



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

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Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

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12-05-2021

Webinar on Kidney-on-Chip: To Mimic Reabsorption function

Circular:

National online webinar "Kidney-on-Chip: To Mimic Reabsorption function" by
Microelectronics Research Group, Department of ECE, KLEF – Reg.

Registrar <registrar@kluniversity.in>

Sat 6/12/2021 7:46 AM

To: PRESIDENT <president@kluniversity.in>; Havish <havish@kluniversity.in>; Raja H Koneru <krh@kluniversity.in>; Dr. S S Mantha <ssmantha@kluniversity.in>; N Venkat Ram <venkatram@kluniversity.in>; Prof. Chandra Prakash <vchandrap@kluniversity.in>; PRINCIPAL - COE <principal.coe@kluniversity.in>; Lalitha <lalitha@kluniversity.in>; Dr. Y V Hanumantha Rao <dryvrao@kluniversity.in>; Prof. V. Srikanth <vsrikanth@kluniversity.in>; Dean - Placements & Internships (International)-K L University <nbvprasaad@kluniversity.in>; Dean (Student Affairs) <krsprasad_fed@kluniversity.in>; Slavanya <slavanya_css@kluniversity.in>; SHANMUKH <shanmukh_fed@kluniversity.in>; Dr. MVN <mvn@kluniversity.in>; Prasanth <prasanthyalla@kluniversity.in>; Suman Maloji <suman.maloji@kluniversity.in>; Dr. I. Govardhani <govardhaneec@kluniversity.in>; Dinesh <dinesh@kluniversity.in>; Vemuri Praveen Kumar <vemuripraveen@kluniversity.in>

1 attachments (4 MB)

ECE_National Online Webinar_Poster.jpg;

Ref: KLEF/RO/HOD-ECE/2020-21

Date: 12-06-2021

Orders of the Pro Vice-Chancellor dt. 11-06-2021

CIRCULAR

Sub: National online webinar "Kidney-on-Chip: To Mimic Reabsorption function" by
Microelectronics Research Group, Department of ECE, KLEF – Reg.

Ref: E-mail dated 10.06.2021 from Dr. M. Suman, HoD-ECE.

This is to inform that Microelectronics Research Group, Department of ECE, KLEF, is conducting a National online webinar on "Kidney-on-Chip: To Mimic Reabsorption function" for all the students and faculty members as per the details given below.

Date and Time : 12th May 2021 from 10.00 a.m. to 11.30 a.m.

Registration link: <https://forms.gle/xE3QjkfEZb5i6SLF7>

Chair : Dr. Vinay Kumar Mittal, Department Chair, KLEF
Co-Chair : Dr. M. Suman, HOD, Department of ECE, KLEF
Dr. M. Goutham, HOD, Department of ECE, KLH
Technical Chair : Dr. K. Srinivasa Rao, Professor & Head MERG
Convenor : Dr. K. Girija Sravani, Assistant Professor
Co-Convenor : Dr. B. Balaji, Associate Professor
Mr. M. Aditya, Assistant Professor

Note: E-certificate will be provided to all the participants

Poster of the webinar is enclosed herewith.

REGISTRAR

Encl: Poster

Mail & Hard copy to: Hon'ble President, KLEF

Mail to: Hon'ble Vice-Presidents, KLEF

Mail & Hard copy to: Hon'ble Chancellor

Mail & Hard copy to: Pro Vice Chancellor (Administration) – Dr. N. Venkatram



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Mail & Hard copy to: OSD to Hon'ble Chancellor-Dr.K. Subrahmanyam

Mail to: Chief Coordinating Officer-Dr.A. Jagadeesh / Chief Coordinating Officer of Examinations-Dr.K.J.Babu

Mail to: Controller of Examinations-Dr.A.S.C.S.Sastry

Mail to: KL H – Dean/ /Principal-Engg.College / Principal-Business School / Vice-Principal

Mail to: Vice-Principal-Coll. of Science & Humanities & Coordinator-FED.Dr.VKR

Mail & Hard copy to: HoDs.. AI&DS / BT / CE / CSE / Comp.Engg. / CS&IT / ECE / EEE / ECM / ME

