

REPORT



National Workshop

“Technology Awareness Programme for Potential
Young Entrepreneurs to Start Their Own Business”

18th August 2015

Organised by

AMITY UNIVERSITY GURGAON

In Collaboration with

MAHATMA GANDHI INSTITUTE FOR RURAL INDUSTRIALISATION (MGIRI)
(A National Institute under Ministry of MSME, Govt. of India.)

WARDHA

Prof. Rajendra Prasad
Convenor

Dr. Machiavelli Singh
Organising Secretary

Reportage: Dr. Machiavelli Singh & Dr. Kushagra Rajendra

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Chief Patron: Dr Ashok Chauhan, Founder President, RBEF
Shri Aseem Chauhan Chancellor, AUH

Patron: Prof P B Sharma, Vice Chancellor, AUH
Prof Padmakali Banerjee Pro Vice Chancellor, AUH
Maj Gen B S Suhag, Dy Vice Chancellor, AUH

Convener: Prof Rajendra Prasad, Director, AIB & AIISH

Organising Secretary: Dr Machiavelli Singh, AIB & AIISH

Advisor: Prof P B Kale, Director, MGIRI

Resource Persons: Dr K R Yadav, Dy Director, Bioprocessing & Herbal, MGIRI
Mr K. Ravi Kumar, Dy Director, Rural Energy & Infra., MGIRI
Mr K. Venkat Kumar, Dy Director, Rural Craft & Engineering, MGIRI
Mr H. D. Sinoor, Dy Director, Khadi & Textile, MGIRI

Coordinators: Prof Bura Prasad, AIB
Dr Viveak Ballyan, AIA
Dr Kushagra Rajendra ASEES
Ms Reena Nigam, ASI

Stage Secretary:
Dr Sangeeta Kumari, AIB

Hospitality Coordinator:
Dr Saif Hameed, AIB

Registration:
Dr Neelam Yadav, AIB
Dr Kamakshi Gupta, AIB

Transport Coordinator:
Dr Munindra Ruwali, AIB

Stage Management:
Dr Manju Sharma, AIB
Dr Gargi Bagchi, AIB

Research Volunteers:
Rishab Aswal, Vipin Tyagi, Abhay Singh,
Julie P Singh, Rambha, Gunjan Dagar,
Manisha Dagar, Pavleen Bali, Amandeep,
Shweta Singh, Moiz Ansari.

Media Coordinator:
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INVITATION LETTER BY THE CONVENOR

14th August, 2015

Chief Patron:

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President, RBEF
Shri Aseem Chauhan
Chancellor, AUH

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Vice Chancellor, AUH
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Vice Chancellor, AUH
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Director, MGIRI

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Dr K R Yadav
Dy Director, B&H, MGIRI
Mr K. Ravi Kumar
Dy Director, E&I, MGIRI
Mr K. Venkat Kumar
Dy Director, RCE, MGIRI
Mr H. D. Sinoor
Dy Director, K&T, MGIRI

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Abhay Singh, Julie P Singh,
Rambha, Gunjan Dagar,
Manisha Dagar, Pavleen Bali,
Amandeep, Shweta Singh,
Moiz Ansari.

Dear Colleagues

Under our recently signed MOU with Mahatma Gandhi Institute of Rural Industrialization, Wardha. MGIRI is a national institute under Ministry of MSME, Govt. of India. We are organising a National Workshop on “Technology Awareness Programme for Potential Young Entrepreneurs to Start Their Own Business” jointly organised by Amity Institute of Biotechnology (AIB), Amity Institute of Integrated Science & Research (AIISH) in association with Mahatma Gandhi Institute of Rural Industrialization on August 18th, 2015.

I am honoured to invite you to be part of the program during the workshop on August 18th, 2015 (Day – Tuesday) at Amity University Campus, Manesar. Your participation and blessings shall encourage us and the participants from all over the India.

I would further request you to nominate faculties and students to attend this workshop. Please find attached with the copy of program. We encourage maximum participation of final and pre final year students towards the entrepreneurship drive for becoming job provider and start up builders of the nation.

