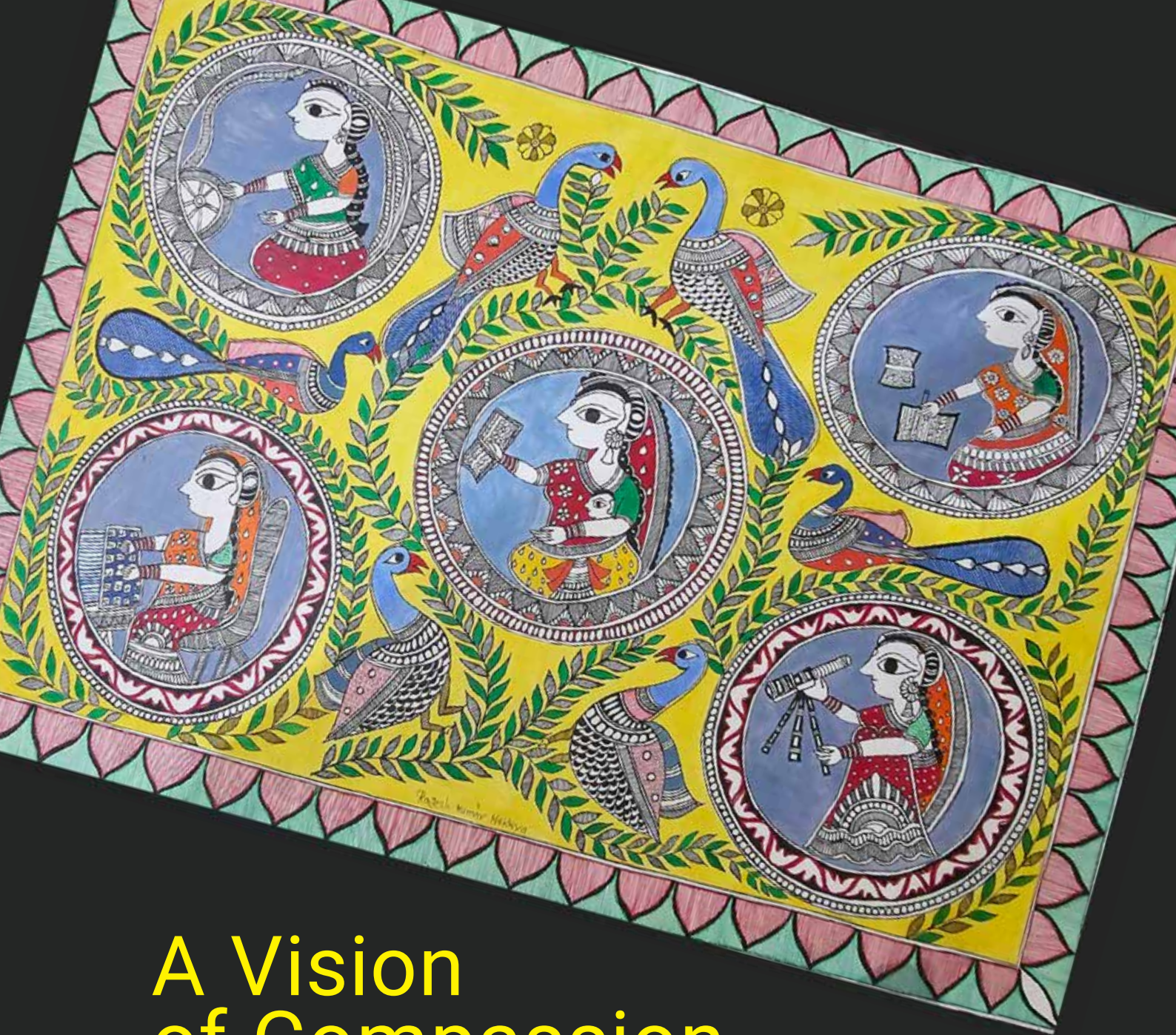# AMRITA
VISHWA VIDYAPEETHAM
DEEMED TO BE UNIVERSITY

SUSTAINABILITY REPORT 2023-24

JITWARPUR

A Vision of Compassion
and Responsibility through Education

Amrita Vishwa Vidyapeetham preserves, documents, and digitally archives Madhubani painting, strengthening cultural heritage and artisan livelihoods. Through capacity building, AR/VR cultural experiences, and global visibility, the initiative reduces migration, fosters sustainable local economies, and enables worldwide audiences to engage with this eco-friendly tradition in immersive and deeply educational ways globally.

