RAJIV GANDHI CENTRE FOR BIOTECHNOLOGY

LIST OF PhD THESIS AWARDED

SI No	Title	Name of Student	Name of the Research Guide	Year in which awarded
1	Functional role for the Goat Uterine Nuclear Estrogen Receptor in Post-Transcriptional control mechanisms	Thomas Sebastian	Dr. R V Thampan	May-01
2	Molecular mechanisms associated with the Plasma Membrane - To - Neucleus Movement of the Goat Uterine Non- Activated Estrogen Receptor	Sreeja, S	Dr. R V Thampan	Aug-01
3	Hepatitis C Viruses (HCV): Studies on Viral Genotypes and its Role in HepatoCellular Carcinoma	Chetan Datta Poduri	Dr. M R Das	Oct-01
4	Molecular signatures of Tribal Populations in Kerala based on DNA Finger printing	Anitha, A	Dr. Moinak Banerjee	Mar-03
5	Molecular Alterations of SMAD 2 and SMAD 4 in Human Cervical cancer	Tessy Thomas Maliekal	Dr. Karunagaran	Aug-03
6	Endoplasmic Reticulam-To-Nucleus movement of the Goat Uterine Estrogen Receptor Activation Factors: Identification of the key Proteins involved	Anitha P Govind	Dr. R V Thampan	Dec-03
7	IS6110 fingerprinting of clinical isolates of Mycobacterium tuberculosis and the development of a system to study the mechanisms of	Indu Lakshmi Radhakrishnan	Dr. Sathish Mundayoor	Dec-03

	pathogenicity.			
8	Active Site Mapping of Calcium/Calmodulin Dependent Protein Kinase Type II	Praseeda, M	Dr. R V Omkumar	Dec-03
9	Molecular Genetic Analysis of Hereditary Deafness amoung Kerala population: Role of Myosin 15 and Connexin 26 genes	Anu Yamuna Joseph	Dr. T.J. Rasool	May-04
10	Molecular characterization of Avian Cytokines	Sreekumar, E	Dr. T.J. Rasool	May-04
11	Molecular Mechanism of Curcumin Action in Cells	Rashmi, R	Dr. Karunagaran	Dec-04
12	Study on the Regulation of Nuclear factor Kappa B Expression in Human Cervical cancer	Venkatraman, M	Dr. Karunagaran	Feb-05
13	Molecular characterization of 3-Hydroxy-3- Methylglutaryl-CoA Reductase and 1- Deoxy - D- Xylulose - 5- Phosphate Synthase Gene from phosphate Andographis paniculata (Burm.f.) Wall.ex Nees	Seetha, K	Dr. N.S Banerjee	Jun-05
14	Design Synthesis and characterization of new Polymeric support for solid phase peptide synthesis	Leena, S	Dr. K. Santhosh kumar	Dec-05
15	Molecular characterization of major Cytokines of Indian water Buffalo	Avinash Premraj C	Dr. T.J Rasool	Dec-05
16	Immunogenetic Profiling and Disease Association of HLA Class India 1 Genes in different population of Kerala	Rashmi Thomas	Dr. Moinak Banerjee	Mar-06
17	Effects of major Organosulfur Compounds from	Suby Oommen	Dr. Karunagarn	Apr-06

	Garlic on Proliferation and Apoptosis of cancer cells			
18	Molecular characterization and varietal identification in 'njavara' a traditional medicinal rice (Oryza sativa L.) in Kerala, India	Sreejayan	Dr. George Thomas	Aug-06
19	Mapping of functions on Calcium/Calmodulin: Dependent Protein Kinase Type II	Pradeep K K	Dr. R V. Omkumar	Nov-06
20	Genome Organization of Field Strains of Mycobacterium Tuberculosis	Suma, S	Dr. Sathish Mundayoor	Nov-06
21	Resistance Gene candidates from Zingiber spp: Isolation, characterization and expression analysis	Aswati Nair S	Dr. George Thomas	Nov-06
22	Hepatoprotective Action of Lygodium Flexuosum(L.) SW From Traditional Medicine to Molecular Biology	Wills, P J	Dr. Asha V V	Dec-06
23	Molecular Charecterization of NS 3 Serine Protease and RNA dependent and "RNA Polymers of Hepatitis C Virus, sub type b"	Prasanth V	Dr. Sugunan	Apr-07
24	Molecular charecterisation of field strains of Mycobacterium tuberculosis	Manju Y K	Dr. Sathish Mundayoor	Jun-07
25	Structure - Function Relationships in the Interactions between Calcium/ Calmodulin Dependent Protein Kinase Type II (CaMKII) and N-Methyl-D-aspartate Receptor (NMDAR) sub units	Rajeev Kumar R	Dr. R V. Omkumar	Aug-07
26	Studies on Genomic diversity and genotype	Bhanumathi R	Dr. D V Singh	Oct-07

	associated virulance factors in clinical and environmental isolates of vibrio cholerae 0139 strains			
27	Studies on a cytotoxic factor produced by a clinical strain of Vibrio cholerae 054	Sree Ranjini Isac	Dr. D. V. Singh	Oct-07
28	A Study on Transforming Growth factor Beta Signalling In Human Overian Cancer	Marie Lue Antony	Dr. D. Karunagaran	Jan-08
29	Potential Role of Curcumin, The Yellow Pigment of Turmeric(Curcuma longa) in Sensitizing the conventional Chemotherapeutic drugs	Smitha VB	Dr Ruby John Anto	Feb-08
30	Functional studies on the goat uterine estrogen receptor activation factor	Julie Jacob	Dr. R V Thampan	Mar-08
31	Molecular analysis of vibrio choleraer 01 EL TOR strains isolated from Kerala, India	Dhanya Ramachandran	Dr. D. V. Singh	Mar-08
32	Type III polyketide synthases - Its genomic analysis in Zingiberaceae, significance in ginger in relation to gingerol and potential applications	Radhakrishnan E K	Dr. Soniya E. V	Apr-08
33	Population dynamics, molecular phylogeny and charecterization of antimicrobial peptides of teak defoliator (Hyblae puera carmer)	Chandrasekhar, R	Dr. Moinak Banerjee	May-08
34	Studies on the pharmacological and toxicological properties of cardiospermum Linn. extracts/active fractions keeping in view with standardized phytomedicine development	Sheeba, M S	Dr. Asha V V	Jun-08
35	Cloning of ß-1, 3- glucanase from ginger (Zingiber	Deepty Antony	Dr. G. Purushothama	Oct-08

