

## **Track 4 - Biotechnology & Bio Sciences, Health & Allied Sciences & Hospitality & Tourism**

### **Session No: 4.1**

#### **Panel Discussion Session Topic: Novel and Innovative Approaches for COVID-19 Vaccine Development Globally**

**Day & Date: Thursday; 20th Jan 2022**

**Time: 12:00 PM -1:30 PM**

**Overview:** The availability of a safe and effective vaccine for COVID-19 is well-recognized as an additional tool to contribute to the control of the pandemic. At the same time, the challenges and efforts needed to rapidly develop, evaluate and produce this at scale are enormous and more innovative approaches are needed for the same. The Coalition for Epidemic Preparedness Innovations (CEPI) is working with global health authorities and vaccine developers to support the development of vaccines against COVID-19. To facilitate this effort, maintaining an overview of the global landscape of COVID-19 vaccine development activity is crucial. The landscape will provide insights into key characteristics of COVID-19 vaccine R&D, innovation and serve as a resource for ongoing portfolio management. This will help the global health ecosystem to improve coordination in the COVID-19 outbreak response and enable global resources and capabilities to be directed towards the most promising vaccine candidates.

#### **Session Objectives:**

The main objective of the session is to understand and discuss the major and extraordinary global research innovation undertaking. Further, the discussion is on the WHO facilitated collaborations which accelerated efforts on a scale not seen before; it is convening vital communications across the research community and beyond. The audience will understand the graph and spectrum of innovative approaches involved in the COVID-19 vaccine and will also get to know the actual status and outcome of global collaborations in this massive race of vaccine development.

#### **Key Questions to be explored:**

1. Analyse how to build an alliance, collaborate and meet the global demands?
2. Examine the broader spectrums of collaborative and innovative approaches in the Life Sciences and Healthcare sector?
3. Understand the Reach and acceptance of AI in healthcare?
4. What is the outcome of proper training and induction programmes in making any innovation successful?

### **Session No: 4.2**

#### **Panel Discussion Session Topic: Innovation in Agri based Technology for economic upliftment for Atmanirbhar Bharat**

**Day & Date: Thursday, 20th January 2022**

**Time: 2:00 PM- 3:30 PM**

**Overview:**

Agriculture has been one of the strongest drivers of innovation throughout human history and remains a cornerstone for humanity's continued survival and prosperity. With a massive increase in the human population and environmental changes, innovations in the AgriTech space will be crucial for sustainable agricultural growth. Given the complexity of the Indian agriculture ecosystem, no single policy change or technology shift will move the country toward its dual goals of raising income for smallholder farmers and continuing to strengthen the competitiveness of Indian agriculture. This sector in India is increasingly embracing technology at various levels and industry is coveting the huge potential for tech-driven interventions that can change the agriculture landscape two decades from now. Besides mechanization of farming, technology penetration in the Indian agriculture sector is happening at multiple levels: policy interventions, digital innovations and biotechnology. Range of smart solutions including AI and machine learning solutions like drones and precision farming techniques are aiding farmers past all stages from sowing to crop protection and nutrition, cultivation, and harvest to connecting them to non-traditional markets. Advances in genome sequencing and other technologies including genomics-assisted breeding, genetic engineering and gene editing are increasingly being developed and used to develop crop varieties with enhanced tolerance to biotic and abiotic stresses and with better nutrition. By the year 2050, annual food grain production would need to grow to 333 million tonnes. Even though the contribution of key food grains in acreage terms in India is 15 percent, the production contribution is a mere 8.7 percent. This indicates that the use of innovative technology is necessary to meet the forecasted demand sustainably and move Indian agriculture along the growth path.

**Session Objectives:**

The objectives of the sessions are as follows:

- To gain perspectives on the innovative biotechnological approaches in the agri-biotech domain for increased crop productivity as well as sustainable agriculture ecosystem
- To examine the effect of digital technologies like AI, Blockchain, GIS etc. on the agriculture ecosystem in India
- To explore the agri-biotech ecosystem initiatives and best practices developed

**Key Questions to be explored:**

For Atmanirbhar Bharat in the AgriTech sector, innovations in the agriculture ecosystem across the agriculture value chain from crop selection to crop management and the market and will involve public and private players in agricultural inputs and services and logistics will be required.

