of Applied Sciences, Centurion University of Technology and Management, Bhubaneswar, Odisha, India, Pincode: 752050 - 10)Dr. K. Jagadeeswaraiah Address of Applicant :Lecturer, Department of Chemistry, Govt. Degree College for Women, Wanaparthy, Telangana, India, Pincode: 509103 11)Mr. Sumanta Bhattacharya Address of Applicant :Research Scholar, Department of Textile Technology, MAKAUT, Kolkata, West Bengal, India Pincode: 700064 -------

(57) Abstract :

Filing Date

The disclosure provides a composition that includes a nanoconjugate. The nanoconjugate includes a polynucleotide that is sufficiently complementary to a target polynucleotide. The target polynucleotide encodes a polypeptide that is specifically expressed in a central nervous system (CNS) disorder. The nanoconjugate also has the ability to cross the blood-brain barrier (BBB). In a few of the possible implementations, the composition also includes a targeting moiety. The abnormal expression of genes may, in some cases, be traced back to the origin of the condition. In some implementations, the composition also includes a therapeutic agent, while in other implementations, the therapeutic agent is temozolamide. Both of these may be thought of as embodiments. A targeted moiety and/or a therapeutic drug may be included in the nanoconjugate in some implementations of the

No. of Pages: 23 No. of Claims: 4



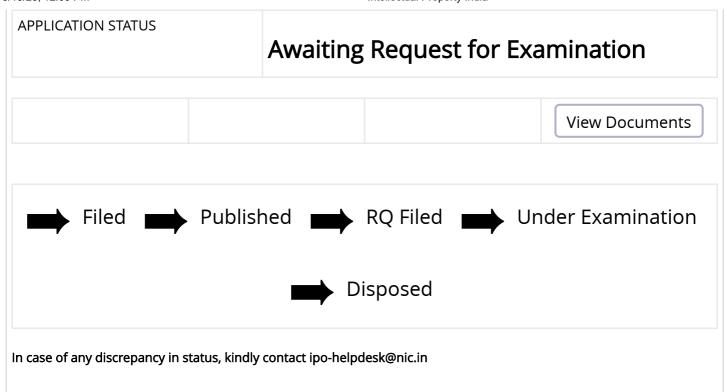
# (http://ipindia.nic.in/index.htm)



(http://ipindia.nic.in/index.htm)

	Application Details					
APPLICATION NUMBER	202341007733					
APPLICATION TYPE	ORDINARY APPLICATION					
DATE OF FILING	07/02/2023					
APPLICANT NAME	<ol> <li>Dr.N.Kamala</li> <li>Dr.M.Rajeswari</li> <li>Dr. Zeba Rushi</li> <li>Dr. Pramod Kumar Patjoshi</li> <li>Dr P.Suganya</li> <li>Dr.R.Pushpa Latha</li> <li>S. Arumuga Selvi</li> <li>Pallavi Rahul Gedamkar</li> <li>Dr. I.Meenakshi</li> <li>Dr.A.Aruna Devi</li> </ol>					
TITLE OF INVENTION	FINANCIAL CREDIT MANAGEMENT SYSTEM ON E-COMMERCE USING MULTIDIMENSIONAL FRAMEWORK MODEL					
FIELD OF INVENTION	COMPUTER SCIENCE					
E-MAIL (As Per Record)	thilakresearch@gmail.com					
ADDITIONAL-EMAIL (As Per Record)						
E-MAIL (UPDATED Online)						
PRIORITY DATE						
REQUEST FOR EXAMINATION DATE						
PUBLICATION DATE (U/S 11A)	17/02/2023					

#### **Application Status**



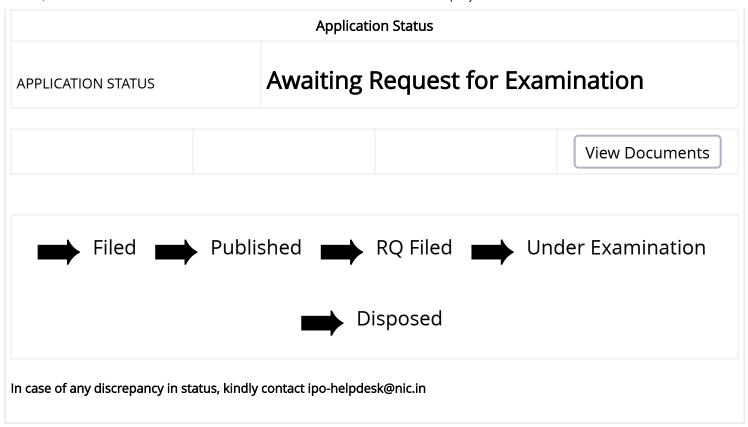


# (http://ipindia.nic.in/index.htm)



(http://ipindia.nic.in/index.htm)

	Application Details				
APPLICATION NUMBER	202241064085				
APPLICATION TYPE	ORDINARY APPLICATION				
DATE OF FILING	09/11/2022				
APPLICANT NAME	<ol> <li>Mr.Jitendra Debata</li> <li>Ms.Akula Rajitha</li> <li>Dr.Himansu Bhusan Samal</li> <li>Dr.Gyanranjan Mahalik</li> <li>Dr.Arun Kumar Mahato</li> <li>Dr.Nihar Ranjan Kar</li> <li>Dr.C.Nithya Shanthi</li> <li>Mr.Dhiraj Kumar</li> <li>Ms.Nigar Kadar Mujawar</li> <li>Ms.Ashwini Rajendra Suryawanshi</li> </ol>				
TITLE OF INVENTION	AN ARTIFICIAL INTELLIGENCE BASED 3D PRINTED MEDICINES FOR EFFECTIVE TREATMENT OF PATIENTS AND METHOD THEREOF				
FIELD OF INVENTION	MECHANICAL ENGINEERING				
E-MAIL (As Per Record)	tumula.githam@gmail.com				
ADDITIONAL-EMAIL (As Per Record)	tumula.githam@gmail.com				
E-MAIL (UPDATED Online)					
PRIORITY DATE					
REQUEST FOR EXAMINATION DATE					
PUBLICATION DATE (U/S 11A)	25/11/2022				



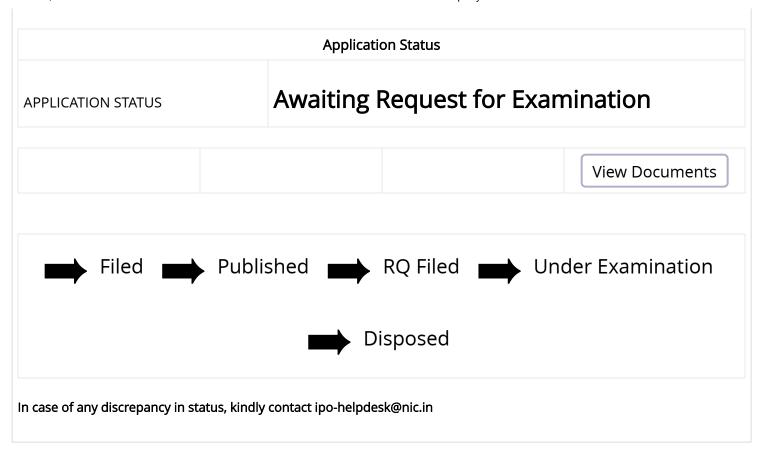


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(http://ipindia.nic.in/index.htm)

	Application Details					
APPLICATION NUMBER	202231064985					
APPLICATION TYPE	ORDINARY APPLICATION					
DATE OF FILING	14/11/2022					
APPLICANT NAME	<ol> <li>Dr.Ashish Kumar Sarangi</li> <li>Dr.Rudra Narayan Sahoo</li> <li>Dr.Gurudutta Pattnaik</li> <li>Dr.Jovan Pattanaik</li> <li>Dr.Jasmin Panda</li> <li>Dr.Gyanranjan Mahalik</li> <li>Mr.Yashwant Giri</li> <li>Mrs.Nabani Mahato</li> <li>Mr.Sujit Kumar Patro</li> <li>Ms.B.Jyotirmayee</li> </ol>					
TITLE OF INVENTION	A CRITICAL APPRAISAL OF ARTIFICIAL INTELLIGENCE BASED RETINA SCAN FOR THE DETERMINATION OF CARDIOVASCULAR PATHOLOGY IN A PATIENT AND METHOD THEREOF					
FIELD OF INVENTION	COMPUTER SCIENCE					
E-MAIL (As Per Record)	tumula.githam@gmail.com					
ADDITIONAL-EMAIL (As Per Record)	tumula.githam@gmail.com					
E-MAIL (UPDATED Online)						
PRIORITY DATE						
REQUEST FOR EXAMINATION DATE						
PUBLICATION DATE (U/S 11A)	18/11/2022					



(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application: 14/01/2023

(21) Application No.202341002964 A

(43) Publication Date: 17/02/2023

#### (54) Title of the invention: Nano formulations-based drug delivery to reach blood brain barrier

(51) International classification
(86) International Application No
Filing Date
(87) International Publication No
(61) Patent of Addition to
Application Number
Filing Date
(62) Divisional to Application
Number
Number
Sing Date
(82) Divisional to Application
Number
Filing Date
(83) International Publication No
(84) Publication No
(85) International Publication No
(86) International Application No
(87) International Publication No
(87) International Publication No
(88) International Application No
(87) International Publication No
(87) Internatio

(71)Name of Applicant: 1)Dr. Kiran Kumar Y Address of Applicant : Professor & Principal, Department of Pharmaceutics, Sana College of Pharmacy, Kodad, Telangana, India, Pincode: 508206 2)Mrs. E. Navya Pravala 3)Dr. Gopal Krishna Padhy 4)Ms. Annada Kar 5)Dr. Reddy Sunil 6)Ms. Ipsita Priyadarsini Samal 7)Dr. Y. Ganesh Kumar 8)Mrs. V. Anusha 9)Dr. Gvanranian Mahalik 10)Dr. K. Jagadeeswaraiah 11)Mr. Sumanta Bhattacharya Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor: 1)Dr. Kiran Kumar Y Address of Applicant :Professor & Principal, Department of Pharmaceutics, Sana College of Pharmacy, Kodad, Telangana, India, Pincode: 508206 --------2)Mrs. E. Navya Pravala 3)Dr. Gopal Krishna Padhy Address of Applicant: Associate Professor, Department of Pharmaceutical Chemistry, Centurion University of Technology and Management, Rayagada, Odisha, India, Pincode: 765001 -------4)Ms. Annada Kar Address of Applicant :Assistant Professor, Department of Pharmaceutical Chemistry, Royal College of Pharmacy and Health Sciences, Berhampur, Odisha, India, Pincode: 760002 5)Dr. Reddy Sunil Address of Applicant :Professor & HOD- Pharmaceutics, Department of Pharmacy, SVS Group of Institutions, Hanmakonda, Telangana, India, Pincode: 506015 - 6)Ms. Ipsita Priyadarsini Samal Address of Applicant :Ph.D. Scholar, Department of Botany, School of Applied Sciences, Centurion University of Technology and Management, Bhubaneswar, Odisha, India, Pincode: 752050 7)Dr. Y. Ganesh Kumar Address of Applicant : Professor & HOD, Department of Pharmaceutics, KVK College of Pharmacy, Surmaiguda (V), Lashkarguda (G.P), Abdullapurmet (M), R.R Dist., Telangana, India, Pincode: 501512 --Address of Applicant :Department of Pharmaceutics, KVK College of Pharmacy, Surmaiguda (V), Lashkarguda (G.P), Abdullapurmet (M), R.R Dist., Telangana, India, Pincode: 501512 - 9)Dr. Gyanranjan Mahalik Address of Applicant :Associate Professor, Department of Botany, School of Applied Sciences, Centurion University of Technology and Management, Bhubaneswar, Odisha, India, Pincode: 752050 - 10)Dr. K. Jagadeeswaraiah Address of Applicant :Lecturer, Department of Chemistry, Govt. Degree College for Women, Wanaparthy, Telangana, India, Pincode: 509103 11)Mr. Sumanta Bhattacharya Address of Applicant :Research Scholar, Department of Textile Technology, MAKAUT, Kolkata, West Bengal, India Pincode: 700064 -------

(57) Abstract :

Filing Date

The disclosure provides a composition that includes a nanoconjugate. The nanoconjugate includes a polynucleotide that is sufficiently complementary to a target polynucleotide. The target polynucleotide encodes a polypeptide that is specifically expressed in a central nervous system (CNS) disorder. The nanoconjugate also has the ability to cross the blood-brain barrier (BBB). In a few of the possible implementations, the composition also includes a targeting moiety. The abnormal expression of genes may, in some cases, be traced back to the origin of the condition. In some implementations, the composition also includes a therapeutic agent, while in other implementations, the therapeutic agent is temozolamide. Both of these may be thought of as embodiments. A targeted moiety and/or a therapeutic drug may be included in the nanoconjugate in some implementations of the

No. of Pages: 23 No. of Claims: 4



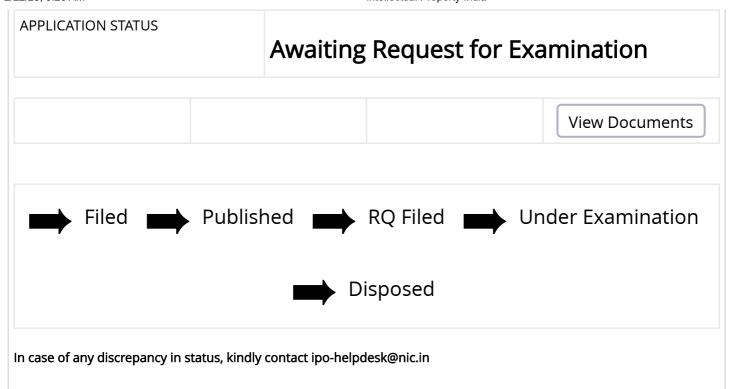
# (http://ipindia.nic.in/index.htm)



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	Application Details					
APPLICATION NUMBER	202341002964					
APPLICATION TYPE	ORDINARY APPLICATION					
DATE OF FILING	14/01/2023					
APPLICANT NAME	<ol> <li>Dr. Kiran Kumar Y</li> <li>Mrs. E. Navya Pravala</li> <li>Dr. Gopal Krishna Padhy</li> <li>Ms. Annada Kar</li> <li>Dr. Reddy Sunil</li> <li>Ms. Ipsita Priyadarsini Samal</li> <li>Dr. Y. Ganesh Kumar</li> <li>Mrs. V. Anusha</li> <li>Dr. Gyanranjan Mahalik</li> <li>Dr. K. Jagadeeswaraiah</li> <li>Mr. Sumanta Bhattacharya</li> </ol>					
TITLE OF INVENTION	Nano formulations-based drug delivery to reach blood brain barrier					
FIELD OF INVENTION	CHEMICAL					
E-MAIL (As Per Record)	03mrmanoj@gmail.com					
ADDITIONAL-EMAIL (As Per Record)	03mrmanoj@gmail.com					
E-MAIL (UPDATED Online)						
PRIORITY DATE						
REQUEST FOR EXAMINATION DATE						
PUBLICATION DATE (U/S 11A)	17/02/2023					

#### **Application Status**

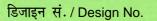






#### भारत सरकार GOVERNMENT OF INDIA पेटेंट कार्यालय THE PATENT OFFICE

डिजाइन के पंजीकरण का प्रमाणपत्र CERTIFICATE OF REGISTRATION OF DESIGN



375821-001

तारीख / Date

19/12/2022

पारस्परिकता तारीख / Reciprocity Date\*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **EMERGENCY VENTILATOR** से संबंधित है, का पंजीकरण, श्रेणी **24-01** में 1.Dr.Ashish Kumar Sarangi 2. Dr.Rudra Narayan Sahoo 3.Dr.Bhabani Sankar Satapathy 4.Dr.Kalpita Bhatta के नाम में उपर्यक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class **24-01** in respect of the application of such design to **EMERGENCY VENTILATOR** in the name of 1.Dr.Ashish Kumar Sarangi 2. Dr.Rudra Narayan Sahoo 3.Dr.Bhabani Sankar Satapathy 4.Dr.Kalpita Bhatta.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में। In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

# INTELLECTUAL PROPERTY INDIA PATENTS | DESIGNS | TRADE MARKS

निर्गमन की तारीख/Date of Issue : 13/03/2023

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\*The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.

