Visit of the Vietnam Delegation

A Delegation from Vietnam comprising of Prof. Dr. Ngo Dai Quang, Director, Mr. Vu Ngoc Giang, Deputy Director, Leather and Shoe Research Institute (LSRI) and Mr. Pham Hoang Ha, Principal Official Asia and Africa Division, MoST (DIC), Vietnam visited Central Leather Research Institute (CLRI), Chennai during the period 28-29 November 2012 for finalizing the proposal for a Collaborative Research program in Science and Technology in the area of “Research cooperation on waste water treatment and application of cleaner leather manufacturing technologies” aimed at capacity building in LSRI to help the Vietnam Leather industry meets the growing technological changes in Global leather sector. Prior to their visit to CLRI, the Vietnam delegation made a visit to New Delhi and held discussions with the Secretary, DST and Director General, CSIR about the proposal. A meeting was held on 28th November 2012 at 10.00 to 1.00 PM in Director’s Annex to finalize the proposal to be submitted to DST for financial funding with the following members:

Delegation from Vietnam: Prof. Dr. Ngo Dai Quang, Mr. Vu Ngoc Giang and Mr. Pham Hoang Ha.

Team CLRI: Prof. Dr. A B Mandal, Shri D Chandramouli, Dr. B U Nair, Dr. NK Chandrababu, Dr. G Sekaran, Dr. BN Das, Dr. C Muralidharan, Dr. B Chandrasekaran, Dr. J Raghava Rao, Dr. E Ravindranath, Mr. Gautham Gopalakrishnan, Mr. Md. Sadiq, Dr. Subendu Chakrabarti, Dr. K. Srinivasan and Dr. B Madhan.

Prof. Dr. AB Mandal, Director, CLRI welcomed the delegation with floral bouquets and introduced the team from CLRI. He gave a glimpse of CLRI’s activities in various areas towards the sustained development of the Indian Leather Sector. He emphasized the importance of cleaner leather processing technologies for environmental security in the tanning industry. He cited the experience of CLRI working in tandem with the industry to meet the challenges of the Catastrophe of the Indian leather industry in 1996. CLRI has been extending its arms in capacity building in the technology upgradation of the leather sector in Ethiopia, which led to an increase in the realization of export earnings considerably. He mentioned about his recent visit to Vietnam, where he has formally signed the Letter of Intent for a Cooperation Program. He has discussed various components to be considered for a cooperation program.

Prof. Dr Ngo Dai Quang, Director, LSRI thanked the Secretary DST and DG, CSIR for their whole hearted support for Cooperation Program. He requested the Director, CLRI along with his team to support Vietnam in technology development in the areas of cleaner leather processing and waste water treatment to comply with the Vietnam standards. These two areas are of high priority in the initial phase and later on they would like to move towards capacity building in the areas of Footwear and design and footwear fabrication. He requested CLRI to finalize the proposal in tune with their proposal, which had been cleared from the Ministry of Vietnam.

It has been decided to fit the proposal to DST format for a Joint Research Project of INDIA - VIETNAM under the Programme of Cooperation of Science and technology. Dr. AB Mandal assigned a team to finalize the proposal with identified work elements for both CLRI and LSRI. The team worked in the afternoon of 28th November and finalized the proposal along with the delegation of Vietnam. A visit to India Shoes, Chennai was arranged for the benefit of the Vietnam delegation. Director advised the Head, BPD to prepare the Memorandum of Understanding to be signed by the Directors of both the Institutions.