Sincere regards

Prof. (Dr.) Rajendra Prasad

Ph.D, FNASc, FASc, FNA

Director

Amity Institute of Biotechnology

Amity Institute of Integrated Science & Health

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PROGRAM

<u>Time</u>	<u>Event/Activity</u>	<u>Venue</u>
10:00 - 10:30 AM	Networking Tea with Guests	VIP Lounge
10:30 - 11:00 AM	Welcome Address by Dr. R Prasad Director AIISH & Director AIB Opening Remarks by Dr. Padmakali Banerjee, PVC, AUG Vice Chancellor's Address by Dr. P. B. Sharma, VC, AUG	Auditorium B-Block,
11:00- 11:30 AM	Inaugural Address on “Technology Awareness and Dissemination of Knowledge towards Rural Industrialization for Community” by Prof P B Kale, Director, MGIRI, Wardha	
11:30 – 12:00 PM	Genesis of MGIRI & Felicitations	
12:00 – 12:30 PM	“Commercially Viable Technology/ Products for Micro & Small Scale for potential Entrepreneurs by Dr K R Yadav, Dy. Director , B&H Div. MGIRI, Wardha.	
12:30 – 1:00 PM	“Technology based on Solar Energy for Rural Industry” by Mr K. Ravi Kumar Dy. Director, Energy and infrastructure Div, MGIRI. Wardha.	
1:00 – 01:30 PM	“Commercially viable technology / products by rural craft and engineering department by Mr K. Venkat Rao, Dy.Director Rural craft and engineering Div, MGIRI Wardha.	
1:30 – 2:00 PM	Appropriate Technology for Khadi & Technology By Mr H.D.Sinnur PSO, K&T Div. Wardha	
2:00 – 2:30 PM	Open House Discussion with LUNCH	VIP Lounge
2.30-4.00 PM	Panel Discussion “Building the Rural Innovation a Key to globalization of Make in India Plan” Chair: Prof Padmakali Banerjee, Pro-VC, Amity University Haryana and Prof P B Kale, Director, MGIRI Moderator – Prof Rajendra Prasad, Convenor Participants - Dr Karm Raj Yadav, Mr K. Ravi Kumar, Mr K. Venkat Kumar Rao, Mr H. D. Sinnur, Maj Gen V K Narang, Prof. J.P. Dudeja, Prof R. K Malik, Prof. Vikas Madhukar, Prof. S. K. Ray, Prof. Priti Singh, Prof Bhawna Adikari, Prof Kiran Devendra, Dr Ranjan K Malik, Dr Seema Pathak, Ms Reena Nigam, Mr Rikhil Nagpal, Dr Vivek Ballyan, Dr Anjali Verma, Dr Kushagra Rajendra & Dr Machiavelli Singh.	
4.00-4.30 PM	Workshop briefing, suggestions and feedback form: Scientist Students direct interaction on Govt. Schemes	
4:30 – 4:45 PM	Tea	VIP Lounge
4:45 – 5:15 PM	Amity farm visit and campus tour	Campus
7.00 – 8.30 PM	Interaction with motivated students Moderators: Dr. Machiavelli Singh, Dr. Burra Prasad, Dr. Kushagra	VIP Lounge

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**National Workshop “Technology Awareness Programme for Potential Young
Entrepreneurs to Start Their Own Business” by MGIRI – AUH held on 18th August
2015 at Amity University Gurgaon**

DAY 1 (17.08.2015):

Arrival and reception of delegation:

A delegation of eminent researcher and grassroots innovators led by Prof (Dr) P B Kale, Director, Mahatma Gandhi Institute of Rural Industrialisation (MGIRI), MSME, GOI along with Dr K R Yadav, Deputy Director (Bio-Processing & Herbal), Mr K. Ravi Kumar Dy Director, Rural Energy & Infrastructure, Mr K. Venkat Kumar Rao, Dy Director, Rural Craft & Engineering, Mr H. D. Sinnur, Dy Director, Khadi & Textile, arrived at Amity University Haryana Campus for conducting National Workshop “*Technology Awareness Programme for Potential Young Entrepreneurs to Start Their Own Business*”.

The delegation was received at the campus on 17th August 2015 followed by interaction meetings with senior leaders of the university, including Vice Chancellor Prof (Dr) P B Sharma and Pro-Vice Chancellor Prof (Dr) Padmakali Banerjee to set agenda for the next day’s national workshop and strengthen the tie ups between both institutions of higher learning and innovation.

DAY 2 (18.08.2015): National Workshop

Registration of Participants:

A total of 286 students of different Schools, Institutes and Departments from Amity University Haryana registered for the national workshop along with many faculty members, in the end 233 response sheets with feedback were collected from participating students and faculty members. **(Participants list is attached in Annexure 1).**

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Networking Meeting:

The National Workshop started with networking tea in the VIP Lounge at 10:00 am. Prof (Dr) Rajender Prasad, Director, AIB & AIISH welcomed and greeted the team and discussed modalities of the day. Delegates were shared mission and vision of Amity under the leadership of founder President. Prof (Dr.) P B Kale was very much impressed with foresightedness and mission taken by Founder President.

