3.2.1 Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge.

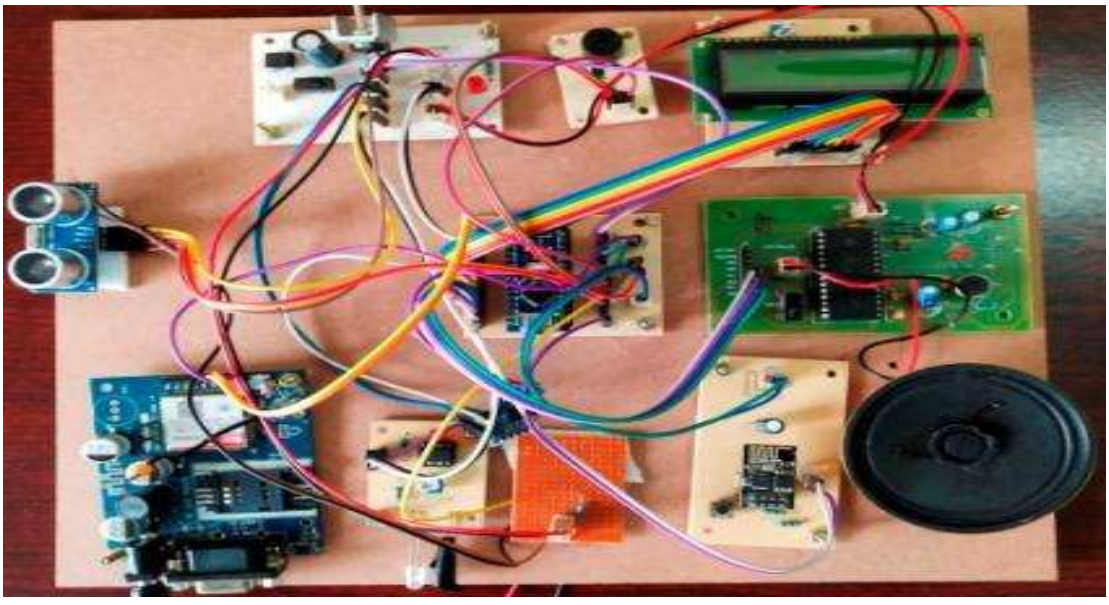
Report on R & D Centre Innovations Activity

The institution has set up an innovation ecosystem to foster a culture of innovation among the young talents in the campus. The institution keeps up the ecosystem more vibrant and conducive with state of the art infrastructure and suitable scholarly human resources.

The sole objective of the R&D Centre is to facilitate students to convert their Ideas into Technological Innovations. Students are provided facilities to build prototypes useful for promotion of Development of Society. Financial Assistance is provided for major and minor Projects.