The delegation visited various departments of CLRI namely, tannery Division, SDDC, CLAD, EXCEL and Environmental Department in the forenoon of 29th November 2012. The meeting resumed with the visit of Dr. Raj Kumar Sharma who was deputed by DST for the purpose exclusively to finalize the draft proposal. Finally the Proposal and the MoU were signed by Dr. AB Mandal, Director CLRI and Prof Dr. Ngo Dai Quang, Director, LSRI in the presence of all the team members. The meeting concluded with the exchange of signed documents. After the meeting, a visit to CETP, Pallavaram in Chennai was made to understand the commitment of Indian tanners to the compliance of the stringent environmental standards. The CETP personnel explained in detail the infrastructure created and technological options chosen for complying with the zero liquid discharge norm prescribed by the Tamil Nadu Pollution Control Board.
In preparation for the MODEUROP Colour Club Meeting for the Spring Summer 2014 season, 20 Tanners readied 485 leather/colour proposals. Ahead of the MODEUROP Roundtable, these leather/colour proposals were showcased in CSIR-CLRI on 18th October 2012 coupled with the release of First from LINEAPELLE: Autumn Winter 13/14 season, and First View: MODEUROP preview of Colours for Spring Summer 2014 season Companies.

The Members of the Fashion Committee of MODEUROP Fashion Pool were engaged in the process of pre-selection of colours on 6.11.2012 from the wide selection presented by Tanneries from India, Italy and Germany. Colours in three Colour Groups namely: REALITY, ART and WORLD were the basis of the selection. Theme boards and Mood boards readied by Ms. Marga Indra Heide, Ms. Jutta Turnwald and Mr. Gebhard were the reference to the various leather, colour and material surfaces. Mr. Manfred Junkert, Managing Director of MODEUROP welcomed the gathering to the Spring Summer 2014 edition of the MODEUROP Roundtable and Colour Club Meeting. Mr. Junkert detailed the activities of MODEUROP since the last meeting and he added that five new members had joined MODEUROP since the last meeting and it was the endeavour of MODEUROP to reach out to the A to Z of the Leather Industry globally. In his welcome address, Mr. Hampl expressed great joy on the opportunity given to him by MODEUROP for hosting the Spring Summer 2014 edition of MODEUROP. He added that the MODEUROP endeavour was very useful to his company in gearing up for the new seasons well in advance.

Ms. Marga Indra Heide presented the important dates for the next review meetings for the Spring Summer 2014 season as well as the date to discuss the Pantone Colours for the Autumn Winter 14/15 season: She then traced the trends from Le Cuir to LINEAPELLE covering the Autumn Winter 13/14 season in three colour stories: Drama, Shadow and History. Post-presentation by Ms Marga Indra Heide, the Colours for the MODEUROP Autumn Winter 13/14 season were reviewed and the process of Colour Voting for the TOP Colours for the season commenced.

Mr. Ralph Hanus, President, MODEUROP in his welcome address, read a leaf out of a Best Seller which says ...

"More and more people want products that are recoverable, made on fair and ecologically compatible manner and not travel around the globe, before they end up in the domestic four walls".

Presentation by INDIA Painting the World in Indian Colours on a KTM: Ready to Race for Spring Summer 2014 season In his presentation, Mr. Md. Sadiq, Senior Principal Scientist, CSIR-Central leather Research Institute (CSIR-CLRI) traced the Journey of MODEUROP in India since the last MODEUROP Meeting held in Heilbronn and proved that INDIA indeed was a good ambassador of MODEUROP reaching out to the discerning. He then went to add how the tendencies for the Spring Summer 2014 season were launched at an Indo-German Urban Mela held on 24th August 2012 at the BASF pavilion to the preview of leathers/colours - SHOWCASE held in CSIR-CLRI on 18th October 2012. He moved on to present the Colour, Leather & Material Trends for the Spring Summer 2014 season and grouped them into: New Colours for Spring Summer 2014 season, Evolution of Colours for Spring Summer 2014 season & Leathers & Materials for Spring Summer 2014 season.

TOP Colours for MODEUROP Autumn Winter 13/14 season The Voting Results are: 1. Oxblood 2. Topaz 3. Black Diamond 4. Amethyst - Velvet - Uniform - Hunter are the TOP Colours for the MODEUROP Autumn Winter 13/14 season.