Inaugural Session



Introduction and compering of the workshop was carried out by Dr. Sangeeta Kumari. Inaugural session formally started with lamp lighting by the honourable Vice Chancellor, Pro- Vice Chancellor, Director, MGIRI and Convenor of Workshop followed by a floral welcome to all resource persons.

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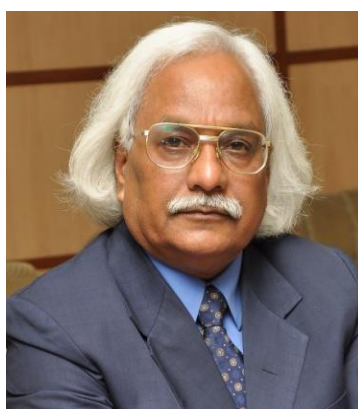
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Prof. (Dr) P B Kale, along with his team was formally welcomed by the Conference Convenor Prof. (Dr) Rajendra Prasad, who emphasized the need of blending of scientific and societal need in complementary manner. While welcoming the distinguished and eminent scientist, he briefly introduced the background of this workshop and recently signed MOU between MGIRI and AUH in establishing joint efforts at the grass root and rural innovations at Amity University, Gurgaon.



Prof. (Dr) Padmakali Banerjee, Pro-Vice Chancellor, in her opening remarks, spoke about empowering our villages through technology transfer. She also highlighted that the innovative curriculum & research agenda at Amity University has integrated the need to provide solution to problems in the rural sector. She also gave glimpses of several initiatives taken at Amity University Haryana in domain of the this workshop.



At the outset, Hon'ble Vice Chancellor, Prof. Dr. P.B.Sharma, welcomed the august presence of Professor P B Kale and his team, comprised of Dr K R Yadav, Deputy Director (Bio-Processing & Herbal), Mr K. Ravi Kumar Dy Director, Rural Energy & Infrastructure, Mr K. Venkat Kumar Rao, Dy Director, Rural Craft & Engineering, Mr H. D. Sinnur, Dy Director, Khadi & Textile. He conveyed the warm greetings of our Hon'ble Founder, President Dr. Ashok K Chauhan for whom scientific research of world quality and technological innovations of high value to society and industry have become a passion to build Amity University as the top ranked research and innovation driven university of the world.

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Vice Chancellor Prof. P. B. Sharma in his inspiring welcome address said that AUG feels highly privileged to organize this important workshop on 18th August, 2015. He advocated the supporting, upgrading and accelerating of the process of rural industrialization in the country so that we may move towards the Gandhian vision of a sustainable village economy self-sufficient in employment, solving the monumental problems of today as well as that of tomorrow on the strength of the synergy between science and engineering to get best rural outputs of global competitiveness. The Vice Chancellor concluded by stating “Together Amity University and MGIRI shall pave the way for a new era of rural innovations by providing services to rural entrepreneurs, piloting projects and transferring technologies by conducting joint workshops, running programs and providing skill based training”.

Hon’ble Vice Chancellor, Prof. Dr. P.B.Sharma, Pro-VC Prof. Padmakali Banerjee, Prof. Rajendra Prasad and Maj. General VK Narang felicitated Prof (Dr) P B Kale, Director, Mahatma Gandhi Institute of Rural Industrialisation (MGIRI), along with Dr K R Yadav, Deputy Director (Bio-Processing & Herbal), Mr K. Ravi Kumar Dy Director, Energy & Infrastructure, Mr K. Venkat Kumar Rao, Dy Director, Rural Craft & Engineering, Mr H. D. Sinnur, Dy Director, Khadi &Textile with Amity Memento.



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Technical Session

Prof. Kale delivered a scientific talk on the “Technology Awareness and Dissemination of Knowledge towards Rural Industrialization for Community”. He gave an excellent presentation on technology awareness and thought, and spoke on the new facets of Rural Industrialisation. He brought out the hidden potential of bioprocessed & herbal products market under “Make in India” mission. He further spoke about the Gandhian ideology and sustainability through home grown innovative product production, cleaner environment systems, organic food, as well as spreading awareness among rural and farming community about these aspects.