HoDs..Maths / PHY / CHEM / ENG / BES-I / BES-II

HoDs..MBA / BBA / COM / HM / CSS / CA&MS / Law / Architecture / Pharmacy / BCA / Arts

Mail to: All Dy. HoDs / All Alt. HODs

Mail to: KL H HoDs..CSE / AI&DS / ECE / BS / H&S / ME

Mail to: All faculty

Mail to: All students

Thanks & Regards



Prof. Y. V. S. S. V. Prasad Rao
Ph.D(Mech. Engg.), DPM., MBA (Fin & HR), FICWA
REGISTRAR

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Poster:

The poster features a large graphic of a hand holding a green cube with a photo of Dr. Jasti Sateesh. The text is organized into several sections:

- Organized by:** Microelectronics Research Group (MERG)
- Title:** KIDNEY-ON-CHIP: TO MIMIC REABSORPTION FUNCTION
- Date & Time:** 12th June, 2021 @ 10:00 am - 11:30 am
- Resource person:** DR. JASTI SATEESH, Research Fellow, National Institute of Technology Sikkim
- Chair:** Dr. Vinay Kumar Mittal, Professor, ECE, KL
- Co-Chair:** Dr. M. Surman, HOD, ECE, KL; Dr. M. Gowtham, HOD, ECE, KLUH
- Technical Chair:** Dr. K. Srinivasa Rao, Professor & Head MERG, KL
- Convener:** Dr. K. Girija Sravani, Assistant Professor
- Co-Convener:** Dr. B. Balaji, Associate Professor; Mr. M. Aditya, Assistant Professor
- For Details Contact:** +91-7095666645, +91-8669148856, +91-8008914472
- E-Mail:** nondavitee.sravani@kluniversity.in, balaji@kluniversity.in, aditya@kluniversity.in
- Registration Link:** <https://forms.gle/xe3QjkfEzb516SLF7>

A vertical label on the left side reads "National Online Webinar".

Fig. Poster of webinar



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1. Objective and discussions:

Kidney-on-chip technology is an exciting innovation in the field of biomedical engineering. It involves creating miniature models of the human kidney using microfluidic devices, which contain living cells cultured in a way that mimics the structure and function of the kidney.

- i. One of the critical functions of the kidney is reabsorption, where essential substances such as water, electrolytes, and nutrients are reabsorbed from the urine back into the bloodstream. Kidney-on-chip models aim to replicate this reabsorption function by incorporating specialized cell types and channels that simulate the filtration and reabsorption processes that occur in the kidney tubules.
- ii. The design of kidney-on-chip devices allows researchers to study how different factors, such as drugs, toxins, or diseases, impact kidney function in a controlled environment. This technology has the potential to revolutionize drug testing and development, personalized medicine, and our understanding of kidney diseases.
- iii. By mimicking the reabsorption function of the kidney, kidney-on-chip models provide a platform for studying drug efficacy and toxicity, as well as for investigating the underlying mechanisms of kidney diseases.

Ultimately, this technology has the potential to improve patient outcomes by facilitating the development of safer and more effective treatments for kidney-related conditions.

Summary:

The "Kidney-on-Chip" technology aims to replicate the reabsorption function of the human kidney in a microfluidic chip system. This innovative approach utilizes microengineering techniques to create a miniature model of the kidney's nephrons, the functional units responsible for filtering blood and reabsorbing essential nutrients and electrolytes. By mimicking the intricate structure and physiological processes of the kidney, researchers hope to develop a platform for studying kidney diseases, drug toxicity, and personalized medicine. This technology has the potential to revolutionize drug discovery and improve our understanding of kidney function and disease mechanisms.

