



**SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES &
TECHNOLOGY BIOMEDICAL TECHNOLOGY WING, POOJAPPURA,
TRIVANDRUM –12**

(An Institute of National Importance under Govt. Of India)

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(Technical Research Center For Biomedical Devices)**

INTELLECTUAL PROPERTY RIGHT CELL,
TECHNOLOGY BUSINESS DIVISION,
DEPARTMENT OF TECHNOLOGY & QUALITY MANAGEMENT

PATENTS(INDIA) GRANTED (SEALED)

Sl.No	APPLICATION NUMBER	DATE OF FILING	PATENT NUMBER	TITLE OF INVENTION	INVENTORS
1.	202041013409	27/03/2020	594289	POINT OF CARE TESTING PROTOCOL BASED ON RT-LAMP FOR RAPID DETECTION OF CORONAVIRUS SARS-COV-2	Anoopkumar Thekkuveetil, Amal Wilson Varghese, Swathy Suresh Nair, Rasitha Santhosh Kanakalatha, Anjana Usha, Ria Elza Varghese
2.	202041019145	05/05/2020	594092	AN INTUBATION ISOLATION BOX	Sarath Gopalakrishnan, Nagesh Divakara Panickar Sulochana, Vinod Kumar Viswanathan Pillai, Sethuramen Manikandan
3.	202041007961	25/02/2020	589783	A PROCESS FOR MODIFYING MAMMALIAN CHOLECYSTIC EXTRACELLULAR MATRIX THAT PROMOTES DIABETIC WOUND HEALING	Thapasimuthu Vijayamma Anilkumar, Praveen Kunjan Sobhan, Manjula Puthupparambil Mony
4.	201841038669	11/10/2018	588866	AN ABSORBABLE SKIN SUBSTITUTE WITH COMBINATION MATRIX OF AMNION, FIBRIN AND HYALURONIC ACID (AM-F-HA) FOR WOUND REGENERATION AND THE PROCESS THEREOF.	Lissy Kalliyankrishnan Rashmi Ramakrishnan
5.	201941006810	21/02/2019	587948	A TUNABLE HYBRID HYDROGEL	Reshmi Raj, Thapasimuthu Vijayamma Anil kumar, Praveen Kunjan Sobhan
6.	202041018961	04/05/2020	584058	A DUAL CHAMBER BOOTH FOR COLLECTING SAMPLE AND METHOD THEREFOR	Ramesh Babu, Muraleedharan Chirathody Vayalappil, Asha Kishore, Arvind Kumar Prajapati, Kelekanjeri Ganapathi Vishwanathan Siva Kumar, Saurabh Nair
7.	202041012139	20/03/2020	580066	MULTI-COMPONENT PEPTIDE BASED BIOINK FOR BIOPRINTING OF TISSUE CONSTRUCTS	Anugya Bhatt, Renjith parameswaran nair, Lakshmi Thompil Somasekharan, Riya Raju, Suvanish Kumar, Naresh Kasoju
8.	202041014548	01/04/2020	575250	ISOLATION POD FOR THE ISOLATION / TRANSPORTATION OF INFECTED PATIENTS.	Sarath Gopalakrishnan, Sethuramen Manikandan, Vinodkumar Viswanathan Pillai, Sarath sasidharan Nair, Nagesh Divakara Panickar Sulochana
9.	202041015925	13/04/2020	551497	SWAB COLLECTION BOOTH	Ramesh Babu, Muraleedharan Chirathody Vayalappil, Arvind Kumar Prajapati, Kelekanjeri Ganapathi Vishwanathan Siva Kumar,

PATENTS(INDIA) GRANTED (SEALED)

Sl.No	APPLICATION NUMBER	DATE OF FILING	PATENT NUMBER	TITLE OF INVENTION	INVENTORS
					Saurabh Nair, Nagesh Divakara Panickar Sulochana
10.	201841018156	15/05/2018	550844	PREPARATION OF CURCUMIN INCORPORATED CHOLECYSTIC EXTRACELLULAR MATRIX HYDROGEL (CEMH) FORMULATIONS	Thapasimuthu Vijayamma Anilkumar, Akhila Rajan, Geetha Chandrika Surendran
11.	202141048525	25/10/2021	548750	DEVICE FOR CONTACTLESS ADJUSTMENT OF PROPORTION OF GASES PARTICULARLY FOR MANAGEMENT OF FIO2	Sarath Sasidharan Nair, Nagesh Divakara Panickar Sulochana
12.	202141043066	23/09/2021	548511	SYSTEM AND METHOD FOR DETECTION OF LIQUID TYPES WITHIN CATHETER OF AN IMPLANTABLE MICRO INFUSION PUMP	Sarath Sasidharan Nair, Nagesh Divakara Panickar Sulochana
13.	202041020378	14/05/2020	543367	FLOCKED SWABS AND A PROCESS FOR THE MANUFACTURE THEREOF	Lynda Velutheril Thomas, AshokSreedhar, Neethu Mohan, Rahul , Jijo Wilson
14.	201941037451	17/09/2019	542206	AN INVITRO NIDUS DEVICE TO EVALUATE LIQUID EMBOLIC AGENTS	Arvind Kumar Prajapati, Roy Joseph, Jayadevan Enakshy Rajan
15.	202041014164	31/03/2020	543057	DEPLOYABLE FIELD UNITS FOR EMERGENCY RESPONSE.	Subhash Neyyattinkara Neelakandan, Muraleedharan Chirathody Vayalappil
16.	202141037803	20.8.2021	540820	DOWNSTREAM HEAT TREATMENT PROCESSES FOR STRENGTH ENHANCEMENT OF SLENDER Ti6AL4V SHAPED IMPLANT CASTINGS	Kelekanjeri Ganapathi Vishwanathan Siva Kumar, Chirathodi Vylappil Muraleedharan, Ajmal Mohammed T
17.	201941003745	30/1/2019	538205	AN IMPROVED DELIVERY DEVICE FOR DEPLOYMENT OF STENT GRAFTS.	Sujesh sreedharan, Subhash neyyattinkara neelakandan, Krishna kumar sreekumaran, Subhash kumar mahadevan subhashmandiram
18.	201841042752	14/11/2018	537273	AN INTER-VERTEBRAL SPACER DEVICE WITH A DELIVERY INSTRUMENT EMPLOYING A PROTRACTING PIN MECHANISM AND A METHOD FOR DEPLOYMENT	Manoj Komath Sajin Raj Rajan Girija Venkatesan Ramesh Babu
19.	202041016758	18/04/2020	537139	AUTOMATIC SMART-BIN WITH COMBINED UV ENABLED MICROWAVE BASED DISINFECTION OF HOSPITAL	Sethuramen Manikandan, Manoj Govinda Pillai Sulochana Amma,

