



PA COLLEGE OF PHARMACY

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A QUARTERLY NEWS BULLETIN

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Hall of Fame**



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Editorial Insight

Message From Chief Editor

The 2nd batch of B. Pharm and 4th batch of D. Pharm students are all set to complete their respective programs and move out in the real world looking for opportunities. Opportunities in the Pharmaceutical Industries are growing owing to the fact that the Pharmaceutical market in India is very fertile and growing fast with an expectation to reach \$65bn by 2024. It is further estimated to cross \$130bn by the end of 2030. The growth rate is achieved by constant and rigorous quality improvement in the manufacture of drugs in India which led India to become one of the major exporters. India is exporting its pharmaceutical products to 200+ countries across the globe. About 50% of African countries' pharmaceutical demand is met by our produce, about 40% generic demand of the US and approximately 25% of medical requirements of the UK is satisfied by India. India also accounts for ~60% of global vaccine demand, and is a leading supplier of DPT, BCG and Measles vaccines. 70% of WHO's vaccines (as per the essential Immunization schedule) are sourced from India. The Govt. of India is intensifying the manufacture of Key Starting materials, Drug Intermediates and Active Pharmaceutical Ingredients (APIs) by offering various Production Linked Incentives (PLIs). The objective of these PLI schemes was to grow domestic production in the said areas. PLI scheme for bulk drugs aimed at boosting production of 41 selected critical bulk drugs in the country. 51 projects have already been selected for the 34 notified bulk drugs. Of which, 22 projects have been commissioned till 31st January 2023 leading to an investment of INR 2019 crores and an employment of about 1900 professionals and unskilled labourers. Under the PLI scheme for Pharmaceuticals, 55 applicants have been selected, including 20 Micro, Small & Medium Enterprises (MSMEs). As of 31st January 2023, sales of about INR 36,000CR have been reported by the selected applicants. The scheme has garnered an investment of INR 16,199 crores by these applicants in the first year of implementation while employing 23,000 persons in the same period. Thus there are several opportunities for the professionals for employment and entrepreneurship. Students must wisely choose their way out.

The students must also think about continuing their studies. There are different areas in which the pharmacy students can venture into having Pharmacy as a basic degree apart from Masters in Pharmacy. Health and Hospital Management, HR Management, Production Management. Patent and Intellectual property rights law and many more. I would like to wish all the best to the outgoing students.

Dr. Saleemulla Khan

Principal, PA College of Pharmacy

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Updates

Merkel Cells : The 'Magicians of Touch'

As humans, it is our nature to question the reality of self, our relation to the external world and its relation to us. Most of this give and take between the internal biological world and the external environment would be impossible if we were unable to process the experience of touch, an inherent mechanism of our skin to make sense of the pressure stimulus from the environment around us. May it be the feeling of being kicked, or the cool feeling of air flowing around the nape of our neck, touch along with other sensory modalities allows us to make sense of the world around us. All of this would be impossible if our skins were unable to perceive the sensations of touch. For millennia, the answer to the question, "why we feel touch?" has baffled the minds of scientists, philosophers and common man alike.

The breakthrough to answer this question was the discovery of Merkel cells by the German anatomist Friedrich Merkel in the year 1875. Merkel called these touch cells and identified them to be conveyers of sensory touch information. However, the role of Merkel cells in the sensation of touch was debated over the years, until recently when touch sensation was discovered to be indeed associated with Merkel cells.

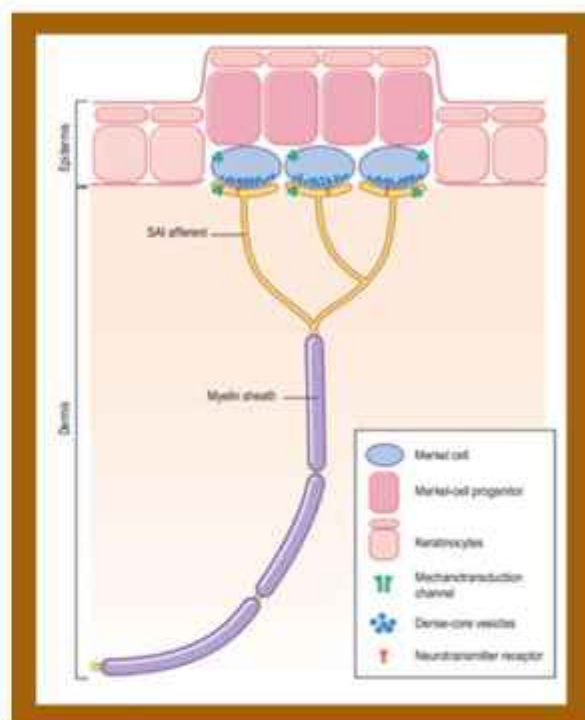
Merkel cells are found in the skin and some parts of the mucosa of all vertebrates. In mammalian skin, they are clear cells found in the stratum basale[(at the bottom of sweat duct ridges) of the epidermis approximately 10 µm in diameter. They are oval-shaped mechanoreceptors essential for light touch sensation and found in the skin of vertebrates.

