

In this issue

- PG 1.** President's Corner
- PG 2.** Visiting Interns
- PG 2.** New Staff Appointments
- PG 2.** Hair Claim Substantiation Team
- PG 3.** Events and Education
- PG 3.** 2017 Seminar Schedule
- PG 3.** A Seminar by Dr. Yash Kamath
- PG 4.** Innovations in Dermatological Sciences
- PG 4.** TRI attended the recent NYC based In-Cosmetics

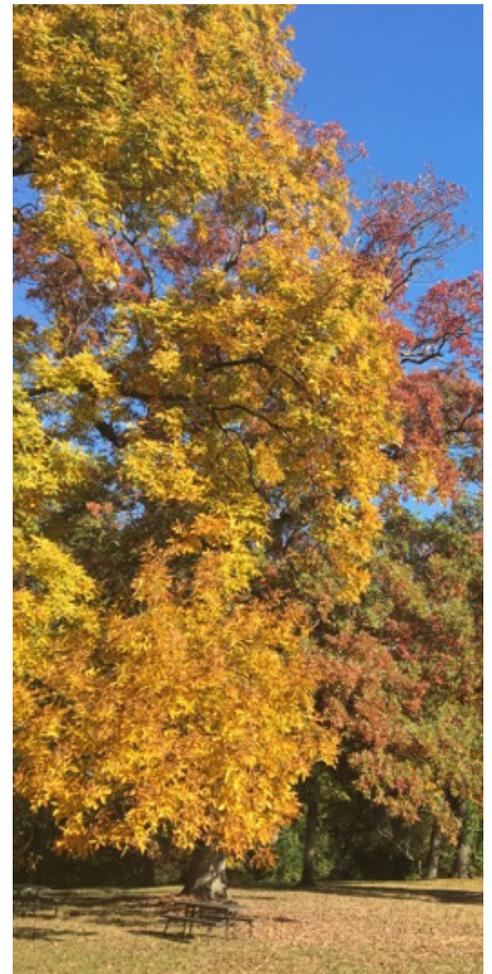
President's Corner

The quarter 3Q2016 has continued to be a building phase in TRI. We had two new members of staff joining and, with the laboratory facilities and the estate now in good stead, we have concentrated on the laboratory equipment. This is the core of our success in the Institute, and we have now spent over \$400K on new scientific equipment that we feel we needed to (a) fully meet our growing base of client's and their growing diverse requests, as well as (b) continue with the prime Institute goal to extend our skills into the research of hair and skin.

The Institute has recruited two new Fellows and perceives the growth of the Board of Trustees as fundamental to the stability and vision for the new TRI. The highly successful educational course entitled "Advances in Skin Science, Measurement and Treatment", which was attended by some 60 participants, followed the earlier highly acclaimed and successful Conference on Applied Hair Science as well the educational course on Hair Science, both held at Red Bank, NJ in June. These established the commitment that TRI has towards education together

with the dual seminars in partnership with the Center for Dermal Research, Rutgers University. The Intern from the University of San Paulo has returned to Brazil to complete her PhD, and the University of Pavia Intern continues her research on Sunscreen actives and their penetration into skin.

The Institute's Directors made many visitations to key members of the institute and close clients which is part of the attempt to bring the Institute closer to our clientele. The role of being a Member of the Institute has been linked to discounts on contracted studies, but we are now including again the advantage of being close to the research and development subjects in both hair and skin which we anticipate will be a large draw when we invite renewal for 2017. We offer advantages and preferential treatment to all our Members. Our web site has been modernized to better represent our current goals and ambitions by which our clients can assess our skills and facilities; check it yourself at www.TRIPrinceton.org. ■



New Staff Appointments

We said goodbye to Annie Shulamite and we wish her well in her new career moves.



Shruti Patel,
Research Associate

Shruti Patel is a recent graduate from Rutgers University and holds a BA in Biological Sciences. She has a research background from Rutgers and Princeton University with a focus on antibiotics and proteins. She joined TRI Princeton in September 2016. Here at TRI she is contributing towards various mechanical testing of hair care. She is also helping towards developing new innovative approaches to better service the Personal Care Industry.



Ben Mac,
Research Associate

Ben Mac earned his bachelor's degree in Chemical Engineering from Rutgers University and proceeded to work at Gelest Inc., a manufacturer and supplier of silanes, silicones, and metal-organics. During his time there, he gained extensive knowledge on the development of safe, cost-effective, and efficient synthetic routes. As a process engineer, he was highly involved in the development, configuration and optimization of industrial processes from inception through to start up. At TRI, Ben currently enjoys the position of Research Associate and works on the mechanical testing and evaluation of claims for global hair products.