The aim and scope of the session was to upgrade and accelerate the process of rural industrialization for social sustainability, attracting talent to facilitate industries, foster creativity and promote innovation with research and development awareness by dissemination of knowledge towards the skill development in youth. It covered the technical, scientific strengths of both partners and discussed platform sharing and capacity building among the partners, Prof Kale offered to set up MGIRI’s TECHNOLOGY TRANSFER CENTRE at Amity University Haryana.



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MGIRI is operating in the area of rural technologies, bio-processing of Agro and Herbal products, rural crafts and khadi textile, which are alternative to synthetic products that pose a threat to human health in the future. Even though the adverse effects of chemical exposure are known regulation is minimal in India and the incidence of cancerous disease is on the rise. He discussed the rural/craft engineering and also stressed on the potential of Solar Charka and Solar Mills usage in industry and upcoming demand of solar products in rural India. Prof. Kale raised concerns about the economic security of the labor force and community for the development of a systematic approach to self-help programs and making them individual entrepreneurs, with an aim to unify physical, chemical and biological energies to better understand our duties towards humanity. He complimented Amity for having made efforts to contribute towards “Make in India” campaign through research and skill development mission. He advocated the starting of Agriculture as a separate domain through the starting of Amity Institute of Agriculture. He offered MGIRI's support for the regulatory clearances & regulatory decisions, if required.

After the inaugural address of Prof Kale and MGIRI team member honoured our Hon'ble Vice Chancellor, Prof. (Dr.) P. B. Sharma, Pro Vice Chancellor Prof Padmakali Banerjee along with the Convenor of the workshop Prof, Rajendra Prasad with MSME – MGIRI's “*Samman Chinn*” as a token of appreciation and acknowledgement.



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Film of MGIRI: A short film of twenty minutes on genesis of MGIRI was shown depicting the revolutionary work carried out by MGIRI towards disseminating the mission of Father of Nation. The film inspired everyone to work towards rural and grass root innovations.

Dr K R Yadav, Dy. Director, Bioprocessing & Herbal Division MGIRI, gave a talk on “Commercially Viable Technology/ Products for Micro & Small Scale for potential Entrepreneurs”. He emphasized on the technologies developed to transform the rural organic products by Bioprocessing. Dr. Yadav gave an interactive picture of the functioning of his division Bioprocessing and Herbal at MGIRI. His division is functioning towards new products and technology development, quality control, quality assurance & standardization, training and awareness programs, etc. to develop new entrepreneurs and create employment for the country by considering the demand from rural India as well as micro, small and cottage industries in the country.

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The division is basically working in four areas, namely Food products, Herbal & cosmetic, Panchgavya based products and Agri -inputs. The division has developed various products and technology and is providing training program to disseminate the technology to the end user. In his presentation he gave an overview of various types of products which have been developed in the division and ready for dissemination. These products included Amla Based products like Amla Ladu, Amla Burfi, Candy, Murraba, Juice, Chocolate based amla chikki, Jam, jellyes, squash, Chawan Prass, herbal tea etc., Soya bean Based Products like Soya bean milk, Paneer, Shri Khand, Curd etc. Value added bakery products like, pro-biotics honey and neutra-ceutical honey, various types of Ayurvedic and herbal based products like syrup, Churna, neutraceutical, cosmetic and herbal gulal etc, products based on panchgavya like white floor cleaner, mosquito repellent, hair oil, Dant manjan, face pack, soap and shampoo etc., the agro-based inputs products plant growth promoter from human hair, Bio-fertilizers, bio-pesticide, pest repellent based on Neem oil, NPKC and microbial testing kits for bio manure, soil etc.

He gave glimpses of training & skilling, consultancy and outreach programme of his division. The department has trained over seven hundred participants during the last 5 years and out of those 150 participants have started their own micro-scales units throughout the country and are earning 10.0 to 50.0 lakhs/ annum, depending upon the unit capacity. The department is also providing consultancy to micro and small entrepreneurs to set up their unit, product standardization, quality control and quality assurance support and short term & long term incubation to the potential entrepreneurs. The department has sophisticated equipment and instruments required for process development, quality control and finished products, etc. like HPTLC, HPLC, Spectrophotometer, GC, Fermenters, Spray dryer, small bakery units, filling unit, granulator and tablet making machine.

He summed up with providing the details of Govt. schemes for young potential entrepreneurs like PMEGP, NABARD, etc. and shared a few stories of successful entrepreneurs and appealed to all the participants to start their own business and provide employment to youth to make the country self-reliant.