Merkel cells are abundant in highly touch-sensitive skin areas, including glabrous (hairless) skin of fingertips and lips, some hair follicles, and touch domes on the trunk. These touch receptors are unusual because they produce biphasic discharges of action potentials that send two types of information to the brain: dynamic responses to moving stimuli represent an object's spatial features (e.g. edges and curvature), whereas sustained action-potential trains signify steady pressure (e.g. contact with clothing;)

Merkel cells are necessary for sustained, but not for dynamic, firing in SAI afferents. Prototypical SAI responses are abolished in transgenic mouse strains that lack either Merkel cells or epidermal Piezo2 expression (Maricich et al 2009, Maksimovic et al 2014, Woo et al 2014). Instead, sustained touch produces only transient bursts of action potentials in these mice. This finding indicates that Merkel cells are essential for conveying information about static pressure to the nervous system. Importantly, they also show that sensory afferents are independently capable of transducing dynamic touch. Finally, touch-driven behaviours are compromised in rodents lacking functional Merkel cells, which indicates that Merkel cells are important for the perception of touch

Despite remarkable progress in Merkel-cell biology, important questions about human Merkel cells remain unanswered. Do Merkel cells serve additional, non-sensory functions in skin? This is particularly important in human

skin, where a substantial fraction of Merkel cells appear to lack innervation. Are human Merkel cells derived from epidermis and renewed throughout life? If so, how are these processes disrupted during ageing, which is accompanied by loss of touch receptors in extremities? This condition is proposed to contribute to the decline of tactile acuity, grip strength and postural stability in the elderly. The research is ongoing and aims at answering some basic questions about the sensation we call touch.



Updates

FDA APPROVALS

No.:	Active Ingredient	Drug Name	Approved Use
1.	fezolinetant	Veozah	To treat moderate to severe hot flashes caused by menopause
2.	perfluorhexyloctane	Miebo	To treat signs and symptoms of dry eye disease
3.	epcoritamab-bysp	Epkinly	To treat relapsed or refractory diffuse large B-cell lymphoma (not otherwise specified) and high-grade B-cell lymphoma after two or more lines of systemic therapy
4.	sulbactam, durlobactam	Xacduro	To treat hospital-acquired bacterial pneumonia and ventilator-associated bacterial pneumonia caused by susceptible isolates of Acinetobacter baumannii-calcoaceticus complex
5.	nirmatrelvir, ritonavir	Paxlovid	To treat mild-to-moderate COVID-19 in adults at high risk for progression to severe COVID-19
6.	flotufolastat F 18	Posluma	To use with positron emission tomography imaging in certain patients with prostate cancer
7.	sotagliflozin	Inpefa	To treat heart failure
8.	glofitamab-gxbm	Columvi	To treat diffuse large B-cell lymphoma, not otherwise specified, or large B-cell lymphoma arising from follicular lymphoma after two or more lines of systemic therapy
9.	ritlecitinib	Litfulo	To treat severely patchy hair loss
10.	rozanolixizumab-noli	Rystiggo	To treat generalized myasthenia gravis in adults who are anti-acetylcholine receptor- or anti-muscle-specific tyrosine kinase antibody-positive

Best Performance – Semester examinations Nov 2023

II Semester



Fathimath Shifana
81.5%



Hiba Muhammad
80.8%



Kathija Afsina
80.8%



Fathima K
78.6%

IV Semester



Asiya Nasheeda
82.4%



Avva Labeeba
80.7%



Ashika K H
80.4%

VI Semester



Roshan Puthige
84.5%



Mariammath Nazmiya
84.5%



Krithika C V
78.6%

VII Semester



Fathima Naza
84.5%



Asiyath Yusra
82.5%



Abishek P N
83%



Pallavi B M
82.5%



INDEPENDENCE DAY CELEBRATION

PA College of Pharmacy, Institution Innovation Cell organized an Independence Day celebration. On 14th August last day of Azadi Ka Amrithmahotsav was celebrated. Stage programme started with the prayer by Mohammed Sahil Ismail, IIC member and Thriveni Raunak Salian (convenor IIC) welcomed the gathering followed by the speeches of guest of honours Dr. Ramis M.k. Principal PACE, Dr. Sarfraz J Hasim, Principal PAFGC, Dr. Ayesha, Vice Principal PAIP, and Dr. Sayyed Ameen Ahmed, Dean (student affairs) PAET. Guest speakers emphasized the importance of Independence and the innovation which invoked a sense of pride among the young students as worthy successors of this legacy as well as students got motivated. Dr. Saleemulla Khan, Principal & President IIC gave the presidential address and Ms. Divya gave the vote of thanks. Following the formal function patriotic song, quiz and poster presentations were conducted. The theme for the poster presentation was "Innovation-new ideas in science". The students participated enthusiastically and got many ideas on how they can move ahead with their idea. The external judges gave important inputs for the idea they have presented. Also, quiz completion involved many rounds which included innovation round. The winner of Poster presentation Roshan Puthige, 3rd B.Pharm student and Yusra and Mubashira from 4th year B.Pharm secured second prize. Everything, from the stage decoration to the anchoring and the performances was well planned and systematically executed, leading to the event being a wonderful Azadi Ka Amrit Mahotsav was celebrated on account of 76th Independence day on 14.08.2023 at PACE Auditorium.