Therefore, this panel discussion will examine questions such as:

- What are the various priority action areas to be immediately addressed to encourage innovations in this sector?
- How can Precision Agriculture transform crop production in India?
- How is the digital transformation of agriculture occurring worldwide and in India holds some promise for progress?

- Analyse what fundamental changes are required in the structure so that small and marginal farmers benefit from digital innovations?
- How can we craft and harness a progressive and positive regulatory policy?

### **Session No: 4.3**

**Panel Discussion Session Topic:** Start-ups that are redefining the healthcare Sector in India

**Day & Date:** Thursday, 20th January 2022

**Time:** 3:45 PM- 5:00 PM

#### **Overview:**

The COVID-19 pandemic has been a pivot for the exponential growth of startups globally. The technological revolution in the realm of the internet of things and digitalization has redefined the healthcare sector. The healthcare sector in India has consistently been flourishing and is one of its fastest-growing sectors. Providing easy and affordable healthcare for India's ever-growing population is a challenge, however, integration of technology like machine learning, big data analytics, artificial intelligence, the Internet of things and automation has enabled India's healthcare sector to establish new landmarks. The focus of most start-ups is to help access healthcare resources. The health-tech startups in India can be broadly divided into six segments- Telemedicine, e-pharmacy, home healthcare, IT and analytics, diagnostics, and personal fitness and wellness. There are about 3,225 startups in India that focus on health tech. The Indian startup companies have deeply evolved by using technologies with scientific theories. They are smart enough to study the trends, quickly adopt changes, and improve the existing system. Being a start-up, they thrive to provide high-quality healthcare and use innovative methods to become high-performance organizations.

#### **Session Objectives:**

The objectives of the sessions are as follows:

- To examine how the startups have redefined the healthcare system in India.
- To gain perspectives on the approaches to integrate technology and data sciences to improve the healthcare system in India.
- To explore the avenues to start a business in the healthcare industry in the context of VUCA.

#### **Key Questions to be explored:**

The idea of introducing technology into healthcare has gained significance in the last few years. However, there are still a few concerns that have to be addressed. Therefore, this panel discussion will examine questions such as:

- How will the technology-based healthcare system be available in rural parts of India?
- What are the bottlenecks for developing the trust of people in these new startup companies?
- How can governments / the Ministry of Education help startups to improve the healthcare system?
- What are the various priority action areas to be immediately addressed so that India emerges as the top player in the healthcare system?

## **Session No.: 4.4**

**Panel Discussion Session Topic:** Innovation and Entrepreneurship Ecosystems in Industrial Biotechnology: Role in Circular Economy

**Day & Date:** Thursday, 20th January 2022

**Time:** 5:30 PM- 7:00 PM

### **Overview:**

Biotechnology innovations with an emphasis on sustainability are a differentiating factor for businesses with an element of life science. Focussed innovation on biotechnology serves as the foundation for providing new opportunities for sustainable enterprise and explores the strategy of building an industrial ecosystem and development of value chains to deliver complex endeavours. The circular economy is an alternative to linear systems with certain limitations. Sustainable practices are the ultimate path to switch from linear to circular economy and require rethinking on business models with consideration of environmental and social facets. Industrial internal and external factors are to be given equal priority to be considered for transition processes to align future research that can meet international standards of excellence. Directions and effects of activities are uncertain and the relation between circular economy features the need to identify processes contributing to a sustainable future economy. Strengthening these links prioritises sustainable business practices. Governments across the world, have conceived targets of transition towards a bio-based economy, to move beyond the exploitations of available natural resources, complementing United Nations's sustainability goals such as "climate change mitigation". Bio-refineries hold a major share among biotechnology industries and a systematic approach with a focus on instrumentation and diversification of products along with alignment with policies and converging technologies, paves route for various industrial set-ups. The major factors that promote a successful transition to knowledge-based bioeconomy with a holistic approach require innovation at micro, meso (clusters and innovation systems) and macro (governmental vision) levels with research on the interface of entrepreneurship and bioeconomy. Higher Educational Institutions (HEIs) being knowledge hubs for all potential transitions and developments, play a critical role in promoting a culture to entrepreneurship. It is imperative to mention that rising challenges in building the bioeconomy necessitates transition from linear to the circular economy, with the sustainable approach towards maintaining the innovation and entrepreneurship ecosystems through Industrial Biotechnology.