Hair Claim Substantiation Team

I am happy to announce that two new members have recently joined my staff in late September/October. Shruti Patel and Ben Mac are two new vibrant researcher associates who bring a complementary skills base that adds to my existing team. The staff are now not only working on contract work for clients but are also devoting time to research in order to broaden their knowledge base and contribute to TRI's growing research program. We are also continuously working to improve the lab equipment to handle the existing flow of work, take on additional work, and also have the ability to function for research. We now have a total of 3 DCS's for thermal analysis, 3 Instrons for mechanical combing performance, and

2 new Diastrons (making a total of 6) for fiber diameter measurements, fatigue and tensile testing. These additions in conjunction with our existing repertoire of equipment/testing capabilities puts TRI at the forefront of hair care testing.



Dr. David Graham, Alison Robinson and myself travelled to England in order to meet existing clients. This trip was instrumental in continuing our client relationships, generate future plans for contract research and also research collaborations.

Dr. Giorgiana Giancola
Director – Personal Care Program

Visiting Interns



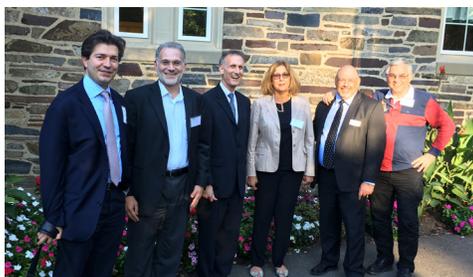
We said goodbye to Marcella Gabarra in September and miss her bubbly character and especially her homemade

Brigadeiros. Her strong work ethic allowed her to achieve an incredible amount of work in just two months at TRI. Marcella, an MSc student from the University of Sao Paulo, interned over the summer working with Director of Research, Trefor Evans. Given her nationality it seemed only right that she study the effects of Brazilian Keratin treatments on hair – in addition to some alternatives to this controversial treatment. Specifically, glyoxylic acid treatments are being promoted as means of straightening hair – with a presumption that functionality occurs by a comparable mechanism (i.e. creating new cross-links in the hair). There is debate as to the exact nature of the interaction between formaldehyde and hair (or wool) – but notwithstanding, treatment produces a dramatic loss of tensile properties. Interestingly, this treatment produces rather unique changes in hair properties that differ quite strikingly from other harbingers of hair damage. Notably, tensile experiments demonstrate a surprisingly low break extension; while water-hair adsorption isotherms indicate diminished moisture content. The influence of carboxylic acids on the properties of hair has been an ongoing area of research interest at TRI for many years – where a selection of acids have been found to impact various properties. Glyoxylic acid produces comparable effects – and might then be considered to have no uniqueness. This said, it appears reasonably effective in its ability to straighten hair. Look for more information on this area in future TRI Notes on Research, conference presentations and literature articles. For more information, contact Trefor Evans at tevans@triprinceton.org. Marcella has our very best wishes and hopes for a continuing successful future. ■

Events and Education



TRI organized and held a two-day course on “Advances in Skin Science, Measurement and Treatment” at Princeton on September 27 and 28. Over 60 people attended, including speakers, TRI staff, and instrument vendors to showcase their measurement equipment. The early feedback from all participants, instructors, and instrument showcase providers has been very positive, and it is in no small measure to all of our organizers and contributors.



The lecturers were:

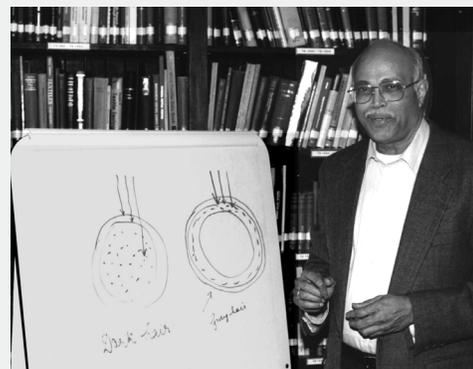
- Bo Michniak-Kohn – Rutgers University
- Apostolos Pappas – Johnson & Johnson
- Mike Southall – Johnson & Johnson
- Curt Cole – Sun & Skin Consulting, LLC
- Eduardo Ruvolo – Bayer Consumer Health, LLC
- Laurie Joseph – Rutgers University



The lecturers were:

- Paulo Bargo – Janssen Pharmaceutical Companies of Johnson & Johnson
- Bob Imhof – Biox Systems Ltd
- Mark Chandler – ACT Solutions Co.
- Samuel Gourion-Arsiquaud – TRI
- Phil Cummins – Estee-Lauder – retired

This course was developed with the aim of providing a broad perspective into Skin Science and then to elucidate current understanding and research in skin properties and physiology along with the techniques used to measure the impact of products and treatments on the skin. ■



TRI held a seminar by Dr. Yash Kamath on the topic of “WATER – Its Importance in Haircare” on September 21st. This initially started life as a seminar for his TRI colleagues, but we were encouraged to make a wider invite, and we were thrilled that many were able to travel and join with us. We enjoyed a beautiful evening and a BBQ provided using the culinary skills of our Facilities Coordinator Brian Kelly, who is also a Chef. It was a wonderful occasion.