**ORIGINAL** 

मूल/No: 130680





# (http://ipindia.nic.in/index.htm)



(http://ipindia.nic.in/index.htm)

	Application Details				
APPLICATION NUMBER	202241062660				
APPLICATION TYPE	ORDINARY APPLICATION				
DATE OF FILING	02/11/2022				
APPLICANT NAME	<ol> <li>Mr.N.Balasubramanian</li> <li>Ms.T.Preethi</li> <li>Dr. Mohammed Siddique</li> <li>Dr. Rajnish Choubey</li> <li>Dr Karuna nidhi Pandagre</li> <li>DR. JYOTI PRASAD PATRA</li> <li>MS. MAYURI SONI</li> <li>Mrs. Raksha vishwakarma</li> <li>Mrs Saba parveen</li> <li>Dr. V.Kannan</li> <li>Mr.J Logeshwaran</li> </ol>				
TITLE OF INVENTION	A secure routing protocol in opportunistic internet of things network using machine learning approach.				
FIELD OF INVENTION	COMMUNICATION				
E-MAIL (As Per Record)	arinnapatent@gmail.com				
ADDITIONAL-EMAIL (As Per Record)					
E-MAIL (UPDATED Online)					
PRIORITY DATE					
REQUEST FOR EXAMINATION DATE					
PUBLICATION DATE (U/S 11A)	18/11/2022				

Application :	Status
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# Awaiting Request for Examination View Documents Filed Published RQ Filed Under Examination Disposed In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in



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(http://ipindia.nic.in/index.htm)

	Application Details					
APPLICATION NUMBER	202241065251					
APPLICATION TYPE	ORDINARY APPLICATION					
DATE OF FILING	14/11/2022					
APPLICANT NAME	<ol> <li>C. Padmavathy</li> <li>Dr Praveen Bhai Patel</li> <li>Mr Ramendra singh Niranjan</li> <li>Dr. Pasupuleti Subrahmanya Ranjit</li> <li>Dr. Mohammed Siddique</li> <li>Mr Bishnu Kant Shukla</li> <li>Mr. KANNADASAN B</li> <li>PARTHIBAN M</li> <li>Mr.J.Thirunavukarasu</li> <li>Mr Biresh Kumar</li> <li>Mr Pallab Banerjee</li> <li>Mr.J Logeshwaran</li> </ol>					
TITLE OF INVENTION	IOT based irrigation system using soil moisture sensor in agriculture field					
FIELD OF INVENTION	MECHANICAL ENGINEERING					
E-MAIL (As Per Record)	arinnapatent@gmail.com					
ADDITIONAL-EMAIL (As Per Record)						
E-MAIL (UPDATED Online)						
PRIORITY DATE						
REQUEST FOR EXAMINATION DATE						
PUBLICATION DATE (U/S 11A)	25/11/2022					

#### **Application Status**

# Awaiting Request for Examination View Documents Filed Published RQ Filed Under Examination Disposed In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in



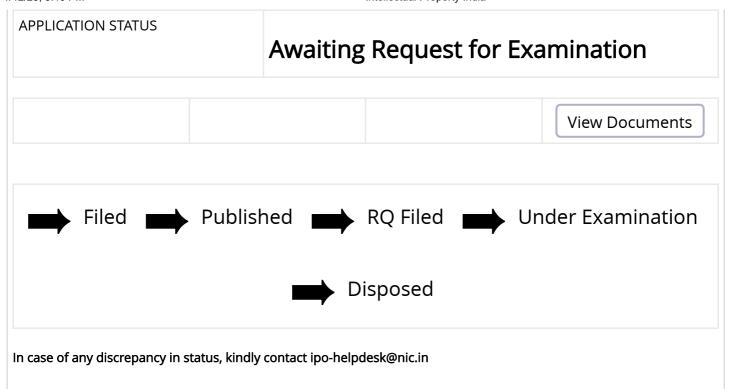
# (http://ipindia.nic.in/index.htm)



(http://ipindia.nic.in/index.htm)

	Application Details				
APPLICATION NUMBER	202241073393				
APPLICATION TYPE	ORDINARY APPLICATION  18/12/2022  1. Dr. S. Vanithamani 2. N. Chellapandi 3. Dr. S. Suganya 4. Mr. Rajeev Ratna Vallabhuni 5. Satheesh S 6. Dr. K. Amudha 7. Dr. Mohammed Siddique 8. Dr. A Rohini 9. Dr. S. Balu 10. Mr. K. Palanivel 11. Dr. V. Kannan 12. Mr. J Logeshwaran				
DATE OF FILING					
APPLICANT NAME					
TITLE OF INVENTION	BANANA LEAF DISEASE DETECTION USING CNN – OPEN CV-DEEP LEARNING APPROACH				
FIELD OF INVENTION	BIOTECHNOLOGY				
E-MAIL (As Per Record)	cldcresearch@gmail.com				
ADDITIONAL-EMAIL (As Per Record)					
E-MAIL (UPDATED Online)					
PRIORITY DATE					
REQUEST FOR EXAMINATION DATE					
PUBLICATION DATE (U/S 11A)	30/12/2022				

#### **Application Status**



# Bundesrepublik Deutschland

# Urkunde

### über die Eintragung des Gebrauchsmusters Nr. 20 2022 107 272

#### Bezeichnung:

Ein System zur Analyse der Infektion mit Pseudomonas Syringae durch gezielte Ansprache von Cochaperonen, die eine J-Domäne enthalten

IPC: C12Q 1/04

Inhaber/Inhaberin:

Centurion University of Technology and Management, Bhubaneswar, Odisha, IN
Panigrahi, Gagan Kumar, Jatni, Odisha, IN
Sahoo, Annapurna, Nayagarh, Odisha, IN
Sahoo, Shraban Kumar, Sambalpur, Odisha, IN
Satapathy, Kunja Bihari, Bhubaneswar, Odisha, IN

Tag der Anmeldung: 28.12.2022

Tag der Eintragung: 30.01.2023

Die Präsidentin des Deutschen Patent- und Markenamts

Cornelia Rudloff-Schäffer

Comelia R. dwg- Idager

München, 30.01.2023

COURT OF STREET



#### DPMAdirekt - elektronische Dokumentenannahme

#### Benachrichtigung über den Erhalt einer Gebrauchsmusteranmeldung:

Dokumenten Referenz-Nr. (DRN): 2022122813184100DE

Anmeldung eingegangen am: 28.12.2022

Digitale Signatur

Signaturniveau: fortgeschritten

gültig von: 28.11.2022 01:00:00

gültig bis: 29.11.2027 00:59:59

Seriennummer: 18195984972387930518499884007315914216

Herausgeber: O=European Patent Office,

CN=European Patent Office CA G2

#### Daten zum vorliegenden Vorgang:

amtliches Aktenzeichen: 20 2022 107 272.8

Barcode:

20 2022 107 272 8

Vorgangstyp: Gebrauchsmusteranmeldung

Bezeichnung der Erfindung: Ein System zur Analyse der Infektion mit Pseudomonas Syringae durch

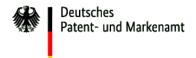
gezielte Ansprache von Cochaperonen, die eine J-Domäne enthalten

Ihr Zeichen: G11949DE

Anmelder: Centurion University of Technology and Management

HIG-4, Jaydev Vihar, Dist: Khurda 751013 Bhubaneswar, Odisha

IN



#### **DPMA**direkt - elektronische Dokumentenannahme

Deutschen Patent- und Markenamt	DE-UM-REQUEST.XML
Hashwert des Antrags	24A2696901DC1AF1968860E86FBD9792A176299A
Folgende Formulare wurden automatisch aus den eingereichten Dateien generiert	DE-UM-REQUEST.PDF DIRECTDEBIT.pdf



#### DPMAdirekt - elektronische Dokumentenannahme

Folgende Warnungen sind bei der Validierung aufgetreten:

[Anmelder: Die zusätzliche Adresszeile sollte die Länge von 100 Zeichen nicht überschreiten., Anmelder: Die zusätzliche Adresszeile sollte die Länge von 100 Zeichen nicht überschreiten., Anmelder: Die zusätzliche Adresszeile sollte die Länge von 100 Zeichen nicht überschreiten., Anmelder: Die zusätzliche Adresszeile sollte die Länge von 100 Zeichen nicht überschreiten.]

Diese Mitteilung wird signiert und verschlüsselt übertragen und bestätigt den Eingang der oben aufgelisteten Dateien im Deutschen Patent- und Markenamt. **Darüber hinaus sind zu diesem Zeitpunkt keine rechtlich verbindlichen Aussagen bezüglich des Inhaltes dieser Dateien möglich.** Fragen zu diesem Vorgang richten Sie bitte unter Angabe der DRN, des amtlichen Aktenzeichens und des Eingangsdatums an:

#### **Deutsches Patent- und Markenamt**

Zweibrückenstr. 12 80297 München

Telefon: 089 / 2195-1000 Fax: 089 / 2195-2221 E-Mail: info@dpma.de

Für technische Fragen rund um DPMAdirekt wenden Sie sich an unsere technische Kundenbetreuung:

E-Mail: DPMAdirekt@dpma.de

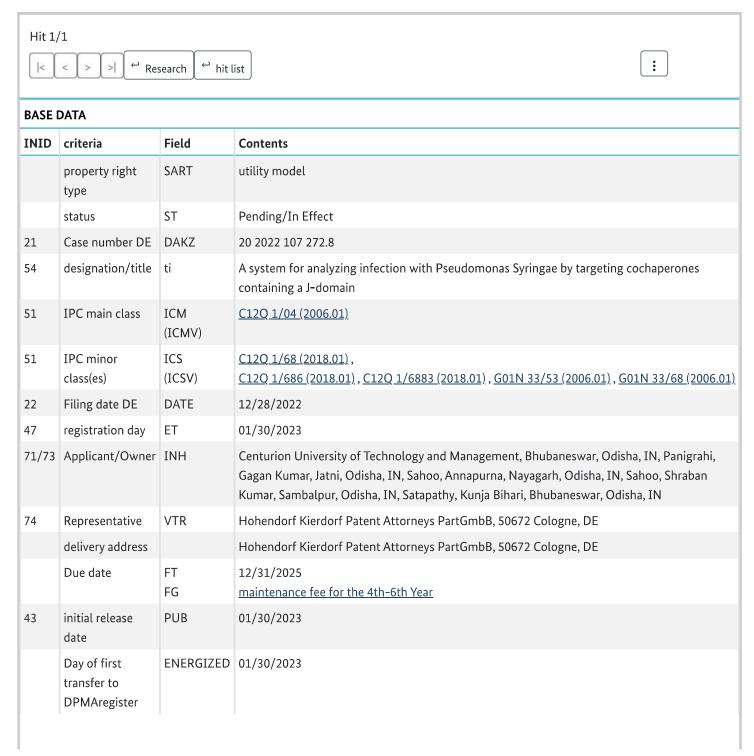


#### **DPMA** register

menu

#### Register information for utility models

File number DE: 20 2022 107 272.8 (status: pending/in force, as of: February 15, 2023)



INI	D criteri	a	Field	Contents					
	updat	` ′	REG	01/30/2023 (show all update days)					
PRC	CEDURA	L DATA							
No.	procedu	re type	status of p	proceedings			status of proceedings 🔺	initial release date	Close all details
1	pre-trial		The applic	plication is in the preliminary ation			12/28/2022		<u>View Details</u>
2	utility m		Registratio	on of the utility model			01/30/2023		View Details
PRC	CEDURE	VIEW UTILI	ITY MODEL P	ROCEDURE :	REGISTRATI	ON (	OF THE UTILITY MODEL	(NO.: 2) Close detai	<u>ls</u>
INII	D	criteria			Field	Con	tents		
		procedure type		VART	utility model proceedings				
	status of proceed		ceedings	VST Regi		Registration of the utility model			
	status		status of proceedings		VSTT	01/30/2023			
	Procedure update da		odate date		REG	01/30/2023			

You are here > <u>DPMAregister homepage</u> > <u>Patents and utility models</u> > <u>Basic search</u> > <u>List of hits</u> > Detailed view

imprint data protection Accessibility Statement

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# Registerauszug zum Aktenzeichen 20 2022 107 272.8

Stand am 15.02.2023 (letzte Aktualisierung in DPMAregister am 30.01.2023)

Es bestehen folgende Eintragungen:

#### **Stammdaten**

[]	Schutzrechtsart: Gebrauchsmuster
[]	Status: Anhängig/in Kraft
[21]	<b>Aktenzeichen DE:</b> 20 2022 107 272.8
[54]	<b>Bezeichnung/Titel:</b> Ein System zur Analyse der Infektion mit Pseudomonas Syringae durch gezielte Ansprache von Cochaperonen, die eine J-Domäne enthalten
[51]	IPC-Hauptklasse: C12Q 1/04 (2006.01)
[51]	IPC-Nebenklasse(n): C12Q 1/68 (2018.01);C12Q 1/686 (2018.01);C12Q 1/6883 (2018.01);G01N 33/53 (2006.01);G01N 33/68 (2006.01)
[22]	Anmeldetag DE: 28.12.2022
[47]	Eintragungstag: 30.01.2023
[71/ 73]	<b>Anmelder/Inhaber:</b> Centurion University of Technology and Management, Bhubaneswar, Odisha, IN, Panigrahi, Gagan Kumar, Jatni, Odisha, IN, Sahoo, Annapurna, Nayagarh, Odisha, IN, Sahoo, Shraban Kumar, Sambalpur, Odisha, IN, Satapathy, Kunja Bihari, Bhubaneswar, Odisha, IN
[74]	Vertreter: Hohendorf Kierdorf Patentanwälte PartGmbB, 50672 Köln, DE
[]	Zustellanschrift: Hohendorf Kierdorf Patentanwälte PartGmbB, 50672 Köln, DE
[]	Fälligkeit: Aufrechterhaltungsgebühr für das 46. Jahr/ 31.12.2025
[43]	Erstveröffentlichungstag: 30.01.2023
[]	Tag der ersten Übernahme in DPMAregister: 30.01.2023
r1	Tag der (letzten) Aktualisierung in DPMAregister: 30 01 2023

#### Verfahrensdaten

#### Vorverfahren

[----] Verfahrensart: Vorverfahren

[----] Verfahrensstand: Die Anmeldung befindet sich in der Vorprüfung

[----] Verfahrensstandstag: 28.12.2022

[----] Tag der Aktualisierung des Verfahrens: 30.01.2023

#### Gebrauchsmusterverfahren

[----] **Verfahrensart:** Gebrauchsmusterverfahren

[----] **Verfahrensstand:** Eintragung des Gebrauchsmusters

[----] Verfahrensstandstag: 30.01.2023

[----] Tag der Aktualisierung des Verfahrens: 30.01.2023



POSTANSCHRIFT Deutsches Patent- und Markenamt • 80297 München

Hohendorf Kierdorf Patentanwälte PartGmbB Hohenzollernring 79-83 50672 Köln HAUSANSCHRIFT Zweibrückenstraße 12, 80331 München

POSTANSCHRIFT 80297 München

KONTAKT Röber

TEL +49 89 2195-1770 FAX +49 89 2195-2221 INTERNET www.dpma.de AKTENZEICHEN 20 2022 107 272.8

ANMELDER/INHABER Centurion University of Technology and

Management u.a.

IHR ZEICHEN G11949DE ERSTELLT AM 04.01.2023

Bitte Aktenzeichen und Anmelder/Inhaber bei allen Eingaben und Zahlungen angeben!

#### Empfangsbestätigung für eine Gebrauchsmusteranmeldung

Die aus der beiliegenden Antragskopie ersichtliche Gebrauchsmusteranmeldung ist am 28.12.2022 beim Deutschen Patent- und Markenamt eingegangen. Die Anmeldung hat das **Aktenzeichen 20 2022 107 272.8** erhalten.

#### Eingegangene Unterlagen:

4	9	Spita(n)	mit Roce	chreibung
1	9	Selletti	mii Besc	mreibuna

- 4 Seite(n) Schutzansprüche mit 10 Schutzansprüchen
- **2** Blatt Zeichnung(en)
- **0** Abschrift(en) der Voranmeldung(en)

Abschrift der	Voranmeldung	bei Abzweigung
	0	0 0

□ Vertretervollmacht

☐ Sequenzprotokoll als elektronisches Dokument

#### Wichtige Hinweise:

Wird die Anmelde- oder Rechercheantragsgebühr nicht innerhalb von 3 Monaten nach Einreichung der Anmeldung bzw. nach Stellung des Antrags gezahlt, so gilt die Anmeldung bzw. der Rechercheantrag als zurückgenommen (§ 6 PatKostG). Bitte beachten Sie, dass außer der Empfangsbestätigung keine weitere Gebührenbenachrichtigung versandt wird.

Auf der nächsten Seite befinden sich weitere Informationen zu den Gebühren sowie Zahlungshinweise.



Dieses Dokument wurde elektronisch erstellt und ist ohne Unterschrift gültig.

Zugang DPMAdirektPro Anlage(n)

#### Gebührensätze

Anmeldegebühr

bei Anmeldung in elektronischer Form 30,-- EUR (Gebührennummer 321 000)
bei Anmeldung in Papierform 40,-- EUR (Gebührennummer 321 100)
Recherchegebühr 250,-- EUR (Gebührennummer 321 200)

Bei jeder Zahlung ist das vollständige **Aktenzeichen**, die genaue Bezeichnung des **Anmelders** und der **Verwendungszweck in Form der Gebührennummer** (s. unten) in deutlicher Schrift anzugeben.

Die **Recherchegebühr** verfällt mit Zahlung; eine Erstattung der Gebühr findet daher auch dann nicht statt, wenn die Recherche z.B. wegen Zurücknahme oder Zurückweisung der Anmeldung abgebrochen werden muss. Es wird daher empfohlen, den Rechercheantrag erst dann zu stellen, wenn feststeht, dass der Eintragung keine Hindernisse im Wege stehen.

