



J.K.K.MUNIRAJAH MEDICAL RESEARCH FOUNDATION'S ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY

Ethirmedu, B.Komarapalayam – 638 183, Namakkal Dist. Tamilnadu. India
Approved by : Pharmacy Council of India, New Delhi & The Tamilnadu Dr. M. G. R Medical University, Chennai.
Website : www.jkkmmrfpharmacy.edu.in | E-Mail : principal@jkkmmrfpharmacy.edu.in
Contact No. : +919789456750, +919943069944, +919943066944

DEPARTMENT OF PHARMACEUTICS

ONE DAY SEMINAR ON SIMULATION MODELS FOR DRUG ABSORPTION FROM GASTROINTESTINAL TRACT

VENUE: SEMINAR HALL

Date: 04.04.2018

RESOURCE PERSONS

1. Dr.S.CHANDRA., M. PHARM, Ph.D.,

PROFESSOR AND HOD ,

JKKMMRF'S ANNAI JKK SAMPOORANI AMMAL

COLLEGE OF PHARMACY,

KOMARAPALAYAM.

2. Mr.R.SURESH., M.PHARM.,

ASSOCIATE PROFESSOR ,

JKKMMRF'S ANNAI JKK SAMPOORANI AMMAL

COLLEGE OF PHARMACY,

KOMARAPALAYAM.

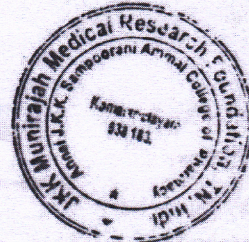
No. of students enrolled: 350

No. of students certified in our institution :30

No. of students certified: 340


Dr. N. SENTHILKUMAR,
PRINCIPAL,

JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
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Objective:

It is described to simulate the effect of gastrointestinal motility and dissolution on the pharmacokinetic profile of any given drug. The method is physiologically more consistent with the experimental evidence that fluid exists in discrete plugs in the gastrointestinal tract, and



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therefore is more realistic than modeling the gastrointestinal tract as a series of compartments with first-order transfer. The number of plugs used in simulations, their gastric emptying times and volumes, and their residence times in the small intestine can be matched with experimental data on motility.

Learning outcomes:

To study the effect of age and feeding *in vitro*, simulated paediatric fasted- and fed-state gastric and intestinal fluids have been developed

Drug absorption in the intestine may be affected by age-related changes in intestinal permeability, as well as activity of drug metabolizing enzymes and membrane transporters.

Head of the Department



Principal

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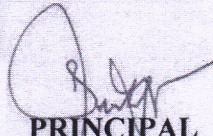
This is informed to the B. Pharm-I, II, III, IV Students that the following SEMINAR can be conducted by the Department of Pharmaceutics, JKKMMRF'S ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY, KOMARAPALAYAM and it will be commenced as per the schedule:

SEMINAR NAME	SCHEDULE	DURATION	VENUE	RESOURCE PERSON
SIMULATION MODELS FOR DRUG ABSORPTION FROM GASTROINTESTINAL TRACT	04.04.2018	3 HOURS	SEMINAR HALL	Dr.S.CHANDRA Mr.R.SURESH

All the above-mentioned students must enroll and actively participate in the course without fail.

NOTE: Certificates should be issued to all the students after completion of the course and examination.




PRINCIPAL

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**JKKMMRF'S-ANNAI JKK SAMPOORANI
AMMAL COLLEGE OF PHARMACY**

komarapalayam, Nammakal DT-638183

DEPARTMENT OF PHARMACEUTICS

SEMINAR TOPIC

**SIMULATION MODELS FOR DRUG
ABSORPTION FROM GASTROINTESTINAL
TRACT**

ONE DAY SEMINAR ON

04/04/2018



Venue: SEMINAR HALL



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DEPARTMENT OF PHARMACEUTICS

ONE DAY SEMINAR ON SIMULATION MODELS FOR DRUG ABSORPTION FROM GASTROINTESTINAL TRACT

ABOUT THE SEMINAR

The main objective of this review is to discuss recent advancements in the overall investigation and in vivo prediction of drug absorption. The intestinal permeability of an orally administered drug (given the value P_{eff}) has been widely used to determine the rate and extent of the drug's intestinal absorption (F_{abs}) in humans. Preclinical gastrointestinal (GI) absorption models are currently in demand for the pharmaceutical development of novel dosage forms and new drug products. However, there is a strong need to improve our understanding of the interplay between pharmaceutical, biopharmaceutical, biochemical, and physiological factors when predicting F_{abs} and bioavailability. Currently, our knowledge of GI secretion, GI motility, and regional intestinal permeability, in both healthy subjects and patients with GI diseases, is limited by the relative inaccessibility of some intestinal segments of the human GI tract. In particular, our understanding of the complex and highly dynamic physiology of the region from the mid-jejunum to the sigmoid colon could be significantly improved. One approach to the assessment of intestinal permeability is to use animal models that allow these intestinal regions to be investigated in detail and then to compare the results with those from simple human permeability models such as cell cultures. Investigation of intestinal drug permeation processes is a crucial biopharmaceutical step in the development of oral pharmaceutical products. The determination of the intestinal P_{eff} for a specific drug is dependent on the technique, model, and conditions applied, and is influenced by multiple interactions between the drug molecule and the