The talk by Yash really showed how water and its symbiotic relationship with other solutes and polymers can influence the structure, properties and breakage of hair. These issues continue to be of critical importance to TRI in both our client testing and claims support, as well as our Research projects that we hold invaluable to the growth and stature of the Institute.

We are planning to hold more such seminars during 2017 (see sidebar) where we invite the “home team” including Dr. Giordiana Giancola, Dr. Trefor Evans, and Peter Landa/Dr. Samuel Gourion-Arsiquaud to talk about their respective departments. You can keep up to date through our website, www.triprinceton.org. These seminars are free and open to the public. We hope you and your colleagues can join us soon. ■

2017 SEMINAR SCHEDULE

April 6, 2017
Dr. Trefor Evans:
“The Perplexing Topic of Hair Type”

May 4, 2017
Peter Landa:
“Various Actives and Different Delivery Systems into Skin”

June 8, 2017
Dr. David Graham:
“Proteins Adsorbed at Interfaces”

August 3, 2017
Speaker and Topic TBD

October 5, 2017
Dr. Giordiana Giancola:
“Marketing Meets Scientific Claim Language”

November 2, 2017
Speaker and Topic TBD

TRI co-sponsored a conference titled Innovations in Dermatological Sciences “Delivery of Actives to Skin” with Rutgers University, Center for Dermal Research on September 29-30, 2016.

Samuel Gourion-Arsiquaud:

- Gave a talk on “Vibrational Spectroscopy and Imaging Methods Relevant to Monitor Transdermal Agent Delivery as well as Analyze their Impact on Skin Barrier Functions.”
- Contributed analyses and studies to a talk by Amy Ethier of BASF titled “Understanding the Role of Functional Excipients in Dermal Drug Delivery.”

Peter Landa:

- Served on the Program Organizing Committee for the conference headed by our Board of Trustees’ member, Dr. Bozena Michniak-Kohn who is also Director of the CDR. Moderated the Friday Afternoon speaker session based around Skin Delivery Investigational Techniques.
- Served on Poster Awards Selection group to choose among a number of excellent and varied posters for 1st, 2nd and 3rd place prizes. A very interesting poster from a University of Manchester Postdoctoral fellow, Victoria Newton, on “3D modelling of Dermal Epidermal Junctions” won top prize.

In general, the Conference was considered very successful (by attendees and presenters alike) with many interesting and thought-provoking presentations, posters, instrument demonstrations and time for all of us to network for a lively exchange of ideas. Some of the presentations for the first day comprised reviews of the current states of drug and active delivery including talks by such leaders in the field as Dr. Philip Wertz, Dr. Samir Mitragotri, and Dr. Thomas J. Franz (for whom the Franz cell perfusion technique is named). The second day focused more on where active delivery is headed into the future and how to better study and analyze for actives in the skin. Some of the lecturers included Dr. Bozena Michniak-Kohn who spoke about Tyrospheres for acne treatment, Dr. Michael Southall from J&J, who discussed Ceramides and challenges for skin lipid delivery, and our own Dr. Samuel Gourion-Arsiquaud, who gave a well-received talk on the use of vibrational spectroscopy for active delivery investigation. The conference was a success and we are already planning for next year. ■



TRI attended the recent NYC based In-Cosmetics, North America at Pier 36 in Manhattan.

In-Cosmetics has always been a premier industry event in various locations around the world, especially Europe, and the organizers have brought it here. The ingredients conference consisted of Supplier’s booths, innovation and marketing seminars, and a formulation lab where a formulation challenge for participants took place. The event centered on new and recently launched ingredients for the cosmetics industry. The trends for the new ingredients (and products) surrounded new actives for skin care along with innovative delivery systems, multi-functional ingredients, and “naturally” based (or sustainably sourced) ingredients for both skin and hair care. The natural trend continues, but even with the rise of some certification organizations (such as Ecocert Inc.) there continues to be no consensus on what constitutes “naturally derived” or definitions for natural, sustainable, eco-friendly, etc. ■