#### Zahlungshinweise

- Die Zahlung der Gebühr bestimmt sich nach der Patentkostenzahlungsverordnung (PatKostZV).
   Danach können Gebühren wie folgt entrichtet werden:
  - a) durch Barzahlung bei den Geldstellen des Deutschen Patent- und Markenamts in München, in Jena und im Informations- und Dienstleistungszentrum Berlin,
  - b) durch Überweisung auf das auf der ersten Seite dieses Schreibens angegebene Konto der Bundeskasse für das Deutsche Patent- und Markenamt,
  - c) durch (Bar-) Einzahlung mit Zahlschein bei der Postbank oder bei allen Banken und Sparkassen auf das auf der ersten Seite dieses Schreibens angegebene Konto der Bundeskasse für das Deutsche Patent- und Markenamt oder
  - d) durch Erteilung eines gültigen SEPA-Basis-Lastschriftmandats mit Angaben zum Verwendungszweck. Bitte benutzen Sie hierfür die auf unserer Internetseite <a href="www.dpma.de">www.dpma.de</a> bereitgestellten Formulare (A 9530 und A 9532) und beachten Sie die dort zur Verfügung stehenden Hinweise zum SEPA-Verfahren.
    - Das SEPA-Mandat muss dem DPMA immer im Original vorliegen. Bei einer Übermittlung per Fax muss das SEPA-Mandat im Original innerhalb eines Monats nachgereicht werden, damit der Zahlungstag gewahrt bleibt.
- Bei jeder Zahlung sind das vollständige Aktenzeichen, die genaue Bezeichnung des Anmelders (Inhabers) und die Gebührennummern in deutlicher Schrift anzugeben. Die Gebührennummern ergeben sich aus dem Gebührenverzeichnis des Patentkostengesetzes (PatKostG), das auch im Kostenmerkblatt A 9510 des Deutschen Patent- und Markenamts abgedruckt ist.
  - Unkorrekte bzw. unvollständige Angaben führen zu Verzögerungen bei der Bearbeitung.
- 3. Als Einzahlungstag gilt gemäß § 2 PatKostZV
  - a) bei Barzahlung der Tag der Einzahlung,
  - b) bei Überweisung der Tag, an dem der Betrag auf dem Konto der Bundeskasse für das Deutsche Patent- und Markenamt gutgeschrieben wird,
  - c) bei (Bar-) Einzahlung auf ein Konto der Bundeskasse für das Deutsche Patent- und Markenamt der Tag der Einzahlung.
    - Da die Bundeskasse die Bareinzahlung von der Überweisung nach b) nicht anhand der Buchungsunterlagen zu unterscheiden vermag, sollte der Bareinzahler, wenn er den nach dieser Zahlungsform vorverlagerten Einzahlungstag geltend machen möchte, dem Deutschen Patent- und Markenamt unverzüglich den vom Geldinstitut ausgestellten Einzahlungsbeleg vorlegen;

d) bei Erteilung eines SEPA-Basis-Lastschriftmandats mit Angaben zum Verwendungszweck, der die Kosten umfasst, der Tag des Eingangs beim Deutschen Patent- und Markenamt oder beim Bundespatentgericht, bei zukünftig fällig werdenden Kosten der Tag der Fälligkeit, sofern die Einziehung zu Gunsten der zuständigen Bundeskasse für das Deutsche Patent- und Markenamt erfolgt. Wird das SEPA-Basis-Lastschriftmandat durch Telefax übermittelt, ist dessen Original innerhalb einer Frist von einem Monat nach Eingang des Telefax nachzureichen. Andernfalls gilt als Zahlungstag der Tag des Eingangs des Originals.



#### REPUBLIC OF SOUTH AFRICA

#### REPUBLIEK VAN SUID AFRIKA

PATENTS ACT, 1978

## CERTIFICATE

accordance with section 44 (1) of the Patents Act, No. 57 of 1978, it is hereby certified that:

#### CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

Has been granted a patent in respect of an invention described and claimed in complete specification deposited at the Patent Office under the number

2021/10562

by of the complete specification is annexed, together with the relevant Form P2.

In testimon the seal of the Patent Office has been affixed at Pretoria with effect from the 27<sup>th</sup> day of July 2022



REPUBLIC OF SOUTH AFRICA	REGISTER OF PATENTS	PATENTS ACT, 1978
Official application No.	Lodging date: Provisional	Acceptance date
<sup>21</sup> 01 <b>2021/10562</b>	22	47 2022/06/03
International classification	Lodging date: Complete	Granted date
51 C05B	23 2021/12/17	2022/07/27
71 Full name(s) of applicant(s)/Patentee(s):		
CENTURION UNIVERSITY OF TECHNOLOGY AND M		
Centurion University of Technology and Management, (	Jaisna, 752050, India	T <sub>B</sub>
71 Applicant substitued:		Date registrered
71 Assignee(s):		Date registrered
72 Full name(s) of inventor(s):		1000
PANIGRAHI, Gagan Kumar		
SAHOO, Shraban Kumar		
SAHOO, Annapurna		
ARUN KUMAR PRADHAN		
KUNJA BIHARI SATAPATHY		
ANUESHA DALBEHERA		
Priority claimed: Country	Number	Date
1000		
	AL	
54 Title of invention		
A SYSTEM FOR ENHANCING PLANT IMMUNIT	TY AND PLANT GROWTH BY USING FABRICA	TED ZNO-ZNFE2O4 NANOPARTICLES
Address of applicant(s)/patentee(s):		
Centurion University of Technology and Management, (	Odisha, 752050	
INDIA		
74 Address for service		
Wolmarans & Susan Inc.		Y 4
Corner of Barry Hertzog Avenue and Empire Roa	ad, Johannesburg, 2092	A STATE OF THE PARTY OF THE PAR
SOUTH AFRICA		
Reference No.		
61 Patent of addition No.	Date of any change	

#### **RENEWAL SHEET**

Year	Payment Date	Receipt Number	Amount

#### HISTORY SHEET

Date entry made	Description
2021-12-20	Proof reading performed automatically
2021-12-20	Request for the acceptance of a Patent electronically filed on 17/12/2021, numbered 2021/10562
2022-06-03	Application accepted on 3/6/2022.
2022-06-21	Correction of clerical errors consisting of to add inventors filed on 03/06/2022, by CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT.
2022-07-28	Patent advertised on 27-07-2022.
2022-07-28	Patent granted on 27-07-2022.





#### REPUBLIC OF SOUTH AFRICA

#### REPUBLIEK VAN SUID AFRIKA

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Has been granted a patent in respect of an invention described and claimed in complete specification deposited at the Patent Office under the number

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REPUBLIC OF SOUTH AFRICA	REGISTER OF PATENTS	PATENTS ACT, 1978
Official application No.	Lodging date: Provisional	Acceptance date
<sup>21</sup> 01 <b>2021/10562</b>	22	47 2022/06/03
International classification	Lodging date: Complete	Granted date
51 C05B	23 2021/12/17	2022/07/27
71 Full name(s) of applicant(s)/Patentee(s):		
CENTURION UNIVERSITY OF TECHNOLOGY AND M		
Centurion University of Technology and Management, (	Jaisna, 752050, India	T <sub>B</sub>
71 Applicant substitued:		Date registrered
71 Assignee(s):		Date registrered
72 Full name(s) of inventor(s):		1000
PANIGRAHI, Gagan Kumar		
SAHOO, Shraban Kumar		
SAHOO, Annapurna		
ARUN KUMAR PRADHAN		
KUNJA BIHARI SATAPATHY		
ANUESHA DALBEHERA		
Priority claimed: Country	Number	Date
1000		
	AL	
54 Title of invention		
A SYSTEM FOR ENHANCING PLANT IMMUNIT	TY AND PLANT GROWTH BY USING FABRICA	TED ZNO-ZNFE2O4 NANOPARTICLES
Address of applicant(s)/patentee(s):		
Centurion University of Technology and Management, (	Odisha, 752050	
INDIA		
74 Address for service		
Wolmarans & Susan Inc.		Y 4
Corner of Barry Hertzog Avenue and Empire Roa	ad, Johannesburg, 2092	A STATE OF THE PARTY OF THE PAR
SOUTH AFRICA		
Reference No.		
61 Patent of addition No.	Date of any change	

#### **RENEWAL SHEET**

Year	Payment Date	Receipt Number	Amount

#### HISTORY SHEET

Date entry made	Description
2021-12-20	Proof reading performed automatically
2021-12-20	Request for the acceptance of a Patent electronically filed on 17/12/2021, numbered 2021/10562
2022-06-03	Application accepted on 3/6/2022.
2022-06-21	Correction of clerical errors consisting of to add inventors filed on 03/06/2022, by CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT.
2022-07-28	Patent advertised on 27-07-2022.
2022-07-28	Patent granted on 27-07-2022.



(12) PATENT APPLICATION PUBLICATION

(21) Application No.202231026515 A

(19) INDIA

(22) Date of filing of Application :07/05/2022

(43) Publication Date: 10/06/2022

(54) Title of the invention: Portable Photovoltaic Mounting Assembly for Agrivoltaics

(51) International :F24S0025120000, H02S0020100000, H02S0040220000, H02S0020300000,

classification F24S00250000000

(86) International Application No :PCT// :01/01/1900

Filing Date
(87) International
Publication No
: NA

(61) Patent of Addition to Application Number :NA

Filing Date
(62) Divisional to
Application Number
Filing Date

SNA
:NA

(71)Name of Applicant:

1)Centurion University of Technology & Management (CUTM)

Address of Applicant :At-Alluri Nagar, PO-R.Sitapur via-Uppalada, Parlakhemundi, Gajapati District, Odisha, India – 761211. ------

Name of Applicant: NA Address of Applicant: NA (72)Name of Inventor: 1)Prof. Nimay Chandra Giri

Address of Applicant :Department of Electronics and Communication Engineering, Centurion University of Technology

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2)Dr. Ramesh Chandra Mohanty

Address of Applicant :Department of Mechanical Engineering, Centurion University of Technology & Management (CUTM) Bhubaneswar, Odisha-752050 India -------

3)Prof. Jagannath Padhi

Address of Applicant :Department of Electrical Engineering, Centurion University of Technology & Management (CUTM) Bhubaneswar, Odisha-752050 India --------

#### (57) Abstract:

ABSTRACT: Title: Portable Photovoltaic Mounting Assembly for Agrivoltaics The present disclosure proposes a portable and adjustable photovoltaic mounting assembly for agrivoltaics that enables mutual sharing of sunlight between farm and solar panels and thereby increases land productivity and revenue of farmers. The photovoltaic mounting assembly 100 comprises at least one solar panel 102, at least one mounting support 104, at least a pair of vertical support members, and plurality of ground support members 110. The usage of photovoltaic panels on the farm lands to enhance the socio-economic indicators such as Benefit-Cost Ratio (BCR), Payback Period (PBP), and Land Equivalent Ratio (LER) of the system. The adjustable photovoltaic mounting assembly provides sufficient amount of sunlight to transfer underneath the mounting assembly for better photosynthesis and food production.

No. of Pages: 21 No. of Claims: 9





Controller General of Patents, Designs and Trademarks
Department of Industrial Policy and Promotion
Ministry of Commerce and Industry

#### **Design Application Details**

Application Number: 374952-001

Cbr Number: 209220

Cbr Date: 02/12/2022 10:40:00

Applicant Name: 1. Centurion University of Technology and Management (CUTM)

2. Prof. Nimay Chandra Giri

3. Dr. Ramesh Chandra Mohanty

#### **Design Application Status**

Application Status: Examination Report has been Generated ,Case is Waiting for Examination Report Reply (FER

generated on 17/01/2023)

Back



	GEOGRAPHICAL INDICATIONS
	Application Details
APPLICATION NUMBER	202241042430
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	25/07/2022
APPLICANT NAME	<ol> <li>Dr. Sonal Sharma</li> <li>Dr. G. Nagaraj</li> <li>Dr. A. S Prakaash</li> <li>Dr. Abhigyan Ganguly</li> <li>Dr. Bhaskar Seth</li> <li>Anirbit Sengupta</li> <li>Dillip Kumar Mohanta</li> <li>Vaishnawi Priyadarshni</li> <li>Dr. Harish Chandra Mohanta</li> <li>Davinder Paul Singh</li> <li>Udit Mamodiya</li> </ol>
TITLE OF INVENTION	AN INTELLIGENT SYSTEM AND A METHOD FOR MONITORING LAUNDRY MACHINE OPERATIONS USING MACHINE LEARNING FOR ANALYSIS OF ACOUSTIC TRANSDUCER SIGNAL INFORMATION
FIELD OF INVENTION	MECHANICAL ENGINEERING
E-MAIL (As Per Record)	patenpublication@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	
PUBLICATION DATE (U/S 11A)	29/07/2022



	Application Details
APPLICATION NUMBER	202231049007
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	27/08/2022
APPLICANT NAME	<ol> <li>Dr. Harish Chandra Mohanta</li> <li>Shalini Kushwaha</li> <li>Ayushi</li> <li>Neha</li> <li>Vikas Chauhan</li> <li>Banita Kumari Charchi</li> <li>Pramod Kumar Mandal</li> <li>Dr. Sachin Gupta</li> <li>Dr. Brajesh Kumar Singh</li> <li>Dr. Sanjay Sharma</li> <li>Prof. (Dr). R.K Bathla</li> </ol>
TITLE OF INVENTION	AN INTELLIGENT SYSTEM AND METHOD FOR THE SERVICE SECTOR ON THE NATION'S ECONOMIC GROWTH USING MACHINE LEARNING AND BLOCKCHAIN TECHNOLOGY
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	harishmohanta@cutm.ac.in
ADDITIONAL-EMAIL (As Per Record)	patenpublication@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	
PUBLICATION DATE (U/S 11A)	09/09/2022





डिजाइन के पंजीकरण का प्रमाणपत्र CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No.

376914-001

**ORIGINAL** 

मूल/No: 131007

तारीख / Date

07/01/2023

पारस्परिकता तारीख / Reciprocity Date\*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **PORTABLE SOLAR VEGETABLES DRYER** से संबंधित है, का पंजीकरण, श्रेणी **07-05** में 1.Dr. Debani Prasad Mishra 2. Dr.Arun Kumar Sahoo 3.Dr. Ramesh Chandra Mohanty 4.Prof. Nimay Chandra Giri के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class **07-05** in respect of the application of such design to **PORTABLE SOLAR VEGETABLES DRYER** in the name of 1.Dr. Debani Prasad Mishra 2. Dr.Arun Kumar Sahoo 3.Dr. Ramesh Chandra Mohanty 4.Prof. Nimay Chandra Giri.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में। In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

# INTELLECTUAL PROPERTY INDIA PATENTS | DESIGNS | TRADE MARKS GEOGRAPHICAL INDICATIONS

निर्गमन की तारीख/Date of Issue : 15/03/2023

महानियंत्रक पेंट्रेंट डिजाइन और व्यापार चिह्र Controller General of Patents, Designs and Trade Marks

पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति देश के नाम पर की गई है। डिजाइन का सत्त्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अविध के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

\*The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.





डिजाइन के पंजीकरण का प्रमाणपत्र CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No.

376944-001

**ORIGINAL** 

मूल/No: 131381

तारीख / Date

07/01/2023

पारस्परिकता तारीख / Reciprocity Date\*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **IOT BASED CAMERA FOR HEALTHCARE MANAGEMENT** से संबंधित है, का पंजीकरण, श्रेणी **16-01** में 1.Prof. Sima Das 2. Prof. Susmita Chakrabarty 3.Ms. Solanki Mitra 4.Prof. Nimay Chandra Giri के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 16-01 in respect of the application of such design to IOT BASED CAMERA FOR HEALTHCARE MANAGEMENT in the name of 1.Prof. Sima Das 2. Prof. Susmita Chakrabarty 3.Ms. Solanki Mitra 4.Prof. Nimay Chandra Giri.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में। In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

# INTELLECTUAL PROPERTY INDIA PATENTS | DESIGNS | TRADE MARKS GEOGRAPHICAL INDICATIONS

निर्गमन की तारीख/Date of Issue : 20/03/2023

महानियंत्रक पेंट्रेंट डिजाइन और व्यापार चिह्र Controller General of Patents, Designs and Trade Marks

पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति देश के नाम पर की गई है। डिजाइन का सत्त्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अविध के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.





डिजाइन के पंजीकरण का प्रमाणपत्र CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No.