Colour Selection: MODEUROP Spring Summer 2014 season - The final colour selection was then made. Members were engaged in discussions and a final check was made on the leathers/colours that were pre-selected and the Colours for the Spring Summer 2014 season were selected in the three colour groups: Reality, Art and World and also in the categories: Shoes & Accessories and Leather Garments.

Winning Colours from INDIA Out of a total of 32 colours selected as ‘MODEUROP’ for the Spring Summer 2014 season for both Shoes/Accessories and Leather Garments, 22 colours feature from Indian proposals. In the Shoes & Accessories category, 14 out of 21 colours are from India, and in the Leather Garments category, 8 out of a total of 11 colours are from India.

The next MODEUROP Roundtable and Colour Club Meeting for the Autumn Winter 14/15 season will be held during 29-30 April 2013, Offenbach, Germany. To consider organizing MODEUROP in India in November 2013 in Agra/ New Delhi, Mr. Ralph Hanus, President of MODEUROP has made an appeal to CSIR-CLRI to kindly explore the possibility of India hosting the MODEUROP Roundtable and Colour Club Meeting for the Spring Summer 2015 season in India during end October 2013 or early November 2013. Release of MODEUROP Colour Card for the Spring Summer 2014 season in INDIA The MODEUROP Colour Card for the Spring Summer 2014 season was released on 14th December 2012.
The Italian Trade Commission, which is the Trade Promotion Section of the Italian Embassy in India, invited CSIR-CLRI to be a part of Business Delegation to visit the SIMAC / TANNING TECH 2012 Fair in Bologna, Italy. SIMAC is the world’s leading show of Machines and Technologies for Footwear and Leather Goods industries and TANNING TECH is the world’s leading show of Machines, Technologies and Chemicals for the Tanning industry. These two shows were concurrently held with LINEAPELLE – the International exhibition of leathers, Accessories, Components, Synthetic products and Models for footwear, leather goods, leatherwear and furnishing. A visit by the CSIR-CLRI Team to the above fairs was ideal to interact with the Italian Designers, Design Schools, Tanners and Machinery Manufacturers and lay the ground to forge collaborative efforts in the area of Design and Development especially in view of the proposed “National Design Studio” to be set up in CSIR-CLRI. Team CSIR-CLRI gave a presentation on the “National Design Studio” sought to be created in CSIR-CLRI, Chennai and also discussed the modalities of co-operation between Ars Sutoria & CSIR-CLRI with respect to the co-operation in building Design Excellence.

Team CSIR-CLRI then visited Politecnico di Milano on the afternoon of 8th October 2012 for a meeting and discussed with them regarding the possibilities of Design co-operation between the two Institutes. Ms Anne Schoonbrodt, International Relations and projects of the Department of Industrial Design, Arts, Communication and Fashion (INDACO). She said that they could offer Master courses in India or organize Master courses in Italy especially for Indian Designers. A meeting was organized by UNIDO with the Italian Tanners Association to discuss the collaboration between the Indian Tanners and the Italian Tanners. Presentations on technology were made by CSIR-CLRI and Director, CSIR-CLRI also addressed the gathering. Chairman, IFLMEA also spoke and assured the Italian Tanners and UNIDO of unstinted co-operation from IFLMEA to work with the Italian Tanners Association for mutual benefit. The broad aims of co-operation envisaged the transfer of technological solutions and exploration of foreign markets.

A visit was also organized for Team CSIR-CLRI to have a live demonstration of a Gait Analysis system at M/s BTS Bioengineering, Italy. Conclusion The visit by Team CSIR-CLRI was very useful in discussing Design Collaboration with leading Italian Design Schools. The visit to the SIMAC, Tanning Tech and Lineapelle Fairs was very useful in appreciating how Innovation and Sustainability help you be more competitive and how these fairs are still the leaders in the showcasing of technological innovations in the footwear, leather goods and tanning sectors. The visit to the BTS Bioengineering gave us a very good idea of the use of Gait Analysis Systems for Human Movement modelling and Locomotion studies.