Online Link



<https://kluniversity.webex.com/webappng/sites/kluniversity/recording/5caae1431ae8105bbd1fa626fdccf678d/>

Number of participants: 92

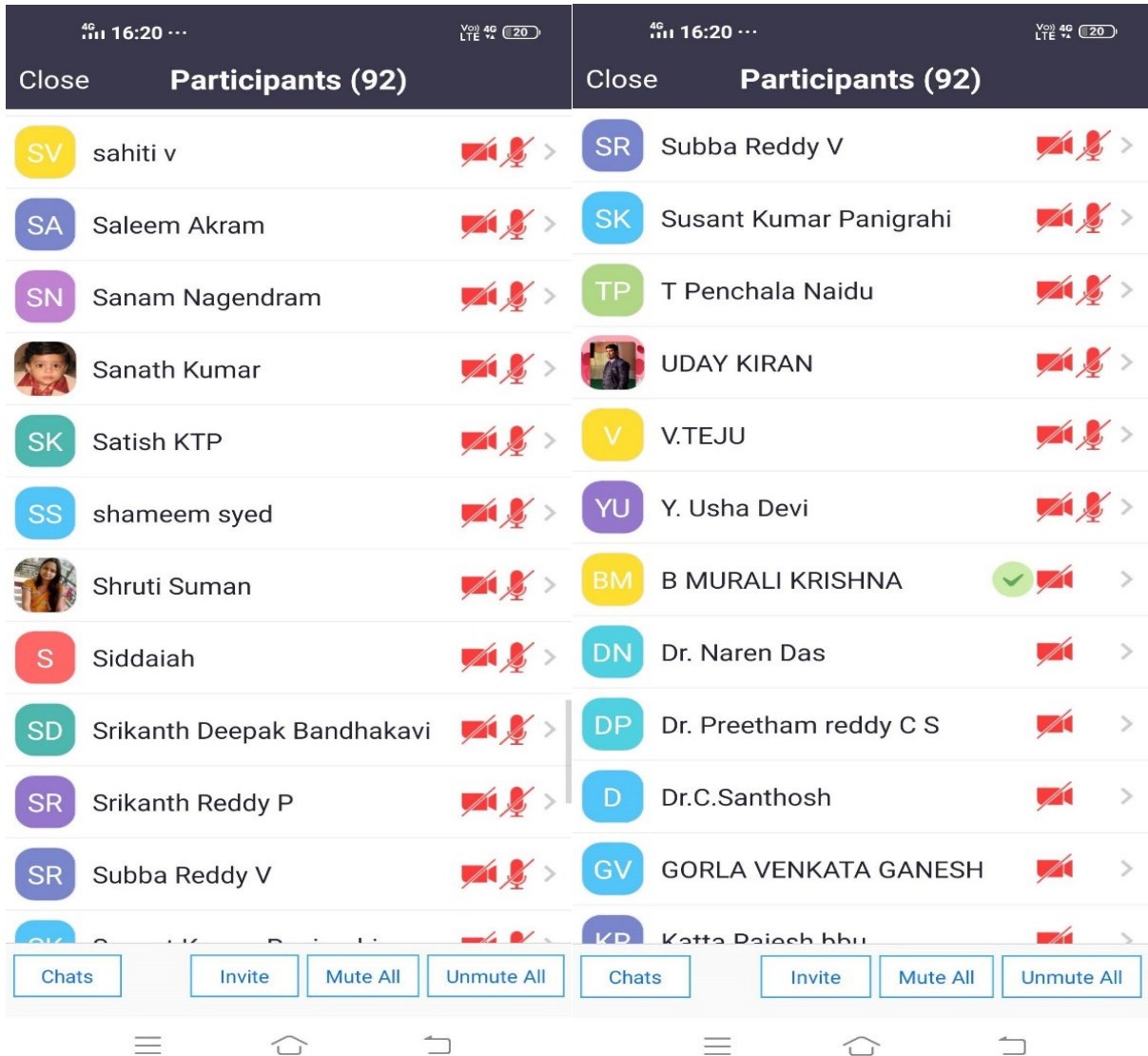


Fig. Snapshots of Webinar presentation

List of the Participated Students:

- | | | |
|---|-----------|-----------------------------|
| 1 | 190040369 | NERSU PAVAN SIDDHARTHA |
| 2 | 190040343 | MULAGALA DHARANESH |
| 3 | 190040634 | MADDINENI TRINADH BABU |
| 4 | 190040256 | KORA DILEEP BABU |
| 5 | 190040387 | PALAGIRI SRAVAN KUMAR REDDY |