376903-001

**ORIGINAL** 

मूल/No: 131380

तारीख / Date

07/01/2023

पारस्परिकता तारीख / Reciprocity Date\*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो IOT BASED AGRICULTURE ROBOT FOR PESTICIDES SPRAYING से संबंधित है, का पंजीकरण, श्रेणी 15-03 में 1.Prof. Prasheet Mishra 2. Dr.Taraprasad Mohapatra 3.Prof.Sudhansu Sekhar Mishra 4.Prof. Nimay Chandra Giri के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 15-03 in respect of the application of such design to IOT BASED AGRICULTURE ROBOT FOR PESTICIDES SPRAYING in the name of 1.Prof. Prasheet Mishra 2. Dr.Taraprasad Mohapatra 3.Prof.Sudhansu Sekhar Mishra 4.Prof. Nimay Chandra Giri.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में। In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

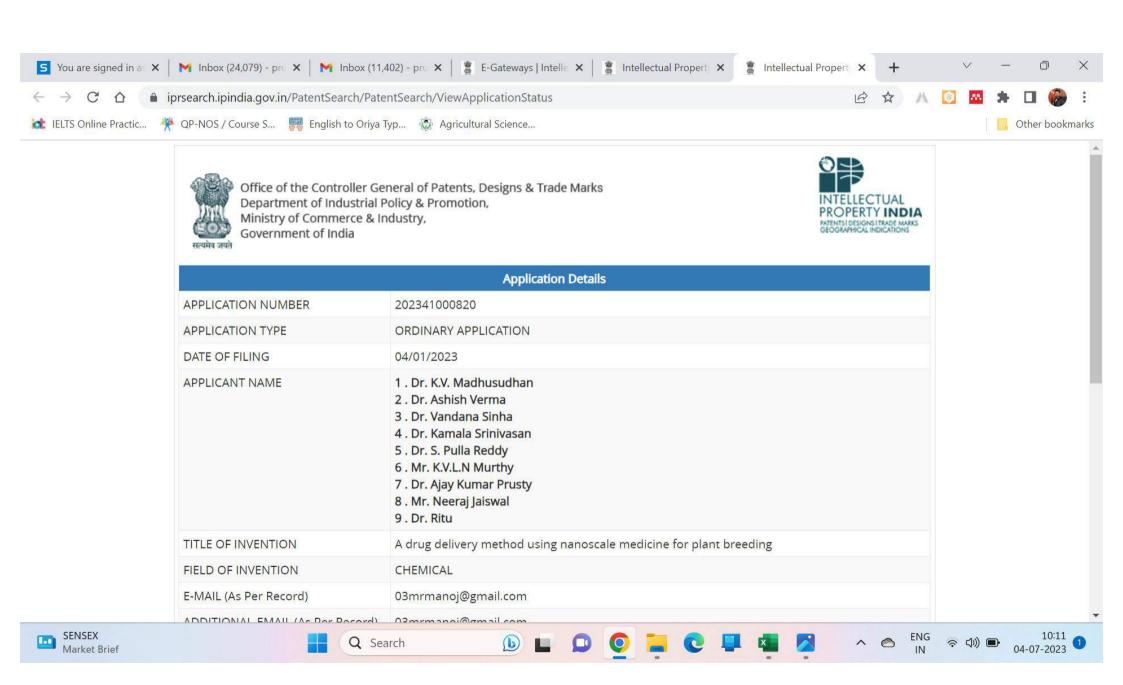
## INTELLECTUAL PROPERTY INDIA PATENTS | DESIGNS | TRADE MARKS GEOGRAPHICAL INDICATIONS

निर्गमन की तारीख/Date of Issue : 20/03/2023

महानियंत्रक पेटेंट डिजाइन और व्यापार चिह्र Controller General of Patents, Designs and Trade Marks

पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति देश के नाम पर की गई है। डिजाइन का सत्त्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अविध के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

\*The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



### पेटेंट कार्यालय शासकीय जर्नल

# OFFICIAL JOURNAL OF THE PATENT OFFICE

निर्गमन सं. 45/2022 ISSUE NO. 45/2022

शुक्रवार FRIDAY दिनांकः 11/11/2022

DATE: 11/11/2022

#### पेटेंट कार्यालय का एक प्रकाशन PUBLICATION OF THE PATENT OFFICE

(19) INDIA

(22) Date of filing of Application :26/10/2022

(43) Publication Date: 11/11/2022

#### (54) Title of the invention: IDENTIFY A DISTANT EIGHT-PLANET SOLAR SYSTEM USING ARTIFICIAL INTELLIGENCE

:G06N0003080000, G06N0003040000, (51) International G06K0009620000, G06N0003020000, classification G06N0005000000 (86) International :NA Application No :NA Filing Date (87) International : NA Publication No. (61) Patent of Addition to :NA Application Number ·NA Filing Date

:NA

·NA

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Address of Applicant :Lecturer, Department of Mechanical Engineering, Sandip Polytechnic, Nashik, Maharashtra 422213, India ------

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#### 3)Rama Prasanna Dalai

4)Ms.Sangu Navya

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7)Dr. Malligunta Kiran Kumar

Name of Applicant : NA Address of Applicant : NA

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#### 7)Dr. Malligunta Kiran Kumar

Address of Applicant :Associate Professor, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, Guntur, Andhra Pradesh-522302, India ----------

#### (57) Abstract:

(62) Divisional to

Application Number

Filing Date

Over a million stars have been tracked over the course of the last decade in an effort to find transiting planets. The manual interpretation of prospective exoplanet candidates is time-consuming, prone to human mistakes, and the outcomes of this process are difficult to measure. In this article, we offer a novel way of finding exoplanet candidates in big planetary search initiatives that utilises a neural network, in contrast to the methods that are currently being used. Neural networks, which are often referred to as deep learning or deep nets, are intended to provide a computer with perception of a particular issue by teaching the computer to detect patterns. Deep neural networks, in contrast to earlier methods of transit identification, are taught to distinguish individual planet properties rather than depending on hand-coded criteria that humans consider to be the most representative. The convolutional neural network that we have developed is superior to the least-squares technique when it comes to the accuracy with which it can identify Earth-like exoplanets in noisy time-series data. Deep neural networks are extremely generalizable, which enables data to be assessed after interpolation from a variety of time series without negatively impacting the performance of the network. We do not need to fit any models in order to find periodic transits since our deep net analysis of Kepler light curves has shown that our results are in agreement with the actual period.

No. of Pages: 20 No. of Claims: 3







#### पेटेंट कार्यालय,भारत सरकार पेटेंट प्रमाण पत्र

The Patent Office, Government Of India Patent Certificate

पेटेंट नियमावली का नियम 74)

(Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No.

520024

आवेदन सं. / Application No.

202231026515

फाइल करने की तारीख / Date of Filing

07/05/2022

पेटेंटी / Patentee

Centurion University of Technology & Management (CUTM)

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकटित Portable Photovoltaic Mounting Assembly for Agrivoltaics नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख मई 2022 के सातवें दिन से बीस वर्ष की अविध के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled *Portable Photovoltaic Mounting Assembly for Agrivoltaics* as disclosed in the above mentioned application for the term of 20 years from the 7<sup>th</sup> day of May 2022 in accordance with the provisions of the Patents Act,1970.

अनुदान की तारीख : 05/03/2024 Date of Grant : ति विभिन्न दिन है। देश कि विभन्न है। देश कि वि

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, मई 2024 के सातवें दिन को और उसके पश्चात प्रत्येक वर्ष मे उसी दिन देय होगी।

Note. - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 7" day of May 2024 and on the same day in every year thereafter.

ە جو ,அறிவுசார் சொத்து அலுவலகம். இந்திய அரசு ، فس آف دى انٹىلىكجولىرابرئيگو

(19) INDIA

(22) Date of filing of Application :08/07/2022

(43) Publication Date: 29/07/2022

#### (54) Title of the invention: Polycentric Knee Joint for Improved Stability and Flexion

:A61F0002640000, A61F0002380000, (51) International A61F0002680000, A61F0005010000, classification

A61F0002500000

(86) International :PCT// Application No :01/01/1900 Filing Date

(87) International

(61) Patent of Addition :NA to Application Number :NA Filing Date

(62) Divisional to **Application Number** Filing Date

: NA Publication No

> :NA :NA

(71)Name of Applicant:

1) Centurion University of Technology & Management (CUTM)

Address of Applicant: At-Alluri Nagar Village, PO-R. Sitapur, Via-Uppalada, Parlakhemundi, Gajapati District, Odisha, India -761211 Parlakhemundi ------ -----

Name of Applicant: NA Address of Applicant: NA (72)Name of Inventor: 1)Rajesh Kumar Mohanty

Address of Applicant :Ph.D.Scholar (Inter disciplinary) Centurion University of Technology and Management Bhubaneswar, Odisha, India. 752050 Bhubaneswar -----

2)Ramesh Chandra Mohanty

Address of Applicant: Ph.D. Professor, Department of Mechanical Engineering Centurion University of Technology and Management Bhubaneswar, Odisha, India. 752050 Bhubaneswar -

3)Sukanta Kumar Sabut

Address of Applicant :Ph.D., Associate Professor, School of Electronics Engineering, KIIT Deemed to be University, Bhubaneswar, Odisha, India - 751024 Bhubaneswar -----

#### (57) Abstract:

ABSTRACT: Title: Polycentric Knee Joint for Improved Stability and Flexion The present disclosure proposes a knee prosthesis designed with a polycentric four-bar linkage mechanism for enhanced knee stability and better swing clearance. The polycentric knee joint comprises a coupling unit, an upper knee unit 106, a lower knee unit 116, a linking means, and a bumper 114. The hinged joint motions of the upper knee unit and the lower knee unit enable kinematic forward and backward gliding movements. The movements limit the free swing of the knee with minimum resistance and help in better swing clearance. The polycentric knee joint is to manufacture a cost-effective knee prosthesis using simple mechanical components. Further, the proposed prosthesis knee joint design allows a low profile design to suit long transfemoral residual limbs.

No. of Pages: 20 No. of Claims: 9





डिजाइन के पंजीकरण का प्रमाणपत्र CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No.

377791-001

**ORIGINAL** 

मूल/No: 131159

तारीख / Date

21/01/2023

पारस्परिकता तारीख / Reciprocity Date\*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **POWDER MANUFACTURING UNIT** से संबंधित है, का पंजीकरण, श्रेणी **15-09** में 1.Dr.Bijaya Bijeta Nayak 2. Dr.Sasmita Sahu 3.Dr. Santosh Kumar Nayak 4.Ms. Debashree Debadatta Behera 5.Dr.Shiv Sankar Das 6.Dr.Rita Kumari Sahu के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 15-09 in respect of the application of such design to POWDER MANUFACTURING UNIT in the name of 1.Dr.Bijaya Bijeta Nayak 2. Dr.Sasmita Sahu 3.Dr. Santosh Kumar Nayak 4.Ms. Debashree Debadatta Behera 5.Dr.Shiv Sankar Das 6.Dr.Rita Kumari Sahu.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में। In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

## INTELLECTUAL PROPERTY INDIA PATENTS | DESIGNS | TRADE MARKS GEOGRAPHICAL INDICATIONS

निर्गमन की तारीख/Date of Issue : 16/03/2023

महानियंत्रक पेंट्रेंट डिजाइन और व्यापार चिह्र Controller General of Patents, Designs and Trade Marks

पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति देश के नाम पर की गई है। डिजाइन का सत्त्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अविध के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

\*The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.





डिजाइन के पंजीकरण का प्रमाणपत्र CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No.

368071-001

**ORIGINAL** 

मूल/No: 133388

तारीख / Date

20/07/2022

पारस्परिकता तारीख / Reciprocity Date\*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो SOLAR OPTICAL DESALINATION UNIT से संबंधित है, का पंजीकरण, श्रेणी 23-03 में 1.Dr. Bijaya Bijeta Nayak 2. Dr. Shiv Sankar Das 3.Ms. Debashree Debadatta Behera 4.Mr. Soumya Ranjan Giri के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 23-03 in respect of the application of such design to SOLAR OPTICAL DESALINATION UNIT in the name of 1.Dr. Bijaya Bijeta Nayak 2. Dr. Shiv Sankar Das 3.Ms. Debashree Debadatta Behera 4.Mr. Soumya Ranjan Giri.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में। In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

# INTELLECTUAL PROPERTY INDIA PATENTS | DESIGNS | TRADE MARKS GEOGRAPHICAL INDICATIONS

निर्गमन की तारीख/Date of Issue : 19/04/2023

महानियंत्रक पेंट्रेंट डिजाइन और व्यापार चिह्र Controller General of Patents, Designs and Trade Marks

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\*The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



Office of the Controller General of Patents, Designs & Trade Marks Department of Industrial Policy & Promotion, Ministry of Commerce & Industry, Government of India

### (http://ipindia.nic.in/index.htm)



(http://ipindia.nic.in/index.htm)

Application Details	
APPLICATION NUMBER	202341016847
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	14/03/2023
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TITLE OF INVENTION	A method and system for efficient removal of toxic metals using functionalized adsorbents
FIELD OF INVENTION	CHEMICAL
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Application Status			
APPLICATION STATUS	Awaiting Request for Examination		

	View Documents





#### REPUBLIEK VAN SUID AFRIKA

PATENTS ACT, 1978

### CERTIFICATE

accordance with section 44 (1) of the Patents Act, No. 57 of 1978, it is hereby certified that:

r. Ashish Kumar Sarangi; Dr. Amarendranath Choudhury; Mr. Dhilleshwara Rao Vana; Dr. Rudra Narayan Sahoo; Mr. Wishard Ia Vincent Barreto; Dr. Kumar atyush; Dr. Sushma Jaiswal; Mrs. Madhu Chhanda Mishra; Mr. Tarun Jaiswal; Dr. Kapil Paiwal

Has been granted a patent in respect of an invention described and claimed in complete specification deposited at the Patent Office under the number

2023/01522

by of the complete specification is annexed, together with the relevant Form P2.

In test thereof, the seal of the Patent Office has been affixed at Pretoria with effect from the 31st day of May 2023

Registrar of Patents

#### REPUBLIC OF SOUTH AFRICA PATENTS ACT, 1978 REGISTER OF PATENTS

Official application No.	Lodging	date: Provi	sional	Acce	eptance date	
21 01 2023/01522	22			47 ]	L2 April 2023	
International classification	n Lodging	Lodging date: National phase		Granted date		
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71 Applicant(s) substitute	<del>2</del> a:			Date	registrered	
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Priority claimed:	Country	Nı	ımber		Date	
r flority claimed.	IN		2231074077			mber 2022
	III	20	72231074077		20 Decei	11061 2022
54 Title of invention						
A METHOD FOR DETECTIN	AC CANCEDOUS CEL	I C INI ACVM	DTOTIC DATIENTS	1101	NG MONOCI (	NIAL ANTIRODY
DRUGS	NG CANCEROUS CEE	LO III AO I M	FIOTIC FATILITIES	0311	NG MONOCLO	MAL ANTIBODI
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Reference no.: PT_CP_ZA	J000/317 ([INSID: ])					
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61 Patent of addition No.			Date of any chang	je		

Fresh application based on.	Date of any change

#### REPUBLIC OF SOUTH AFRICA PATENTS ACT, 1978 COMPLETE SPECIFICATION

[Section 30(1) - Regulation 28]

OFFICIAL APPLICATION NO.	LODGING DATE
21 01 2023/01522	22 7 February 2023
INTERNATIONAL CLASSIFICATION 51 C12Q	
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#### TITLE OF INVENTION

A METHOD FOR DETECTING CANCEROUS CELLS IN ASYMPTOTIC PATIENTS USING MONOCLONAL ANTIBODY DRUGS

#### TITLE OF THE INVENTION

### A METHOD FOR DETECTING CANCEROUS CELLS IN ASYMPTOTIC PATIENTS USING MONOCLONAL ANTIBODY DRUGS

#### FIELD OF THE INVENTION

[001] The present disclosure relates, in general, to diagnosing cancer, and more particularly, to a method of detecting cancerous cells in asymptotic patients using monoclonal antibody drugs.

#### 5 Background of the invention

[002] More and more, it is understood that proto-oncogene mutations in somatic cells play a key role in the development of human malignancies. These mutations can result in the formation of oncogenes. Point mutations are frequently the mutations that turn proto-oncogenes into oncogenes. Understanding how oncogenes and the results of their expression function to change normal cells into cancer cells requires a great deal of learning.

[003] Oncogenes are typically thought to behave in a dominating manner. This is usually understood to suggest that when a proto-oncogene transforms into an oncogene, a new function, such as promoting transformation, is acquired.

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[004] A distinct kind of cancer-related mutation takes place when a tumor suppressor gene is changed in a way that renders the gene's offspring ineffective for suppressing tumor growth. The retinoblastoma susceptibility gene is an illustration of a tumor suppressor gene.

[005] Although technically speaking, tumor suppressor gene products do not contribute to the development of tumors, tumor suppressor genes are sometimes referred to be recessive oncogenes. The absence of a tumor suppressor gene when both alleles are altered leads to an increase in carcinogenesis, which is why the phenotype is recessive. A gene product with characteristics of both a recessive and a dominant oncogene.

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[006] Furthermore, the association between overexpression and malignancies was established prior to the development of the present invention. The relationship between altered genes and their altered patterns of expression in cells, as well as how to use this relationship to diagnose as well as to identify the clinical significance or prognoses of cancer patients, have not, however, been disclosed prior to the present invention. The purpose of the invention under consideration is to improve cancer diagnosis and patient prognosis by utilizing the association of amplified genes.

[007] Since the late 19th century, when antibodies were discovered, researchers have speculated that they could act as "magic bullets" for the detection and treatment

of cancer. In the following decades, a significant effort was made to immunize many animal species with human cancer in the hopes of producing antisera with some level of disease specificity. The discovery of carcinoembryonic antigen, a marker for colon and other cancers, and -fetoprotein, a marker for hepatocellular cancer, were the major exceptions to this approach's early failure.