	officinale Rose) and studies on its modulation during pythium aphanidermatum infection			
36	A Study on the nuclear abnormalities induced by smad3 or RelA and HeLa cells	Goodwin Jinesh G	Dr. D. Karunagaran	Nov-08
37	Development of phenotypically normal transgenic potatocytokinins (Solanum tuberosum) plants overproducing	Nisha K K	Dr. G. Purushothama	Nov-08
38	Development of Microsatellite markers and AFLP analysis for genotyping the cultivars of black pepper (Piper nigrum L.)	Nisha Joy	Dr. E. V. Soniya	Dec-08
39	Regulatory role of curcumin on the carcinogenic effect induced by ingredience of cigerette smoke	Vinesh kumar T P	Dr. Ruby John Anto	Mar-09
40	Genetic Transformation studies in Cucumis Sativus for Expressing Immunogenic Proteins	Sindhu C Unni	Dr. Soniya E V	Mar-09
41	Molecular Studies on Plants- Derived agents which display Antiosteoporosis and anticancer properties	Sebastian K S	Dr. R V Thampan	Apr-09
42	Study of Microtubule Assembly by some Microtubule Nucleation Promoters	Nisha Elizabeth Thomas	Dr. Suparna Sen Gupta	Jun-09
43	Structural and functional studies of the goat bone marrow RNA dependent RNA polymerase	Lakshmi Priyadarsini	Dr. R V Thampan	Jul-09
44	Genetic variation in wild gingers (Zingiberaceae) for resistance to response Pythium infection and analysis of differentially expressed transcripts in hosts with different levels of pathogen	Kavitha P G	Dr. George Thomas	Aug-09

45	Functional implications of the interaction between CA2+/ Calmodulin dependent protein kinase type II and N-Methyl-D-aspartate receptor subunit 2B	John Cheriyan	Dr. R V. Omkumar	Sep-09
46	Identification of the Functional Role of Estrogen Receptor Activation Factor and Zinc Finger Protein-99 in Steroid Regulated Gene Expression	Mohamed Febin Farook	Dr. R V Thampan	Nov-09
47	Pharmacogenetic Profiling for Theranostic Evaluation of Schizophrenla in a South Indian Population	Neetha N V	Dr. Moinak Banerjee	Jan-10
48	Functional Analysis of Duck (ANAS PLATYRHYNCHOS) CC Chemokines on Antibacterial and Antiviral Defense	Arathy D S	Dr. E Sreekumar	May-10
49	Identification and biological characterization of ApAvBD2- A Novel Beta-Defensin antimicrobial peptide of avian orgin	Soja Saghar S	Dr. E Sreekumar	Aug-10
50	Cellular effects of plumbagin in BRCAI blocked ovarian cancer cells	Thasni K A	Dr. Priya Srinivas	Aug-10
51	Interaction of Calcium/Calmodulin dependent protein kinase type II with neuronal Ion channel proteins - Implications in kinase catalysis and regulation by phosphates	Suma Priya	Dr. R V Omkumar	Oct-10
52	Genetic Dissection of Intracranial Aneurysms in South Indian Population	Linda Koshy Vaidyan	Dr. Moinak Banerjee	Nov-10
53	Identification and chareacterization of Lipid Refts and Taft Associated Proteinsa on Mammalian Spermatozoa	Mohammed Shoeb	Dr. Pradeep kumar G	Dec-10

54	Role and relevance of plastidial and cytolic isopentenyl diphosphate (IPP) overproduction on bacoside content of Brahmi [Bacopa monnieri(L.) Wettst.]	Lakshmi Mahadevan	Dr. PurushothamaM G	Feb-11
55	Albumin of Epididymal Origin: Synthesis, secretion and possible regulatory functions	Deepa Mathew	Dr. R V Thampan	Apr-11
56	Evaluation of the Synergistic Effect of Paclitaxel and curcumin in carcinogen- Induced and Xenograft models of Cervical Carcinogenesis in Mice	Sreekanth C N	Dr. Ruby John Anto	Jun-11
57	Study of Diaminothiazoles in cancer cells and in Microtubule system	Smitha S L	Dr. Suparna Sen Gupta	Jun-11
58	A Study of Hippocampal Neurogenesis associated with Temporal Lobe Epilepsy and the Role of Notch Signalling in Transcriptional Regulation of TLX3, a Selecter Gene involved in Excitatory versus Inhibitory Fate Specification	Indulekha C L	Dr. Jackson James	Sep-11
59	Evaluation of Neuclear presence and DNA binding ability of Son of sevenless 1 to elucidate its function in pregnency	Zyju D P	Dr. Malini Laloraya	Nov-11
60	Isolation and charecterization of native transcription machinery for genetic transformation studies in Piper nigrum L.	Маји T T	Dr. Soniya E V	Jan-12
61	Bioprospecting of Selected Medicinal Plants for Hepatpprotective and Anti-Viral Molecules and Construction of a Screening System for High	Suresh V	Dr. Asha V V	Jan-12

	Throughput Anti-HBV Drug Sreening			
62	Investigation of functional Role of CKS1, a Subunit Associated with Proteasome Machinery, in Cancer Cell Cycle and its Significance in Cancer Chemotherapy response and Oral Cancer Progression	Anand Krishnan	Dr.S. Asha Nair	Jan-12
63	Molecular and functional characterization of testes expressed NOX in relation to sperm development	Ambika Chandrasekhar	Dr. Pradeep Kumar G	Jan-12
64	Molecular Characterization of the environmental strains of vibrio cholerae isolated from the aquatic sources in Southern Kerala	Praveen Kumar P P	Dr. Sabu Thomas	Feb-12
65	Characterization of regulatory pathways involved in the maintenance and differentiation of embryonic stem cell derived neural progenitors and their potential use in regenerative therapy for temporal lobe epilepsy	Sanalkumar R S	Dr. Jackson James	Mar-12
66	Study of the Mechanism of Action of a Diaminothiazole, A Potential Anticancer Agent	Thomas Sannu Ann	Dr. Suparna Sen Gupta	Mar-12
67	mTOR medicated effect of essential amino acid Leucine and its role in estrogen action in MCF-7 breast cancer cell line	Sony Devassy	Dr. R V Thampan	May-12
68	Endoplasmic Reticulum Stress Mediated Cell Death and Survival: Potential Role of Caspases and Bc12 family proteins	Bhavya B C	Dr. T.R. Santhosh Kumar	May-12
69	Cloning and charecterisation of defence - related genes from Piper colubrinum by substractive cDNA	Dicto Jose M	Dr. Manula S	Jul-12