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Sl.No	APPLICATION NUMBER	DATE OF FILING	PATENT NUMBER	TITLE OF INVENTION	INVENTORS
				WASTE	Rahul
20.	202041015399	08/04/2020	524398	DISPOSABLE DISINFECTANT ABSORBENT SPONGE.	Manju Saraswathy, Manoj Komath
21.	202041028674	06/07/2020	528001	DEVELOPMENT OF FILTER HOUSING FOR A LEUKODEPLETION FILTER UNIT	Ranjith Gopinathan, Ramesh Parameswaran, Muraleedharan Chirathodi Vayalappil, Anugya Bhatt, Nikhil Prasad, Subhair Valakundil Assainar, Ramesh Babu Venkatesan
22.	201841008901	12/03/2018	527030	A PROCESS OF THIN FLEXIBLE ELECTRODE ENCAPSULATION OF CORTICAL ELECTRODES WITH LEAD REINFORCEMENT FOR ECoG RECORDING.	Jithin Krishnan Chirathody Vayalappil Muraleedharan Rethnagireeshwar Rajalingam
23.	201841049649	28/12/2018	521747	A SELF EXPANDING FLOW DIVERSION DEVICE WITH ENHANCED KINK RESISTANCE AND RADIAL STRENGTH	Sujesh Sreedharan Anku Sreekumar Sreehari Unnikrishnan Nair
24.	201941000952	09/01/2019	523811	A RELEASE MECHANISM FOR USE IN CATHETERIZED DELIVERY OF CARDIOVASCULAR IMPLANTABLE DEVICE INSIDE THE BODY	Sujesh Sreedharan, Jijo Jerard
25.	201741041605	21/11/2017	523370	LEAD BODY FLEXION TESTING DEVICE FOR IMPLANTABLE LEADS	Muraleedharan Chirathody Vayalappil Jithin Krishnan. Nitha Velayudha Panicker
26.	202041014851	03/04/2020	515557	BATTERY OPERATED ASSISTIVE BREATHING UNIT	Sarath sasidharan Nair, Nagesh Divakara Panickar Sulochana ,Vinodkumar Viswanathan Pillai
27.	201841000603	05/01/2018	513511	A VENTRICULAR ASSIST DEVICE BLOOD PUMP HAVING IMPELLER SUPPORTED WITH COMBINED PASSIVE MAGNETS AND HYDRODYNAMIC BEARING	Sarath sasidharan Nair, Nagesh Divakara Panickar Sulochana, Vinod Kumar Viswanathan Pillai
28.	201941009511	12/03/2019	510987	ANTIOXIDANT POLYMERIC SPONGES FOR WOUND HEALING APPLICATIONS	Rekha Mannemcherril Ramesan
29.	201741016428	10/05/2017	508452	A DEVICE AND A PROCESS FOR DETERMINING THE COAGULATION OF BLOOD AND FOR EVALUATION OF PROTHROMBIN TIME (PT) AND INTERNATIONAL NORMALISE RATIO.	Sarath Sasidaran Nair, Anugya Bhatt