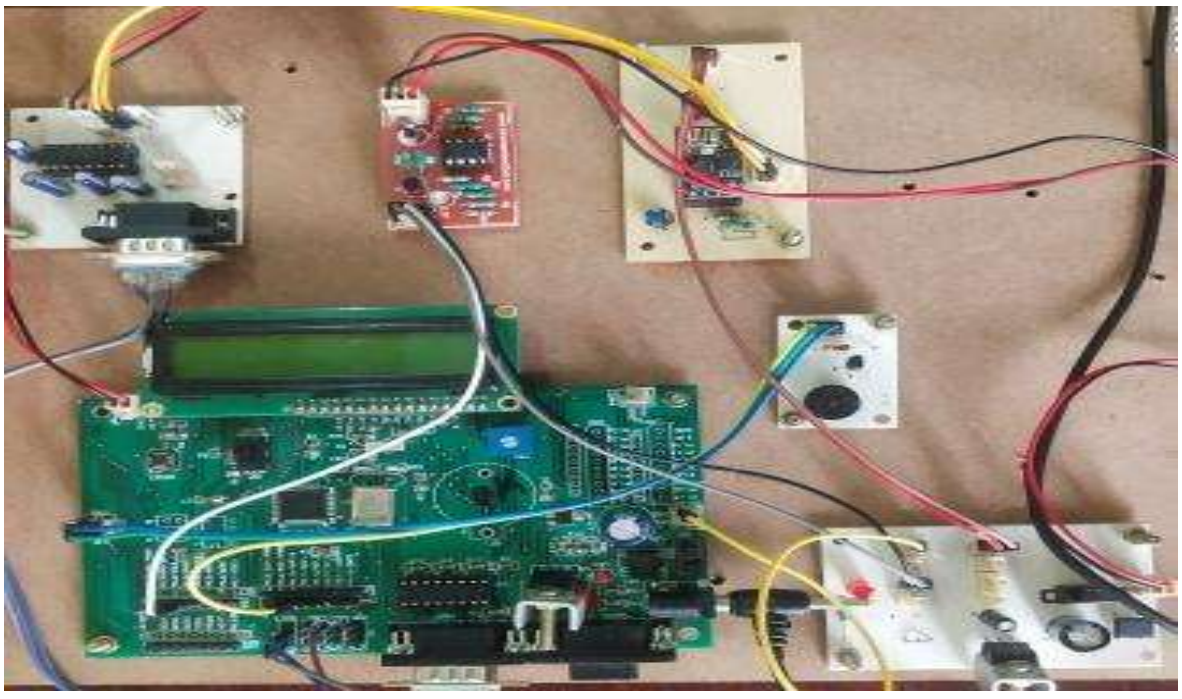
1. Smart Walking Stick for Blind And Old Aged People

A foot stick based totally on ultrasonic sensors and Arduino for visually impaired human beings. People with seen disabilities are often relying on outdoor help which may be provided with the beneficial resource of people, educated puppies, or unique virtual gadgets as assist structures for desire making. Thus, we had been endorsed to growth a clever white cane to overcome the ones boundaries. We finished this cause with the beneficial useful resource of the use of adding ultrasonic sensors at particular positions to the cane that supplied statistics about the surroundings to the customer via the usage of manner of activating the buzzer sound.



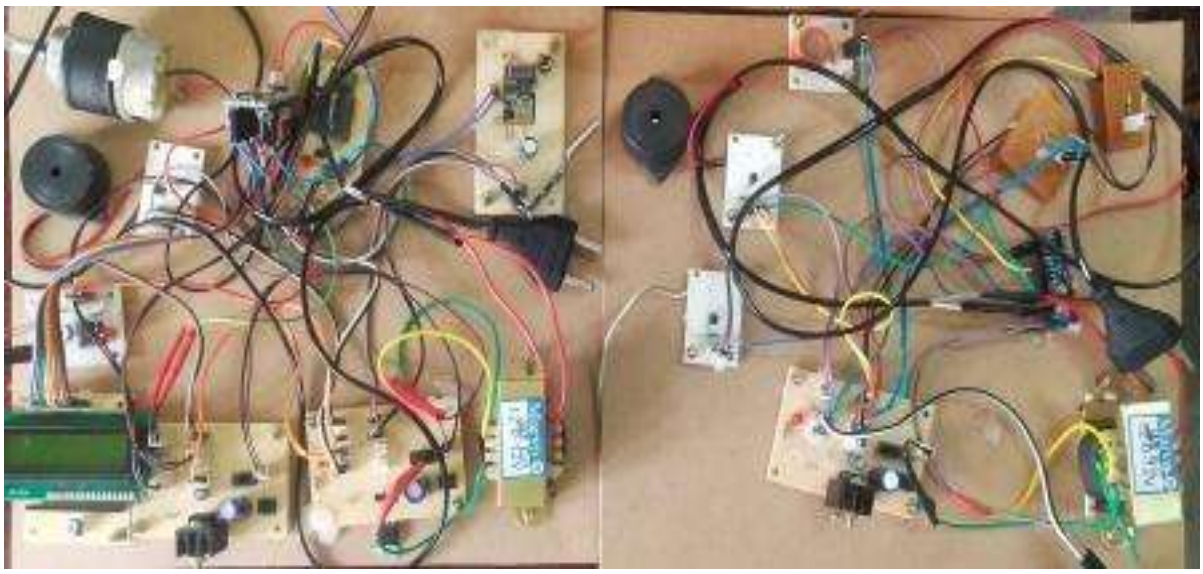
2. ARM Based IoT Health Monitoring System