Events

INSTITUTIONAL NEWS

ORIENTATION DAY

Orientation program was conducted on 4.10.2023 for B.Pharm 2023-2024 batch and D.Pharm 2023-2024 batch at PACE Auditorium. Orientation programme was inaugurated by Prof.Ganesh Kamath ,Former President of KCCI,and explained the students about the goals.. Dr.Ramis M K,Principal,PAET had attended the function and explained the students about Pharmacy and role of Pharmacist in a society. Dr.Sayyed Ameen, Dean student affairs explained about rules and regulations to the students.Dr.Saleemulla Khan ,Principal of P.A.college of Pharmacy explained about the importance of Pharmacists in the society.Mr.sharfuiddin P.K AGM campus PAET,Dr.Sajish Reghunathan ,Principal of P.A.college of Physiotherapy, Prof.K.P.Soofie,Principal P.A.Polytechnic, Shafinaz Syed Ismail,admission Officer were present.



As part of their social commitment, the NSS Unit of P A College of Pharmacy, The staff and students of P.A college of Pharmacy Nadupadav organized a Health Checkup Camp at Olavina Halli old age home in Kinya as a part of world Pharmacist day on September 28.

Mangalore Assistant Drug controller Udaya Kishore P inaugurated the program. Dr. Saleemulla Khan Principal, P.A.College of Pharmacy welcomed the gathering.

The AGM of P.A Educational Trust Sharfuiddin PK, P.A First Grade College Principal Sarfras J Hasim , Dr. Sajish Ragunathan Principal of Physiotherapy, Prof. K.P. Soofie Principal of P.A Polytechnic were also present.

Prof. Dr. Muhammad Mubeen welcomed the gathering, Mohammed Sahil Started the program with prayer, Ms. Thriveni narrated the program, and Ms. Nishmitha gave the vote of thanks.

The active participation of students, instructors, and staff significantly contributed to the camp's success. The well-organized event ensured the safety and comfort of all participants. Many people registered to donate blood. The collected blood will significantly contribute to saving lives and aiding those in need.

Social Outreach



ANTI-DRUG AND ANTI RAGGING

P.A First Grade College and P.A college of Pharmacy conducted a program on "Awareness of Drug addiction and Ragging" at P.A auditorium on October 5 2023. Mangalore Division DGP B.P Dinesh Kumar was the chief guest of the program and he said that both drug addiction and ragging are two sides of the same coin, both of them are punishable crimes and the more we stay away from it, the better it is for our society.

The Director of Drug Addiction Prevention centre, Yenepoya deemed to be University, Dr. Maji Jose was the chief guest of the program.

Dr. Saleemulla Khan, Principal of P.A College of Pharmacy welcomed the gathering and Dr. Muhammad Mubeen, Vice Principal of P.A college of Pharmacy delivered the vote of thanks.

The Principal of P.A first Grade College Dr. Surfraz J. Hasim gave the presidential address. Mr. Sharfuddin P.K, AGM, PACE campus, Dr. Sayyad Ameen Dean student affairs, Mr. Haris T D Head of Purchase Department and Dr. Sajeesh Reghunathan Principal ,P.A college of Physiotherapy also graced the occasion with their presence.



INTERACTION SESSION ON STUDY ABROAD OPTIONS

The P.A college of Pharmacy had arranged an interaction session for 3rd year and final year B.Pharm students on 13.10.2023. Mr. K.P Singh director and founder of IMFS, Institute of Management and Foreign studies and Mrs. Sharmila Shaligram, IMFS took their time to interact with students. The duo motivated students to take up higher studies abroad. They explained the opportunities available in different countries. IMFS train students in TOFEL, ILTES, and other tests. IMFS is the only institute recognized to conduct these exams in this region. Mrs. sharmila offered to help the students in grooming them in PACP



Events

ZONAL CENTER PROGRAM IN ASSOCIATION WITH MAKEINTERN & E-CELL IIT KHARAGPUR AND P.A COLLEGE OF PHARMACY, MANGALORE

Zonal Center Program in Association with Makeintern & E-Cell IIT Kharagpur and P.A college of Pharmacy, Mangalore was conducted from 20th-25th september 2023 for B.pharm students. Mr. Gaurab Banerjee, Co-founder Molsys Pvt.Ltd was the trainer for this 1 week program. 68 B.Pharm student were participated and best five students were selected to the next round which will be held in IIT Kharagpur. 10 students were selected for 1 week internship at molsys Mangalore office.



ACHIEVEMENTS

Faculty Corner



Patent

ROTAROD APPARATUS FOR MONITORING MUSCLE RELAXANT ACTIVITY IN MICE

Awarded For
Dr. Manohar Naik Kokala
Head
Department of Pharmacology
PA College of Pharmacy

Congratulations!