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Sl.No	APPLICATION NUMBER	DATE OF FILING	PATENT NUMBER	TITLE OF INVENTION	INVENTORS
30.	202041014221	31/03/2020	505945	AUTOMATED ARTIFICIAL MANUAL BREATHING UNIT VENTILATOR	Sarath sasidharan Nair, Nagesh Divakara Panickar Sulochana, Vinodkumar Viswanathan Pillai
31.	201941037650	18/09/2019	501941	A PROCESS FOR MAKING SPHERICAL BIO CERAMIC BEADS USING SUPER HYDROPHOBIC POWDER BED	Manoj Komath Sivadasan Suresh Babu, Harikrishna Varma Parimanathu Kovilakom Rama Varma
32.	202041019872	11/05/2020	498135	A SYSTEM FOR SPILLAGE CONTROL AND FLUID WASTE MANAGEMENT IN HOSPITALS	Manju Saraswathy, Manoj Komath, Ajay Prasad Hrishi, Asha Kishore
33.	201941019027	13/05/2019	497258	A DELIVERY SYSTEM WITH A RELEASE MECHANISM FOR DEPLOYING AND DETACHING BRAIDED VASCULAR DEVICES.	Sujesh sreedharan, Anku Sreekumar, Sreehari Unnikrishnan Nair
34.	201841005220	12/02/2018	495822	A CONDUCTOR FLEX TEST SYSTEM TO TEST FATIGUE RESISTANCE OF UNIFORM LEAD BODY	Jithin Krishnan Chirathody Vayalappil Muraleedharan Nitha Velayudha Panicker Biju Benjamin
35.	201741038920	01/11/2017	495816	PREVENTION OF INVIVO CALCIFICATION IN GLUTERALDEHYDE CROSSLINKED PERICARDIUM THROUGH MAGNESIUM CHELATION	Payanam Ramachandra Umashankar Kunnatheery Sreenivasan Prem Mohan Mohana Chandran Baiju.S.Dharan M.Unnikrishnan.
36.	201741042949	30/11/2017	495521	A DEVICE WITH A SYSTEM FOR SIMULATING THE CHARGE DISTRIBUTION MATRIX IN ELECTRICAL PHANTOM MODEL OF BRAIN USING CONCENTRIC NEEDLE ELECTRODES.	Muraleedharan Chirathody Vayalappil Jithin Krishnan. Biju Benjamin
37.	201741036490 PCT/IN2018/050642	13/10/2017	489968	IMPLANTABLE ATRIAL SEPTAL DEFECT OCCLUSION DEVICE WITH WOVEN CENTRAL SECTION ON LEFT ATRIAL FLANGE	Sujesh Sreedharan, Jijo Jerard, Liji Geetha Vijayan, Dr. Bijulal Sasidharan

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38.	201741001964	18/01/2017	474076	AN APPLICATION SYSTEM FOR TWO COMPONENT INJECTABLE GEL MIXTURES WITH A HOMOGENEOUS MIXING UNIT FOR VARIOUS APPLICATIONS.	Praveen Krishnan Veerasubramaniam Lynda Veluthetil Thomas Prabha Damodaran Nair
39.	201841020267	30/05/2018	469615	A TUNABLE BIOINK FOR 3D BIOPRINTING AND THE PROCESS FOR THE PREPARATION THEREOF	Roy Joseph Praveen Kunjan Sobhan
40.	202041014200	31/03/2020	460266	FACE MASKS SANITIZATION BIN	Subhash Neyyattinkara Neelakandan, Muraleedharan Chirathody Vayalappil
41.	201741021062	16/06/2017	458341	A HYDROGEL SYSTEM FOR THREE-DIMENSIONAL (3d) PRINTING	Shiny Velayudhan, Anilkumar Pallicka veedu Rajan Asari, Kumary Thrikkovil Variath,Kalliyanakrishnan Venkateswaran
42.	985/CHE/2012	19/03/2012	455693	A SIMPLIFIED PROCEDURE FOR ISOLATION OF TISSUE ENGINEERING- SCAFFOLDS FROM CHOLECYST	Thapasimuthu Vijayamma Anilkumar
43.	201841029835	08/08/2018	444325	RECOMBINANT TRANSFORMING GROWTH FACTOR ALPHA (TGfα) FOR VARIOUS WOUND HEALING APPLICATIONS AND THE PROCESS THEREOF	Anoopkumar Thekkuveettil Salini Bhasker Geethu Shaji
44.	2894/CHE/2013	28/06/2013	440233	HIGH SENSITIVE CURRENT CONTROLLED ELECTROMAGNETIC BLOOD FLOW METER DEVICE	Sarath sasidharan Nair Nagesh Divakara Panickar Sulochana Vinod Kumar Viswanathan Pillai
45.	201741040538	14/11/2017	437270	IMPLANTABLE ATRIAL SEPTAL OCCLUSION DEVICE WITH LEFT ATRIAL DISC HAVING A LOW PROFILE INTER-TWINED CENTRE	Sujesh Sreedharan, Jijo Jerard, Amritha Thankamony Suresh

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46.	201741039475	06/11/2017	437272	A DELIVERY DEVICE WITH A THUMB WHEEL DRIVE FOR INTRODUCING, POSITIONING AND DEPLOYING A STENT GRAFT	Sujesh Sreedharan, Krishna Kumar Sreekumaran, Jijo Jerard, Anoop Gopinathan
47.	201741038830	01/11/2017	437267	AN IMPROVED STENT WITH ENHANCED CRIMPABILITY, HAVING ENCLOSING STRUTS, FOR USE IN BLOOD VESSELS	Sujesh Sreedharan, Krishna Kumar Sreekumaran
48.	6194/CHE/2013	31/12/2013	433927	A METHOD FOR FABRICATING BIO-ARTIFICIAL SKIN GRAFT BY LOADING CELLS ON CHOLECYST EXTRACELLULAR MATRIX FOR WOUND HEALING APPLICATIONS.	Deepa Revi Anoopkumar Thekkuveettil Thapasimuthu Vijayamma Anilkumar
49.	201741038832	01/11/2017	429582	AN IMPROVED STENT FOR USE IN BLOOD VESSELS WITH ENHANCED FIXATION	Sujesh Sreedharan, Krishna Kumar Sreekumaran
50.	202041022745	30/05/2020	424961	HYDRO-NANOGEL POWDER FORMULATION FOR ORAL PROTEIN DELIVERY APPLICATIONS	Mannemcherril Ramesan Rekha
51.	201741039555	07/11/2017	422625	A DELIVERY DEVICE FOR POSITIONING AND DEPLOYMENT OF STENT GRAFTS	Sujesh Sreedharan, Krishna Kumar Sreekumaran, Vivek Parayath Uthaman, Subhash Neyyattinkara Neelakandan.
52.	1080/CHE/2012	23/03/2012	419263	A CENTRIFUGAL PUMP FOR TRANSFERRING FLUID AT A REDUCED PRIMING VOLUME WITHOUT DETERIORATION OF INHERENT FLUID PROPERTIES.	Nagesh Divakara Panickar Sulochana Vinod Kumar Viswanathan Pillai
53.	201841007029	24/02/2018	415327	A MOLD FOR CORTICAL ELECTRODE FABRICATION WITH LEAD REINFORCEMENT MECHANISM	Jithin Krishnan Chirathody Vayalappil Muraleedharan Rethnagireeshwar Rajalingam Biju Benjamin