### **Session Objectives:**

The objectives of the sessions are as follows:

- To examine the educational systems and discover the transformations required in the academic programmes and Higher Education curriculum to align mindset towards innovation and entrepreneurship ecosystems.
- To enable students to acquire entrepreneurial skills in industrial biotechnology needed for the development of circular bioeconomy.

### **Key Questions to be explored:**

- Examine how are the HEIs responsibly shaping young minds to be an important part of leveraging the economy?
- What may be various approaches for the transition from linear to the circular economy through Industrial Biotechnology?
- Analyse the role that innovation and entrepreneurship ecosystems in industrial biotechnology plays in a circular economy?
- What contributions from HEIs may be expected towards attaining a sustainable bioeconomy?
- What can be accountable measures to bridge the gap between industry-academia for progress in bioeconomy?

### **Session No.: 4.5**

**Panel Discussion Session Topic:** Digital Transformation and Product Innovation in Biotechnology and Healthcare for Promoting Start-Ups

**Day & Date:** Friday, 21st January 2022

**Time:** 10.15 AM- 11:45 AM

### **Overview:**

Digital technologies are pushing continuous revolution in biotechnology and health care. It will be instrumental in helping product innovation for Biotechnology companies and start-ups to invent and develop products and services that have a better engagement with the patrons and implement operations further effectively. The plethora of data is the new health care currency. Enormous quantities of data are getting produced from patients using consumer sensors and monitors, at-home diagnostics, and digital therapeutics. Nevertheless, for digital transformation and product innovation in the biotechnology and healthcare sector to flourish and more start-ups being promoted, it is pertinent to train manpower in accordance with this transformation and new techniques and approaches must be updated in the curriculum to enable such transforms. Biotech manufacturing and healthcare companies should adopt start-up approach and build a society that encourages and supports innovation. One of the major steps is supporting failures by accepting them as part of the process. This promotes innovation, new initiatives, and experimentation that facilitates future successes and opportunities for scaling up across the organization.

### **Session Objectives:**

The objectives of the sessions are as follows:

- To assess the curriculum changes needed and realize the transformations required in the academic programmes and Higher Education curriculum for enabling students to attain the training needed to be industry ready
- To obtain knowledge about how digital transformation can modernise the innovations and incorporate entrepreneurship education into the curriculum of higher education
- To explore the best practices developed within universities aimed to encourage students to choose the career of an entrepreneur

## **Key Questions to be explored:**

Big data and digital transformation solutions have allowed the Biotech, Healthcare and Data Science start-ups to tap into this wealth of data to drive innovation. It allows biopharma companies to recruit patients for clinical trials more effectively. Nevertheless, the need for integration with the knowledge and the applicability of the industry remains a challenge. This panel will discuss pertinent questions like:

- The importance of digital transformation and innovation in the biotech and healthcare industry? Why the consumers want healthcare in their own space and time?
- Examine how new products and innovations can catalyse the development of new start-ups and business models to drive more customer satisfaction?
- What are the various priority action areas to be immediately addressed to encourage entrepreneurial education?
- How digital transformation could help companies improve their processes and productivity. Specifically, biopharma companies should be able to reduce R&D costs, better target marketing spending, and optimize manufacturing and supply chains?