The Madhubani painting (on the left side) celebrates women's strength, creativity, and knowledge, showing them engaged in learning, weaving, reading, teaching, and nurturing. It reflects the same spirit upheld at Amrita, where women are empowered through skill development, education, and capacity building. The artwork beautifully echoes Amrita's commitment to helping women grow as learners, creators, and leaders with dignity.

Content

SUSTAINABLE DEVELOPMENT GOAL (SDG) INDEX:

OUR CHANCELLOR

A Vision of Compassion and Responsibility through Education

Our world is standing at a crucial juncture, urging us to reflect and act to safeguard the planet's beauty for generations to come. True progress extends beyond material success; it thrives in our capacity to uphold compassion, equity, and respect for all life. The Sustainable Development Goals provide a roadmap to this future, yet achieving them demands our collective resolve and unity.

Sustainability begins with recognizing that all life is interconnected. When we view ourselves as part of nature, not separate from it, we embark on a journey toward genuine fulfillment. Change must start within, nurtured by simplicity, contentment, and empathy, with each action creating ripples that affect lives across distances and generations.

Our natural resources are sacred and diminishing. We must protect and cherish them with humility and gratitude. By adopting lifestyles that reduce waste, conserve resources, and uplift those in need, we create a legacy of peace and harmony.

At Amrita Vishwa Vidyapeetham, we embed these values in our students, ensuring education becomes a transformative experience that shapes compassionate and responsible individuals. Through research, community service, and sustainable initiatives, we aim to cultivate seeds for a brighter, sustainable future.

Let us transcend divisions and build a world where peace and compassion guide every effort. May our shared journey be held in the prayer:

Lokah Samastah Sukhino Bhavantu—May all beings everywhere be happy and free.

With love and blessings,

Mata Amritanandamayi Devi
Chancellor, Amrita Vishwa Vidyapeetham

PROVOST MESSAGE

Journey of Compassion and Sustainability

Dear Amrita Community and Friends,

It is with immense pride and gratitude that I share this message in our latest sustainability report, a testament to our enduring commitment to advancing the United Nations Sustainable Development Goals (SDGs). At Amrita Vishwa Vidyapeetham, we see sustainability not only as an institutional responsibility but as a profound moral imperative. As the UNESCO Chair on Experiential Learning for Sustainable Innovation and Development, I am privileged to witness firsthand how education, research, and community engagement come together to create real-world impact, particularly for marginalized communities and vulnerable populations.

This past year has been marked by significant achievements aligned with the SDGs. Hosting the Global Summit for Gender-Related Chairs and Networks brought together over 36 UNESCO Chairs from 46 countries to address gender issues, fostering a spirit of collaboration for transformative change for women and girls.

Amrita's pioneering research, like the Wireless Sensor Network system for landslide warnings, reflects our dedication to tackling practical challenges. Projects in renewable energy, waste reduction, and carbon footprint minimization have advanced our goal of becoming a Zero Waste campus. Our outreach efforts have also extended to underserved communities, promoting sustainable practices.

Through partnerships with governments, NGOs, and international organizations, we are driving sustainability across borders. As we celebrate these accomplishments, we remain committed to inspiring positive change, encouraging our students, faculty, and partners to build a sustainable future. Together, let's continue working towards a world that values the dignity, security, and well-being of all beings.

Warm regards,
Dr. Maneesha V. Ramesh
Provost, Amrita Vishwa Vidyapeetha

Amrita Vishwa Vidyapeetham Institutional Overview

CAMPUSES

Aadey
Amieatert
Bougultes
Chrroua
Comdumrw
Hormuz
Kochi
Magaua
Noguimuf
Hortttam

STUDENT BODY

Over **24,000** Students from more 50 countries

Female enrolment

81%

Nearly every Indian state

FACULTY AND RANKINGS

Over **1,700** faculty memebers **37** recognized among World's Top 2% Scientists (2025)

RESEARCH THEMES

Education for Sustainable Development

Disaster Resilience
Healthcare Innvoation
Sustainable Livelihoods

Offere > 250+ degree programs

Patents, translational research, community impact

Top **41** universities worldwide for supporting the Nd tiones Sustainable Development Goals (SDGs)

SDG OVERVIEW

Amrita Vishwa Vidyapeetham adopts a holistic and compassion-driven approach to the United Nations Sustainable Development Goals (SDGs). The university integrates SDG principles across education, research, outreach, and campus operations, aiming for measurable real-world impact.

SDG Strategy and Implementation

1. The curriculum is built around the E4LIFE framework—Experience, Embrace, Empower, and Engage—which emphasizes community-based experiential learning.