Indian patents filed

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54.	201941013381	03/04/2019	415206	A RADIOPAQUE POLYMERIC LIQUID EMBOLIC SYSTEM	Roy Joseph, Jayadevan Enakshy Rajan Gopika Valsalakumari Gopan
55.	2338/CHE/2013	29/05/2013	413604	A PROCEDURE FOR FABRICATING XENOGRAFT USING MAMMALIAN CHOLECYST DERIVED EXTRACELLULAR MATRIX FOR WOUND HEALING APPLICATIONS	Deepa Revi, Thapasimuthu Vijayamma Anilkumar, Jaseer Muhamed Ceethakulath Jamaludheen
56.	201941001306	11/01/2019	404518	AMINO ACID ENRICHED TUNABLE BIOINK FORMULATION FOR MULTIDIMENSIONAL BIOPRINTING AND THE PROCESS THEREOF	Roy Joseph, Praveen Kunjan Sobhan
57.	201941013380	03/04/2019	398081	A NON-CYTOTOXIC DIPHENOLIC TETRAIODO COMPOUND AND METHOD OF PREPARATION THEREOF	Roy Joseph, Gopika Valsalakumari Gopan
58.	201741047245	29/12/2017	393911	LINT FREE CROSSLINKED CHITOSAN-PVA SPONGE AS AN ABSORBENT WOUND DRESSING AND METHOD OF PREPARATION THEREOF	Lynda Velutheril Thomas Prabha Damodaran Nair Nimi Nirmala Shanti Krishna Ayilliath
59.	201741046606	26/12/2017	374801	ISOTHERMAL AMPLIFICATION OF mpt64 GENE USING SPECIFIC PRIMERS FOR THE DETECTION OF <i>Mycobacterium tuberculosis</i> AND THE PROCESS THEREOF	Anoop Kumar Thekkuveetil, Praveen Sanker Shivasankaran, Swathy Suresh Nair
60.	19/CHE/2014	03/01/2014	353231	A BATTERY OPERATED HAND HELD PORTABLE BLOOD OR CONDUCTING FLUID FLOW MEASURING DEVICE EXHIBITING HIGH SENSITIVITY, ZERO WARM UP TIME, MINIMUM SIGNAL DRIFT, LOWER HEAT DISSIPATION AND POWER LOSSES	Sarath sasidharan Nair Nagesh Divakara Panickar Sulochana

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1.	201841007029	24/02/2018	A MOLD FOR CORTICAL ELECTRODE FABRICATION WITH LEAD REINFORCEMENT MECHANISM	30/08/2019	Jithin Krishnan, Chirathody Vayalappil Muraleedharan, Rethnagireeshwar Rajalingam, Biju Benjamin
2.	201841038669	11/10/2018	AN ABSORBABLE SKIN SUBSTITUTE WITH COMBINATION MATRIX OF AMNION,FIBRIN AND HYALURONIC ACID (AM-F-HA) FOR WOUND REGENERATION AND THE PROCESS THEREOF.	17/04/2020	Lissy Kalliyanakrishnan Rashmi Ramakrishnan
3.	201941006800	21/02/2019	BIOINK FORMULATION SUITABLE FOR LOW TEMPERATURE	07/05/2021	Roy Joseph Praveen Kunjan Sobhan
4.	201841049655	28/12/2018	A BRAIDED CUFF FOR PREVENTING ENDOLEAKS IN STENT GRAFTS	03/07/2020	Sujesh sreedharan, Krishna kumar sreekumaran
5.	201941006810	21/02/2019	A TUNABLE HYBRID HYDROGEL	07/05/2021	Reshmi Raj, Thapasimuthu Vijayamma Anil kumar, Praveen Kunjan Sobhan
6.	201941013671	04/04/2019	VASCULAR ENDOTHELIAL GROWTH FACTOR (VEGF), WHICH ENHANCES ANGIOGENESIS	09/10/2020	Anoopkumar Thekkuveettim, Sheeja Liza Easo, Geethu Shaji
7.	201941031304	02/08/2019	CELL GROWTH ENHANCING BIOINK FORMULATION FOR 3D BIOPRINTED CONSTRUCTS	05/02/2021	Anugya bhatt,Naresh Kasoju,Roy Joseph,Lakshmi Thompil Somasekharan,Gayathri Prameela Jayachandran