	approach			
70	Identification of Testis-Expressed Cell Cycle Regulating Proteins with Special Reference to Meiosis	Uma Chandran	Dr. Pradeep kumar G	Jul-12
71	The Cancer Stem Cell Code in Oral Tumorigenesis	Vinitha Richard	Prof. M. Radhakrishna Pillai	Jul-12
72	Regulatory Interactions of Calcium/ Calmodulin Dependent Protein Kinase Type II with Substrates and Ligands	Mayadevi M	Dr. R. V. Omkumar	Sept- 12
73	Selective Estrogen Receptor Modulator(Serm) Activity of Pomegranate (Punica Granatum L.): Implications for Estrogen Dependent Breast Cancer	Sreeja S	Dr. Sreeja S	Oct-12
74	Cell- to- Cell Variability in Apoptotic Signalling Events Role of the cycle phases	Jeena Joseph	Dr. T R Santhosh Kumar	Oct-12
75	Elucidation of Membrane - Initiated and Nucleus - Initiated Steroid Signaling Pathways in an Early Implantation Mouse Uterus	Renjini A P	Dr. Malini Laloraya	Oct- 12
76	Development of Novel Biodegradable Polymer Systems for controlled Drug Release in Biomedical Applications	Lekha Nair K	Dr.Vinod Kumar G S	Jan-13
77	Development of a New Class of Solvent –like PEGylated Dendimer Polystyrene Resins for Solid Phase Organic Synthesis	Siyad M A	Dr. Vinod kumar G S	Mar-13
78	Understanding the 'modus operandi' of DOCK mediated signaling at embryo implantation.	Jasna J Mohan	Dr. Malini Laloraya	May -13
79	A Reporter System to Detect the Activity of	Mathew Stephen	Dr. R V Omkumar	May -13

	Neuronal Ca2+ CHANNELS – Implications In High Throughput Screening for Agonists And Antagonists.			
80	Effect and Mechanism of Action of Natural compunds on the growth of Mycobacterium tuberculosis in vitro	Divya Lakshmanan	Dr. Ajay Kumar	June-13
81	A Study on Drug Resistance Pattern and Molecular Epidemiology of Clinical Isolates of Mycobacterium tuberculosis from Kerala	Biljo V Joseph	Dr. Satish Mundayoor	June -13
82	Concentration Detection and Molecular charecterization of Human Immunodeficiency Virus, Hepatitis B Virus and Hepatitis C Virus from water and waste water.	Manoj Narayanan	Dr. Paul Murugan Dr. D Karunagaran	July-13
83	Cellular Models to Charecterize Nonclassical Apoptosis Signalling Capable of Bypassing Drug Resistance Conferred by Bcl-2/Bcl-xL in Tumor Cells	Mahendra Servi	Dr. T R Santhosh kumar	July-13
84	Interaction of Mycobacterium tuberculosis and macrophage: Studies on the down-regulation of the macrophage scavenger receptor by mycobacterial proteins and Comparative analysis of mycobacterial TrHb promoters and the groEL2 promoter	Sunil V J	Dr. Satish Mundayoor	July -13
85	Heat Shock Proteins in the Regulation of Cancer Drug Resistance	Praveen K S	Dr. T R Santhosh kumar	July-13
86	Identification and functional Evaluation of Factors Regulating Testicular Germline Stem Cell Division and Differentiation	Indu S	Dr. Pradeep kumar G	July -13
87	Regulatory Mechanisms of Nuclear factor Kappa B in Human Cancer Cells	Mani Sankar Babu	Dr. D Karunagaran	Aug -13
88	Polyoxypropylene Crosslinked Polymer	Sachidanandan P	Dr. K. Santhosh Kumar	Sept-13

	supports(Poly GEL): Design, Synthesis, Chareacterization and its application in conventional/ Microwave Assisted Polypeptide Synthesis.			
89	Mutation Analysis and Molecular Characterization of Drug resistant clinical Isolates of Mycobacterium Tuberculosis From Kerala	Anil kumar A K	Dr. Satish Mundayoor	Nov -13
90	Design, Synthesis and Application of Polyoxyethylene Cross-Link Functionalised Polystyrene Support for Solid Phase Organic Synthesis	Manoj Kurian	Dr. K. Santhosh kumar	Nov -13
91	Identification of Effective and Non-Toxic Chemosensitizers, which can be used in Combination with the conventional Chemotherapeutic drugs used for Breast Cancer Treatment.	Vinod B S	Dr. Ruby John Anto	Dec - 13
92	Genetic Predisposition to Schizophrenia in South Indian Population: An Immunogenetic Perspective	Lekshmi Srinivas	Dr. Moinak Banerjee	Feb -14
93	Neural Differentiation of Embryonic and Umbilical Cord Blood Derived Mesenchymal Stem Cells for Possible Cell Replacement Therapy in Glaucoma model.	Divya M S	Dr. Jackson James	Mar -14
94	Hepatitis B Virus core VLP (Virus Like Particle) based vaccine delivery system for Tuberculosis	Dhanasooraj	Dr. Satish Mundayoor	Mar- 14
95	Molecular Evidence for the Anticancer Activity of Plumbagin in BRCA1 Deffective Breast Cancer	Rakesh S	Dr. Priya Srinivas	Apr -14
96	Isolation, identification and functional characterization of a Mycobacterium tuberculosis protein with histone acetyltransferase activity.	Leny Jose	Dr. Ajay Kumar R	Apr -14
97	Identification of a novel NMDA receptor inhibitory plant extract with neuroprotective action	Soumya Paul	Dr. Omkumar	May-14
98	Molecular characterization and in silico analysis of	Thomson Mani	Dr. S. Manjula	May -14