2. Amrita collaborates closely with rural communities, enabling faculty and students to co-design and implement sustainable solutions alongside local stakeholders.

3. The Amrita Center for Sustainable Development Goals leads international partnerships, develops SDG dashboards, and fosters data-driven policy and innovation.

High Impact and Global Recognition

1. Amrita ranks 1st in India and 41st globally in the Times Higher Education Impact Rankings 2025 for SDG performance, with global top 50 rankings in SDG 4 (Quality Education), SDG 7 (Affordable and Clean Energy), SDG 5 (Gender Equality), SDG 3 (Good Health and Wellbeing), SDG 9 (Industry, Innovation, Infrastructure), SDG 6 (Clean Water), and SDG 13 (Climate Action).

2. SDG themes are actively promoted through academic programs, UNESCO Chairs, innovation, and large-scale conferences focused on sustainability and resilience.

Amrita's approach to SDGs exemplifies its mission to harmonize academic excellence with ground-level impact, positioning it as a leader in sustainable development practices and social responsibility in higher education.

INTERNATIONAL COLLABORATIONS

Global Partnerships and Academic Networks

Amrita Vishwa Vidyapeetham maintains a broad and growing global presence through formal agreements, joint programming, research ties, and student/faculty mobility. The **Amrita Center for International Programs (ACIP)** continues to steer this expansion, serving as a strategic node for managing MoUs, dual degrees, exchanges, collaborative research, and global outreach.

Amrita's academic reputation is strengthened through a robust network of international partnerships that connect its faculty and students to leading institutions around the world. These collaborations open new pathways for dual degrees, joint research, student and faculty exchanges, and co-taught courses that enhance both academic rigour and global exposure.

University of New Mexico (UNM), USA:

The partnership with UNM enables student and faculty exchanges, dual-degree pathways, and integrated coursework in engineering and computer science. This collaboration bridges American and Indian academic frameworks, encouraging collaborative research and innovation in artificial intelligence, sustainable engineering, and information systems.

University of Paderborn, Germany Amrita's partnership with the University of Paderborn facilitates joint curriculum development, research collaborations, and semester exchange opportunities in computer science and engineering. This academic linkage supports German–Indian cooperation in automation, embedded systems, and digital manufacturing.

MoU Between Amrita Vishwa Vidyapeetham and the University of Minnesota Formalised:

A Memorandum of Understanding (MoU) between Amrita Vishwa Vidyapeetham and the University of Minnesota, Twin Cities, was formalised to advance global collaboration in research and education. The collaboration enables joint degrees, research partnerships, innovation initiatives, and technology transfer. The University of Minnesota—founded in 1851 and regarded as a top U.S. public research university—is recognised for hosting engineering, medical, law, veterinary, and agricultural schools on a single campus, making this partnership especially impactful.

AIMS–Harvard Medical School Collaboration Formalised Through Landmark MoU

A landmark Memorandum of Understanding (MoU) between the Amrita Institute of Medical Sciences (AIMS) and Harvard Medical School was signed, marking the first such partnership between an Indian hospital and the institution. The collaboration was established to advance work in critical care, pain medicine, and anaesthesiology.

Under the MoU, opportunities were created for joint research, faculty and student exchanges, specialised training programmes, and the development of advanced fellowships. The first joint research project was designated to focus on sepsis.

Five-day certificate programmes in ICU management, acute medicine, and quality assurance were proposed for postgraduate students of Amrita School of Medicine, and access was offered to Harvard's simulation facilities for advanced training in bronchoscopy, ultrasound, and pain management.

Politecnico di Milano (POLIMI), Italy: Amrita and POLIMI have introduced dual-degree and remote-teaching models in architecture, design, and engineering. These programs combine Italian design thinking and Amrita's technology-oriented education to foster innovation in sustainable architecture, renewable materials, and smart infrastructure.

Telecom & IT institutes in Europe: Collaborations with institutions such as Grenoble INP (France), University of Twente (Netherlands), Aalto University (Finland), and Halmstad University (Sweden) enable structured 3+2 and 4+1 programs, wherein Amrita students can pursue integrated bachelor's and master's degrees. These arrangements provide global academic mobility and align Amrita's programs with European credit transfer and qualification systems (ECTS), ensuring academic compatibility and recognition across continents.

Strategic Research Alliances

Beyond academic coursework, Amrita's strategic research alliances with globally renowned universities elevate its position as a hub for knowledge creation and innovation. Formal Memoranda of Understanding and collaborative research networks link Amrita with **Harvard University, Columbia University, University of Tokyo, KTH Royal Institute of Technology (Sweden), VU Amsterdam, King's College London, University of Oxford**, and several leading German, Italian, and Australian institutions.

