



**Velammal Medical College Hospital and Research Institute, Madurai**

## **MD Physiology Post Graduate**

**2023 - 2024 Academic Activities**

<b>Post Graduate</b>	<b>Course Year</b>
Dr. M. A. Hariviknesh	1 <sup>st</sup> year

As per recent NMC guidelines (CBME 23-24), PG program is conducted at our department. All the competencies and requirements as per the curriculum framed by the NMC are fulfilled at the department level for the PG program.

<b>PG Activities Planned</b>			
<b>Academics</b>	<b>Classes to be taken</b>	<b>Research</b>	<b>Lab Activities</b>
Case discussion	MBBS theory and practical classes	Thesis study	Hematology Lab
Pedagogy	AHS 1 <sup>st</sup> and 2 <sup>nd</sup> year theory and practical classes	Research projects	Clinical Lab
Inter-Departmental Seminar	Nursing theory and practical classes	Oral and Poster presentation at National/State CMEs	Human experiments
Symposium		Journal publication	Amphibian Lab
Seminar			Mammalian Lab
Journal club			Neurophysiology Lab
Case presentation			Cardiorespiratory Lab
Group Discussion			Exercise Physiology/Yoga Lab



## **Academic & Research Activity Completed**

<b>Sl. No.</b>	<b>Research Presentations</b>	<b>Program &amp; Venue</b>	<b>Date</b>
1	Paper presentation	BMSecON'23 AVMC	13 <sup>th</sup> to 15 <sup>th</sup> December 2023
2	Poster Presentation	Vita Electio'24 VMCHRI	4 <sup>th</sup> to 6 <sup>th</sup> April 2024

<b>Sl. No.</b>	<b>Courses Attended</b>	<b>Conducted by</b>	<b>Date</b>
1	BCBR	SWAYAM NPTEL Madurai	24 December
2	Research Methodology for PGs	TNMGR Medical University	26 – 28 March 2024
3	Good Clinical Practice	Institute of Pharmacology, MMC	25 <sup>th</sup> April 2024
4	PG Master-class	Ripples SRMCHRI	5 <sup>th</sup> and 6 <sup>th</sup> June 2024
5	Research Methodology Workshop for PGs	Department of Community Medicine, VMCHRI	31 <sup>st</sup> July to 2 <sup>nd</sup> August 2024

<b>Sl. No.</b>	<b>Research Projects</b>	<b>Guide</b>	<b>Status</b>
1	Effect of eye exercises on visual field and visual reaction time	Dr. S. Anu	Completed
2	<b>Thesis</b> – Critical Fusion Frequency and Finger dexterity in IT professionals in Madurai – An Observational Study	Dr. S. Anu	Ongoing
3	Effect of 7 days of minimalistic app usage on screen time among First Year Medical Students	Dr. S. Anu	Ongoing



## **Case Discussion**

Faculty Incharge: Dr. S. Anu, Professor & HOD

<b>Sl. No.</b>	<b>Case Discussion Topics</b>	<b>Date</b>
1	Warfarin therapy	14/11/23
2	Anemia	20/12/23
3	Thalassemia	29/12/23
4	Hirschsprung's disease	03/01/24
5	Achalasia cardia	10/01/24
6	GFR	05/02/24
7	Bronchial Asthma	06/02/24
8	Acromegaly	05/03/24
9	Conn's syndrome	19/03/24
10	Diabetes mellitus	09/04/24
11	Thalamic syndrome	28/05/24
12	Kluver Bucy syndrome	11/06/24
13	Night blindness	25/06/24
14	Osmolarity	09/07/24
15	Hypokalemic periodic paralysis	30/07/24
16	Oxygen debt	06/08/24
17	Cellular immunity	17/09/24



## **Pedagogy**

Faculty Incharge: Dr. John Rajpathy, Professor

<b>Sl. No.</b>	<b>Pedagogy Topics</b>	<b>Date</b>
1	Phagocytosis	08/11/23
2	Excitation Contraction Coupling	06/12/23
3	Sodium Potassium Pump	20/12/23
4	Baroreceptor Reflex	09/01/24
5	Reynold's Number	13/02/24
6	Barter's Syndrome	27/02/24
7	Somatomedins	12/03/24
8	Synthesis Of Thyroxine	16/04/24
9	Referred Pain	07/05/24
10	Phantom Limb	21/05/24
11	Wernicke's Aphasia	04/06/24
12	Aqueous humour	18/06/24
13	Na - K pump	02/07/24
14	Gibbs-Donnan equilibrium	16/07/24
15	Aquaporins	03/08/24
16	Excitation of skeletal muscle & Contraction of skeletal muscle	27/08/24
17	Erythropoietin	03/09/24
18	NK Cells	17/09/24



## **Interdepartmental Seminar**

Faculty Incharge: Dr. M. Shanthi, Professor

<b>Sl. No.</b>	<b>Interdepartmental Seminar Topics</b>	<b>Involved departments</b>	<b>Date</b>
1	Platelets - structure and functions	Pathology	20/11/23
2	Transport across cell membrane	Biochemistry	24/01/24
3	Neurotransmitters	Pharmacology	13/06/24
4	Myocardial infarction	Multiple (9)	23/08/24



## Symposium

Faculty Incharge: Dr. M. Renu Meena, Assistant Professor  
(& Dr. S. Anu)