	Pathogenesis-Related Osmotin (PR5) and Serine/ Threonine Protein Kinase gene homologues from <i>Piper colubrinum</i> Link.			
99	Identification and Characterisation of Genes of Mycobacterium Tuberculosis that are Induced during interaction with Host Cells	Madhavi Latha, GK	Dr. Satish Mundayoor	May -14
100	Molecular studies on the Dengue virus strains from Kerala, South India	Anoop M	Dr. E. Sreekumar	June -14
101	Functional Elucidation of a Ginger Calcium- dependent Protein Kinase Activated under Multiple Stress Responses	Vivek P J	Dr.Soniya E V	Sept-14
102	Genetic Structure of cultivated rice(Oryza sativa L.) and its progenitor Oryza rufipogon Griff, in India	Dinesh Raj	Dr. George Thomas	Sept-14
103	Identification, characterization and in planta functional elucidation of quinolone synthase, a Type III polyketide synthase from Aegle marmelos Corr.	Reshmi M S	Dr.Soniya E V	Oct -14
104	Peptidomic analysis of the skin secreted antibacterial peptides of the frog Clinotarsus curtipes and their structure function studies	Parvin Abraham	Dr. Santhosh Kumar K	Nov -14
105	Isolation, Charecterzation and Therapeutic interventions of Breast Cancer Stem Cells from BRCA1- defective breast cancer	Veena Somasundaram	Dr. Priya Srinivas	Mar -15
106	Design and Development of PolyAlkyl Ether Based Multifunctional Dentric Nanocarrier for Target Specific Drug Delivery.	Aravind. A	Dr. Santhosh kumar	Mar-15
107	Synthesis Charecterization and Biological Evolution of Novel Nanoparticulate Drug Delivery Systems for Colon Cancer	Ashwani Kumar N	Dr. G.S. Vinod Kumar	Apr-15
108	Characterization of Fodrin as a Gamma – tubulin Associated Protein	Shashikala S	Dr. Suparna Sen Gupta	Apr-15
109	DNA Fingerprinting and discrimination of the	Mariet Jose	Dr. George Thomas	Apr-15

	traditional medicinal rice "Njavara" from other traditional rice strains			
110	Molecular Evaluation of Anticancer Properties of the Active Principles from WRIGHTIA TINCTORIA	Jayesh Antony	Dr. Ruby John Anto	Jul -15
111	Molecular analysis of mutualistic interaction between Centella asiatica and Priformospora indica and its effect on secondary metabolic production	Jisha S	Dr. Manjula S	Jul-15
112	Evaluation of Molecular Defects in Polycystic Ovary Syndrome	Meera Krishna B	Dr. Malini Laloraya	Aug -15
113	Functional analysis of Smad ubiquitin regulatory factor 2(Smurf2), a HECT E3 Ubiquitin ligase, in breast cancer	Diana David	Dr. Asha Nair	Sept- 15
114	Development and evaluation of effective inhalable drug delivery system for the treatment of pulmonary tuberculosis	Mithun Varghese	Dr. Vinod kumar G S	Oct -15
115	Identification of specific microRNAs involved in differentiation of retinal ganglion cells	Abdul Rasheed V	Dr. Jackson James	Oct -15
116	Delineation of Genes Associated with Remodeling of Extracellular Matrix and Endothelial Dysfunction in Intracranial Aneurysm	Sanish Sathyan	Dr. Moinak Banerjee	Oct-15
117	Intersection of Genetics and Epigenetics in Schizophrenia	Saradalekshmi K R	Dr. Moinak Banerjee	Dec -15
118	Isolation and Characterization of the Anti- hepatocellular Carcinoma Compound from Glycosmis pentaphylla (Retz.) Correa	Sreejith P.S	Dr. V.V Asha	Jan-16
119	Nanoparticle –based drug delivery and drug release for chemotherapy and chemoprevention.	Arun Kumar T T	Dr. Ruby John Anto	Feb-16
120	Study of Drug Resistance Mechanisms in Cancer Against Antimitotic Agents Using Paclitaxel and Diaminothiazoles	Smreti Vasudevan	Dr. Suparna Sen Gupta	Feb -16
121	Molecular characterization of incompatible response of Zingiber zerumbet Smith to the soft rot pathogen Pythium myriotylum Drechsler	Kiran A G	Dr.George Thomas	Mar -16

122	Role of MicroRNA in male germ cell differentiation	Sreesha Sree	Dr. Pradeep kumar G	Mar -16
123	Functional Analysis of TDP-43 in Regulation to	Divya Saro Varghese	Dr. Pradeep Kumar G	Apr -16
	Spermatogenesis			
124	Molecular Screening for Salt Tolerance genes in	Tara G Menon	Dr. E.V.Soniya	Apr -16
	Rhizophra apiculata BLUME.			
125	Identification and characterization of microRNAs	Asha S	Dr. Sonia E V	May -16
	involved in stress regulation during Phytophthora			
100	infection from black pepper (Piper nigrum L.)	21 1/2		
126	Functional Analysis of AIRE (Autoimmune in	Bhagya K P	Dr. Pradeep kumar G	Jun -16
127	Regulator) Germ Cell Development	Dashus Thamalas sho	Du Conserve Con Consta	A 1C
127	Study of the Signaling events and role of p53 on the In vitro and In vivo Efficacy of a lead	Reshma Thamkachy	Dr. Suparna Sen Gupta	Aug-16
	Diaminothiazole in Colon cancer Models.			
128	Central Nervous System infection by Alphaviruses:	Rachy Abraham	Dr. E.Sreekumar	Aug-16
120	Cellular pathology of Chikungunya virus infection	nachy Moranam	Dr. E.Sreekamar	Aug 10
	in Astrocytic cells.			
129	Functional Role of p21-Acivated Kinases, PAK1 and	Parvathy M	Dr.Sreeja S	Mar-17
	PAK4, in Oral cancer	,		
130	Biological action of is(3,5-diiodo-2,4,6-	Saneesh Babu P S	Dr. S. Asha Nair	Nov -16
	trihydroxyphenyl) squaraine as a photosensitizer			
	for breast cancer			
131	Effect of Synthetically and Modularly modified	Deepu A	Dr. K. Santosh Kumar	Dec - 16
	Chemokine of vMIP-II on CC Chemokine Receptor			
100	5			2 10
132	In vitro and in vivo evaluation of the anticancer	Lekshmi R Nath	Dr. Ruby John Anto	Dec -16
	effects of active principles from Solanum Nigrum Linn and Chromolaena odorata			
133	Transcriptional Regulation of Homeobox Gene	Divya T S	Dr. Jackson James	Jan-17
155	TLX3 and its Downstream targets in developing	Divya i S	Dr. Jackson James	JdII-17
	cerebellum			
134	Differential regulation of Notch target gene Hes-1:	Dhanesh S B	Dr. Jackson James	Feb -17
	Implications in maintenance, proliferation and fate	2.10.10011 3 5	2346113411163	
	·			
	during neocortical development.			
	specific differentiation of neural progenitors			