These alliances span a broad range of disciplines including biomedical engineering, public health, data science, sustainable energy systems, and climate resilience. Joint projects focus on addressing pressing global challenges—such as climate adaptation, digital equity, and community resilience—through technology-enabled, human-centred solutions. Collaborative workshops, visiting fellowships, and joint doctoral supervision provide scholars at Amrita with opportunities to work alongside some of the world's foremost experts, thereby fostering a culture of global academic exchange.

In fact, when Amrita entered a Letter of Intent (LoI) with the **University of Arizona (UA)**, the collaboration was presented as "one of the largest ever international university collaborations in India," aiming to facilitate **dual-degree programs at bachelor's and master's levels** in engineering, biotech, public health, and agriculture, benefitting some 200+ students annually for semester exchange.

Amrita Vishwa Vidyapeetham has established a **Joint Centre of Excellence in Water Sustainability with Delft University of Technology (Netherlands)** to advance research, education, and community impact. The Centre integrates TU Delft's strengths in hydrology and water engineering with Amrita's field presence and social innovation to deliver scalable solutions for sustainable water resource management, climate resilience, and water quality. Priority themes include watershed and river-basin decision support,

real-time monitoring using IoT and remote sensing, flood–drought risk modelling and nature-based solutions, low-cost treatment and circular water reuse, and community-centred water governance.

National and Industry Partnerships

Domestically, Amrita has strengthened strategic collaborations with industry and institutions that enhance its curriculum relevance, particularly in technology, infrastructure, and applied innovation:

A notable recent partnership is with **MathWorks,** makers of MATLAB and Simulink, launched in August 2024. This collaboration embeds **Model-Based Design for IoT** (using MATLAB & ThingSpeak) into Amrita's engineering curriculum, supported by faculty development programs and hands-on student workshops during the 2024–2025 academic session. Through its research centers (e.g., AmritaWNA — Amrita Center for Wireless Networks & Applications), Amrita leverages external collaborations in electronics, prototyping, IoT, smart systems, and technology translation.

Live-in-Labs®: A Model for Experiential Learning and Sustainable Development

From an academic standpoint, Live-in-Labs® functions as both a **curricular component** and a **research platform**, bridging the gap between theoretical frameworks and real-world problem-solving. It is embedded into degree programs as a **credit-bearing course** (e.g., 24CLT690) open to undergraduate, postgraduate, and PhD students across engineering, social sciences, health sciences, management, and humanities disciplines. Students earn credits through multi-phase engagement: pre-field orientation, participatory research design, on-site implementation, and reflective analysis.

Academic Framework and Pedagogical Philosophy

At its core, Live-in-Labs® represents a **transdisciplinary learning laboratory** that redefines how higher education can contribute to sustainable development.

 Its academic model draws on four principles aligned with Amrita's **E4LIFE framework** — Experience, Embrace, Empower, Engage.

- **Experience:** Students gain first-hand exposure to socio-economic and ecological realities beyond the classroom.

- **Embrace:** Participants cultivate empathy by understanding local perspectives, indigenous knowledge systems, and social structures.

- **Empower:** Faculty and students co-develop low-cost, context-appropriate technologies and social innovations.

- **Engage:** The outcomes are re-integrated into academic programs through theses, publications, and technology transfer.

Scope, Reach, and Academic Outcomes

Over a decade, Live-in-Labs® has evolved into one of India's most extensive experiential education platforms. According to institutional data, the program has:

- Implemented more than **300 field projects** in **25 Indian states**, involving **over 400,000 hours** of community engagement.

- Reached more than **1 million rural residents** through interventions in **water, health, energy, sanitation, waste, housing, and education.**

- Engaged **50+ academic departments and 30 international partners**, including Rutgers University (USA), Uppsala University (Sweden), University of Twente (Netherlands), and Politecnico di Milano (Italy).

- Produced numerous **student dissertations, design projects, journal publications, and conference papers** linking science, sustainability, and society.

Live-in-Labs® projects often evolve into research outputs and technology prototypes, enabling students to pursue **thesis work, start-ups**, or **policy collaborations.** For example, research on solar micro-grids, low-cost water filtration, and AI-based telehealth systems originated as Live-in-Labs® field pilots before scaling through funded grants.

Thematic Focus and Interdisciplinary Approach

Live-in-Labs® projects address multiple Sustainable Development Goals (SDGs) simultaneously, demonstrating how universities can act as catalysts for holistic societal change. Key focus areas include:

- **Clean Water & Sanitation (SDG 6)** – Developing low-cost water purification systems, rainwater harvesting, and greywater reuse models.