Today Health-care Environment has advanced technological know-how and records based totally without a doubt mostly on Wireless-Sensing node Technology oriented. Patients are going through a complex state of affairs of sudden loss of life because of the precise cause of coronary heart problems and attack this is due to nonexistence of right clinical protection to patients at the favored time. This is for mainly monitoring the vintage age patients and informing scientific medical doctors and loved ones. So we are imparting a contemporary project to avoid such sudden loss of lifestyles charges through the usage of Patient Health Monitoring that makes use of sensor technology and makes use of internet to talk to the loved ones in case of issues .This device uses Temperature and heartbeat sensor for monitoring patients fitness. Both the sensors are related to the Adriano. To tune the affected person health micro-controller is in flip interfaced to a LCD display and Wi-Fi connection to deliver the information to the internet-server (wireless sensing node). In case of any abrupt modifications in affected character coronary heart-charge or frame temperature alert is sent about the affected person the usage of IOT. This tool moreover suggests patient temperature and heartbeat tracked stay data with timestamps over the Internetwork. Thus Patient fitness monitoring device based totally mostly on IOT makes use of internet to efficaciously display affected individual fitness and lets in the man or woman monitoring their cherished ones from artwork and saves lives.



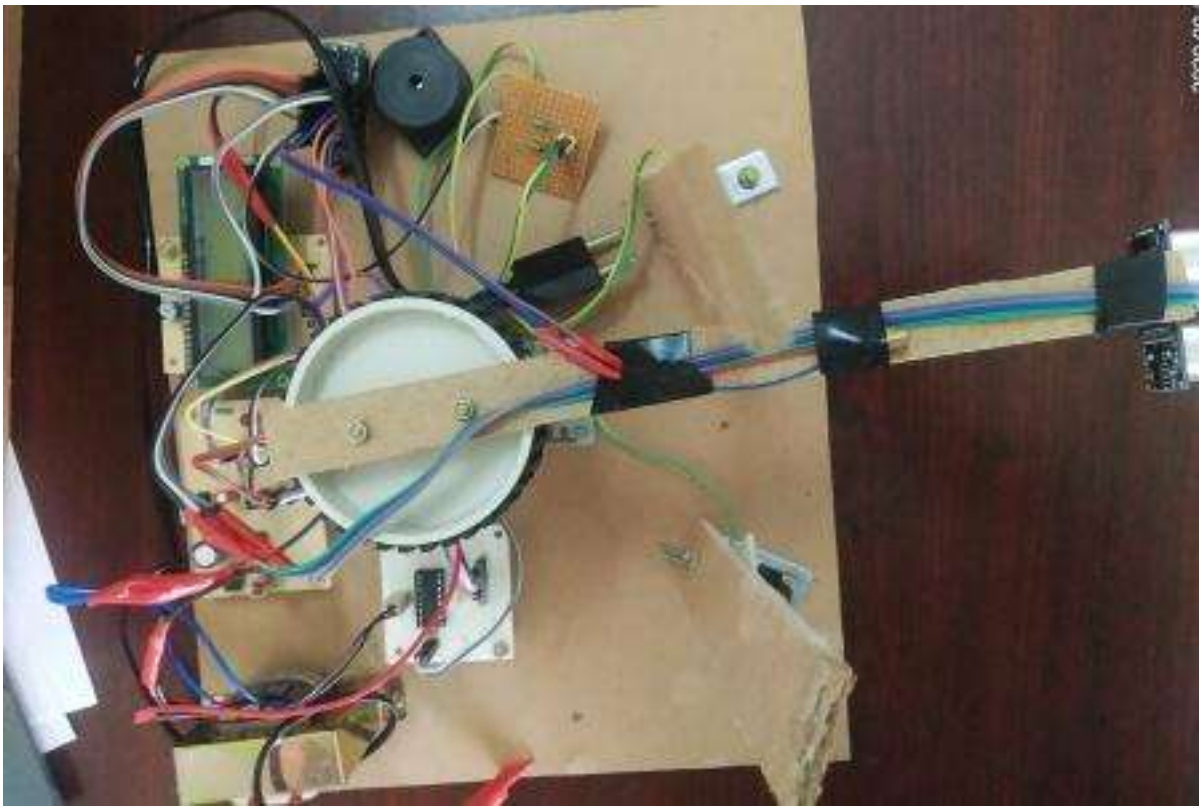
3. Smart Helmet

A smart helmet is a type of protective headgear used by the rider which makes bike driving safer than before. The main purpose of this helmet is to provide safety for the rider. This can be implemented by using advanced features like alcohol detection, accident identification, location tracking, use as a hands free device, fall detection. This makes it not only a smart helmet but also a feature of a smart bike. It is compulsory to wear the helmet, without which the ignition switch cannot turn ON. An RF Module can be used as wireless link for communication between transmitter and receiver. If the rider is drunk the ignition gets automatically locked, and sends a message to the registered number with his current location. In case of an accident it will send a message through GSM along with location with the help of GPS module. The distinctive utility of project is fall detection; if the rider falls down from the bike it sends a message.



4. IOT Based Missile Tracking System