## **Session No.: 4.6**

**Panel Discussion Session Topic:** Innovation and Entrepreneurship Opportunities in Pharmaceutical sector: Pharma Vision 2030

**Day & Date:** Friday, 21st January 2022

**Time:** 3:45 PM- 5:30 PM

## **Overview:**

Indian pharmaceutical industry enjoys an important position in the global pharmaceuticals industry. The Indian pharmaceuticals market is the third-largest in terms of volume and fourteen-largest in terms of value. Indian pharmaceutical sector supplies over 50% of global demand for various vaccines, 40% of generic demand in the US and 25% of all medicine in the UK. The domestic pharmaceutical industry includes a network of 3,000 drug companies and ~10,500 manufacturing units. According to the Indian Economic Survey 2021, the domestic market is expected to grow 3x in the next decade. India's domestic pharmaceutical market is estimated at US\$ 42 billion in 2021 and likely to reach US\$ 65 billion by 2024 and further expand to reach ~US\$ 120-130 billion by 2030. With this kind of growth, the next story of the Indian pharma industry has to be one centred around innovation. India playing at scale in the innovation space will not just help the country but will create a source of sustainable revenues, bringing new solutions to unmet healthcare needs. In India, this would lead to a reduction in disease burden (development of drugs for India-specific concerns like tuberculosis and leprosy does not get global attention), creation of new high-skilled jobs, and probably around \$10 billion of additional exports from 2030. Further, the Indian pharma industry is adapting novel technologies and medicinal practices steadily. Since the pharma industry has lesser players in the market also a lot of dependency on other countries for bulk drugs and other raw materials for pharmaceutical products, the government desires entrepreneurial forays to occur in the sector and help to expand the sector. The entrepreneurs should make use of this opportunity and begin intriguing in the pharmaceutical sector. The sector includes a huge scope which makes it a worthwhile opportunity for private owners to enter.



## **Session Objectives:**

The objectives of the sessions are as follows:

- To understand the current scenario of the innovation and entrepreneurship in the pharmaceutical sector
- To examine the major challenges and issues for the innovation and entrepreneurship in the pharmaceutical field
- To explore the regulations issues in approval of new drugs, clinical trials, etc.

## **Key Questions to be explored:**

For innovation/ entrepreneurship to thrive in India, multiple challenges must be overcome: Complex and protracted approval processes (e.g. 33-63 months versus 11-18 months in regulated nations); lack of robust process guidelines (Indian websites list about 24 guidelines compared to over 600 at the USFDA); lack of transparency (open data related to warning letters/notices); limited governance and a limited innovation mindset; lack of skilled workers; lack of coordination between academia and industry.

This panel discussion will examine questions such as:

- Examine what are major challenges for innovation/ entrepreneurship in India?
- Discuss what are government policies in the promotion of innovation/ entrepreneurship and overcoming the challenges faced by innovators and entrepreneurs?
- How coordination/collaboration between academia and industry can be enhanced?
- What are the major steps required by each stakeholder (universities/pharmacy council/drug regulators/government) for transforming pharma industry innovation and entrepreneurship driven?

## **Session No.: 4.8**

**Panel Discussion Session Topic: Innovation, Entrepreneurship and Leadership in Physiotherapy and Occupational Therapy."**

**Day & Date: Friday, 21st January 2022**

**Time: 3:45 PM- 5:30 PM**

**Overview:** The current health care environment entails exploration and opportunities to meet the imminent needs of society. In order to identify opportunities and develop roles, the physiotherapist and occupational therapist can benefit from acknowledging various business concepts. The health care industry can learn innovations across various business disciplines including operations, finance, marketing and customer service.

Entrepreneurship refers to an individual's ability to turn ideas into action. It includes creativity, innovation and leadership along with vision and taking risks. Entrepreneurship education can bring about a positive impact on entrepreneurial attitudes and intentions, individuals get a job earlier, innovate more even as employees and start more companies. The physiotherapy and occupational therapy field have the potential equivalent to any other successful industry. The only need to develop a strong education platform for entrepreneurship right from the beginning of the career of an individual. With this in mind, we need to explore the following.