8.	202041007961	25/02/2020	A PROCESS FOR MODIFYING MAMMALIAN CHOLECYSTIC EXTRACELLULAR MATRIX THAT PROMOTES DIABETIC WOUND HEALING.	27/08/2021	Thapasimuthu Vijayamma Anilkumar, Praveen Kunjan Sobhan, Manjula Puthupparambil Mony
9.	202041012139	20/03/2020	MULTI-COMPONENT PEPTIDE BASED BIOINK FOR BIOPRINTING OF TISSUE CONSTRUCTS	24/09/2021	Anugya Bhatt, Renjith parameswaran nair, Lakshmi Thompil Somasekharan, Riya Raju, Suvanish Kumar, Naresh Kasoju
10.	202041013409	27/03/2020	POINT OF CARE TESTING PROTOCOL BASED ON RT-LAMP FOR RAPID DETECTION OF CORONAVIRUS SARS-COV-2	01/10/2021	Anoopkumar Thekkuveetil, Amal Wilson Varghese, Swathy Suresh Nair, Rasitha Santhosh Kanakalatha, Anjana Usha, Ria Elza Varghese
11.	202041014548	01/04/2020	ISOLATION POD FOR THE ISOLATION / TRANSPORTATION OF INFECTED PATIENTS.	08/10/2021	Sarath Gopalakrishnan, Sethuramen Manikandan, Vinodkumar Viswanathan Pillai, Sarath sasidharan Nair, Nagesh Divakara Panickar Sulochana
12.	202041015212	07/04/2020	A KIT FOR THE RAPID DETECTION OF COVID-19 IGG/IGM ANTIBODIES USING IMMUNOCHROMATOGRAPHIC TECHNIQUES.	08/10/2021	Anugya Bhatt, Manoj Gopi, Renjith parameswaran Nair, Jyothi Embekkat Kaviyil, Dinoop Korol Ponnambath, Ranjith Sankarankutty Kantha, Priyanka Ajitha, Anilkumar Velayudhan, Vani Maya.
13.	202041016519	16/04/2020	RAPID VIRAL RNA ISOLATION PROTOCOL.	22/10/2021	Anoopkumar Thekkuveetil, Amal Wilson Varghese, Swathy Suresh Nair, Rasitha Santhosh Kanakalatha
14.	202041018961	04/05/2020	DUAL-CHAMBER SWAB COLLECTION BOOTH	12/11/2021	Ramesh Babu,Muraleedharan Chirathody Vayalappil, Asha Kishore, Arvind Kumar Prajapati, Kelekanjeri Ganapathi Vishwanathan Siva Kumar, Saurabh Nair

15.	202041019145	05/05/2020	INTUBATION ISOLATION BOX	12/11/2021	Sarath Gopalakrishnan, Nagesh Divakara Panickar Sulochana, Vinod Kumar Viswanathan Pillai, Sethuramen Manikandan
16.	202041020015	12/05/2020	UNIVERSAL TRANSPORT MEDIUM	19/11/2021	Akhandanandan Maya Nandkumar, AnilKumar Pallicka veedu RajanAsari, AnugyaBhatt, Keerthi Santhosh kumar
17.	202041044910	15/10/2020	MITRAL ANNULOPLASTY RING	10/02/2023	Ranjith Gopinathan, Sunson Sunny, Muraleedharan Chirathodi Vayalappil, Ramesh Babu Venkatesan, Subhash Kumar Mahadevan Subhash Mandiram, Sarath Muraleedharan
18.	202141025466	8/6/2021	A CELL AND TISSUE CULTURE STORAGE AND SHIPPING DEVICE	09.12.2022	Naresh Kasoju, Anilkumar Pallicka veedu Rajan Asari, Ramesh Babu Venkatesan, Anju Mohanan Shylaja
19.	202241053990	21.09.2022	DIGITALLY CONTROLLED MULTICHANNEL NEUROSTIMULATOR FOR PAIN MANAGEMENT	22/03/2024	JITHIN KRISHNAN, NEETHU SUNDARLAL, MURALEEDHARAN CHIRATHODY VAYALAPPIL, NANDU KRISHNAN A M, AJAY PRASAD HRISHI
20.	202241060846	26.10.2022	A TEMPERATURE PROFILING SYSTEM WITH IN-PLANE THREE AXIS MOVEMENT FOR CHIP- BASED ELECTRONIC DEVICES	03/05/2024	JITHIN KRISHNAN, MURALEEDHARAN CHIRATHODY VAYALAPPIL, BIJU B
21.	202341021496	25.03.2023	THREE-DIMENSIONAL BIOPRINTED IN VITRO HEPATOTOXICITY	27/09/2024	ANILKUMAR PALLICKA VEEDU RAJAN ASARI, SHINY VELAYUDHAN, ANUPAMA JAYAPRABHA