In technical session on “Technology based on Solar Energy for Rural Industry” Mr K. Ravi Kumar, Dy. Director, Rural Energy and Infrastructure Division of MGIRI provided an

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overview of the mission and functioning of MGIRI that has revolutionized industries and is also constantly supporting micro, small and medium scale industries of India. He gave a brief update on different initiatives of MGIRI including artisan training and marketing through online interventions which were well received by many entrepreneurs. His major emphasis was energy sector that support MGIRI has provided mainly in the renewable solar sector by redesign and system engineering. A brief report of equipment designed and tested by MGIRI for small sector industries was presented, including different scales of solar charkha, handlooms which successfully improved the efficiency as well as quality of products. He explained the importance of MSMEs as they are the back bone of India since 60-70% of the employment is generated through this sector, and it contributes a major part in the GDP.

Mr. Ravikumar talked about why MGIRI has been restructured from KVIC to address the problems existing in MSME sector like lack of Innovations, S&T Interventions, poor quality, lack of productivity and lack of proper HRD and also to find some solutions through their R&D activities. He explained how REI Division addresses the problems of MSMEs by;

- Considering the demand sector in terms of segments needing the smallest level of energy and work out strategies to fulfil the energy needs through innovative use of local resources.
- Redesigning products/processes with a view to optimize energy needs and to arrive at devices/systems/energy mixes to best fit products/scales.
- Demonstrating the ‘community scaling of technologies’ through designs of appropriate ‘man-machine systems’ to ensure employment without sacrificing quality and productivity needed for global competence.
- Expediting innovations in the mass consumption sectors of food, clothing and shelter and help bring sustainable lifestyles and cost reductions through a focus on ‘building-elements’, ‘passive structures’, substitution/minimization of transportation/packaging while at the same time encouraging waste recycling
- Enhancing equity/human dignity through innovative energy-support in terms of working tools/systems to artisans, women, weaker sections, handicapped etc.

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- Helping to develop the ‘software’ aspects like energy audit/energy conservation/ decentralized energy strategies considering viable clusters of Panchayats as units of micro level planning.

He gave information about products developed by REI Division like Solar Charkha, Solar loom, Solar Dal mill, Packaging machines, filling machines (both powder and liquid), Solar Garment unit etc. and also showed a Video clipping of Solar Garment unit at Asti and Solar power loom demonstration at Tirupur, Tamil Nadu.

The next session was on “Commercially viable technology/products by rural craft and engineering” by Mr K. Venkat Rao, Dy. Director Rural craft and engineering Division, MGIRI, Wardha. Dr Rao gave a brief vision of MGIRI, i.e to upgrade the skills, creativity and productivity of rural artisans and to provide scientific and technological inputs for quality improvement of their products, the design and fabrication of prototypes, tools, machineries for suitable value addition to the rural artisans: a novel way to engage rural youth for nation building. He also emphasized on the dissemination of technologies through prototype design, training and via incubation of young and new entrepreneurs. The Dept. is working with a vision to support, upgrade and accelerate the process of rural industrialization, to move towards the Gandhian Vision of sustainable village economy self-sufficient in employment opportunities and to provide S&T inputs to make the rural craft products and services in line with the need of time. He said that the rural craft sector was the 2nd largest employment generating sector after agriculture sector in India and the rural craft sector is declining day by day. The RC&E Dept. is working on the directions of Terracotta craft, Wood & Bamboo craft, Khadi bag craft, Iron Craft and bell metal craft, based on the road map of MGIRI for rural craft sector. The Dept. has initiated different level of skill & product development training programs to the artisans having a different skill levels. This Dept. has developed new innovative products having contemporary lifestyle orientation & commercial viability, according to present consumer taste and market demand. This Division also provided support in design and fabrication of prototypes and machines for development of new products.

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The Khadi and Textile were the next theme for a presentation that was on “Appropriate Technology for Khadi & Technology” by Mr H.D. Sinnur PSO, K&T Division. He presented the mission of KVIC in relation with other Khadi perspectives on quality assurance in Khadi industry, finishing technology for fabric and garment, mercerization mechanism and natural dyeing of khadi. His presentation includes the qualitative as well quantitative improvement of khadi products and processes. In order to enhance the environmental friendly nature of khadi, several new resources like natural dyes need to be explored. A range of innovative products including 24 spindel NMC motorised charka, Balakalsil Carding machine, pre-spinning machine of different range, solar yarn knitting products, charka fitted with fan were presented. He further focused on Khadi sector and presented the qualities of Khadi. Khadi sector has enormous potential to generate employment and fulfil the need of the country by bringing minor modernization.