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biological membranes. Bioavailability is a key pharmacokinetic parameter that represents the fraction of an orally administered drug that reaches the systemic circulation in an uncharged molecular form (Equation (1)):

$$F = F_{\text{abs}} \times (1 - E_G) \times (1 - E_H) \quad (1)$$

where F is the bioavailability, and E_G and E_H are the fractions extracted in the gut wall and liver, respectively. The fraction of the dose that is absorbed (F_{abs}) and its absorption rate are largely determined by the following biopharmaceutical factors: the dissolution, solubility, luminal stability (chemical and/or enzymatic), intestinal transit time, and intestinal permeability of the active pharmaceutical ingredient (API).



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SYLLABUS

DATE	HOURS	SEMINAR TOPIC	SUB TOPICS	RESOURCE PERSON
04.04.2018	3 HOURS	SIMULATION MODELS FOR DRUG ABSORPTION FROM GASTROINTESTINAL TRACT	Predicting Oral Drug Absorption	Dr.S.CHANDRA
			Intestinal Permeability and Drug Absorption	Mr.R.SURESH

TOTAL HOURS=3 hours

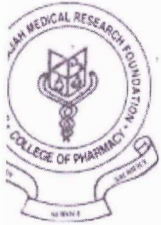
Head Of the Department



Principal

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STUDENT FEEDBACK FORM

NAME OF STUDENT :
COURSE :

REGISTRATION NO :
YEAR & SEMESTER:

SEMINAR TOPIC :

DATE & TIME:

1. Overall, how satisfied were you with this seminar?

- Very satisfied
- Satisfied
- Neutral
- Dissatisfied
- Very dissatisfied


2. How clear were the ideas and concepts we presented?

- Extremely clear
- Very clear
- Moderately clear
- Not very clear
- Not at all clear

3. What percentage of the information was new to you?

- 100%
- 75%
- 50%
- 25%
- 0%




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4. **How informative did you find our seminar?**

- Extremely Informative
- Very Informative
- Moderately Informative
- Not very informative
- Not informative at all

5. **Were there any technical issues that prevented you from seeing or hearing the seminar?**

- Yes
- No

6. **Would you like to learn more about this topic?**

- Yes
- No

7. **Rate the content of the slides/virtual aid?**

- Extremely clear
- Very clear
- Moderately clear
- Not very clear
- Not at all clear

8. **How accurate was the session description?**

- Extremely clear
- Very clear
- Moderately clear
- Not very clear
- Not at all clear

9. **How did the session compare to your expectations?**

- Excellent
- Good
- Fair
- Poor
- Not at all clear



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10. How Would you rate the content of the seminar?

- 1
- 2
- 3
- 4
- 5



Student Name With Signature

A handwritten signature in blue ink, appearing to be "Dr. N. Senthilkumar".

Dr. N. SENTHILKUMAR,
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STUDENTS FEEDBACK ANALYSIS

DATE: 04.04.2018

S.NO	QUESTION DESCRIPTION	ANSWERS	MARKS	TOTAL MARKS
1	Satisfaction	Very satisfied	5	5
		Satisfied	3	
		Neutral	2	
		Dissatisfied	1	
		Very dissatisfied	0	
2	Clarity	Extremely clear	5	5
		Very clear	4	
		Moderately clear	2	
		Not very clear	1	
		Not at all clear	0	
3	Percentage of the information was new	100%	5	5
		75%	4	
		50%	3	
		25%	2	
		0%	1	
4	Informative	Extremely Informative	5	5
		Very Informative	3	
		Moderately Informative	2	
		Not very informative	1	
		Not informative at all	0	
5	Technical issues	Yes	5	5
		No	0	



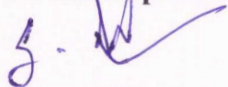
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6	Like to learn more about this topic	Yes	5	5
		No	0	
7	Rate the content of the slides/virtual aid	Extremely clear	5	5
		Very clear	3	
		Moderately clear	2	
		Not very clear	1	
		Not at all clear	0	
8	Accuracy of the sessions	Extremely clear	5	5
		Very clear	3	
		Moderately clear	2	
		Not very clear	1	
		Not at all clear	0	
9	Session expectations	Excellent	5	5
		Good	3	
		Fair	2	
		Poor	1	
		Not at all clear	0	
10	Rate the content of the seminar	1	1	5
		2	2	
		3	3	
		4	4	
		5	5	