135	Hetrologous expression of recombinant human Granulocyte Colony Stimulating factor (rhG-csF) in transgenic tobacco (Nicotiana tabucum L. Var. Samsun)	Nisha Nair R	Dr. S Manjula	Feb -17
136	Molecular Basis of Remodeling of pulmonary Vascular Endothelium in Rats with Left Ventricular Heart Failure	Binil Raj S S	Dr. C C Kartha	Feb-17
137	Functional evaluation of pathogen defense roles of Serine/Threonine Protein and Kinase and DnaJ gene homologues from Piper colubrinum Link.	Anu K	Dr. Manjula S	Mar -17
138	H3K4 methylation and Spermatogenesis	Karthika Radhakrishnan	Dr. Pradeep Kumar G	Mar-17
139	Epigenetic modifications associated with Mycobacterium tuberculosis infection in macrophages	Aneesh C	Dr. Ajay Kumar R	Jun-17
140	A Calcium Cell Line to Scree for Modulators of Calcium Channels based on a simple End point Assay	Arun Kumar RC	Dr.R.V Omkumar	Jun -17
141	Molecular Studies on Cold Adaptation of Pseudomonas psychrophila MTCC12324 Isolated from the Artic at 70°N.	Wilson Peter Abraham	Dr. Sabu Thomas	Aug -17
142	Remodeling of Cardiac Endothelium in Progressive Heart failure-an Experimental Study in Rats	Dr. Ajith Kumar G S	Dr. C. C. Kartha	Aug-17
143	Evaluation Pharmaco – Epigenomic response of Antipsychotic Drugs	Swathy B	Dr. Moinak Banerjee	Sept-17
144	Prospecting of Cheilanthus(Forsk.) Kaulf, for its Antiongiogenic and Anti-Hepatocellular Carcinima.	Krishna Radhika	Dr. Asha V V	Sept -17
145	Mycobacterium tuberculosis induced phosphorylation of macrophage proteins	Mahesh P P	Dr. Satish Mundayoor	Nov-17
146	Isolation and Functional Characterization of TypeIII Polyketides Synthase (PKS) From Amla(Emblica Officinalis Gaertn)	Aiswarya G	Dr. Soniya E V	Nov-17
147	Evaluation of Protocadherin Expression in Relation	Anil Kumar T R	Dr. Pradeep Kumar G	Nov-17

	to Human Male Factor Infertility			
148	Functional characterization of Rv3334, a putative transcriptional regulator of mycobacterium tuberculosis H37Rv	Roshna L. Gomez	Dr. R Ajay Kumar	Dec -17
149	Isolation, Characterization and Structure-Function studies of skin secreted peptides from frog Hylarana temporalis	Reshmy V	Dr. Santhosh Kumar K	Jan-18
150	Molecular and Functional Analysis of Autoimmune Regulator in Female Reproduction	Soumya V	Dr. Malini Laloraya	Jan-18
151	Reciprocal Regulation of $\beta\text{-hCG}$ and BRCA1- An in vitro study	Satheesh Kumar S	Dr. Priya Srinivas	Apr -18
152	Effect of Cancer Associated Fibroblasts on Cancer Cells: Relation to Aggressiveness	Sreelatha K H	Dr. Priya Srinivas	Apr -18
153	Studies on Regulation of Cell growth by BRCA1/2 in prostate cancer cells: Influence of certain selected Quinones	Reshma R S	Dr. Priya Srinivas	Apr-18
154	Identification of potential targents for inhibiting biofilm formation in <i>Vibrio parahaemolyticus</i> and <i>Vibrio cholerae</i>	Akhilandeswaree D	Dr. Sabu Thomas	Apr-18
155	N-Methyl –D- Aspartate Receptor Mediated Calcium Signaling in Glutamatergic Synapses of cortical and cerebellar Neurons	Ramya R Prabhu	Dr. R. V.Omkumar	May -18
156	Structural charecterisation and in silico studies on selected members of type III polyketide synthase family of proteins	Mallika V	Dr. Soniya E V	May-18
157	Bioactivity guided fractionation and Characterization of Phyllanthus Maderaspatensis L for Anti-Liver fibrotic effects	Krishnakumar K A	Dr. Asha V V	July-18
158	Identification of biological mediators of metastasis associated protein-1 (MTA1) in cancer cells	Deivendran S	Prof. M Radhakrishna Pillai	July-18

159	"Role Of Histone Chaperones In Cellular Reprogramming"	Mr.Syed Khaja Mohieddin	Dr.Debasree Dutta	August 2018
160	"Elucidation of Endothelial Cell signaling Mechanisms and Vascular Permeability in Dengue."	Ms. Anupriya MG	Dr.Sreekumar.E	Sep 2018
161	"Wnt5a signaling and its implications in cerebellar neurogenesis"	Ms. Subashini C	Dr.Jackson James	Oct 2018
162	'Cloning and expression of polyhydroxybutyric acid biosynthesis genes from bacteria isolated from the environment and the optimized production of the biopolymer'	Mr. Aneesh.B	Dr.Harikrishnan	Nov 2018
163	Generation of metagenomic libraries and screening for potential biomolecules	Mr. Arjun. J.K	Dr.Harikrishnan	Dec 2018
164	"Expression profiling of phenylpropanoid biosynthetic pathway genes in Zingiber spp. With contrasting response to soft-rot pathogen Pythium".	Mr. Lesly Augustine	Dr.George Thomas	Dec 2018
165	"The role of endothelial cell Angiopoietin-1 (Ang-1) signaling in vascular leakage induced by Dengue virus	Ms. Sneha Singh	Dr.Sreekumar.E	Dec 2018
166	"βHCG and BRCA1 in Gestational Trophoblastic Diseases"	Ms. Revathy	Dr.Priya Srinivas	Jan 2019
167	"Molecular Determinants in Pancreatic Sustenance: Implications in Type 1 Diabetes"	Ms. Annu Joseph	Dr.Malini Laloraya	Jan 2019
168	"Molecular Mechanism of cell differentiation and pluripotency"	Mr. Philip Litto Thomas	Dr.Malini Laloraya	Jan 2019
169	A study on environmental Vibrio parahaemolyticus with special emphasis on its pathogenicity "	Ms. Divya M P	Dr.Sabu Thomas	Jan 2019
170	"Mechanistic evaluation and In vivo validation of Syndergistic combinations of curcumin and resveratrol with 17ignaling17peutics used in breast cancer treatment".	Ms. Haritha H Nair	Dr.Ruby John Anto	Jan 2019