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[008] A thorough investigation of tumor expression, including homogeneity of expression, and normal tissue expression, as well as knowledge of the biologic role of the antigen in tumor growth, are necessary for the selection of tumor antigens suitable for antibody targeting and therapy. It is preferable that the antigen complex not be rapidly internalized if the desired mechanism of action is engagement with cell surface receptors or to activate antibody-dependent cell-mediated cytotoxicity or complement-dependent cytotoxicity.

[009] As a result, the Fab region's capacity to interact correctly with surface receptors and the Fc region's accessibility to complement proteins and immune effector cells are both maximized. On the other hand, internalization is preferred for proteins or antibodies that carry poisons to cancer cells and for antibodies whose main mode of action is to downregulate cell surface receptors.

[010] Therefore, there is a need to overcome the prior arts to provide a more enhanced solution. The present invention provides a novel approach to mitigate the

conventional methods. However, the present invention relates to method of detecting cancerous cells in asymptotic patients using monoclonal antibody drugs.

[011] The present invention's object is to provide an improved method and system to address the existing challenge. Alternatively, it is an object of the present invention to address the foregoing problems or at least to provide the public with a useful choice.

#### Summary of the present invention

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[012] Cancer is the second largest cause of death worldwide now. To lower mortality and morbidity, a successful early disease detection technique is essential. Modern cancer diagnostics will be greatly improved by the creation of efficient monoclonal antibody (mAb)-based assays or diagnostic imaging techniques for the identification of antigens and small chemicals produced from malignant cells.

[013] Despite the fact that mAb technology is still in its infancy, recent developments in recombinant antigen production and antibody creation methods have significantly expanded the uses of this technology in cancer diagnosis. Compared to alternative techniques, mAb-based assays may offer geographical, temporal, precise, and quantitative assessment for disease diagnosis. The development of mAb-based tests in the area of molecular cancer diagnostics is disclosed in the present invention.

[014] The monoclonal antibody-based cancer therapy has emerged as one of the most effective therapeutic approaches for both hematologic and solid tumors. A number of groundbreaking clinical trials that paved the path for new generation antibodies and subsequent clinical success are produced as a result of the early merging of serological approaches for cancer cell surface antigen discovery with hybridoma technology.

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[015] Clinical efficacy has also been greatly enhanced by Fc modification optimization of anti-tumor immune responses. The targeting of T cell receptors as a potent new therapeutic approach for tumor therapy and to improve the efficiency of cancer vaccines has emerged as a powerful new therapeutic approach for tumor therapy. The history of antibody-based tumor surface antigen identification, antigenic targets appropriate for antibody-based therapy, antibody modes of action, and recent clinical triumphs of antibodies are presented.

[016] By offering a technique of predicting the progression of cancer by evaluating the level in a biological sample, whereby an elevated signals a poor prognosis, determines another goal of the present invention.

[017] Moreover, the present invention offers a method for identifying cancer cells, cells at risk of developing into cancer, and precancerous cells in biological samples that contain at least one healthy p53 allele is also provided by the invention. The

method entails determining whether the level in the biological sample is abnormally elevated. An elevated level in the biological sample compared to normal biological samples denotes the presence of cancer cells or cells that are precancerous or at high risk of developing into cancer cells.

#### **Brief Description of Drawings**

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[018] When considering the following through explanation of the present invention, it will be easier to understand it and other objects than those mentioned above will become evident. Such description refers to the illustrations in the annex, wherein figure 1-2 illustrates a schematic and conventional diagram of a method of detecting cancerous cells in asymptotic patients using monoclonal antibody drugs.

#### **Detailed Description of the Present Invention**

[019] Description of the Invention for a thorough understanding of the present invention, reference is made to the following detailed description in connection with the invention. Although the present invention is described with reference to exemplary embodiments, the present invention is not intended to be limited to the specific forms set forth herein. It is understood that various omissions and substitutions of equivalents are contemplated as circumstances may suggest or render expedient, but these are intended to cover the application or implementation without departing from the spirit or scope of the present invention.

[020] Further, it will nevertheless be understood that no limitation in the scope of the invention is thereby intended, such alterations and further modifications in the figures and such further applications of the principles of the invention as illustrated therein being contemplated as would normally occur to one skilled in the art to which the invention relates.

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[021] Also, it is to be understood that the phraseology and terminology used herein are for the purpose of description and should not be regarded as limiting. Further, reference herein to "one embodiment" or "an embodiment" means that a particular feature, characteristic, or function described in connection with the embodiment is included in at least one embodiment of the invention.

[022] Furthermore, the appearances of such phrases at various places herein are not necessarily all referring to the same embodiment. The terms "a" and "an" herein do not denote a limitation of quantity, but rather denote the presence of at least one of the referenced items.

[023] In order to be illustrated more clearly in the utility model embodiment or technical scheme of the prior art, to the of required use in embodiment or description of the Prior Art be briefly described below, apparently, accompanying description in the following describes is only embodiment more of the present utility model, for those of ordinary skill in the art, do not paying under the prerequisite of creative work, can

also obtain according to this accompanying description. Those of ordinary skill in the art are not making every other accompanying object obtaining under creative work prerequisite, all belong to the scope of the utility model protection.

[024] The present disclosure relates, in general, to diagnosing cancer, and more particularly, to a method of detecting cancerous cells in asymptotic patients using monoclonal antibody drugs.

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[025] By measuring the expression level or gene amplification, the invention offers a technique for diagnosing cancer; a higher level indicates a cancer diagnosis. The invention further includes a method for predicting the progression of cancer by analyzing the expression level or gene amplification, with an elevated level indicating a poor prognosis.

[026] A procedure for determining a subject's biological sample, levels, and classifying the sample into one of three groups, with the first group consisting of no abnormal elevation, the second group consisting of abnormal elevation of the level but no abnormal elevation of the level of dm2, and the third group consisting of abnormal elevation of the level but no abnormal elevation of the level of dm2, is a procedure.

[027] The monoclonal antibody-based cancer therapy has emerged as one of the most effective therapeutic approaches for both hematologic and solid tumors. A number of ground breaking clinical trials that paved the path for new generation

antibodies and subsequent clinical success are produced as a result of the early merging of serological approaches for cancer cell surface antigen discovery with hybridoma technology.

[028] Clinical efficacy has also been greatly enhanced by Fc modification optimization of anti-tumor immune responses. The targeting of T cell receptors as a potent new therapeutic approach for tumor therapy and to improve the efficiency of cancer vaccines has emerged as a powerful new therapeutic approach for tumor therapy.

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[029] One of the main benefits of tumor immunology for cancer patients is the use of monoclonal antibodies for cancer treatment. This accomplishment of scientific exploration into cancer cell signaling pathways, methodologies for producing tailored antibodies to tumor targets, serological characterization of cancer cells, and the intricate interactions between cancer cells and the immune system. The antibody characteristics in vivo and evaluation of functional effects on cancer cells are essential to the clinical development of antibodies.

[030] Combining the two main immune-based therapeutic modalities—antibodies and vaccines—is current primary problems in order to fully utilize antibody treatments in cancer patients. Ipilimumab and vaccination trials have so far produced a range of results.

[031] This disclosure has been presented for purposes of illustration and description but is not intended to be exhaustive or limiting. Many modifications and variations will be apparent to those of ordinary skill in the art. The example embodiments have been chosen and described in order to explain principles and practical application, and to enable others of ordinary skill in the art to understand the disclosure for various embodiments with various modifications as are suited to the particular use contemplated.

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[032] Above description is only the general introduction of technical solution of the embodiment of the present invention, in order to better understand the embodiment of the present invention Technological means and can be implemented in accordance with the contents of the specification, and in order to allow above and other mesh of the embodiment of the present invention, feature and advantage can be more clearly understood, the special specific embodiment for lifting the embodiment of the present invention below.

[033] The foregoing is only preferred embodiment of the present invention, not in order to limit the present invention, all any modifications of doing within the spirit and principles in the present invention, be equal to and replace and improvement etc., within all should being included in protection scope of the present invention.

[034] What has been described above includes examples of the subject invention. It is, of course, not possible to describe every conceivable combination of components or methodologies for purposes of describing the subject invention, but one of ordinary skill in the art may recognize that many further combinations and permutations of the subject invention are possible. Accordingly, the subject invention is intended to embrace all such alterations, modifications, and variations that fall within the spirit and scope of the appended claims. Furthermore, to the extent that the term "includes" is used in either the detailed description or the claims, such term is intended to be inclusive in a manner similar to the term "comprising" as "comprising" is interpreted when employed as a transitional word in a claim.

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[035] The foregoing descriptions of specific exemplary embodiments of the present invention have been presented for purposes of illustration and description only. They are not intended to be exhaustive or to limit the invention to the precise forms and sequence of steps disclosed, and obviously many modifications and variations are possible considering the above teachings.

[036] The exemplary embodiments were chosen and described in order to explain certain principles of the invention and their practical application, thereby enabling others skilled in the art to make and utilize various exemplary embodiments of the present invention, as well as various alternatives and modifications thereof.

#### We Claim:

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- 1. A method of detecting cancerous cells in asymptotic patients using monoclonal antibody drugs, comprising the steps of providing a technique of predicting the progression of cancer by evaluating the level in a biological sample, whereby an elevated signals a poor prognosis, determines.
- 2. The method as claimed in claim 1, wherein a method for identifying cancer cells, cells at risk of developing into cancer, and precancerous cells in biological samples that contain at least one healthy p53 allele is also provided by the invention.
- 3. The method as claimed in claim 1, wherein the method entails determining whether the level in the biological sample is abnormally elevated.
  - 4. The method as claimed in claim 1, wherein an elevated level in the biological sample compared to normal biological samples denotes the presence of cancer cells or cells that are precancerous or at high risk of developing into cancer cells.
  - 5. The method as claimed in claim 1, wherein a procedure for determining a subject's biological sample, levels, and classifying the sample into one of three groups, with the first group consisting of no abnormal elevation, the second group consisting of abnormal elevation of the level but no abnormal elevation

of the level of dm2, and the third group consisting of abnormal elevation of the level but no abnormal elevation of the level of dm2, is a procedure.

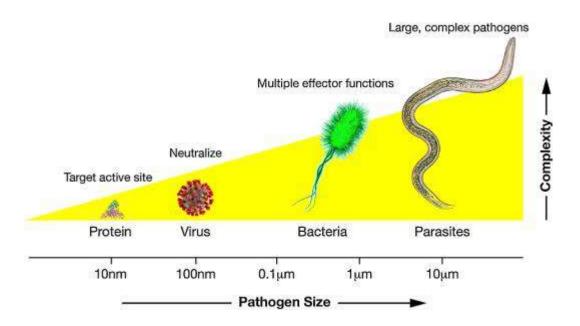


Figure 1

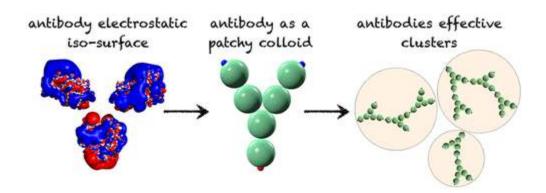


Figure 2

#### **ABSTRACT**

### A METHOD FOR DETECTING CANCEROUS CELLS IN ASYMPTOTIC PATIENTS USING MONOCLONAL ANTIBODY DRUGS

The present invention discloses a method of detecting cancerous cells in asymptotic patients using monoclonal antibody drugs. A procedure for determining a subject's biological sample, levels, and classifying the sample into one of three groups, with the first group consisting of no abnormal elevation, the second group consisting of abnormal elevation of the level of dm2, and the third group consisting of abnormal elevation of the level but no abnormal elevation of the level of dm2, is a procedure. The monoclonal antibody-based cancer therapy has emerged as one of the most effective therapeutic approaches for both hematologic and solid tumors. A number of groundbreaking clinical trials that paved the path for new generation antibodies and subsequent clinical success are produced as a result of the early merging of serological approaches for cancer cell surface antigen discovery with hybridoma technology.

Accompanied Drawings [FIG. 1 & 2]

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Office of the Controller General of Patents, Designs & Trade Marks Department of Industrial Policy & Promotion, Ministry of Commerce & Industry, Government of India



Application Details		
APPLICATION NUMBER	202231062139	
APPLICATION TYPE	ORDINARY APPLICATION	
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TITLE OF INVENTION	A SYSTEM PROVIDED WITH NEXT-GENERATION COMPUTING TECHNOLOGY FOR PRECISION MEDICINE AND METHOD THEREOF	
FIELD OF INVENTION	BIO-MEDICAL ENGINEERING	
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TITLE OF INVENTION	AN ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING-BASED SURVEILLANCE SYSTEMS TO MONITOR REAL TIME CROP GROWTH AND METHOD THEREOF			
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APPLICATION NUMBER	202231063516				
APPLICATION TYPE	ORDINARY APPLICATION				
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TITLE OF INVENTION	AN IOT BASED IMAGE PROCESSING SYSTEM FOR MEDICAL APPLICATIONS				
FIELD OF INVENTION	BIO-MEDICAL ENGINEERING				
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Application Details				
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APPLICATION TYPE	ORDINARY APPLICATION			
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TITLE OF INVENTION	A CRITICAL APPRAISAL OF ARTIFICIAL INTELLIGENCE BASED RETINA SCAN FOR THE DETERMINATION OF CARDIOVASCULAR PATHOLOGY IN A PATIENT AND METHOD THEREOF			
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Application Details				
APPLICATION NUMBER	202231068193			
APPLICATION TYPE	ORDINARY APPLICATION			
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TITLE OF INVENTION	A METHOD FOR ADVANCED TUMOR RECOGNITION BASED ON IOT AND AI IMAGE PROCESSING			
FIELD OF INVENTION	BIO-MEDICAL ENGINEERING			
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APPLICATION TYPE	ORDINARY APPLICATION			
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TITLE OF INVENTION	APPLICATION OF NANOROBOTICS IN HIGH-DENSITY PHARMACEUTICAL ASSAY PROCESS			
FIELD OF INVENTION	BIO-MEDICAL ENGINEERING			
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#### REPUBLIEK VAN SUID AFRIKA

PATENTS ACT, 1978

# CERTIFICATE

accordance with section 44 (1) of the Patents Act, No. 57 of 1978, it is hereby certified that:

r. Ashish Kumar Sarangi; Dr. Amarendranath Choudhury; Mr. Dhilleshwara Rao Vana; Dr. Rudra Narayan Sahoo; Mr. Wishard Ia Vincent Barreto; Dr. Kumar atyush; Dr. Sushma Jaiswal; Mrs. Madhu Chhanda Mishra; Mr. Tarun Jaiswal; Dr. Kapil Paiwal

Has been granted a patent in respect of an invention described and claimed in complete specification deposited at the Patent Office under the number

2023/01522

by of the complete specification is annexed, together with the relevant Form P2.

In test thereof, the seal of the Patent Office has been affixed at Pretoria with effect from the 31st day of May 2023

Registrar of Patents

# REPUBLIC OF SOUTH AFRICA PATENTS ACT, 1978 REGISTER OF PATENTS

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International classification	n Lodging	date: Natio	nal phase	Grar	nted date		
51 C12Q	23 7 Feb	oruary 2023	3		31 May 2023		
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Mrs. Madhu Chhanda Mis	nra; (9) Mr. Tarun Jai	iswai; (10) i	Dr. Kapii Paiwai				
71			_	D-+-	!		
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71 Assignee(s):				Date	registrered		
72 Full name(s) of invent							
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Mis. Madrid Crinarida Mis	11a, (3) 1411. Taran jan	13Wai, (10) i	Dr. Kapir i aiwai				
Priority claimed:	Country	Nı	ımber		Date		
r flority claimed.	IN		2231074077			mber 2022	
	III	20	72231074077		20 Decei	11061 2022	
54 Title of invention							
A METHOD FOR DETECTIN	AC CANCEDOUS CEL	I C INI ACVM	DTOTIC DATIENTS	1101	NG MONOCI (	NIAL ANTIRODY	
DRUGS	NG CANCEROUS CEE	LO III AO I M	FIOTIC FATILITIES	0311	NG MONOCLO	MAL ANTIBODI	
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Technology and Manager							
Zoology, Patharkandi Coll							
University, Tiruchirappalli			·			-	
Sciences, Centurion Unive							
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Johannesburg, 2192, SOUTH AFRICA Reference no.: PT CP ZA00007312 ([InsID: ])							
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Fresh application based on.	Date of any change

# REPUBLIC OF SOUTH AFRICA PATENTS ACT, 1978 COMPLETE SPECIFICATION

[Section 30(1) - Regulation 28]

OFFICIAL APPLICATION NO.	LODGING DATE			
21 01 2023/01522	22 7 February 2023			
INTERNATIONAL CLASSIFICATION 51 C12Q				
FULL NAME(S) C	DF APPLICANT(S)			
Dr. Ashish Kumar Sarangi Dr. Amarendranath Choudhury Mr. Dhilleshwara Rao Vana Dr. Rudra Narayan Sahoo Mr. Wishard la Vincent Barreto Dr. Kumar Pratyush Dr. Sushma Jaiswal Mrs. Madhu Chhanda Mishra Mr. Tarun Jaiswal Dr. Kapil Paiwal				
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### TITLE OF INVENTION

A METHOD FOR DETECTING CANCEROUS CELLS IN ASYMPTOTIC PATIENTS USING MONOCLONAL ANTIBODY DRUGS

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#### FIELD OF THE INVENTION

[001] The present disclosure relates, in general, to diagnosing cancer, and more particularly, to a method of detecting cancerous cells in asymptotic patients using monoclonal antibody drugs.