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6	190040210	KARANAM SAI RAM
7	190040463	SHAIK AHAMAD GOUSE
8	190040659	CHALLA ROHIT
9	190040628	HARI BHARATH
10	190040663	NERUSU INDU SAI PRIYA
11	190040238	KOLAHALAM GOWTHAM BHARATH VARMA
12	190040429	PYDIMARRI VENKATA VISHNU
13	190040036	AVULA SANTOSH
14	190040231	KILARU PAVAN SAI
15	190040031	ARELLA MANOJ
16	190040039	BANDARU SAI SANKAR
17	190040573	VOONNA DURGA VARAPRASAD
18	190040367	NEMALLAPUDI HARSHA VARDHAN REDDY
19	190040317	MAREEDU TILAK SAI
20	190040681	INDUPALLI ABHISHEK ARUNODAI
21	190040211	KARICHARLA LATHA NAGESWARI
22	190040540	VENKATA GANGA VEERENDRA VALLEPALLI
23	190040290	MADDIKUNTA VINAY BABU
24	190040275	LAKKISETTY SAI VISHNU VARDHAN
25	190040679	GANGIREDDYGARI CHARAN KUMAR REDDY
26	190040364	NAVULURI PAVAN BHARGAVA
27	190040533	UPPULURI NAGA SAI CHARAN
28	190040141	GAYAM HEMALATHA REDDY
29	190040683	GUMMA VAMSI
30	190040609	SURYADEVARA POORNIMA
31	190040515	SHANMUKHA SAI VIVEK THALLA
32	190040174	GUTTIKONDA DINESH
33	190040278	LAKSHMIPALEM BHAVANI SANKAR
34	190040636	GATTE NAGA VENKATA VISWESWARA SAICHAITANYA
35	190040638	NALLAMEKALA SRINIVAS
36	190040504	SWARNA RAMA VAMSI
37	190040635	MOHAMMED SHUAIB
38	190040592	DASARI SIVA PARVATHI
39	190040602	SASANAM ANIL KUMAR
40	190040091	CHILUKURI SAI DIVYANT
41	190040386	PALAGIRI SANDEEP KUMAR REDDY
42	190040018	AMBATI YASWANTH KUMAR
43	190049034	JAMMULA SURENDRA BABU
44	190040102	D BALA AVINASH
45	190040261	KOTA NAVEEN KUMAR
46	190040647	SUMANTH KUMAR YADAV DUGGANABOINA
47	190040483	SISTLA SATHWIC SANJAY
48	190040230	KILARU NIKSHITH
49	190040414	POTLURI GURU SRI CHARAN CHOWDARY



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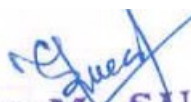
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50	190040253	KOPPANA PAVAN SAI
51	190040650	PEDAPUDI SUBOD KUMAR
52	190040494	SRI RAMYA GOPU
53	190049006	LOHITH MUTYALA
54	190049033	VATTIKUTI V RATHAIAH CHOWDARY
55	190040119	DIVI NAGA SAI
56	190040122	DOKKU SIVA KUMAR
57	190040164	GUDURU DEEPIKA
58	190040622	GOLLAPUDI SAI GANESH
59	190040048	BATTULA MANOJ
60	190040401	PERUBOYINA VENU
61	190040327	MEENA MANDAPU
62	190040323	MASARAPALLI SHANMUKHA VENKATA VARSHITH
63	190040061	BOLAGANI SIVA SAI TEJA
64	190040652	MALLU MANVITH REDDY
65	190040642	MADDI SAI KIRAN
66	190040603	SOMEPELLI JYOTHI PRAKASH
67	190040154	GORRIPATI V V S S D MANIKANTA JAYANTH
68	190040420	PULIPATI PADMINI
69	190040052	BELLAMKONDA PRUDHVI
70	190040351	MUSUNURU SAI CHALAMAYYA
71	190040563	PARA VENKATA VINOD KUMAR


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