**Awards**

Prof. Dr. A.B. Mandal, Director CLRI has been elected as Fellow of Indian National Academy of Engineering (FNAE) during December 2012.

Mrs. Malathy Jawahar, Senior Scientist was awarded Young Scientist Award (Bronze Medal) for the Oral Presentation at 9th Asian International Conference on Leather Science and Technology held at Taipei, Taiwan from 12th to 14th November 2012.

**CSIR-CLRI Team visits major Leather and Product Fair in Italy**

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**UNIDO – CLRI Centre for Salt Free Tanning**

The Central Leather Research Institute (CSIR - CLRI) has developed a common salt free tanning technology. This technology not only eliminates the usage of salt in the tanning process but also shortens it by avoiding the steps of acidification and then again basification to make the medium neutral. While addition of the salt in the above process helps in retaining the strength and quality of leather, it leads to high amount of Total Dissolved Solids and chlorides with respect to pollution standards in the effluents during treatment at a later stage. Even after a huge financial investment to treat effluent systems, the present tanning industry has been struggling on for years to meet the proper regulatory standards of TDS in effluent systems. This technology provides an enabling solution to address the issue of TDS through a change from a century old process. CLRI team comprising Mr. V. John Sundar and Mr. T. Rangasamy under the leadership of Dr. C. Muralidharan and guidance of Dr. A. B. Mandal developed and implemented this technology in select tanneries of Tamilnadu, Saudi Arabia and Qatar. National Tanner’s Apex body (All India Skin and Hide Tanners and Merchants Association), has made detailed assessment of the present technology and has presented its First award to the team for the Technology Innovation and successful commercial scale implementation.

CSIR, Ministry of Science & Technology, India has recognized CLRI team for the breakthrough technology by honouring with Technology award for Innovation - 2011. UNIDO, Vienna has now come forward to join hands with CSIR-CLRI to establish UNIDO-CLRI centre for salt free tanning in order to disseminate the technology across the Indian Leather Sector. Based on the outcome, a major initiative will be taken up by UNIDO and CLRI for dissemination of the technology at global level.

A press meet was organized at CLRI on 19.12.2012 in connection with Establishment of UNIDO-CLRI Centre for salt free tanning. Prof. Dr. A. B. Mandal, Director, CLRI welcomed the gathering and gave his introductory remarks on the “Salt Free Tanning Technology”. Mr. Hemant Verma, Senior Expert, UNIDO (India) gave a snapshot on “UNIDO Consolidated Project for SME (Leather) Development in India” and about the setting up of the UNIDO & CSIR-CLRI salt free tanning centre. Dr. C. Muralidharan, Chief Scientist, CSIR-CLRI highlighted the importance & economic benefits of the Salt Free Tanning Technology.

Mr. N. Shafeeq Ahmed, Chairman, IFLMEA, congratulated the CLRI Team for inventing this eco-friendly technology which totally avoids the use of salt in Leather processing. During the occasion, this technology was licensed to CETP of Ambur and Ranipet. In this connection, UNIDO and CSIR-CLRI signed and exchanged the Letter of Intent.