Total marks = 50

Head Of the Department



Principal

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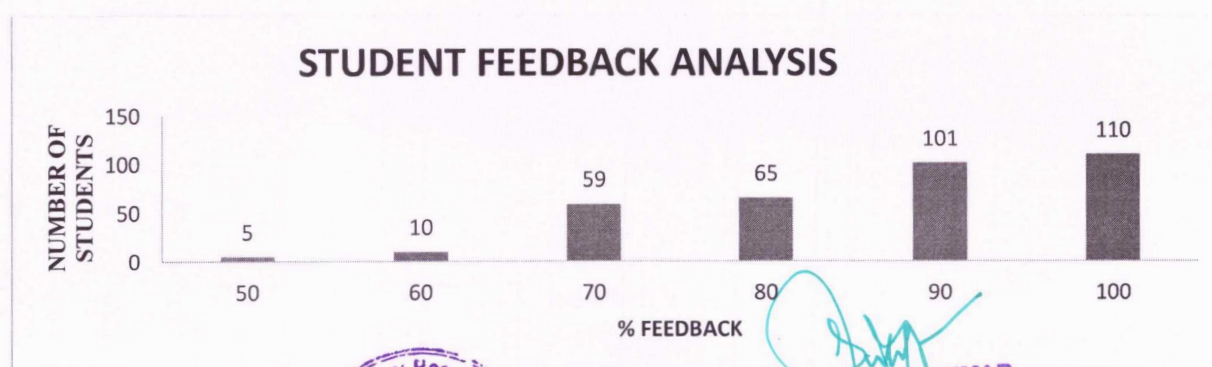
REPORT SUMMARY

DATE: 04.04.2018

Duration of the Course	3 HOURS
Total participants Enrolled	350
Successfully Completed	340
Type of Feedback Assessment	Multiple Choice Questions (MCQ's)
Course Outcome	1.To study the effect of age and feeding <i>in vitro</i> , simulated paediatric fasted- and fed-state gastric and intestinal fluids have been developed 2. Drug absorption in the intestine may be affected by age-related changes in intestinal permeability, as well as activity of drug metabolizing enzymes and membrane transporters.

Feedback Question Analysis – Question Asked-Feedback Rating

1.Satisfaction	6.Like to learn more about this topic
2.Clarity	7.Rate the content of the slides/virtual aid
3. Percentage of the information was new	8.Accuracy of the sessions
4.Informative	9.Session expectations
5.Technical issues	10.Rate the content of the seminar



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LIST OF PATICIPANTS

S.NO	REGNo	NAMEOFSTUDENT	YEAR/SEM
1	381710401	ANDLYCHEDRICKC	
2	381710402	ASHA M	
3	381710403	ASHRITHADN	
4	381710404	DEEPIKAK	
5	381710405	HARINIR	
6	381710406	JAYAPRAKASHU	
7	381710407	JEBISHGS	
8	381710408	JEMISHAJ	
9	381710409	KAVINKISHORES	
10	381710410	MUGILARASANS	
11	381710411	MUKILANM	
12	381710412	NATHIYAA	
13	381710413	PREETHIT	
14	381710414	PUSHPARAJA	
15	381710415	RAGHULG	
16	381710416	SHANGEETHAS	
17	381710417	SUDHARSANV	
18	381710418	SULIMANB	
19	381710419	TAMILSELVANS	
20	381710420	VEDIYAPPANV	
21	381710421	YOGAVARSHINIKS	
22	381710422	AHAMMEDKABEER	
23	381710423	AMRUTHAM.K	
24	381710424	CHANDNATHERASAMATHEW	
25	381710425	DEBORAHROSE	
26	381710426	HELANNAM	
27	381710427	MUNEERT	
28	381710428	NISSYESTHERJOHN	
29	381710429	SAMUELBABU	
30	381710430	NAIVINDALMEDA	



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JKKMMRF's ANNAI JKK SAMPOORANI
AMMAL COLLEGE OF PHARMACY



**CERTIFICATE
OF APPRECIATION**

Department of pharmaceuticals

ONE DAY SEMINAR

Mr./Ms _____ has participated in one day seminar about SIMULATION MODELS FOR
DRUG ABSORPTION FROM GASTROINTESTINAL TRACT was organized by department of
pharmaceutics held on 04 APRIL 2018

CONVENER



CO-CONVENER



**Dr. N. SENTHILKUMAR,
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Department of pharmaceuticals

ONE DAY SEMINAR

HARINI R

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convenor



co-convenor

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Department of pharmaceuticals

ONE DAY SEMINAR

ASHA M

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pharmaceutics held on 04 APRIL 2018

convener



co-convener



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