India being a young country having more than 65% youth, there are all possibilities to make Khadi attractive to youth by adding all the components like design, colour, good quality fabric etc. required for the younger generation. The lacunas of present khaki can be overcome by adopting new technologies, he added. He has stressed the need to adopt trendy garment designs for the manufacture of youth attractive garments and asked to dye the fabric with natural dyes. He also informed about MGIRI’s efforts to launch a website especially for providing vibrant woven and trendy garment designs to the public free of cost. He has also explained in brief how youth attractive garments can be made at low cost by adopting technologies developed by MGIRI like, wrinkle free finish technology, soft & stiff finish technology, natural dyeing technology etc.

The technical session was followed by a networking lunch with organizing committee members that turned into an informal brainstorming session on different aspects of potential area of collaboration with MGIRI and Amity University Haryana.

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Panel Discussion

The Panel Discussion on “Building the Rural Innovation a Key to the globalization of Make in India Plan”

Chair: Prof Padmakali Banerjee, Pro-VC, Amity University Haryana and Prof P B Kale, Director, MGIRI

Moderator – Prof Rajendra Prasad, Convenor

Participants - Dr Karm Raj Yadav, Mr K. Ravi Kumar, Mr K. Venkat Kumar Rao, Mr H. D. Sinnur, Maj Gen V K Narang, Prof. J.P. Dudeja, Prof R. K Malik, Prof. Vikas Madhukar, Prof. S. K. Ray, Prof. Priti Singh, Prof Bhavana Adikari, Prof Kiran Devendra, Dr Ranjan K Malik, Dr Seema Pathak, Ms Reena Nigam, Mr Rikhil Nagpal, Dr Vivek Ballyan, Dr Anjali Verma, Dr. Kushagra Rajendra & Dr Machiavelli Singh. **(Participants list is attached in Annexure 2)**

In a brief participation Hon’ble VC Prof (Dr) P B Sharma mentioned identifying potential areas for collaboration and expecting a fruitful and long lasting collaboration on various areas.

After a very intense panel discussion, following suggestions were unanimously agreed upon:

1. Multidisciplinary Projects must be promoted wherein a team of students from different disciplines should be identified and a group of faculty should collaborate projects with MGIRI.
2. A group of faculty should come to MGIRI under *train the trainer* program for bidding research projects, initiating new areas of technology based research targeting rural need and training at AUH.
3. Encourage university students and rural youth with government policies and schemes for undertaking entrepreneurship projects and their successful execution.
4. A joint centre for MGIRI and AUH combined activities must be thought of on campus to boost rural and grassroots innovations for local rural society by engaging potential researcher and students to carry out need based projects.
5. The university should promote synergy among eminent scientists, farmers, artisans and faculty members for quality research and innovations.

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6. Proposal to establish a Rural Innovation Incubator facilities for students and faculty in Amity University which accelerate innovations and shall give rise to the accelerated growth of start-ups, and new age enterprises.
7. Amity University Gurgaon (AUH) and Mahatma Gandhi Institute of Rural Industrialization MGIRI) may take lead in creating a Gandhian Vision for a New Age University towards Rural Innovative Drive.

Campus Tour

After the formal workshop session, the delegation was taken for a campus tour from 4:30 to 5:15pm with Dr Machiavelli Singh, Dr Vivek Ballyan, Dr Kushagra Rajendra and Mr. Sanjeev Rathi. They visited the orchards, agricultural fields, Amity Military School, dog unit and cattle farm. The delegation was impressed with the self-sustainable model at the university and the clarity in implementation of Amity's vision & mission. They assured all possible support for agricultural and horticultural activities by MGIRI. It was also proposed to support local farmers through different outreach programs including training, workshop and seminar at the University by Agriculture division. They discussed the agro products in the farms related to bio-treatment and fertigation (liquid bio-fertiliser in drip irrigation). They assured to provide several medicinal plants from MGIRI to enrich herbal garden at AUH.

Student Interaction

A special session was organized for the interaction of motivated students to answer their queries on different aspects of grass root and rural innovations linked entrepreneurship possibilities with resource persons in the VIP lounge in the evening (7:00 PM to 8:30 PM). Large number of students turned up to share their views and potential projects for direction and possible troubleshooting from MGIRI scientist. The session was moderated by Dr. Machiavelli Singh, Dr. Burra Prasad and Dr. Kushagra Rajendra. In his very brief presence, Prof. A. K. Raghav also catalysed the session with his experience and ongoing innovation activities in the campus.