**Ph.D. Public Viva Voce**

<table>
<thead>
<tr>
<th>Name of the Candidate, Supervisor &amp; Department</th>
<th>Project Title</th>
<th>University &amp; Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Dinesh Prasad Dr. M.K. Gowthaman Bio-Technology Division</td>
<td>Production of Tannase from Aspergillus heteromorphus MTCC 5466 : Upscaling, Purification and Characterization for Industrial Applications</td>
<td>University of Madras 27.12.2012</td>
</tr>
<tr>
<td>Mr. M. Prakash Dr. V. Subramanian Chemical Lab</td>
<td>Ab Initio and Density Functional Theory Studies on the Role of Noncovalent Interactions in Molecular Hydration</td>
<td>University of Madras 9.11.2012</td>
</tr>
<tr>
<td>Ms. S.S. Liji Sobhana Prof. Dr. A. B. Mandal Lab Assistant to Dr. C. Muralidharan</td>
<td>Preparation and Characterization of gold nano particles supported nano-hydroxypatite and cadmium sulfide quantum dots</td>
<td>University of Madras 14.11.2012</td>
</tr>
<tr>
<td>Mr. E. Madhavacharyulu Dr. A. Gnanamani Microbiology Lab</td>
<td>Evaluation of antimicrobial activity, mode of action and proangiogenic activity of anionic quinoxaline radicals: 2-nonylquinoxalin-6-01 and 2-heptylquinoxain-6-o1: Paramagnetic secondary metabolites of Pseudomonas aeruginos</td>
<td>University of Madras 10.10.2012</td>
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**M.S. by Research**

<table>
<thead>
<tr>
<th>Name of the Candidate, Supervisor &amp; Department</th>
<th>Project Title</th>
<th>University &amp; Date</th>
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</thead>
<tbody>
<tr>
<td>Mr. N. Govindarajan Dr. B. Chandrasekaran CHORD</td>
<td>Design and Development of a functional moulded artificial foot prosthesis</td>
<td>Anna University 31.12.2012</td>
</tr>
</tbody>
</table>
Science Club

The Science Club, met on October 13th 2012, for its 138th session at IMSC in connection with Green Consumer Day (September 28). The programme was organized by the Convenor, Mr. M R Sridharan, Principal Scientist, CLRI, with the help of fellow convenors from UNOM, IITM & IMSc. The meet started with a lecture on "Bio-Plastics and their applications" by Dr. M. Purushothaman, Research Scholar, CIPET, followed by lecture on "Nano Bio-Materials" by Dr. Weslen Vedakumari, CLRI and lecture by Dr. N. V. Ravikumar, IITM, on "Bioinspired Material Science - Nature's way of designing materials".

The 139th Meet was held at IITM on 17th November, 2012 with the theme “Abel Prize and Nobel Prizes 2012”. The meet started with a lecture on “Nurturing young researchers in Science & Technology” by Prof. Bhaskar Ramamurthi, Director, IITM. This lecture was followed by a lecture by Prof. R. Balasubramaniam, Director, IMSC in connection with National Year of Mathematics and a lecture by Dr. A. Gopalakrishna IITM on “G-Protein coupled receptors (Nobel Prize in Chemistry)” & a lecture on “Discovery on Mature cells can be reprogrammed to become Pluripotent” by Prof. Rama Shanker Verma, IITM. This meet was organized by Covenor, Science Club, Mr. M.R. Sridharan, CLRI.

The 140th meet was organized by the convenor, Mr. M.R. Sridharan at CLRI on 8th December 2012. Dr. A.J. Vanishree, University of Madras delivered a lecture on “Neurogenesis and Neurological Diseases”. This lecture was followed by a lecture on “GPU Scientific Computing: A real time Mathematical solution” by Shri M. Panchatcharam, IITM and a lecture on “Activity of the wonder brain of the differently abled” by Dr. Brig. C.R. Suryanarayan (Retd.), Ministry of Defense & a lecture by Dr. Mythili Chari on “Savant Syndrome: Autism Spectrum / Condition or Disorder”.