## 5 **Background of the invention**

[002] More and more, it is understood that proto-oncogene mutations in somatic cells play a key role in the development of human malignancies. These mutations can result in the formation of oncogenes. Point mutations are frequently the mutations that turn proto-oncogenes into oncogenes. Understanding how oncogenes and the results of their expression function to change normal cells into cancer cells requires a great deal of learning.

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[006] Furthermore, the association between overexpression and malignancies was established prior to the development of the present invention. The relationship between altered genes and their altered patterns of expression in cells, as well as how to use this relationship to diagnose as well as to identify the clinical significance or prognoses of cancer patients, have not, however, been disclosed prior to the present invention. The purpose of the invention under consideration is to improve cancer diagnosis and patient prognosis by utilizing the association of amplified genes.

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of cancer. In the following decades, a significant effort was made to immunize many animal species with human cancer in the hopes of producing antisera with some level of disease specificity. The discovery of carcinoembryonic antigen, a marker for colon and other cancers, and -fetoprotein, a marker for hepatocellular cancer, were the major exceptions to this approach's early failure.

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[010] Therefore, there is a need to overcome the prior arts to provide a more enhanced solution. The present invention provides a novel approach to mitigate the

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[011] The present invention's object is to provide an improved method and system to address the existing challenge. Alternatively, it is an object of the present invention to address the foregoing problems or at least to provide the public with a useful choice.

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[012] Cancer is the second largest cause of death worldwide now. To lower mortality and morbidity, a successful early disease detection technique is essential. Modern cancer diagnostics will be greatly improved by the creation of efficient monoclonal antibody (mAb)-based assays or diagnostic imaging techniques for the identification of antigens and small chemicals produced from malignant cells.

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[016] By offering a technique of predicting the progression of cancer by evaluating the level in a biological sample, whereby an elevated signals a poor prognosis, determines another goal of the present invention.

[017] Moreover, the present invention offers a method for identifying cancer cells, cells at risk of developing into cancer, and precancerous cells in biological samples that contain at least one healthy p53 allele is also provided by the invention. The

method entails determining whether the level in the biological sample is abnormally elevated. An elevated level in the biological sample compared to normal biological samples denotes the presence of cancer cells or cells that are precancerous or at high risk of developing into cancer cells.

#### **Brief Description of Drawings**

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[018] When considering the following through explanation of the present invention, it will be easier to understand it and other objects than those mentioned above will become evident. Such description refers to the illustrations in the annex, wherein figure 1-2 illustrates a schematic and conventional diagram of a method of detecting cancerous cells in asymptotic patients using monoclonal antibody drugs.

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[019] Description of the Invention for a thorough understanding of the present invention, reference is made to the following detailed description in connection with the invention. Although the present invention is described with reference to exemplary embodiments, the present invention is not intended to be limited to the specific forms set forth herein. It is understood that various omissions and substitutions of equivalents are contemplated as circumstances may suggest or render expedient, but these are intended to cover the application or implementation without departing from the spirit or scope of the present invention.

[020] Further, it will nevertheless be understood that no limitation in the scope of the invention is thereby intended, such alterations and further modifications in the figures and such further applications of the principles of the invention as illustrated therein being contemplated as would normally occur to one skilled in the art to which the invention relates.

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[022] Furthermore, the appearances of such phrases at various places herein are not necessarily all referring to the same embodiment. The terms "a" and "an" herein do not denote a limitation of quantity, but rather denote the presence of at least one of the referenced items.

[023] In order to be illustrated more clearly in the utility model embodiment or technical scheme of the prior art, to the of required use in embodiment or description of the Prior Art be briefly described below, apparently, accompanying description in the following describes is only embodiment more of the present utility model, for those of ordinary skill in the art, do not paying under the prerequisite of creative work, can

also obtain according to this accompanying description. Those of ordinary skill in the art are not making every other accompanying object obtaining under creative work prerequisite, all belong to the scope of the utility model protection.

[024] The present disclosure relates, in general, to diagnosing cancer, and more particularly, to a method of detecting cancerous cells in asymptotic patients using monoclonal antibody drugs.

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[025] By measuring the expression level or gene amplification, the invention offers a technique for diagnosing cancer; a higher level indicates a cancer diagnosis. The invention further includes a method for predicting the progression of cancer by analyzing the expression level or gene amplification, with an elevated level indicating a poor prognosis.

[026] A procedure for determining a subject's biological sample, levels, and classifying the sample into one of three groups, with the first group consisting of no abnormal elevation, the second group consisting of abnormal elevation of the level but no abnormal elevation of the level of dm2, and the third group consisting of abnormal elevation of the level but no abnormal elevation of the level of dm2, is a procedure.

[027] The monoclonal antibody-based cancer therapy has emerged as one of the most effective therapeutic approaches for both hematologic and solid tumors. A number of ground breaking clinical trials that paved the path for new generation

antibodies and subsequent clinical success are produced as a result of the early merging of serological approaches for cancer cell surface antigen discovery with hybridoma technology.

[028] Clinical efficacy has also been greatly enhanced by Fc modification optimization of anti-tumor immune responses. The targeting of T cell receptors as a potent new therapeutic approach for tumor therapy and to improve the efficiency of cancer vaccines has emerged as a powerful new therapeutic approach for tumor therapy.

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[029] One of the main benefits of tumor immunology for cancer patients is the use of monoclonal antibodies for cancer treatment. This accomplishment of scientific exploration into cancer cell signaling pathways, methodologies for producing tailored antibodies to tumor targets, serological characterization of cancer cells, and the intricate interactions between cancer cells and the immune system. The antibody characteristics in vivo and evaluation of functional effects on cancer cells are essential to the clinical development of antibodies.

[030] Combining the two main immune-based therapeutic modalities—antibodies and vaccines—is current primary problems in order to fully utilize antibody treatments in cancer patients. Ipilimumab and vaccination trials have so far produced a range of results.

[031] This disclosure has been presented for purposes of illustration and description but is not intended to be exhaustive or limiting. Many modifications and variations will be apparent to those of ordinary skill in the art. The example embodiments have been chosen and described in order to explain principles and practical application, and to enable others of ordinary skill in the art to understand the disclosure for various embodiments with various modifications as are suited to the particular use contemplated.

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[032] Above description is only the general introduction of technical solution of the embodiment of the present invention, in order to better understand the embodiment of the present invention Technological means and can be implemented in accordance with the contents of the specification, and in order to allow above and other mesh of the embodiment of the present invention, feature and advantage can be more clearly understood, the special specific embodiment for lifting the embodiment of the present invention below.

[033] The foregoing is only preferred embodiment of the present invention, not in order to limit the present invention, all any modifications of doing within the spirit and principles in the present invention, be equal to and replace and improvement etc., within all should being included in protection scope of the present invention.

[034] What has been described above includes examples of the subject invention. It is, of course, not possible to describe every conceivable combination of components or methodologies for purposes of describing the subject invention, but one of ordinary skill in the art may recognize that many further combinations and permutations of the subject invention are possible. Accordingly, the subject invention is intended to embrace all such alterations, modifications, and variations that fall within the spirit and scope of the appended claims. Furthermore, to the extent that the term "includes" is used in either the detailed description or the claims, such term is intended to be inclusive in a manner similar to the term "comprising" as "comprising" is interpreted when employed as a transitional word in a claim.

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[035] The foregoing descriptions of specific exemplary embodiments of the present invention have been presented for purposes of illustration and description only. They are not intended to be exhaustive or to limit the invention to the precise forms and sequence of steps disclosed, and obviously many modifications and variations are possible considering the above teachings.

[036] The exemplary embodiments were chosen and described in order to explain certain principles of the invention and their practical application, thereby enabling others skilled in the art to make and utilize various exemplary embodiments of the present invention, as well as various alternatives and modifications thereof.

#### We Claim:

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- 1. A method of detecting cancerous cells in asymptotic patients using monoclonal antibody drugs, comprising the steps of providing a technique of predicting the progression of cancer by evaluating the level in a biological sample, whereby an elevated signals a poor prognosis, determines.
- 2. The method as claimed in claim 1, wherein a method for identifying cancer cells, cells at risk of developing into cancer, and precancerous cells in biological samples that contain at least one healthy p53 allele is also provided by the invention.
- 3. The method as claimed in claim 1, wherein the method entails determining whether the level in the biological sample is abnormally elevated.
  - 4. The method as claimed in claim 1, wherein an elevated level in the biological sample compared to normal biological samples denotes the presence of cancer cells or cells that are precancerous or at high risk of developing into cancer cells.
  - 5. The method as claimed in claim 1, wherein a procedure for determining a subject's biological sample, levels, and classifying the sample into one of three groups, with the first group consisting of no abnormal elevation, the second group consisting of abnormal elevation of the level but no abnormal elevation

of the level of dm2, and the third group consisting of abnormal elevation of the level but no abnormal elevation of the level of dm2, is a procedure.

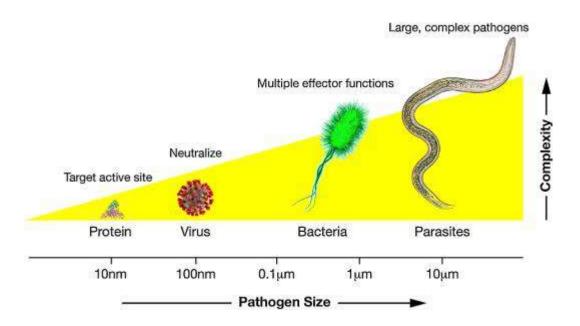


Figure 1

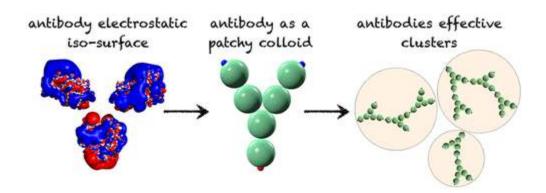


Figure 2

#### **ABSTRACT**

# A METHOD FOR DETECTING CANCEROUS CELLS IN ASYMPTOTIC PATIENTS USING MONOCLONAL ANTIBODY DRUGS

The present invention discloses a method of detecting cancerous cells in asymptotic patients using monoclonal antibody drugs. A procedure for determining a subject's biological sample, levels, and classifying the sample into one of three groups, with the first group consisting of no abnormal elevation, the second group consisting of abnormal elevation of the level of dm2, and the third group consisting of abnormal elevation of the level but no abnormal elevation of the level of dm2, is a procedure. The monoclonal antibody-based cancer therapy has emerged as one of the most effective therapeutic approaches for both hematologic and solid tumors. A number of groundbreaking clinical trials that paved the path for new generation antibodies and subsequent clinical success are produced as a result of the early merging of serological approaches for cancer cell surface antigen discovery with hybridoma technology.

Accompanied Drawings [FIG. 1 & 2]

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Controller General of Patents, Designs and Trademarks Department of Industrial Policy and Promotion Ministry of Commerce and Industry

# **Design Application Details**

Application Number: 375062-001

Cbr Number: 209309

Cbr Date: 05/12/2022 12:22:00

Applicant Name: 1. Dr.Sushil Kumar Bhoi

2. Dr.Asini Kumar Baliarsingh

3. Dr.Deepa Das

4. Dr. Ashish Kumar Sarangi

# **Design Application Status**

Application Status: Application Under Process(wating for Technical Examination)

Back





#### REPUBLIEK VAN SUID AFRIKA

PATENTS ACT, 1978

# CERTIFICATE

accordance with section 44 (1) of the Patents Act, No. 57 of 1978, it is hereby certified that:

r. Ashish Kumar Sarangi; Dr. Amarendranath Choudhury; Mr. Dhilleshwara Rao Vana; Dr. Rudra Narayan Sahoo; Mr. Wishard Ia Vincent Barreto; Dr. Kumar atyush; Dr. Sushma Jaiswal; Mrs. Madhu Chhanda Mishra; Mr. Tarun Jaiswal; Dr. Kapil Paiwal

Has been granted a patent in respect of an invention described and claimed in complete specification deposited at the Patent Office under the number

2023/01522

by of the complete specification is annexed, together with the relevant Form P2.

In test thereof, the seal of the Patent Office has been affixed at Pretoria with effect from the 31st day of May 2023

Registrar of Patents

# REPUBLIC OF SOUTH AFRICA PATENTS ACT, 1978 REGISTER OF PATENTS

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51 C12Q	23 7 Feb	oruary 2023	3		31 May 2023		
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71 Full name(s) of applic	ant(s)/Patentee(s):						
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Rudra Narayan Sahoo; (5				Praty	ush; (7) Dr. S	ushma Jaiswal; (8)	
Mrs. Madhu Chhanda Mis	nra; (9) Mr. Tarun Jai	iswai; (10) i	Dr. Kapii Paiwai				
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71 Applicant(s) substitute	<del>2</del> a:			Date	registrered		
71 Assignee(s):				Date	registrered		
72 Full name(s) of invent							
(1) Dr. Ashish Kumar Sara							
Rudra Narayan Sahoo; (5 Mrs. Madhu Chhanda Mis				raty	usn; (7) Dr. S	usnma jaiswai; (8)	
Mis. Madrid Crinarida Mis	11a, (3) 1411. Taran jan	13Wai, (10) i	Dr. Kapir i aiwai				
Priority claimed:	Country	Nı	ımber		Date		
r flority claimed.	IN		2231074077			mber 2022	
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54 Title of invention							
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FULL NAME(S) O	OF INVENTORS(S)				
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[025] By measuring the expression level or gene amplification, the invention offers a technique for diagnosing cancer; a higher level indicates a cancer diagnosis. The invention further includes a method for predicting the progression of cancer by analyzing the expression level or gene amplification, with an elevated level indicating a poor prognosis.

[026] A procedure for determining a subject's biological sample, levels, and classifying the sample into one of three groups, with the first group consisting of no abnormal elevation, the second group consisting of abnormal elevation of the level but no abnormal elevation of the level of dm2, and the third group consisting of abnormal elevation of the level but no abnormal elevation of the level of dm2, is a procedure.

[027] The monoclonal antibody-based cancer therapy has emerged as one of the most effective therapeutic approaches for both hematologic and solid tumors. A number of ground breaking clinical trials that paved the path for new generation

antibodies and subsequent clinical success are produced as a result of the early merging of serological approaches for cancer cell surface antigen discovery with hybridoma technology.

[028] Clinical efficacy has also been greatly enhanced by Fc modification optimization of anti-tumor immune responses. The targeting of T cell receptors as a potent new therapeutic approach for tumor therapy and to improve the efficiency of cancer vaccines has emerged as a powerful new therapeutic approach for tumor therapy.

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[029] One of the main benefits of tumor immunology for cancer patients is the use of monoclonal antibodies for cancer treatment. This accomplishment of scientific exploration into cancer cell signaling pathways, methodologies for producing tailored antibodies to tumor targets, serological characterization of cancer cells, and the intricate interactions between cancer cells and the immune system. The antibody characteristics in vivo and evaluation of functional effects on cancer cells are essential to the clinical development of antibodies.

[030] Combining the two main immune-based therapeutic modalities—antibodies and vaccines—is current primary problems in order to fully utilize antibody treatments in cancer patients. Ipilimumab and vaccination trials have so far produced a range of results.

[031] This disclosure has been presented for purposes of illustration and description but is not intended to be exhaustive or limiting. Many modifications and variations will be apparent to those of ordinary skill in the art. The example embodiments have been chosen and described in order to explain principles and practical application, and to enable others of ordinary skill in the art to understand the disclosure for various embodiments with various modifications as are suited to the particular use contemplated.

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[032] Above description is only the general introduction of technical solution of the embodiment of the present invention, in order to better understand the embodiment of the present invention Technological means and can be implemented in accordance with the contents of the specification, and in order to allow above and other mesh of the embodiment of the present invention, feature and advantage can be more clearly understood, the special specific embodiment for lifting the embodiment of the present invention below.

[033] The foregoing is only preferred embodiment of the present invention, not in order to limit the present invention, all any modifications of doing within the spirit and principles in the present invention, be equal to and replace and improvement etc., within all should being included in protection scope of the present invention.

[034] What has been described above includes examples of the subject invention. It is, of course, not possible to describe every conceivable combination of components or methodologies for purposes of describing the subject invention, but one of ordinary skill in the art may recognize that many further combinations and permutations of the subject invention are possible. Accordingly, the subject invention is intended to embrace all such alterations, modifications, and variations that fall within the spirit and scope of the appended claims. Furthermore, to the extent that the term "includes" is used in either the detailed description or the claims, such term is intended to be inclusive in a manner similar to the term "comprising" as "comprising" is interpreted when employed as a transitional word in a claim.

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[035] The foregoing descriptions of specific exemplary embodiments of the present invention have been presented for purposes of illustration and description only. They are not intended to be exhaustive or to limit the invention to the precise forms and sequence of steps disclosed, and obviously many modifications and variations are possible considering the above teachings.