171	"Effect of PEGylation and fatty acid acylation on the membrane perturbation activity of AMP".	Ms. Asha R	Dr.K. Santhosh Kumar	Jan 2019
172	"Comprehensive analysis of biofilm forming bacterial communities in chronic diabetic ulcer and identification of biofilm associated genes in Enterococcus faecalis"	Ms. Karthika. S	Dr.Sabu Thomas	Feb 2019
173	"Molecular basis of metabolic switch in response to hemodynamic stress in aging heart"	Mr. Vikas Kumar	Dr.T.R.Santhosh Kumar	Feb 2019
174	"Expression Profiling and Functional Characterization of Nephrocystin in relation to Spermatogenesis"	Ms. Devi.AN	Dr. Pradeep Kumar	Feb 2019
175	"An integrated systems biology approach for the molecular elucidation of Piper nigrum L. – Phytophthora capsici Leonian phytopathosystem"	Mr.Chidambareswaren Mahadevan	Dr.S Manjula	Feb 2019
176	"Application of synthetic nucleases for HPV gene editing"	Ms.Sumitra Shankar	Prof. M. Radhakrishna Pillai	Feb 2019
177	"Molecular alterations in central nervous system in mouse models of chikungunya virus neurovirulence"	Ms. Sreeja R Nair	Dr. E. Sreekumar	Feb 2019
178	"Evaluating the role of FOXP3 (scurfin) during embryo implantation, an immune privileged instance"	Mr.Prasanth Narayan	Dr. Malini Laloraya	Mar 2019
179	"Control of monoamine Bio Synthetic pathway in Autism Phenotypes".	Ms. Ann Mary Alex	Dr. Moinak Banerjee	Apr 2019
180	"SKP2-FOXM1-CDK1 axis in cell cycle regulation and therapeutic implication of FOXM1 inhibitor, Thiostrepton	Ms.Dhanya.K	Dr.Asha.S Nair	Apr 2019
181	Role of Metastasis Tumour Antigen (MTA) family proteins in Endometrial Cancer: Clinicopathological correlation and molecular functions	Ms.Chithra.J.S	Dr.Asha.S Nair	Apr 2019
182	"Studies on the Mechanism of Action of Some Frog Skin Antimicrobial Peptides"	Mr.Vineeth Kumar.TV	Dr.Sanil George	May 2019

183	"Molecular Studies on Autophagy in Chikungunya virus infection"	Mr.Mudaliar Prashant Pandurang	Dr.Sreekumar .E	May 2019
184	"Role of Fodrin in regulating mitosis and analysis of its interaction with Gamma-tubulin"	Mr. Rohith Kumar N	Dr.Suparna Sengupta	June 2019
185	"Role of upstream activators and downstream effectors of MTA1 associated tumor aggressiveness"	Ms. Hezlin Marzook	Prof. M. Radhakrishna Pillai	June 2019
186	Role of FAM171A1 in Triple Negative Breast Cancer.	Mr. Rahul Sanawar	Dr.T.R. Santhosh Kumar	June 2019
187	THE ROLE OF SphKs/S1P AXIS IN INNATE IMMUNE RESPONSE AND AUTOIMMUNITY	Ms. Sabira Mohammed	Dr. Harikumar. B	June 2019
188	Molecular mechanistic evaluation of the Anti- hepatocellular carcinoma activity of Glycopentalone from Glycosmis pentaphylla (Retz.) Correa and its Optimization using Nano-enabled drug delivery systems	Ms.Greeshma Tom	Dr. V.V.Asha	July 2019
189	Molecular Evaluation of Interaction between Sperm Memberane Rafts and Zona Pellucida Proteins	Ms. Soumya A	Dr.Pradeep Kumar.G	July 2019
190	Molecular mechanisms in the pathogenesis of cerebral Arteriovenous Malformation	Ms. Jaya Mary Thomas	Dr.Arumugam Rajavelu	July 2019
191	"Identification of effective chemosensitizers for leukemia and melanoma chemotherapy".	Ms. Minakshi Saikia	Dr. Ruby Joh Anto	Aug 2019
192	"Molecular genetics behind the response of cultivated ginger (Zingiber officinale Roscoe) and the wild congener Z. zerumbet (L.) Smith to the soft rot pathogen Pythium myriotylum Drechsler"	Ms. Smini Varghese	Dr.George Thomas	Aug 2019
193	'Proteomic analysis of dormant and reactivated Mycobacterium tuberculosis, and characterization of Rv0474, a putative transcriptional regulator identified	Mr. Sajith Raghunandan	Dr. Ajay Kumar	Sep 2019

	from reactivated bacterium'.			
194	Functional attributes and protective efficacy of antibodies induced by different doses of vaccination against Human Papillomavirus (HPV).	Ms. Priya R Prabhu	Prof. M. Radhakrishnapillai	Dec 2019
195	Analysis of Genetic Variation in an Endemic Frog (Indirana semipalmata Boulenger, 1882) Population of the Western Ghats using molecular markers"	Mr. Kiran S Kumar	Dr. Sanil George	Dec 2019
196	"Role of RNA binding protein, RBM10 in gene expression and cardiovascular functions"	Ms. Nimmy Mohan	Dr. Rakesh S Laishram	Dec 2019
197	"Hypoxia Induced Cell Signaling in Drug Resistance of Cancer and Modulation of Cancer Stem Cells".	Ms. Krupa Ann Mathew	Dr. T.R Santhosh Kumar	Dec 2019
198	"Mechanism and regulation of Star-PAP mediated 3'-end processing and alternative polyadenylation"	Mr. Sudheesh A.P.	Dr. Rakesh S Laishram	Dec 2019
199	Molecular mechanistic investigation and validation of the Anti-inflammatory activity of <i>Tinospora cordifolia</i> (Willd.) Miers – <i>in vitro</i> and <i>in vivo</i>	Ms. Sheena Philip	Dr. V.V. Asha	Dec 2019
200	Cell Cycle-Dependent Cell Signalling Analysis using Single Cell Imaging Approach	Ms. Asha Lekshmi	Dr. T.R Santhosh Kumar	Jan 2020
201	Understanding the Functional Role of S1PR1 in Pancreatic Ductal Adenocarcinoma	Mr. Manendra Babu	Dr. Harikumar	Feb 2020
202	Profiling of mouse testicular proteome in relation to germ cell development in first wave of spermatogenesis and busulfan-induced germ cell depletion models	Mr. Nomesh Yadu	Dr. Pradeep Kumar	Feb 2020
203	"Role of histone chaperones in cellular transitions".	Ms. Aditi Majumdar	Dr. Debasree Dutta	Feb 2020