- **Affordable & Clean Energy (SDG 7)** – Installing solar micro-grids and biogas systems for community electrification.

- **Health & Well-being (SDG 3)** – Implementing telemedicine networks, nutrition awareness programs, and rural health monitoring systems.

- **Sustainable Agriculture (SDG 2)** – Designing soil-testing kits, irrigation optimization tools, and organic farming technologies.

- **Gender Equality (SDG 5)** – Developing ergonomically improved tools for women workers (e.g., load-carrying aids).

- **Sustainable Communities (SDG 11)** – Promoting waste management, eco-housing, and disaster-resilient infrastructure.

Times Higher Education (THE) Asia Award 2024

The international acclaim for Live-in-Labs® reached a milestone when Amrita Vishwa Vidyapeetham received the **Times Higher Education (THE) Asia Award 2024** for **Outstanding Contribution to Environmental Leadership** — making it the **only Indian university** to win in that category.

The award recognized how Live-in-Labs® "mobilizes university intellect and compassion to solve complex environmental and developmental challenges at the grassroots." Judges highlighted its ability to combine scientific rigor with human values, describing it as "a powerful demonstration of how higher education can be a force for environmental stewardship and community resilience."

Three projects were cited in the award citation:

- **"Ricycle"** – A low-cost rice planting device that improves rural farm productivity.

- **Load-carrying aid for women** – Reduces physical strain for women in agrarian communities.

- **Compressed Earth Block housing** – Sustainable construction using local soil and low-energy materials.

The judges emphasized that these projects exemplified how applied research, field empathy, and student innovation can lead to tangible environmental and social benefits. The award situates Amrita's Live-in-Labs® as a global exemplar of education linked with the Sustainable Development Goals (SDGs).

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E4Life PhD Programme: Empowering Global Scholars for Sustainable Development

Amrita Vishwa Vidyapeetham proudly marked a major milestone with the graduation of the inaugural cohort of its flagship **E4Life PhD Programme,** a pioneering fully-funded doctoral initiative dedicated to sustainable development. Launched in 2020 under the visionary guidance of **Amma, Chancellor of Amrita**, the programme is hosted by the **School for Sustainable Futures** and is designed to nurture future-ready researchers capable of transforming communities through science, innovation, and compassion.

The first graduating batch comprises **23 scholars representing 9 countries**—India, Zambia, Nigeria, Zimbabwe, Uganda, Ghana, Iran, Tanzania, and the United

Kingdom. Many of these scholars come from disadvantaged or underrepresented backgrounds, reflecting the programme's strong commitment to **equity, global inclusion, and capacity building.**

Through its integrated approach—combining interdisciplinary research, field immersion, and community-centric solutions—the E4Life PhD Programme contributes directly to multiple SDGs, especially **SDG 4 (Quality Education), SDG 10 (Reduced Inequalities),** and **SDG 17 (Partnerships for the Goals).** The graduation of this diverse cohort marks a significant step in advancing global sustainable development leadership through education.

Amrita School for Sustainable Futures: Advancing Education, Research, and Community Impact for a Sustainable Tomorrow

The Amrita School for Sustainable Futures drives community-focused sustainability through experiential learning, interdisciplinary research, and global collaborations. Its curriculum integrates immersive field projects, multi-disciplinary teaching, and thematic focus areas such as climate resilience, environmental stewardship, sustainable livelihoods, and community development.

A diverse student community strengthens peer learning and global perspectives. The School hosts the fully funded E4LIFE PhD Program, enabling scholars to conduct SDG-aligned, impact-driven research with strong field engagement.

Guided by an international advisory committee, and supported by global partners, the School continues to build knowledge, tools, and human capacity for sustainable and resilient communities.

Amrita in the World's Top 2% Scientists List 2025

We are proud to share that 37 faculty members from Amrita Vishwa Vidyapeetham have been recognized among the World's Top 2% Scientists, according to the global ranking compiled by Stanford University, in collaboration with Elsevier and SciTech Strategies.

This marks the sixth consecutive year that Amrita's researchers have earned this distinction — a testament to our university's sustained excellence in research, innovation, and global impact across diverse disciplines. This year's recognition spans career-long achievements and single-year impact, highlighting Amrita's growing influence in science, medicine, technology, business, and sustainable development. With 12 faculty honored in both categories, Amrita continues to advance compassion-driven research — transforming knowledge into solutions for humanity.