Training Programmes: October – December 2012

<table>
<thead>
<tr>
<th>Name of the Training Programme / Firm</th>
<th>Month of Commencement &amp; Duration</th>
<th>No. of Trainees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Aided Design for Garments</td>
<td>October 2012 / 5 Weeks</td>
<td>17</td>
</tr>
<tr>
<td>Executive Training Programme in Identification of Finished leathers Office of the commissioner of Customs (Airport &amp; Air Cargo) Chennai</td>
<td>November 2012 / 1 Week</td>
<td>3</td>
</tr>
<tr>
<td>Executive Training Programme in Leather Processing M/s. Balaji Leather Exports</td>
<td>December 2012 / 12 Weeks</td>
<td>1</td>
</tr>
<tr>
<td>Training programme in “Cleaner Leather Processing and Tannery Waste Water Treatment” LSRI, Vietnam</td>
<td>December 2012 / 1 Week</td>
<td>4</td>
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</table>

Patents Filed

- A Novel condensate of amino resin with polysaccharide and / or polyphenol for industrial application and a process for the preparation thereof (3193DEL2012).
- A Microaerophilic bacterial consortium and use thereof for the simultaneous biodegradation of mixture of recalcitrants present in water (3437DEL2012).
- Clean self draining water conservative system for urinals (3481DEL2012).
### Projects Undertaken

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultancy</td>
<td>2</td>
</tr>
<tr>
<td>Grant-In-Aid</td>
<td>5</td>
</tr>
<tr>
<td>Technology Transfer</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>

The Institute has undertaken the following projects/services during the Quarter ending 31.12.2012:

#### Consultancy Projects

1. **Risk Analysis Study for the Mounded Bullet Storage facility at Refinery complex.**
   - Mr. V. Srinivas,
   - Chemical Engineering Division
   - M/s. Chennai Petroleum Corporation Limited, Chennai

2. **Modeling and Analysis of Trends in Leather Exports Data**
   - Mr. D. Chandramouli &
   - Dr. K.M. Jagathnath Krishna, Economics Research Division
   - M/s. Council for Leather Exports

3. **Supply Chain Management for Rural Leather Sector**
   - Dr. A. Amudeswari, Economics Research Division
   - M/s. Department of Science & Technology - SEED Division, New Delhi

4. **Effect of Radiolytic Products and Metal Nitrates on Red Oil Forming Substances**
   - Dr. M. Surianarayanan,
   - Chemical Engineering Division
   - M/s. Atomic Energy Regulatory Board, Mumbai

5. **Design and Reengineering of Organic Dyes for Solar Cell Application (INSPIRE Faculty Award Scheme)**
   - Dr. Mrs. Dolly Vijay, Chemical Lab
   - M/s. Department of Science & Technology, New Delhi

6. **Bio-mimetic High Valent Oxomanganese (IV/V) Complexes : Generation, Spectroscopic Characterization and Reactivity (INSPIRE Faculty Award Scheme)**
   - Dr. K.Sundaravel, Chemical Lab
   - M/s. Department of Science & Technology, New Delhi

7. **Studies on Therapeutic Interventions of Angiogenesis using Molecular and Nano Biotechnological approaches**
   - Dr. M.S. Kiran, Bio-Materials Lab
   - M/s. Department of Science & Technology, New Delhi

#### Grant-In-Aid Project

8. **Salt Free / Pickle Free Tanning Process**
   - Dr. C. Muralidharan, EXCEL Lab
   - M/s. Ambur Tannery Effluent Treatment Co. Ltd., Ambur

9. **Fluidized Immobilized Carbon Catalytic Oxidation (FICCO) reactor for the treatment of waste water**
   - Dr. G. Sekaran, Environmental Technology Division
   - M/s. Khilari Infrastructure Pvt. Ltd., Kolkata

10. **Pickle Free (Salt Free) Chrome Tanning Process**
    - Dr. C. Muralidharan, EXCEL Lab
    - M/s. Ranitec Tannery Effluent Treatment Co. Ltd., Ranipet

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### Forthcoming Events

- **47th LERIG 2013**
  - CLRI, Chennai
  - 28.01.2013 to 30.01.2013

- **28th IILF 2013**
  - Chennai
  - 31.01.2013 to 03.02.2013

- **Chennai Chemistry Conference**
  - CLRI, Chennai
  - 08.02.2013 to 10.02.2013

- **18th ILGF 2013**
  - Kolkata
  - 15.03.2013 to 17.03.2013

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