As far as military applications are concerned many modern technologies andequipment's have been designed to provide the security over the borders, sea faces, aircrafts, etc. After a long research, it has been found that the ultrasonic radar based systems proves to be most useful, due to its highly accurate and optimized results. Also, the efforts are being made to avoid the actual presence of human intervention over such systems and to control them from anywhere around the world. Thus, this paper deals with a similar kind of system that tends to approach the today's need. Here, the robotic vehicle consists of a digital video camera used for live streaming of surveillance zone in control room, and then the ultrasonic sensor and a shooting missile are all built over a single bot. This not only helps to enter an area involving high risk but also to visualize the area and there by shoot whatever object user wants to. When the object enters the surveillance zone, then the robotic vehicle and hence the missile is adjusted via an android application in such a way that it targets the object. As it is an IOT based system, it can be controlled from anywhere, and beside this it allows us to take quick and immediate actions, without actually reaching and controlling the bot.



5. IOT Based Low end Automotive Drive Recorder System

The main function of the system is to provide vehicle security by providing a safety case to the vehicle. It will continuously monitor the data regarding vehicle and store it in the Raspberry pi. In this the usage of sensors such as alcoholic sensor, ultrasonic sensor, piezo sensor, and fire sensor and so on is done. These data's are fed in to Raspberry pi for further processing. As the vehicle starts the safety case will be in active mode. Thus when ever their occurs any kind of accidents takes place, at that moment itself the microcontroller trigger the Raspberry pi and a clear cut picture will be recorded and sent to the destination for rescue operation to carried out. These data's are sent to server with the help of Raspberry pi, which is single credit card sized minicomputer with the help of cloud computing. We can store the data in the server, so that we can access the data whenever it is necessary. These can be viewed from the web page. In case of network failure, these data's will be sent to the authorized android application in the form of twillio message.

PATENTS 2023-24

S.NO	NAME OF THE FACULTY	TITLE OF INVENTION	DATE OF PUBLISHING	Application number
	SRIKANTH DURGAM	SECURE AND RELIABLE MOBILE RFID BASED IOT TECHNOLOGY FOR HOME IN SMART CITIES	18-08-2023	202341038280
1	SMD SHAFIULLA	ARTIFICIAL INTELLIGENCE AND IOT BASED SMART AGRICULTURE MANAGEMENT SYSTEM	1/9/2023	202341043088
2	KALERU ANOOSHA	SMART BUSINESS FRAMEWORK FOR CHRONIC LIVER DISEASE DETECTION AND QUALIFICATION USING INTEGRATED DATA ANALYTICS WITH VGG19,DENSENET,BERT,NLP,AND SENSOR BASED SOLUTIONS IN EDUCATION AND HEALTHCARE	11/7/2024	202411053188
3	M.JYOTHI	INTELLIGENT BUSINESS FOR POTATO LEAF DISEASE DETECTION AND QUANTIFICATION USING ADVANCED DAT ANALYTICS ROBERTA EFFICIENTNET,YOLO,NLP,AND SENSOR BASED SOLUTIONS IN AGRICULTURE AND EDUCATION	13-07-2024	202411053607