			ASSAY PLATFORM		SEKAR
22.	202341040576	14.06.2023	AN AUTOMATIC SELF-LOCKING CLIP ARRESTOR FOR USE WITH AN ANTERIOR CERVICAL PLATING SYSTEM	20/12/2024	KELEKANJERI GANAPATHI VISHWANATHAN SIVA KUMAR, VISHNU S PRASAD, MURALEEDHARAN CHIRATHODY VAYALAPPIL
23.	202341041150	16.06.2023	PRIMERS FOR REAL-TIME ISOTHERMAL AMPLIFICATION OF THE MPT 64 GENE OF MYCOBACTERIUM TUBERCULOSIS AND THE PROCESS THEREOF	20/12/2024	Dr.ANOOP KUMAR THEKKUVEETHIL, SWATHY SURESH NAIR, ANJANA USHA, RIA ELZA VARGHESE
24.	202541008717	03.02.2025	A BIOPROSTHETIC HEART VALVE		RANJITH G, MURALEEDHARAN C V , UMASHANKAR P R , VIVEK V PILLAI, RAJEEV A, SUBHASH KUMAR M S, UNNIKRISHNAN M M
25.	202541039439	24/04/2025	A MITRAL CLIP DESIGN INCORPORATING A TRUSS STRUCTURE CONFIGURATION FOR CORRECTION OF MITRAL REGURGITATION		Ranjith Gopinathan, Muraleedharan Chirathodi Vylappil, Dr Harikrishnan S, Praful Prasannan
26.	202641072665	11.06.2026	PHOTO-POLYMERIZED POLY(IONIC LIQUID)-FUNCTIONALIZED POLYPROPYLENE MEMBRANES AND A METHOD OF PREPARATION THEREOF		RENJITH SASI JYOTHI EMBEKKAT KAVIYIL ROY JOSEPH

Patents(Foreign) Granted

SL NO	PATENT NO	APPL NO	Date of filing	TITLE OF INVENTION	INVENTORS	APPLICANT	COUNTRY	Date of Grant
1.	2021/02576	2021/02576 (PCT/IN2019/050936)	19/04/2021	A SELF EXPANDING FLOW DIVERSION DEVICE WITH ENHANCED KINK RESISTANCE AND RADIAL STRENGTH	Sujesh Sreedharan Anku Sreekumar Sreehari Unnikrishnan Nair	TRC	South Africa	26.01.2022
2.	2020/03941	2020/03941 (PCT/IN2018/050642)	29/06/2020	IMPLANTABLE ATRIAL SEPTAL DEFECT OCCLUSION DEVICE WITH WOVEN CENTRAL SECTION ON LEFT ATRIAL FLANGE	Sujesh Sreedharan, Jijo Jerard, Liji Geetha Vijayan, Bijulal Sasidharan	TRC	South Africa	27.10.2021
3.	US 11,911,302 B2	17/285,771 (PCT/IN2019/050936)	15/04/2021	A SELF EXPANDING FLOW DIVERSION DEVICE WITH ENHANCED KINK RESISTANCE AND RADIAL STRENGTH	Sujesh Sreedharan Anku Sreekumar Sreehari Unnikrishnan Nair	TRC	USA	27.02.2024
4.	EP3902505	19838978.5. (PCT/IN2019/050936)	22/04/2021	A SELF EXPANDING FLOW DIVERSION DEVICE WITH ENHANCED KINK RESISTANCE AND RADIAL STRENGTH	Sujesh Sreedharan Anku Sreekumar Sreehari Unnikrishnan Nair	TRC	Europe	21.02.2024

Patents(Foreign) Granted

SL NO	PATENT NO	APPL NO	Date of filing	TITLE OF INVENTION	INVENTORS	APPLICANT	COUNTRY	Date of Grant
5.	US 11,986,571 B2	17/291,075 PCT/IN2020/050317	04/05/2021	A RADIOPAQUE POLYMERIC LIQUID EMBOLIC SYSTEM	Roy Joseph, Jayadevan Enakshy Rajan Gopika Valsalakumari Gopan	TRC	U.S.A	21/05/2024
6.	EP3873547	20784813.6 PCT/IN2020/050317	04/6/2021	A RADIOPAQUE POLYMERIC LIQUID EMBOLIC SYSTEM	Roy Joseph, Jayadevan Enakshy Rajan Gopika Valsalakumari Gopan	TRC	European Union	07/08/2024
7.	BR 11 2021 005851 6	BR 11 2021 0058516 (PCT/IN2019/050936)	25/03/2021	A SELF EXPANDING FLOW DIVERSION DEVICE WITH ENHANCED KINK RESISTANCE AND RADIAL STRENGTH	Sujesh Sreedharan Anku Sreekumar Sreehari Unnikrishnan Nair	TRC	BR	02/07/2024
8.	3700432	18807438.9(EU) (PCT/IN2018/050642)	07/07/2020	IMPLANTABLE ATRIAL SEPTAL DEFECT OCCLUSION DEVICE WITH WOVEN CENTRAL SECTION ON LEFT ATRIAL FLANGE	Sujesh Sreedharan, Jijo Jerard, Liji Geetha Vijayan, Bijulal Sasidharan	TRC	European Union	12/02/2025
9.		BR11 2020 013348 5 (PCT/IN2018/050642)	29/06/2020	IMPLANTABLE ATRIAL SEPTAL DEFECT OCCLUSION DEVICE WITH WOVEN CENTRAL SECTION ON LEFT ATRIAL FLANGE	Sujesh Sreedharan, Jijo Jerard, Liji Geetha Vijayan, Bijulal Sasidharan	TRC	Brazil	28/01/2025

Patents(Foreign) Granted

SL NO	PATENT NO	APPL NO	Date of filing	TITLE OF INVENTION	INVENTORS	APPLICANT	COUNTRY	Date of Grant
10.	12290425	16/959,143(USA) (PCT/IN2018/050879)	22/12/2020	LINT FREE CROSSLINKED CHITOSAN- PVA SPONGE AS AN ABSORBENT WOUND DRESSING AND METHOD OF PREPARATION THEREOF.	Lynda Velutheril Thomas Prabha Damodaran Nair Nimi Nirmala Shanti Krishna Ayilliath	TRC	USA	06/05/2025