[036] The exemplary embodiments were chosen and described in order to explain certain principles of the invention and their practical application, thereby enabling others skilled in the art to make and utilize various exemplary embodiments of the present invention, as well as various alternatives and modifications thereof.

## We Claim:

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- 1. A method of detecting cancerous cells in asymptotic patients using monoclonal antibody drugs, comprising the steps of providing a technique of predicting the progression of cancer by evaluating the level in a biological sample, whereby an elevated signals a poor prognosis, determines.
- 2. The method as claimed in claim 1, wherein a method for identifying cancer cells, cells at risk of developing into cancer, and precancerous cells in biological samples that contain at least one healthy p53 allele is also provided by the invention.
- 3. The method as claimed in claim 1, wherein the method entails determining whether the level in the biological sample is abnormally elevated.
  - 4. The method as claimed in claim 1, wherein an elevated level in the biological sample compared to normal biological samples denotes the presence of cancer cells or cells that are precancerous or at high risk of developing into cancer cells.
  - 5. The method as claimed in claim 1, wherein a procedure for determining a subject's biological sample, levels, and classifying the sample into one of three groups, with the first group consisting of no abnormal elevation, the second group consisting of abnormal elevation of the level but no abnormal elevation

of the level of dm2, and the third group consisting of abnormal elevation of the level but no abnormal elevation of the level of dm2, is a procedure.

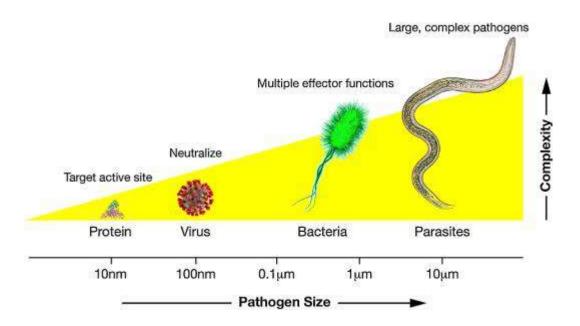


Figure 1

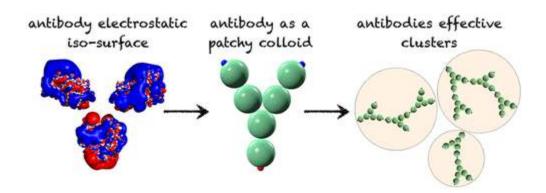


Figure 2

### **ABSTRACT**

# A METHOD FOR DETECTING CANCEROUS CELLS IN ASYMPTOTIC PATIENTS USING MONOCLONAL ANTIBODY DRUGS

The present invention discloses a method of detecting cancerous cells in asymptotic patients using monoclonal antibody drugs. A procedure for determining a subject's biological sample, levels, and classifying the sample into one of three groups, with the first group consisting of no abnormal elevation, the second group consisting of abnormal elevation of the level of dm2, and the third group consisting of abnormal elevation of the level but no abnormal elevation of the level of dm2, is a procedure. The monoclonal antibody-based cancer therapy has emerged as one of the most effective therapeutic approaches for both hematologic and solid tumors. A number of groundbreaking clinical trials that paved the path for new generation antibodies and subsequent clinical success are produced as a result of the early merging of serological approaches for cancer cell surface antigen discovery with hybridoma technology.

Accompanied Drawings [FIG. 1 & 2]

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डिजाइन के पंजीकरण का प्रमाणपत्र CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No.

352888-001

**ORIGINAL** 

मूल/No : 137345

तारीख / Date

10/11/2021

पारस्परिकता तारीख / Reciprocity Date\*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो A MEDICAL NEEDLE STERILIZATION BOX से संबंधित है, का पंजीकरण, श्रेणी 24-02 में 1.Dr. Ranjan Kumar Mohapatra 2. Dr.Ashish Kumar Sarangi 3.Dr.Pranab Kishor Mohapatra 4.Dr.Alok Ranjan Sahu के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 24-02 in respect of the application of such design to A MEDICAL NEEDLE STERILIZATION BOX in the name of 1.Dr. Ranjan Kumar Mohapatra 2. Dr.Ashish Kumar Sarangi 3.Dr.Pranab Kishor Mohapatra 4.Dr.Alok Ranjan Sahu.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में। In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

# INTELLECTUAL PROPERTY INDIA PATENTS | DESIGNS | TRADE MARKS GEOGRAPHICAL INDICATIONS

निर्गमन की तारीख/Date of Issue : 23/05/2023

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पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति देश के नाम पर की गई है। डिजाइन का सत्त्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अविध के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।



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# (http://ipindia.nic.in/index.htm)



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APPLICATION NUMBER 202231075297	
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	25/12/2022
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TITLE OF INVENTION	A METHOD FOR STUDY RISK MITIGATION AND MANAGEMENT IN AGRICULTURAL PRACTICES AMONG FARMERS USING ICT
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	Application Details				
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(57) Abstract :

An electrode for use in an apparatus for causing nuclear fusion reactions at a low temperature being characterized in that said electrode is made of an alloy being capable of occluding hydrogen isotopes. The electrode for use in an apparatus for causing nuclear fusion reactions at a low temperature being characterized in that said electrode is formed as a sphere. An electrode for use in an apparatus for causing nuclear fusion reactions at a low temperature being characterized in that said electrode is made of an amorphous metal or alloy not having a crystal lattice rule of long period as a main component, receiving photons and thermal waves emitted from a radioactive material at a Nuclear Thermionic Avalanche Cell. Outputting avalanche electrons using in part the received photons.

No. of Pages: 16 No. of Claims: 1



# REPUBLIC OF SOUTH AFRICA

## REPUBLIEK VAN SUID AFRIKA

# PATENTS ACT, 1978

# **CERTIFICATE**

In accordance with section 44 (1) of the Patents Act, No. 57 of 1978, it is hereby certified that:

Dr.Yashaswi Nayak; Lopamudra Samantray; Dr. Sunita Satapathy; Dr. Satyasis Mishra

Has been granted a patent in respect of an invention described and claimed in complete specification deposited at the Patent Office under the number

2022/12009

A copy of the complete specification is annexed, together with the relevant Form P2.

timony thereof, the seal of the Patent Office has been affixed at Pretoria with effect from the 29<sup>th</sup> day of March 2023

Registrar of Patents

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Act	21 01 2022/05202	22		47 2022/0	08/30	
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71 Applicant substitued:  72 Full name(s) of inventor(s):  Dr. Satyasis Mishra Dr. Mohammed Siddique Dr. Sunita Satapathy Dr. Ramesh Chandra Mohanty Dr. Ramesh Chandra Mohanty Dr. Samita Nayak Mr. Nilamadhab Dash Priority claimed:  Country Number  Date  A SYSTEM AND A METHOD OF IMPROVED SCA-ELM BASED DENSENET121 FOR CLASSIFICATION OF FRUIT DISEASES  Address of applicant(s)/patentee(s):  Department of Electronics and Communication Engineering, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA	DR. RAMESH CHANDRA MOHANTY					
71 Assignee(s):  Date registrered  72 Full name(s) of inventor(s):  Dr. Satyasis Mishra  Dr. Mohammed Siddique  Dr. Sunita Satapathy  Dr. Ramesh Chandra Mohanty  Dr. Goutam Kumar Mahato  Dr. Tumbanath Samantara  Dr. Sasmita Nayak  Mr. Nilamadhab Dash  Priority claimed:  Country  Number  Date  A SYSTEM AND A METHOD OF IMPROVED SCA-ELM BASED DENSENET121 FOR CLASSIFICATION OF FRUIT DISEASES  Address of applicant(s)/patentee(s):  Department of Electronics and Communication Engineering, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA  Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA  Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA  Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 2050		, Centurion University of Technolog	y and Management, Ramon			+
72 Full name(s) of inventor(s):  Dr. Satyasis Mishra  Dr. Mohammed Siddique  Dr. Sunita Satapathy  Dr. Ramesh Chandra Mohanty  Dr. Goutam Kumar Mahato  Dr. Tumbanath Samantara  Dr. Sasmita Nayak  Mr. Nilamadhab Dash  Priority claimed:  Country  Number  Date  54 Title of invention  A SYSTEM AND A METHOD OF IMPROVED SCA-ELM BASED DENSENET121 FOR CLASSIFICATION OF FRUIT DISEASES  Address of applicant(s)/patentee(s):  Department of Electronics and Communication Engineering, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA  Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA  Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 752050	/1  Applicant substitued:			Date regist	rered	
Dr. Mohammed Siddique Dr. Sunita Satapathy Dr. Ramesh Chandra Mohanty Dr. Goutam Kumar Mahato Dr. Tumbanath Samantara Dr. Sasmita Nayak Mr. Nilamadhab Dash Priority claimed:  Country  Number  Date  Title of invention  A SYSTEM AND A METHOD OF IMPROVED SCA-ELM BASED DENSENET121 FOR CLASSIFICATION OF FRUIT DISEASES  Address of applicant(s)/patentee(s):  Department of Electronics and Communication Engineering, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 752050				Date regist	trered	†
Title of invention  A SYSTEM AND A METHOD OF IMPROVED SCA-ELM BASED DENSENET121 FOR CLASSIFICATION OF FRUIT DISEASES  Address of applicant(s)/patentee(s):  Department of Electronics and Communication Engineering, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA  Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 752050	Dr. Mohammed Siddique Dr. Sunita Satapathy Dr. Ramesh Chandra Mohanty Dr. Goutam Kumar Mahato Dr. Tumbanath Samantara Dr. Sasmita Nayak			V		
A SYSTEM AND A METHOD OF IMPROVED SCA-ELM BASED DENSENET121 FOR CLASSIFICATION OF FRUIT DISEASES  Address of applicant(s)/patentee(s):  Department of Electronics and Communication Engineering, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA  Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 752050	Priority claimed:	Country	Number		Date	
A SYSTEM AND A METHOD OF IMPROVED SCA-ELM BASED DENSENET121 FOR CLASSIFICATION OF FRUIT DISEASES  Address of applicant(s)/patentee(s):  Department of Electronics and Communication Engineering, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA  Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 752050				100		
A SYSTEM AND A METHOD OF IMPROVED SCA-ELM BASED DENSENET121 FOR CLASSIFICATION OF FRUIT DISEASES  Address of applicant(s)/patentee(s):  Department of Electronics and Communication Engineering, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA  Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 752050				100		
A SYSTEM AND A METHOD OF IMPROVED SCA-ELM BASED DENSENET121 FOR CLASSIFICATION OF FRUIT DISEASES  Address of applicant(s)/patentee(s):  Department of Electronics and Communication Engineering, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA  Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 752050	54 Title of invention			2.00		
Address of applicant(s)/patentee(s):  Department of Electronics and Communication Engineering, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA  Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 752050		MPROVED SCA-ELM BASED	DENSENET121 FOR C	LASSIFICATION OF	FRUIT DISEASES	
Department of Electronics and Communication Engineering, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 752050						
Department of Electronics and Communication Engineering, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 75 INDIA Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 752050	Address of applicant(s)/patentee(s	()·				
INDIA  Department of Zoology, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 752050	Department of Electronics and CommuINDIA Department of Mathematics, Centurion INDIA	nication Engineering, Centurion Uni	agement, Ramchandrapur, J	latni, Khurda, Odisha, 7	752050	50

Department of CSE, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 752050
INDIA

Department of CSE, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 752050

Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 752050

Department of Mathematics, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, Odisha, 752050

INDIA

INDIA

INDIA

Department of Mechanical Engineering, Centurion University of Technology and Management, Ramchandrapur, Jatni, Khurda, 752050, Odisha, INDIA

74 Ac	ddress for service				
Wolma	rans and Susan Inc.				
337 Su	ırrey Avenue, Randburg, 2194				
SOUTH	H AFRICA				
Refere	nce No.				
61 Pa	61 Patent of addition No. Date of any change				
Fresh a	Fresh application based on.  Date of any change				

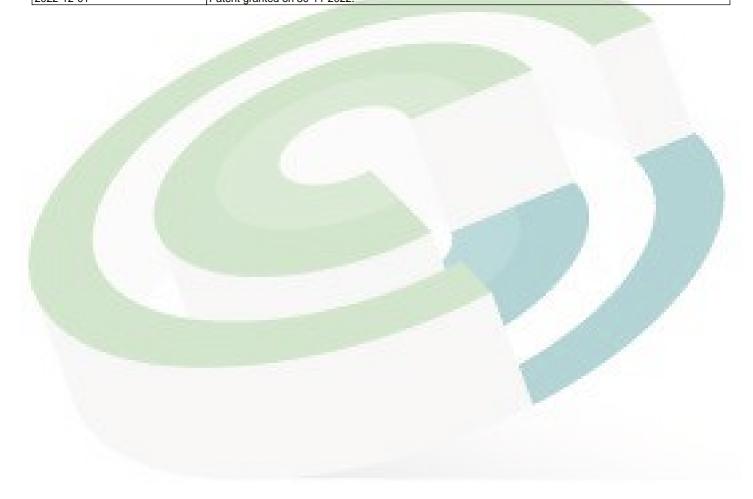


### **RENEWAL SHEET**

Year	Payment Date	Receipt Number	Amount

# HISTORY SHEET

Date entry made	Description	
2022-05-12	Proof reading performed automatically	
2022-05-12	Request for the acceptance of a Patent electronically filed on 11/5/2022, numbered 2022/05202	
2022-05-30	Correction of clerical errors consisting of to correct address filed on 26/05/2022, by Dr. Satyasis Mishra, Dr. Mohammed Siddique, Dr. Sunita Satapathy, Dr. Ramesh Chandra Mohanty, Dr. Goutam Kumar Mahato, Dr. Tumbanath Samantara, Dr. Sasmita Nayak, Mr. Nilamadhab Dash.	
2022-08-30	Application accepted on 30/08/2022.	
2022-12-01	Patent advertised on 30-11-2022.	
2022-12-01	Patent granted on 30-11-2022.	







डिजाइन के पंजीकरण का प्रमाणपत्र CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No.

380508-001

**ORIGINAL** 

मूल/No: 136484

तारीख / Date

01/03/2023

पारस्परिकता तारीख / Reciprocity Date\*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो SOLAR BIOMASS INTEGRATED CROP DRYER से संबंधित है, का पंजीकरण, श्रेणी 15-03 में 1.Prof. Poulomi Chatterjee 2. Prof. Amit Kumar 3.Prof. Susovan Dutta 4.Dr. Susmita Das 5.Ar. Teesha Majumder 6.Dr. Sanjeeta Biswas 7.Dr. Devegowda S R 8.Prof. Prasheet Mishra 9.Dr.Nimay Chandra Giri के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 15-03 in respect of the application of such design to SOLAR BIOMASS INTEGRATED CROP DRYER in the name of 1.Prof. Poulomi Chatterjee 2. Prof. Amit Kumar 3.Prof. Susovan Dutta 4.Dr. Susmita Das 5.Ar. Teesha Majumder 6.Dr. Sanjeeta Biswas 7.Dr. Devegowda S R 8.Prof. Prasheet Mishra 9.Dr.Nimay Chandra Giri.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में।
In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

# INTELLECTUAL PROPERTY INDIA PATENTS | DESIGNS | TRADE MARKS GEOGRAPHICAL INDICATIONS

निर्गमन की तारीख/Date of Issue : 18/05/2023

महानियंत्रक पेंट्रेंट डिजाइन और व्यापार चिह्र Controller General of Patents, Designs and Trade Marks

पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति देश के नाम पर की गई है। डिजाइन का सत्त्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अविध के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।





डिजाइन के पंजीकरण का प्रमाणपत्र CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No.

तारीख / Date : 22/02/2023

पारस्परिकता तारीख / Reciprocity Date\*

देश / Country



379893-001

मूल/No: 135884



प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो RENEWABLE ENERGY POWERED POLES TO DETECT NOISE POLLUTION से संबंधित है, का पंजीकरण, श्रेणी 10-05 में 1.Dr.Saine Sikta Dash 2. Dr.Sasmita Behera 3.Prof.Saswat Mishra 4.Dr.Siba Prasad Mishra 5.Prof. Deepak Kumar Sahu 6.Dr.Jyoti Prakash Giri 7.Dr.Prangya Parimita Pradhan 8.Prof.Priyanka Mishra 9.Prof.Nimay Chandra Giri के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 10-05 in respect of the application of such design to RENEWABLE ENERGY POWERED POLES TO DETECT NOISE POLLUTION in the name of 1.Dr.Saine Sikta Dash 2. Dr.Sasmita Behera 3.Prof.Saswat Mishra 4.Dr.Siba Prasad Mishra 5.Prof. Deepak Kumar Sahu 6.Dr.Jyoti Prakash Giri 7.Dr.Prangya Parimita Pradhan 8.Prof.Priyanka Mishra 9.Prof.Nimay Chandra Giri.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में। In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

# INTELLECTUAL PROPERTY INDIA PATENTS | DESIGNS | TRADE MARKS GEOGRAPHICAL INDICATIONS

निर्गमन की तारीख/Date of Issue : 17/05/2023

महानियंत्रक पेंट्रेंट डिजाइन और व्यापार चिह्र Controller General of Patents, Designs and Trade Marks

पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति देश के नाम पर की गई है। डिजाइन का सत्त्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अविध के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।





डिजाइन के पंजीकरण का प्रमाणपत्र CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No.