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Application Details	
APPLICATION NUMBER	202411053188
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	11/07/2024
APPLICANT NAME	1 . JAGENDRA SINGH 2 . Dr. Shubha Jain 3 . Ms. Shail Dubey 4 . Dr. Shalini Gupta 5 . Dr. Divya Mishra 6 . Deepak Sonker 7 . DN Murali Krishna Rao 8 . Dr Kaushal Bhardwaj 9 . Dr Senoj Joseph 10 . Mrs. Kaleru Anoosha 11 . Ashok Kumar Sah
TITLE OF INVENTION	SMART BUSINESS FRAMEWORK FOR CHRONIC LIVER DISEASE DETECTION AND QUANTIFICATION USING INTEGRATED DATA ANALYTICS WITH VGG19, DENSENET, BERT, NLP, AND SENSOR-BASED SOLUTIONS IN EDUCATION AND HEALTHCARE
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	jagendrasngh@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	26/07/2024

Application Status	
APPLICATION STATUS	**Awaiting Request for Examination**

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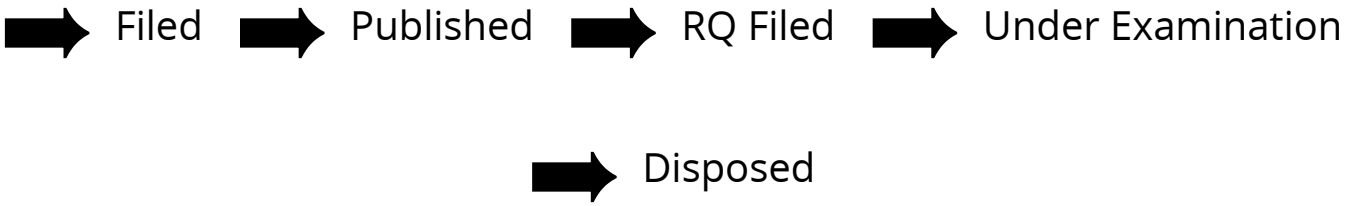

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Application Details	
APPLICATION NUMBER	202411053607
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	13/07/2024
APPLICANT NAME	1 . JAGENDRA SINGH 2 . Upendra Kumar 3 . Ruchika 4 . Dr. Chandani Sharma 5 . Dr Suyash Mishra 6 . Suman Goyat 7 . Amit Kumar Patil 8 . Ms. Ashwini Ankar 9 . Ms. Lekha Thawkar 10 . DN Murali Krishna Rao 11 . Mrs. Macharla Jyothi
TITLE OF INVENTION	INTELLIGENT BUSINESS FRAMEWORK FOR POTATO LEAF DISEASE DETECTION AND QUANTIFICATION USING ADVANCED DATA ANALYTICS, ROBERTA, EFFICIENTNET, YOLO, NLP, AND SENSOR-BASED SOLUTIONS IN AGRICULTURE AND EDUCATION
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	jagendrasngh@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
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REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	26/07/2024

Application Status	
APPLICATION STATUS	**Awaiting Request for Examination**

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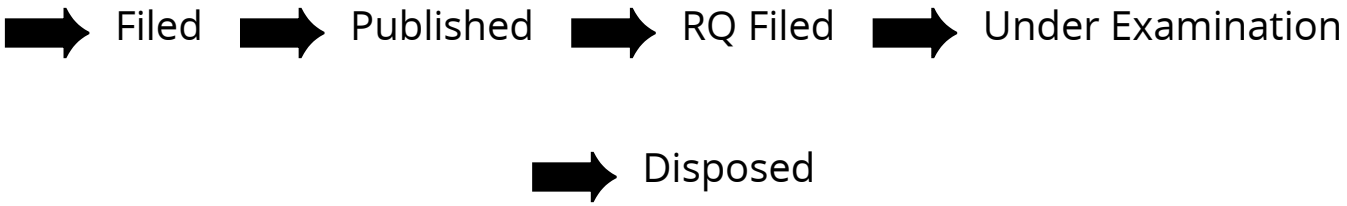