Patent (Foreign) Applications Filed						
SL NO	APPL NO	Date of filing	TITLE OF INVENTION	INVENTORS	APPLICANT	COUNTRY
1.	BR11 2020 013348 5 (PCT/IN2018/050642)	29/06/2020	IMPLANTABLE ATRIAL SEPTAL DEFECT OCCLUSION DEVICE WITH WOVEN CENTRAL SECTION ON LEFT ATRIAL FLANGE	Sujesh Sreedharan, Jijo Jerard, Liji Geetha Vijayan, Bijulal Sasidharan	TRC	Brazil
2.	18807438.9(EU) (PCT/IN2018/050642)	07/07/2020	IMPLANTABLE ATRIAL SEPTAL DEFECT OCCLUSION DEVICE WITH WOVEN CENTRAL SECTION ON LEFT ATRIAL FLANGE	Sujesh Sreedharan, Jijo Jerard, Liji Geetha Vijayan, Bijulal Sasidharan	TRC	European Union
3.	17/253,443 (United States) (PCT/IN2018/050642)	17/12/2020	IMPLANTABLE ATRIAL SEPTAL DEFECT OCCLUSION DEVICE WITH WOVEN CENTRAL SECTION ON LEFT ATRIAL FLANGE	Sujesh Sreedharan, Jijo Jerard, Liji Geetha Vijayan, Dr. Bijulal Sasidharan	TRC	US
4.	P6000984/2020(UAE) (PCT/IN2018/050879)	29/06/2020	LINT FREE CROSSLINKED CHITOSAN-PVA SPONGE AS AN ABSORBENT WOUND DRESSING AND METHOD OF PREPARATION THEREOF.	Lynda Velutheril Thomas Prabha Damodaran Nair Nimi Nirmala Shanti Krishna Ayilliath	TRC	UAE
5.	OM/P/2020/271 (Oman) (PCT/IN2018/050879)	02/07/2020	LINT FREE CROSSLINKED CHITOSAN-PVA SPONGE AS AN ABSORBENT WOUND DRESSING AND METHOD OF PREPARATION THEREOF.	Lynda Velutheril Thomas Prabha Damodaran Nair Nimi Nirmala Shanti Krishna Ayilliath	TRC	Oman
6.	18834068.1(European union)	06/07/2020	LINT FREE CROSSLINKED CHITOSAN-PVA	Lynda Velutheril Thomas	TRC	European union

	(PCT/IN2018/050879)		SPONGE AS AN ABSORBENT WOUND DRESSING AND METHOD OF PREPARATION THEREOF	Prabha Damodaran Nair Nimi Nirmala Shanti Krishna Ayilliath		
7.	16/959,143(USA) (PCT/IN2018/050879)	22/12/2020	LINT FREE CROSSLINKED CHITOSAN-PVA SPONGE AS AN ABSORBENT WOUND DRESSING AND METHOD OF PREPARATION THEREOF.	Lynda Velutheril Thomas Prabha Damodaran Nair Nimi Nirmala Shanti Krishna Ayilliath	TRC	USA
8.	17/266,898 (PCT/IN2019/050578)	08/02/2021	RECOMBINANT TRANSFORMING GROWTH FACTOR ALPHA (TGFA) FOR VARIOUS WOUND HEALING APPLICATIONS AND THE PROCESS THEREOF.	Anoopkumar Thekkuveetil Salini Bhasker Geethu Shaji	TRC	US

DESIGN REGISTRATIONS				
SL NO	DESIGN NO	DATE OF FILING	TITLE OF INVENTION	INVENTORS
1.	285926	09/08/2016	BIREACTOR FOR CULTURE OF MAMMALIAN CELLS	Anilkumar Pallicka veedu Rajan Asari, Shiny Velayudhan, Kumary Thrikkovil Variath, Kalliyanakrishnan Venkateswaran, Roopesh.R.Pai
2.	300220	08/12/2017	IMPLANTABLE ATRIAL SEPTAL DEFECT OCCLUSION DEVICE WITH WOVEN CENTRAL SECTION ON LEFT ATRIAL FLANGE	Sujesh Sreedharan, Jijo Jerard, Liji Geetha Vijayan, Dr. Bijulal Sasidharan
3.	300221	08/12/2017	IMPLANTABLE ATRIAL SEPTAL OCCLUSION DEVICE WITH LEFT ATRIAL DISC HAVING A LOW PROFILE INTER-TWINED CENTRE	Sujesh Sreedharan, Jijo Jerard, Amritha Thankamony Suresh
4.	299421	14/11/2017	A STENT CROWN HAVING AN ASYMMETRIC DESIGN, FOR USE IN BLOOD VESSELS, WITH ENHANCED FIXATION AND CRIMPABILITY	Sujesh Sreedharan, Krishna Kumar Sreekumaran
5.	299422	14/11/2017	A STENT CROWN HAVING AN ASYMMETRIC DESIGN, FOR USE IN BLOOD VESSELS, WITH ENHANCED FIXATION	Sujesh Sreedharan, Krishna Kumar Sreekumaran