204	"ROLE OF CANCER STEM CELLS IN COLORECTAL CANCER PROGNOSIS AND EXPLORING THEIR NOVEL REGULATORS"	Mr. Tapas Pradhan	Dr. Asha Nair. S	Feb 2020
205	"Role of Bcl-2 family proteins in regulation of autophagy and apoptosis"	Ms. Deepa Indira	Dr. T.R. Santhosh Kumar	Mar 2020
206	Targeting calcium 21ignaling for Neuroprotection	Mr. Mantosh Kumar	Dr. R.V Omkumar	Jun 2020
207	"Genetic variation and pathogen (Pythium myriotylum Drechsler) response in Zingiberspecies with contrasting breeding systems"	Ms. Geethu Elizabeth Thomas	Dr. George Thomas	Jun 2020
208	"Evaluation of tryptanthrin as a candidate drug against Non-melanoma skin cancer"	Mr. Mohan Shankar G	Dr. Ruby John Anto	Aug 2020
209	"Identification of Altered Metabolism in Individuals at Risk for Type 2 Diabetes Mellitus Using Mass Spectrometry Based Metabolomics"	Mr. Aneesh Kumar A	Dr. Abdul Jaleel	Sep 2020
210	"DYNAMICS OF REDOX SIGNALING AND CELL SURVIVAL IN DRUG INDUCED CHEMORESISTANCE".	Mr. Santhik SL	Dr. T. R. Santhosh Kumar	Nov 2020
211	"Targeted Drug Delivery Using Drug Loaded Polymer Nanoparticles in Brain Cancer Treatment".	Ms. Meenu Vasudevan	Dr. Vinod Kumar. G S	Nov 2020
212	"CELL CYCLE AND CELL DEATH REGULATION IN TUMOR STEM CELLS".	Mr. Shankara Narayanan V	Dr. T.R Santhosh Kumar	Dec 2020
213	"A COMPREHENSIVE CHARACTERIZATION OF FODRIN AND ITS REGULATORY EFFECT ON GAMMA-TUBULIN MEDIATED MICROTUBULE NUCLEATION".	Ms. J S. Sreeja	Dr. Suparna Sengupta	Jan 2021
214	"Elucidating Genetics of Methylation Map in Intracranial Aneurysm"	Mr. Shafeeque CM	Dr. Moinak Banerjee	Feb 2021
215	"Interaction of Ca2+/ Calmodulin dependent protein kinase II with neuronal calcium channels-Implications in catalysis and cellular physiology"	Ms. Archana .GM	Dr. Omkumar KV	Mar 2021

216	"'Mechanistic analysis and physiological demonstration of the regulation of CaMKII by GluN2B subunit of neuronal NMDA receptor"	Ms. Lakshmi. K	Dr. Omkumar K V	Mar 2021
217	'Studies on the Haitian variant <i>Vibrio cholerae</i> with special emphasis on its pathogenesis, antibiotic resistance and comparative genomics'	Ms. Lekshmi. N	Dr. Sabu Thomas	Mar 2021
218	"Mechanistic evaluation of the chemotherapeutic efficacy of Tryptanthrin against malignant melanoma".	Ms. Shabna. A	Dr. Ruby John Anto	Mar 2021
219	"Interaction and modulation of the human complement system by chikungunya virus"	Mr. Joydeep Nag	Dr. John B Johnson	Jun 2021
220	"Functional implication of Pax6 in eye development: Retinogenesis to intra-retinal axon guidance"	Ms. Lalitha S	Dr. Jackson James	Jul 2021
221	"Dynamic association of the H3K64 trimethylation mark with the genes encoding exported proteins in <i>Plasmodium falciparum</i> "	Ms. Jabeena CA	Dr.Arumugam Rajavelu	Oct 2021
222	"Design and synthesis of biodegradable polymer systems for wound healing."	Ms. Amritha Vijayan	Dr. Vinod Kumar	Oct 2021
223	"Studies On Culturable Gastric Microbes And Assessing Their Role In Gastric Diseases"	Mr. Deepak Chouhan	Prof. M.Radhakrishna Pillai	Oct 2021
224	"A transcriptomic and metabolomic approach to decipher the defence mechanisms and crosstalk between phytohormone signalling pathways in black pepper (Piper nigrum L.)"	Ms. Divya Kattupalli	Dr. E V Soniya	Oct 2021
225	'Isolation and characterization of a novel antimycobacterial molecule from a new Streptomyces sp., and identification of its target in Mycobacterium tuberculosis'	Mr. Balaji M	Dr. Ajay Kumar	Nov 2021
226	"MicroRNA-mediated regulation of gene expression in the division and differentiation of spermatogonial cells in mouse testis"	Ms. Mahitha Sahadevan	Dr. Pradeep Kumar	Dec 2021