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Application Details	
APPLICATION NUMBER	202341043088
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	27/06/2023
APPLICANT NAME	1 . Lingala Sivaranjani 2 . Dr. J. Geetha Ramani 3 . Dr. D.V.Divakara Rao 4 . Narender Chinthamu 5 . Simran Kaur 6 . Siddhanta Shrivastava 7 . Ch. Sandhya Rani 8 . SMD Shafiulla 9 . Balaji Sampathkumar 10 . Dr. Y.Md.Riyazuddin
TITLE OF INVENTION	Artificial intelligence and iot based smart agriculture management system
FIELD OF INVENTION	COMPUTER SCIENCE
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ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	01/09/2023

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APPLICATION STATUS	**Awaiting Request for Examination**

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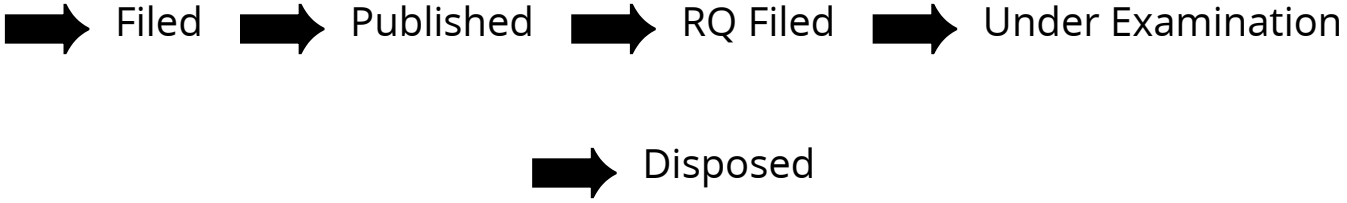

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Application Details	
APPLICATION NUMBER	202341038280
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	03/06/2023
APPLICANT NAME	1 . Dr. P. Sampath 2 . Dr. A. Sengottaiyan 3 . Mr. J. Logeshwaran 4 . Srikanth Durgam 5 . Dr. Santhi Chebiyyam 6 . Mrs. Sristi Vashisth 7 . Mr. B Elisha Raju 8 . Ms. M. Seeni Syed Raviyathu Ammal 9 . Mrs. Pooja Kumari Singh 10 . Dr. G. Nooka Raju 11 . Mrs. Smita Sangewar 12 . Dr. V. Kannan
TITLE OF INVENTION	SECURE AND RELIABLE MOBILE RFID BASED IOT TECHNOLOGY FOR HOME IN SMART CITIES
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)	18/08/2023

Application Status	
APPLICATION STATUS	**Awaiting Request for Examination**

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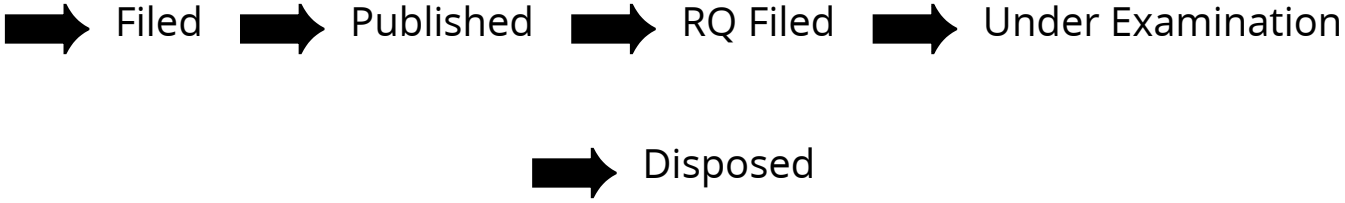

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