Prof Kale set a stage for the discussion by mentioning that rural industrialization is a key concept to give implies to PM's "Make in India" program. He motivated students from

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Biotechnology, Engineering and Applied Science domain who actively shared their view and concepts with him Prof Kale offered the young faculty to come to MGIRI for Train the Trainer program on all the areas like Bioprocessing & Herbal on Soil testing kit, Microbial testing kit, Panchgavya & Solar LED lamp fabrication. Prof. Kale strongly suggested developing a sound base for product development and skill development for youth and unemployed in rural and weaker section of society. He emphasized on adoption of five villages to develop the relations with farmers and youth community on this issue of rural industrialization and youth employability. He also suggested, attracting better talent and network, in making Amity a wheel spinner in this rural industrialization mission of our PM. Prof. Kale proposed to write a joint proposal on technology evaluation, product development in collaboration with MGIRI counterpart to be refereed by him. In the end Prof Kale invited a delegation of all the AUH leaders, VC, Registrar, Deans, faculty and students to MGIRI after this one day national workshop on rural industrialization, to explore more at MGIRI for futuristic collaborations and joint exercises. **(Participants list is attached in Annexure 3)**

Professor Kale acknowledged organizing committee, university leadership and AUH for this joint successful exercise. Prof Kale appreciated the whole program for its grand success with a large number of registrations, active participation of students and interactive sessions regarding rural innovations and technologies towards self-sustainability of the nation building plan. He conveyed his regards to the Founder President. He is hopeful of more technical, scientific and entrepreneurship programs to be conducted as committed in the joint MOU signed between MGIRI and AUH on July 1st, 2015.

Future Ahead

1. **Train the Trainer program:** It has been mutually agreed by Amity University and MGIRI to launch train the trainers program and UG / PG student internship in the following disciplines:

- Khadi and Textile
- Rural Crafts
- Plant Growth Promoters

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- Agriculture
- Panchgavya
- Rural technologies

2. **Technology Transfer Centre (TTC):** Establishment of Technology Transfer Centre in joint collaboration with MGIRI and AUH is proposed and will be inaugurated during the National Innovation Conclave 2015 at Amity University Gurgaon. The potential technologies will be displayed as a joint exercise of both institutions.

3. **Joint Project Work:** To develop, improve or disseminate the following projects:

- Plant Growth Promoters: To work on the efficacy and quality improvement of PGPR.
- Fertigation Technology: Pilot / field based study in agriculture units of Amity University in collaboration with MGIRI via drip irrigation and liquid formulation.

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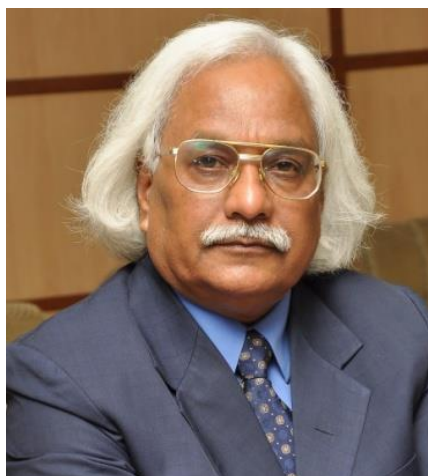
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Prof. P. B. Sharma
Ph.D. (B'ham), FIE, FAeroS, FWAPS

A reputed academician Prof. P.B. Sharma is the Vice Chancellor of Amity University Gurgaon & Founder Vice-Chancellor of Delhi Technological University (formerly Delhi College of Engineering). Prof. P.B. Sharma is a former Professor of IIT Delhi, Founder Vice-Chancellor of Rajiv Gandhi Technology University, former President of Engineering Science Division of Indian Science Congress, former Chairman of Indian Society of Mechanical Engineers and Vice-Chairman of World Confederation of Productivity Sciences, India Section. A Doctorate from University of Birmingham, UK, Prof. Sharma during his professional career spanning 45 years has made distinguished contribution to the advancement of frontiers of knowledge in the areas of Aero Engineering Technology, Power Plant Engineering, New and Renewable Energy Resources and Knowledge and Innovation Management. Prof. Sharma has guided 16 Ph.Ds and has published around 202 research papers, in addition to providing industrial consultancy to the renowned organization including GTRE Bangalore and Rolls Royce of UK.