6.	299423	14/11/2017	AN ASYMMETRIC DESIGN OF A STENT FOR USE IN BLOOD VESSELS WITH ENHANCED FIXATION AND CRIMPABILITY	Sujesh Sreedharan, Krishna Kumar Sreekumaran
7.	299424	14/11/2017	AN ASYMMETRIC DESIGN OF A STENT FOR USE IN BLOOD VESSELS WITH ENHANCED CRIMPABILITY	Sujesh Sreedharan, Krishna Kumar Sreekumaran
8.	299425	14/11/2017	AN ASYMMETRIC DESIGN OF A STENT FOR USE IN BLOOD VESSELS WITH ENHANCED FIXATION	Sujesh Sreedharan, Krishna Kumar Sreekumaran
9.	312432	26/11/2018	STENT FOR SURGICALLY IMPLANTABLE EXTERNALLY MOUNTED VALVES	Umashankar Payanam Ramachandran Venkateshan Ramesh Babu Chirathodi Vylappil Muraleedharan Ranjith Gopinathan Muhammed Shafeeq Ellikkottukurissi Yoosuf
10.	312431	26/11/2018	STENT AND INSERT FOR INTERNALLY MOUNTED SURGICAL BIO PROSTHETIC VALVES	Chirathodi Vylappil Muraleedharan, Ranjith Gopinathan, Umashankar Payanam Ramachandran , Muhammed Shafeeq Ellikkottukurissi Yoosuf, Sumathy Patturaja Bhagyalekshmi , Anila Puthiya Veettil
11.	316296-001	01/04/2019	GENE DOT-A DEVICE TO DETECT DNA AMPLIFICATION.	Anoop Kumar Thekkuveetil,Radhika Remadevi, Rasitha
12.	320214-001	30.07.2019	INVITRO ARTERIOVENOUS	Arvind Kumar

			MALFORMATION MODEL FOR LIQUID EMBOLIC AGENT EVALUATION.	Prajapati,Jayadevan Enakshy Rajan, Roy Joseph
13.	321665-001	16.09.2019	VENTRICULAR ASSIST DEVICE WITH COMPACT INTEGRATED CONTROLLER AND BATTERY PACK	Sarath sasidharan Nair, Nagesh Divakara Panickar Sulochana, Vinodkumar Viswanathan Pillai
14.	320214-002	30.07.2019	LID NIDUS CONSTRUCT FOR LIQUID EMBOLIC AGENT EVALUATION	Arvind Kumar Prajapati,Jayadevan Enakshy Rajan, Roy Joseph
15.	320214-003	30.07.2019	NIDUS IN NIDUS CONSTRUCT FOR LIQUID EMBOLIC AGENT EVALUATION	Arvind Kumar Prajapati,Jayadevan Enakshy Rajan, Roy Joseph
16.	330128-001	17.06.2020	A MULTI-WELL CELL CULTURE PLATE WITH INSERTS	Naresh Kasoju , Manoj Komath, Anilkumar Pallicka veedu Rajan Asari, Ramesh Babu Venkatesan, Athira Rajalakshmi Kumar
17.	339436-002	19/02/2021	LIVE CELL CULTURE SHIPPING DEVICE	Naresh Kasoju , Anilkumar Pallicka veedu Rajan Asari, Ramesh Babu Venkatesan, Anju Mohanan Shylaja
18.	368048-001	20.07.2022	THERMAL CURING MOULD PATTERN ASSEMBLY FOR INTRA CRANIAL ELECTRODES	JITHIN KRISHNAN, NEETHU SUNDARLAL, MURALEEDHARAN CHIRATHODY VAYALAPPIL
19.	368049-001	20.07.2022	THERMAL CURING MOULD PATTERN ASSEMBLY FOR INTERMEDIATE LEAD IN IMPLANTABLE ACTIVE MEDICAL DEVICE APPLICATIONS	JITHIN KRISHNAN, NEETHU SUNDARLAL, MURALEEDHARAN CHIRATHODY VAYALAPPIL
20.	492237-001	23.02.2026	APPLICATOR FOR NEUROSURGICAL FIXATION OF PSEUDOELASTIC NITINOL STAPLES	ANJITH ANAND S S SIVA KUMAR KGV DR.DALJITH SINGH MURALEEDHARAN C V
21.	502144-001	15.05.2026	MANDREL FOR FABRICATING SHAPE MEMORY ALLOY SELF-LOCKING CLIPS.	ANJITH ANAND S S ABHINAV J B SIVA KUMAR KGV

22.	502743-001	20.05.2026	SUPERELASTIC NITINOL STAPLE WITH INWARD ARCHING DUAL SEGMENT LEGS FOR NEUROSURGICAL FIXATION	ABHINAV J B SIVA KUMAR KGV DR. DALJITH SINGH MURALEEDHARAN C V
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Trademark(India)

Sl.No	TRADEMARK APPLICATION NO	DATE OF FILING	TITLE OF TRADEMARK
1.	4489253	20/04/2020	Chitra Gene Lamp-N
2.	4489264	20/04/2020	Chitra Gene Lamp-N (BLACK AND WHITE)
3.	4489260	20/04/2020	Chitra Magna
4.	4489262	20/04/2020	Chitra Magna (BLACK AND WHITE)
5.	4493653	29/04/2020	Chitra En Mesh
6.	4497066	07/05/2020	Chitra Embed
7.	4681143	30/09/2020	Chitra AcryloSorb