## **Session Objectives:**

- Understanding Entrepreneurship in Physiotherapy and Occupational therapy
- Exploring definitive characters that make a successful entrepreneur
- Exploring Innovation, Visionary and leadership quality amongst entrepreneurs in the Physiotherapy domain.
- Examine entrepreneurship education in health care setups.
- Debating possible options of entrepreneurship in Physiotherapy and Occupational therapy.

#### **Key Questions to be explored:**

- Is it possible in the field of Physiotherapy and Occupational therapy?
- Is it an important and necessary ingredient for stimulating economic growth and employment opportunities in all societies?
- What are the driving factors for the Physiotherapist and occupational therapist to become an entrepreneur?
- What kind of skills and knowledge will require in HEIs curriculum to handle clients?
- How to handle challenges faced during establishing own clinic after passing from higher education institution as a Physiotherapy and Occupational Therapy Professional.
- What Infrastructure is required to set up a clinic as an entrepreneur?

#### **Session No: 4.9**

#### **Panel Discussion Session Topic: Innovation and Entrepreneurship in Health Sciences**

**Day & Date: Thursday, 21st January 2022**

**Time: 5:30 PM- 7:00 PM**

#### **Overview:**

The robust education system in India and especially the higher education system in India churns out a large number of young professionals who are not only the present but also the future of India. The professionals need to be well trained and skilled in order to deliver what growing India needs to transform today's functional health care system into one which is creative and innovative which can fulfill the rapidly changing needs of the country and the world at large. During the COVID-19 pandemic, there has been racial changes and ways of working have been modified to adapt to the changing needs. Conventional methods have yielded or have adapted and also numerous new avenues have also propped up. The health care system is the backbone of the country needs to be equally geared up to meet the needs of challenging times. It can be no other thing like creativity driving innovation finally culminating into entrepreneurship, which can be seen as a key to unlock the future of India to become a 5 trillion economy.

#### **Session Objectives:**

The objectives of the sessions are as follows:

- To examine the changing needs of in the health care domain for innovation and entrepreneurship.
- To gain perspectives on the role the students and academic institutes need to play in the changing scenario.



· To explore the conventional and non-conventional approaches being adopted by the corporate world and how young professional can carve a niche for themselves.

**Key Questions to be explored:**

The idea of introducing entrepreneurship into education has gained significance in the last few decades. However, there is a host of challenges in promoting entrepreneurship in the higher education curriculum. Therefore, this panel discussion will examine questions such as:

- How is the situation developing in the current scenario?
- What role change have health professionals witnessed?
- How are young professionals need to gear up to the changing scenario?
- How have conventional roles changed?
- What new opportunities have come up in the current scenario?
- What are the best practices adopted and what were the learning?

**Session No: 4.10**

**Panel Discussion Session Topic: Post-Covid Tourism: Recovering and Rebuilding through Entrepreneurship**

**Day & Date: Saturday, 22nd January 2022**

**Time: 10.15 – 11.45 AM**

**Overview:**

It is considered that for an economy to be versatile and economically active, entrepreneurship is the key answer. Entrepreneurship is an act that drives an entrepreneur towards creating an enterprise and adding value to the new socio-economic order. Tourism has ever since been a major engine for economic development and preservation of culture as well as nature conservation. The industry intends to provide a good breeding ground for innovation, world peace, environment, culture, opportunities, and practices that will promote the recovery of the tourist movement. The role of AI, Innovation, Entrepreneurship has been very critical in shifting from the conventional to the advanced travel operations and businesses. Therefore, the industry needs to embed an entrepreneurial approach to be back in the business and reframe the present tourism systems.

**Session Objectives:**

The objectives of the session are as follows:

1. To examine the current situation of the tourism industry within India and overseas.
2. To evaluate the prospects for the promotion of safer cross-border tourist movement.
3. To examine and suggest the best practices to be adopted for the recovery and rebuilding of post-covid tourism through entrepreneurship.