Recipient of many awards and recognitions Prof. Sharma has been conferred with the Honorary Degree of “Doctor of Engineering” by his alma-mater University of Birmingham at the Annual Congregation held at University of Birmingham UK on 3rd July, 2013. Prof. Sharma has been awarded the Scroll of Honour and Eminent Engineer’s Award 2008 by Institution of Engineers (India) and Lifetime Achievement Award by Institution of Industrial Engineering (India). Prof. Sharma is a fellow of World Academy of Productivity Sciences, Fellow of Institution of Engineers (India), Fellow of Aerodynamics Society of India and also a Fellow of ISTE. He has been the Chairman of Central Counselling Board of MHRD and also an Expert Member of Central Advisory Board of Education CABE of Government of India. Prof. Sharma is a man of vision, an institution builder, a breakthrough leader with speed leadership qualities and is firmly committed to foster the interdisciplinary education and research and synergy between science and engineering.

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Prof. (Dr) Padmakali Banerjee

Dr. Padmakali Banerjee is the Pro Vice Chancellor & Dean Academics of Amity University Haryana and Director Business School and also heads The Centre for BRICS studies, Centers of Excellence at Amity. She is involved in strategic planning and leads the development and implementation of the University's Academic Processes. She is spearheading many innovative initiatives including introducing Flexible Credit System, Industry University Integration and Internationalization. She is fostering strategic change in teaching and learning and student affairs and heads various campus councils, committees and task forces. She has about two decades of experience in Research, Teaching and Training and Academic Administration.

She has done her Doctorate from University of Delhi. She has worked with many reputed Institutions in leadership positions and has contributed in Institutional building. She is an Executive Coach and Mentor and has been a Resource Person and a trainer for Management Development Programmes, Consultant/Trainer on HRD issues to various private and public sector organizations. Her research interests include Leadership studies, Motivational Climate, Management Communication, Entrepreneurship and Design Management. She has published books/research papers in reputed refereed journals. She has closely worked with corporate functionaries holding Leadership Development Workshops and training programs for Corporate Leaders. She has been instrumental in National and International academic tie ups and collaborations. She has received awards and scholarships for academic excellence. In her professional career she exhibited her passion for entrepreneurship by empowering youth and developing leaders in different walks of life. She leads with a collaborative style.

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Prof. Rajendra Prasad

Ph.D, FNASc, FASC, FNA

Eminent Scientist in the area of molecular biology, Prof. Rajendra Prasad has recently joined AUG as the Director of Amity Institute of Integrative Sciences and Health (AIISH). Dr Prasad is a former Professor & Dean of School of Life Sciences at Jawaharlal Nehru University (JNU), New Delhi where he served for 40 years in various capacities which included; Chairman, Molecular Medicine; Rector (Pro-Vice-Chancellor). He established a state of the art instrumentation facility at JNU which has become a major research support to the entire country. Prof. Prasad, a Ph.D. from Central Drug Research Institute, Lucknow, joined JNU in 1976 as an assistant professor after spending three years as research associate at University of Southern California, Los Angeles. He has been visiting Professor in several universities and institutes which included visiting faculty at Ecole Normale Supérieure – CNRS Paris, France; Catholic University, Louvain-la – Neuve, Belgium; Technical University, Valencia, Spain; Bristol Mayer Squib, Princeton, USA; University of Darmstadt, Germany; New York Medical College, Aberdeen University, UK, University of California, USA.,

Prof. Prasad is a recipient of Royal Society Commonwealth Bursary, Alexander von Humboldt-Stiftung Fellowship, Wellcome Foundation Fellowship, Mercator Professorship at University of Bonn, Germany, Centre of Excellence, DBT, BSR-UGC award. He is an elected fellow of Indian Academy of Sciences, Fellow of Indian National Academy and Fellow of National Academy of Sciences, Member, American Society of Microbiology, USA, Society of Microbiology, UK, American Association for the Advancement of Science, International Society of Human and Animal Mycology. He is also a National Contact Point of European commission, Research Ambassador, Germany. International Yeast Commissioner and currently is the Vice President, Indian National Science Academy, INSA. Prof. Prasad is a renowned scientist of repute who has supervised more than 60 PhDs thesis, published over 225 research papers and has handled 50 national and international grants. He is a leading molecular mycologist and has done trend setting research in the area of antifungal clinical drug resistance.

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