227	'Estrogen mediated regulatory role of Ezrin in follicular thyroid cancer',	Ms. Lakshmi. ML	Dr. Sreeja.S	Dec 2021
228	Structural and functional characterization of synthetic transmembrane peptide pores	Ms. Neethu Puthumadathil	Dr. Mahendran. K R	Dec 2021
229	"Cancer stem cell types and its link with prognosis in canine mammary carcinomas"	Dr. Krithiga. K	Dr. Priya Srinivas	Dec 2021
230	"ELUCIDATION OF DRUG RESISTANCE IN CANCER STEM CELLS"	Dr. Sajitha. I S	Prof. M. Radhakrishnapillai	Dec 2021
231	Functional characterization of Rv1019, a putative transcriptional regulator of <i>Mycobacterium tuberculosis</i> H37Rv, and delineation of its role in gene regulation	Mr. Akhil Raj P	Dr. Ajay Kumar R	Feb 2022
232	Functions of Epigenetic Reader proteins in Malaria parasite	Mr. Devadathan VS	Dr. Arumugam Rajavelu	Feb 2022
233	Exploration of intraerythrocytic epitranscriptome of human malarial parasite <i>Plasmodium falciparum</i>	Ms. Gayathri G	Dr. Arumugam Rajavelu	Feb 2022
234	A molecular taxonomic reappraisal and fine scale population genetic structure of <i>Euphlyctis karaavali</i> , an edible frog species of Kerala.	Mr. Anoop V.S	Dr.Sanil George	Feb 2022
235	Role of ER signaling on BRCA1 mediated DNA damage repair, in estrogen responsive breast cancer cells.	Ms. Arathi Rajan	Dr. Priya Srinivas	Mar 2022
236	Molecular dissection and functional elucidation of the interaction of rhabdoviral signatures with complement proteins.	Ms. Nisha Asok Kumar	Dr.John B Johnson	Apr 2022
237	Exploration of key regulatory factors controlling the synthesis of Bioactive compounds in Black pepper.	Ms. Sweda Sreekumar	Dr. Soniya E .V	Apr 2022
238	Evaluation of Circadian Rhythm in Pathophysiology of PCOS.	Ms. Betcy Susan Johnson	Dr. Malini Laloraya	May 2022
239	Development of novel drug releasing implant system for treatment of glioma.	Ms. Wanjale Mrunal Vitthal	Dr.Vinod Kumar G.S	May 2022

240	Genetic predisposition to non-syndromic deafness: an immunogenetic perspective.	Ms. Sindura KP	Dr. Moinak Banerjee	June 2022
241	Peptide conjugated multi-phased poly-lysine dendritic nanocarrier for targeted anticancer drug delivery.	Ms. Pratibha Narayanan	Dr. K. Santhosh kumar	June 2022
242	Linking the two (A) tails: Role of poly(A) binding protein in mRNA stabilization.	Ms. Nimmy Francis	Dr. Rakesh S Laishram	June 2022
243	Elucidating the role of transfer RNAs and their derivatives as stress regulating agents during <i>Phytophthora capsici</i> infection in Black Pepper (<i>Piper nigrum L</i> .)	Ms. Aswathi. U	Dr. Soniya E V	July 2022
244	Targeting tumour cell biomechanical homeostasis for novel anti-GBM (Glioblastoma multiforme) therapeutics.	Mr. Sebastian John	Dr. Rashmi Mishra	July 2022
245	Development and characterization of oncolytic rhabdoviral vectors.	Ms. Reshma K.M	Dr. John B Johnson	Aug 2022
246	Mechanism of polyadenylation and its regulation by signalling pathways and phosphorylation	Mr. Ganesh Ram Koshre	Dr. Rakesh S Laishram	Aug 2022
247	Development of novel therapeutic approach for chronic skin wounds	Ms. Nanditha. C K	Dr. G S Vinod Kumar	Sep 2022
248	MicroRNAs targeting NMDA receptors in the brain	Ms. Sowmya Gunasekaran	Dr. R V Omkumar	Nov 2022
249	Understanding the role of phenotypic heterogeneity in breast cancer	Ms. Archana P T	Dr. Radhika Nair	Nov 2022
250	hCG, the pregnancy hormone mediated immune modulation in BRCAI defective breast cancer	Ms. Geetu Rose Varghese	Dr. Priya Srinivas	Nov 2022
251	Role of Cyclophilin A on the Efferocytosis of Apoptotic Cells and its Association with Atherosclerosis	Ms. Vinitha A	Dr. Abdul Jaleel K. A	Dec 2022
252	Deciphering the Role of Tubulin β4B in Self Renewal of Cancer Stem Cells	Ms. Dhrishya Dharmapal	Dr.Suparna Sengupata	Dec 2022

253	Exploring the structural requirement of antagonist peptide of CCR5 to inhibit co-receptor mediated cellular entry of HIV-1	Ms. Anju Krishnan A	Dr.Santhosh Kumar	Dec 2022
254	Aberrant epigenetic alterations induced by 27- hydroxycholesterol and identification of urolithin A as its attenuator in breast cancer	Ms. Vini Ravindran	Dr. Sreeja S	Jan 2023
255	Frog skin-derived Antimicrobial Peptides (AMPs), their structure activity analysis, design and development of mini protein derivatives to combat multi drug resistant MRSA	Ms. Neethu Ajayakumar	Dr. K Santhosh Kumar	Feb 2023
256	Deciphering the role of CNNM1 in male germ cell establishment, maintenance and differentiation	Mr. Irfan Khan	Dr. Pradeep Kumar	Feb 2023
257	Evaluation of Uttroside B as a candidate drug against Hepatocellular Carcinoma and comparison of its therapeutic potential with that of <i>Solanum nigrum</i> Linn leaf extract	Ms Swetha. M	Dr.Ruby John Anto	Feb 2023
258	Molecular mechanisms of progesterone mediated growth inhibition in breast cancer cells with emphasis on calcium regulatory proteins	Ms.Jubeiya M Azeez	Dr.Sreeja S	April 2023
259	Epigenetic Modifications In Cellular Transition During Developme	Ms. Pallavi Chinnu Varghese	Dr.Debasree Dutta	April 2023
260	Epigenetic Alteration of BRCA1 Signalling in Tumorigenesis	Mr. Dipyaman Patra	Dr.Priya Srinivas	May 2023
261	A systems biology approach to understand the transcriptomic alterations in cervical cancer	Ms. Aswathy Mary Paul	Professor M. Radhakrishna Pillai	June 2023
262	Interaction and modulation of complement responses by Chandipura virus.	Mr. Umerali K	Dr.John B Johnson	June 2023
263	Role of AKT signaling in the regulation of breast cancer transcriptome and the importance of cellular fitness in cancer therapeutics	Mr. Bijesh George	Prof.M. Radhakrishna Pillai	June 2023

264	Role of PKC Signaling in Naive vs. Primed States of Pluripotency	Ms. Ishita Baral	Dr. Debasree Dutta	June 2023
265	Understanding the combined effects of high glucose- induced hyper-osmotic stress and oxygen tension in the progression of tumorigenesis: from mechanism to anti-	Mrs. Gayathri KG	Dr. Rashmi Mishra	August 2023
266	cancer therapeutics. Characterization of potential probiotic strain of human origin and study of its anti-infectious property against	Ms. Devika Das J	Dr. Sabu Thomas	August 2023
	selected multi-drug resistant bacterial pathogens			