**Key Questions to be explored:**

The panel discussion will examine the scope of recovery of tourism post-covid through entrepreneurship.

1. Evaluate the current situation of tourism within India?
2. How do you see the cross-border movement in 2022 and 2023?
3. How can the stakeholders be engaged to promote entrepreneurship tourism post-covid?
4. Can the Ministry of Tourism develop innovative best practices for the promotion of tourism?
5. Explore are the different activities through which lawmakers will be able to develop safer health-related norms for travel?

**Session No. : 4.11**

**Panel Discussion Session Topic: Resilient Hospitality Entrepreneurship: Gearing for Recovery**

**Day & Date: Saturday, 22nd January 2022**

**Time: 12.00 PM - 1.30 PM**

**Overview:**

COVID-19 has generated severe concerns for the hospitality industry's current and future existence, constantly confronted with new challenges. Travel restrictions, border closures, event cancellations, quarantine requirements, and the risk of disease transmission have all posed significant hurdles to the tourism and hospitality industries. As a result, business owners must adapt and seek out new possibilities to revitalise and preserve their enterprise. Simultaneously, they will need to strengthen their operational agility and financial resilience to negotiate the risks of conducting business in a pandemic-prone environment. All in all, the world has moved on. And even though the road ahead may appear uncertain, the challenges if converted into opportunities by the Hospitality sector shall be instrumental for growth in the post-COVID-19 world. It will ultimately return as a stronger entity.

**Session Objectives:**

The objectives of the sessions are as follows:

- To ascertain the future of hospitality entrepreneurship in the Post COVID scenario in the hospitality industry.
- To identify the Post COVID consumer behaviour and ways to gear up for the changes in the hospitality industry.
- To examine various recovery strategies being practiced by hospitality entrepreneurs in the current times.
- To identify the key strategies for accelerating innovation, resilience and growth in the hospitality industry.

**Key Questions to be explored:**

The questions explored through the session are as follows:

- What are the recovery planning and re-development strategies being brought into practice by the entrepreneurs of the hospitality industry?

- What approach should be followed by entrepreneurs to handle the challenges faced due to the pandemic?
- What steps shall be taken to make sure that businesses are on the path to recovery?
- What changes should be brought in by the entrepreneurs to ensure financial recovery and improve profitability?

**Session No.: 4.12**

**Panel Discussion Session Topic: Technological skill requirement and avenues for Hospitality Entrepreneur**

**Day & Date: Saturday, 22nd January 2022**

**Time: 2.00 PM - 3.30 PM**

**Overview:**

Technology is developing at a very high speed and its extensive application is growing in tourism and hospitality management and other related industries. Many of today's jobs will be lost to AI, automation and robotics, and new jobs with new skill-set requirements will emerge. Education establishments will have to adopt a new futureproof educational system or risk of becoming obsolete. Technological advancements today are significantly affecting the way humans lead their lives and run their businesses. The session will give an insight into the technological advancements and skill requirements for the modern-day entrepreneur in the hospitality industry. With technological skills in hand, an entrepreneur can climb the ladder of success with flying colours.

**Session Objectives:**

The objectives of the sessions are as follows:

- To identify the technical skill requirements for today's entrepreneur
- To explore the various avenues for the hospitality entrepreneur in respect to technology
- To analyse the relationship between entrepreneurship and technological skill requirement
- To ascertain the changes that educational institutions need for being contemporary with modern-day technology

**Key Questions to be explored:**

Technological skill requirement and avenues for the hospitality entrepreneur is a matter of growing concern. As a result, the panel discussion will address the following questions:

- How is Academia managing and molding young minds to play a key role in the education of technology skills?
- What are the several pedagogies/teaching techniques for technology that might affect students' entrepreneurial intentions?
- How do stakeholders be engaged in promoting technical skills education among students?

- What are the main priority action areas which must be addressed urgently to boost technical education?
- What are the key avenues available for young entrepreneurs in the field of technology?