380801-001

**ORIGINAL** 

मूल/No: 138096

तारीख / Date

04/03/2023

पारस्परिकता तारीख / Reciprocity Date\*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो FLOATING SOLAR PHOTOVOLTAIC CELL से संबंधित है, का पंजीकरण, श्रेणी 13-04 में 1.Prof.Poulomi Chatterjee 2. Prof.Amit Kumar 3.Prof.Debasis Chatterjee 4.Prof.Susovan Dutta 5.Dr.Alivarani Mohapatra 6.Dr.Debani Prasad Mishra 7.Dr.Siba Prasad Mishra 8.Dr.Prangya Parimita Pradhan 9.Dr.Nimay Chandra Giri के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 13-04 in respect of the application of such design to FLOATING SOLAR PHOTOVOLTAIC CELL in the name of 1.Prof.Poulomi Chatterjee 2. Prof.Amit Kumar 3.Prof.Debasis Chatterjee 4.Prof.Susovan Dutta 5.Dr.Alivarani Mohapatra 6.Dr.Debani Prasad Mishra 7.Dr.Siba Prasad Mishra 8.Dr.Prangya Parimita Pradhan 9.Dr.Nimay Chandra Giri.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में।
In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

# INTELLECTUAL PROPERTY INDIA PATENTS | DESIGNS | TRADE MARKS

निर्गमन की तारीख/Date of Issue : 25/05/2023

महानियंत्रक पेटेंट डिजाइन और व्यापार चिह्र Controller General of Patents, Designs and Trade Marks

पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति देश के नाम पर की गई है। डिजाइन का सत्त्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अविध के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।





ORIGINAL क्रम सं/ Serial No. : 140510



# पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र ि Certificate of Registration of Design

डिजाइन सं. / Design No. : 383997-001

तारीख / Date : 15/04/2023

पारस्परिकता तारीख / Reciprocity Date\*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो IOT BASED SOLAR POWERED AGRICULTURE ROBOT से संबंधित है, का पंजीकरण, श्रेणी 15-03 में 1.Ms.Sima Das 2. Dr.Tanmay Kumar Behera 3.Prof.Monojit Manna 4.Prof.Mohammad Ashique Azad 5.Prof. Subrata Modak, 6.Prof. Lab Kumar Mudi 7.Dr.Soumya Ranjan Das 8.Prof.Rabindranath Sahu 9.Dr.Nimay Chandra Giri के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 15-03 in respect of the application of such design to IOT BASED SOLAR POWERED AGRICULTURE ROBOT in the name of 1.Ms.Sima Das 2. Dr.Tanmay Kumar Behera 3.Prof.Monojit Manna 4.Prof.Mohammad Ashique Azad 5.Prof. Subrata Modak, 6.Prof. Lab Kumar Mudi 7.Dr.Soumya Ranjan Das 8.Prof.Rabindranath Sahu 9.Dr.Nimay Chandra Giri.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में।
In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि Date of Issue

13/07/2023



महानियंत्रक पेटेंद्र डिजाइन और व्यापार चिह्न Controller General of Patents Designs and Trade Mark

\*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।





ORIGINAL क्रम सं/ Serial No. : 141282



# पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र de Certificate of Registration of Design

डिजाइन सं. / Design No. : 387327-001

तारीख / Date : 31/05/2023

पारस्परिकता तारीख / Reciprocity Date\*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो SOLAR PANEL FOR AGRICULTURE ACTIVITIES से संबंधित है, का पंजीकरण, श्रेणी 13-04 में 1.Ms.Meenakshi Attri 2. Dr.Rubby Sandhu 3.Dr. Sandeep Kumar Bangarwa 4.Dr. Ravindra Kumar 5.Dr. Ashish Sheera 6.Ms.Qurat-Ul-Ain-Aga 7.Ms.Renuka 8.Mr.Hritik Srivastava 9.Dr.Nimay Chandra Giri के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 13-04 in respect of the application of such design to SOLAR PANEL FOR AGRICULTURE ACTIVITIES in the name of 1.Ms.Meenakshi Attri 2. Dr.Rubby Sandhu 3.Dr. Sandeep Kumar Bangarwa 4.Dr. Ravindra Kumar 5.Dr. Ashish Sheera 6.Ms.Qurat-Ul-Ain-Aga 7.Ms.Renuka 8.Mr.Hritik Srivastava 9.Dr.Nimay Chandra Giri.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में। In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि Date of Issue

26/07/2023



महानियंत्रक पेट्रेंट- डिजॉइन और व्यापार चिह्न Controller General of Patents, Designs and Trade Marks

\*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।





Controller General of Patents, Designs and Trademarks Department of Industrial Policy and Promotion Ministry of Commerce and Industry

# **Design Application Details**

# **Application Number:**

388845-001

**Cbr Number:** 

207778

**Cbr Date:** 

22/06/2023 16:04:52

## **Applicant Name:**

- 1. Dr.Bijaya Bijeta Nayak 2. Dr. Shiv Sankar Das
- 3. Ms. Debashree Debadatta Behera 4. Dr. Akankshya Patnaik
- 5. Dr.Kshitish Kumar Khuntia 6. Mr. Satya Prakash Lenka

**Design Application Status** 

# **Application Status:**

Application Under Process(wating for Technical Examination)

Back (/DesignApplicationStatus/)

Disclaimer: Application status is available for the application filed on or after 1st April 2009 with application no 222230. The information under "Design Application Status" is dynamically retrieved and is under testing, therefore the information retrieved by this system is not valid for any legal proceedings under the Design Act 2000. In case of any discrepancy you may contact the appropriate Patent Office or send your comments to following email IDs:

Design Office, Kolkata: controllerdesign.ipo@nic.in

Controller General of Patents, Designs and Trademarks





Controller General of Patents, Designs and Trademarks Department of Industrial Policy and Promotion Ministry of Commerce and Industry

**Design Application Details** 

Application Number:

388845-001

**Cbr Number:** 

207778

**Cbr Date:** 

22/06/2023 16:04:52

**Applicant Name:** 

1. Dr.Bijaya Bijeta Nayak 2. Dr. Shiv Sankar Das

3. Ms. Debashree Debadatta Behera 4. Dr. Akankshya Patnaik

5. Dr. Kshitish Kumar Khuntia 6. Mr. Satya Prakash Lenka

**Design Application Status** 

**Application Status:** 

Application Under Process(wating for Technical Examination)

Back (/DesignApplicationStatus/)

Disclaimer: Application status is available for the application filed on or after 1st April 2009 with application no 222230. The information under "Design Application Status" is dynamically retrieved and is under testing, therefore the information retrieved by this system is not valid for any legal proceedings under the Design Act 2000. In case of any discrepancy you may contact the appropriate Patent Office or send your comments to following email IDs:

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#### Patent Search

Invention Title	Nanofluidic delivery system for targeted drug delivery
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Application Number	202331026416
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Priority Number	
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Field Of Invention	PHARMACEUTICALS
Classification (IPC)	A61K 9/00

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#### Abstract:

This invention relates to a nanofluidic delivery system for targeted drug delivery. The system includes a substrate with a plurality of nanochannels, which are function selectively transport a drug or biomolecule of interest. The nanochannels have a diameter of less than 100 nanometers and can be made of various materials such a glass, plastic, or metal. The system can be used in various applications, including ophthalmic drug delivery, oral drug delivery, intravenous drug delivery, implantable wound healing dressings, transdermal patches, microfluidic lab-on-a-chip devices, agriculture applications, veterinary medicine, and cosmetics. Additionally, the syste functionalized with ligands or antibodies to selectively transport specific biomolecules or cell types. The invention also includes methods of using the nanofluidic delivery devices comprising the system, and diagnostic tools utilizing the system for biomolecule detection. Overall, the nanofluidic delivery system provides a hard selective and precise method for targeted drug delivery and biosensing applications.

#### **Complete Specification**

Description: The invention pertains to the field of nanotechnology and drug delivery. More specifically, it relates to a nanofluidic delivery system for targeted drug delivery invention involves the use of nanoscale channels and cavities to deliver drugs to specific cells or tissues in the body.

Background of the invention:

The field of drug delivery has seen tremendous growth and innovation over the years. Targeted drug delivery is a promising area of research that seeks to deliver d specific cells or tissues in the body, while minimizing side effects and improving treatment outcomes. One approach to achieving this goal is through the use of nan delivery systems, which use nanoscale channels to transport drugs to targeted locations.

Nanofluidic channels are tiny channels with diameters of less than 100 nanometers, which are capable of transporting fluids, ions, and particles at the nanoscale le use of these channels for drug delivery has several advantages over traditional drug delivery methods, including increased drug efficacy, reduced toxicity, and the a target specific cells or tissues.

The concept of using nanofluidic channels for drug delivery has been explored for many years, but only recently have advancements in nanotechnology and materi science made it possible to create reliable and effective nanofluidic delivery systems. These systems are still in the early stages of development, but they hold great for the future of targeted drug delivery.

The traditional approach to drug delivery involves administering drugs systemically, either orally or through injection, and relying on the body's natural processes to distribute the drug throughout the body. However, this approach is often associated with significant side effects, as the drug may be distributed to non-targeted are the body and interact with healthy cells and tissues. Additionally, some drugs may not be able to penetrate the cell membrane and reach their intended target. furt

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# Certificate of Registration for a UK Design

Design number: 6273618

Grant date: 17 April 2023

Registration date: 05 April 2023

### This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. Ashish Kumar Sarangi, Dr. Rudra Narayan Sahoo, Dr. Kalpita Bhatta,

Ms.Rasmita Dash

in respect of the application of such design to:

COVID testing machine with digital display

International Design Classification:

Version: 14-2023

Class: 24 MEDICAL AND LABORATORY EQUIPMENT

Subclass: 01 APPARATUS AND EQUIPMENT FOR DOCTORS, HOSPITALS

AND LABORATORIES

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डिजाइन सं. / Design No.

380262-001

**ORIGINAL** 

मूल/No: 136294

तारीख / Date

27/02/2023

पारस्परिकता तारीख / Reciprocity Date\*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **DIGIHALER** से संबंधित है, का पंजीकरण, श्रेणी **24-02** में 1.Dr.Ashish Kumar Sarangi 2. Dr.Rudra Narayan Sahoo 3.Mr.Himansu Bhusan Samal 4.Dr.Kalpita Bhatta के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class **24-02** in respect of the application of such design to **DIGIHALER** in the name of 1.Dr.Ashish Kumar Sarangi 2. Dr.Rudra Narayan Sahoo 3.Mr.Himansu Bhusan Samal 4.Dr.Kalpita Bhatta.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में। In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

# INTELLECTUAL PROPERTY INDIA PATENTS | DESIGNS | TRADE MARKS

निर्गमन की तारीख/Date of Issue : 17/05/2023

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# Certificate of Registration for a UK Design

Design number: 6275723

Grant date: 27 April 2023

Registration date: 16 April 2023

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Dr.Rudra Narayan Sahoo, Dr.Ashish Kumar Sarangi, Dr.Sovan Pattanaik,

Mr.Biswajit Sahoo

in respect of the application of such design to:

Insulin Pump

International Design Classification:

Version: 14-2023

Class: 24 MEDICAL AND LABORATORY EQUIPMENT

Subclass: 01 APPARATUS AND EQUIPMENT FOR DOCTORS, HOSPITALS

AND LABORATORIES

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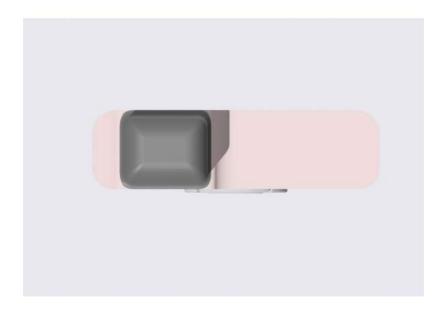
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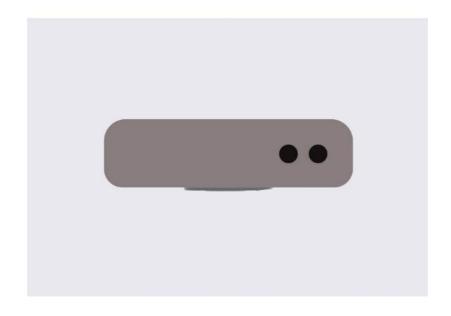
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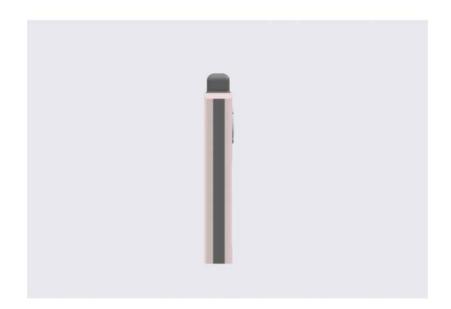
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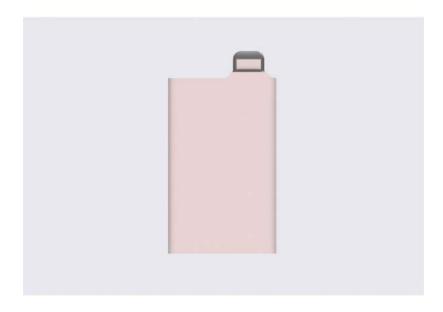














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# Certificate of Registration for a UK Design

Design number: 6307009

Grant date: 09 September 2023

Registration date: 01 September 2023

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Dr. Ashish Kumar Sarangi, Dr. Himansu Bhusan Samal, Dr. Fahima Dilnawaz,

Dr.Kalpita Bhatta

in respect of the application of such design to:

Laparoscopic Instruments

International Design Classification:

Version: 14-2023

Class: 24 MEDICAL AND LABORATORY EQUIPMENT

Subclass: 02 MEDICAL INSTRUMENTS, INSTRUMENTS AND TOOLS FOR

LABORATORY USE



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(43) Publication Date: 02/12/2022

### (54) Title of the invention: AN ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING BASED DRUG DELIVERY SYSTEM FOR PREPARING MICROEMULSIONS WITH ENHANCED BIOAVAILABILITY AND METHOD THEREOF

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# (57) Abstract:

The present invention discloses a drug delivery system by using Artificial Intelligence interfaces for preparing microemulsions to enhance bioavailability and working method thereof. In order to overcome the drawbacks of response surface methodology, such as the inaccurate estimation of the optimal emulsions, stable oil-in-water emulsions have been prepared using an AI interface capable of optimising and modelling the complex relationships between the formulation parameters and their effects on the quality of the finished product wherein the AI interface is also used to maximise the concentration of a fatty alcohol. Further, combining evolving Convolutional Neural Network (CNNs) with a support vector machine SVM for successfully predicting the types and internal architectures of microemulsions

No. of Pages: 19 No. of Claims: 10

REPUBLIC OF SOUTH AFRICA	REGISTER OF PATENTS	P	ATENTS ACT, 1978
Official application No.	Lodging date: Provisional	P	acceptance date
21 01 2022/11886	22	4	7 2022/11/30
International classification	Lodging date: Complete	C	Granted date
51 A61K	23 2022/11/01		2022/12/21
71 Full name(s) of applicant(s)/Patentee(s):			
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71 Applicant substitued:			Date registrered
71 Assignee(s):			Date registrered
72 Full name(s) of inventor(s):			Aller
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Priority claimed: Country	Nui	mber	Date
54 Title of invention			
A DRUG DELIVERY SYSTEM BY USING ARBIOAVAILABILITY	TIFICIAL INTELLIGENCE INTE	RFACES FOR PREPA	ARING MICROEMULSIONS TO ENHANCE

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Wolmarans and Susan Inc.

337 Surrey Avenue, Randburg, 2194

SOUTH AFRICA

Reference No.

61 Patent of addition No.	Date of any change
Fresh application based on.	Date of any change



## **RENEWAL SHEET**

Year	Payment Date	Receipt Numb	er Amount

# HISTORY SHEET

Date entry made	Description
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2022-11-02	Proof reading performed automatically
2022-11-30	Application accepted on 30/11/2022.
2022-12-22	Patent advertised on 21-12-2022.
2022-12-22	Patent granted on 21-12-2022.





# REPUBLIC OF SOUTH AFRICA

# REPUBLIEK VAN SUID AFRIKA

# PATENTS ACT, 1978

# CERTIFICATE

In accordance with section 44 (1) of the Patents Act, No. 57 of 1978, it is hereby certified that:

MR.SATYABRATA JENA; DR.NIRANJAN PANDA; DR.SATYAJIT PANDA; DR.KANCHANA N.DUSSA; DR.HIMANSU BHUSAN SAMAL; MR.SRIBATSA LANCHANA DASH; DR.BIBHUTI BHUSANA PANIGRAHI; MR.TANKADHAR MISHRA; DR.GOJE ARJUN; MR.SOURAB GHOSH

Has been granted a patent in respect of an invention described and claimed in complete specification deposited at the Patent Office under the number

# 2022/11886

A copy of the complete specification is annexed, together with the relevant Form P2.

testimony thereof, the seal of the Patent Office has been affixed at Pretoria with effect from the 21st day of December 2022

Registrar of Patents