Sl. No.	Symposium Topics		Date
1	Transport Across Cell Membrane	Structure of Cell membrane	25/10/23
		Passive Transport	01/11/23
		Active Transport	15/11/23
2	Hemodynamics	Anatomy Of Blood Vessels	13/01/24
		Functions Of Blood Vessels	31/01/24
		Blood Flow, Resistance & Pressure Relationship	19/02/24
		Critical Closing Pressure, Law Of Laplace, Bernoulli's Principle	26/02/24
		Blood Flow: Types, Measurement, Distribution	28/02/24
3	Female Reproduction	Anatomy Of Female Reproductive System	06/03/24
		Functions Of Ovaries	13/03/24
		Hormonal And Endometrial Cycle	20/03/24
		Ovarian Cycle	03/04/24
		Other Changes During Reproductive Cycle	10/04/24
4	Ear	Functional Anatomy	15/05/24
		Functions Of Middle Ear	22/05/24
		Anatomy of inner ear	29/05/24
		Mechanism of hearing	19/06/24
5	Hemostasis	Overview of Hemostasis	04/09/24
		Platelet - Physiology & functions	11/09/24
		Coagulation Cascade	18/09/24



## **Seminar Presentations**

Faculty Incharge: Dr. J. T. Ajit Kumar, Assistant Professor  
(& Dr. S. Anu)

<b>Sl. No.</b>	<b>Seminar Topics</b>	<b>Date</b>
1	Physiology of ageing	20/10/23
2	Hemostasis	28/10/23
3	Lymph	14/11/23
4	Gut brain axis	28/11/23
5	APUD cells	12/12/23
6	GI motility	29/12/23
7	Cardiac cycle	02/01/24
8	Neural regulation of respiration	29/01/24
9	PCT	13/02/24
10	Loop of Henle	21/02/24
11	Oxytocin	07/03/24
12	Actions of glucocorticoids	23/03/24
13	Spermatogenesis	13/04/24
14	Menstrual cycle	23/04/24
15	Synapse	04/05/24
16	Neurotransmitters I	30/05/24
17	Neurotransmitters II	13/06/24
18	Neuromodulators	27/06/24
19	Homeostasis	13/07/24
20	Active transport	27/07/24
21	Smooth Muscles	09/08/24
22	Degeneration & regeneration of nerves	24/08/24
23	Cell Mediated Immunity	14/09/24



## **Journal Club**

Faculty Incharge: Dr. R. Durai Arasan, Assistant Professor  
(& Dr. S. Anu)

<b>Sl. No.</b>	<b>Presented on</b>
1	21/10/23
3	08/11/23
4	09/12/23
5	20/12/23
6	06/01/24
7	10/01/24
8	03/02/24
9	20/02/24
10	09/03/24
11	09/05/24
12	13/05/24
13	18/05/24
15	20/06/24
16	04/07/24
17	20/07/24
18	03/08/24
19	31/08/24





## **Case Presentations**

Faculty Incharge: Dr. Noel Naveen Johnson, Senior Resident  
(& Dr. S. Anu)

<b>Sl. No.</b>	<b>Case Presentation Topics</b>	<b>Date</b>
1	Erythroblastosis Foetalis	25/10/23
2	Myasthenia Gravis	02/12/23
3	Peptic Ulcer Disease	03/01/24
4	Cystic Fibrosis	07/02/24
5	Liddle Syndrome	26/02/24
6	Acromegaly	06/03/24
7	Cushing's Syndrome	20/03/24
8	Grave's Disease	10/04/24
9	Paget's Disease	24/04/24
10	UMN Lesion	08/05/24
11	UMN Vs LMN Lesions	14/05/24
12	Parkinson's Disease	17/05/24
13	Hypothalamic Obesity	22/05/24
14	Obstructive hydrocephalus	12/06/24
15	Horner's syndrome	26/06/24
16	Edema	03/07/24
17	Channelopathies	10/07/24
18	Charcot Marie tooth disease	17/07/24
19	Dehydration	24/07/24
20	Duchenne muscular dystrophy	07/08/24
21	Erythroblastosis fetalis	04/09/24
22	Multiple Myeloma	11/09/24



## **Group Discussion**

<b>Sl. No.</b>	<b>Group Discussion Topics</b>	<b>Date</b>
1	Body Fluids	18/10/23
2	Homeostasis	20/10/23
3	Cell Organelles	21/10/23
4	Erythropoiesis	23/10/23
5	Immunity	31/10/23
6	Autoimmune Diseases	09/11/23
7	Neuron Myelination And Growth	20/11/23
8	Gastric Secretion	27/11/23
9	Blood Pressure	08/01/24
10	Cardiac Output	22/01/24
11	Cardiac Regulation	29/01/24
12	Counter-current Mechanism	19/02/24
13	AKI	20/02/24
14	Growth Hormone	04/03/24
15	Thyroid Hormone	11/03/24
16	Calcium Hemostasis	18/03/24
17	Female Hormones	01/04/24
18	Male Hormones	08/04/24
19	Pregnancy Tests	15/04/24
20	Infertility Tests	22/04/24
21	Basal Ganglia	06/05/24
22	Cerebellum	14/05/24
23	Ascending And Descending Tracts	15/05/24
24	Hypothalamus	16/05/24
25	Spinal Cord	17/05/24
26	Cerebral Cortex	20/05/24
27	Thalamus	27/05/24
28	Hypothalamus	03/06/24
29	CSF	10/06/24
30	Functional anatomy of eye	17/06/24
31	Visual pathway	24/06/24
32	RMP, action potential	08/07/24
33	History - Claude Bernard	10/07/24
34	Membrane potentials measurement -	15/07/24
35	History - Goldman, Hodgkins, Katz	17/07/24
36	Apoptosis	22/07/24
37	Cell membrane	29/07/24
38	History - Neher and Sakmann	31/07/24
39	Excitation contraction coupling	05/08/24
40	Smooth muscles	12/08/24



41	Properties of Skeletal muscles	26/08/24
42	Plasma proteins	02/09/24
43	Anemia	09/09/24