Dear Colleagues,

The scientific committee is delighted to announce to you their newest edition concerning Skin Ageing & Challenges. The 13th International Conference on Skin Ageing and Challenges 2022 will be held on November 17-18, 2022 at Altis Grand Hotel, Lisbon, Portugal and Online.

During both days, many oral and poster communications will be presented and will cover many hot topics. Skin Challenges 2022 is organized under the patronage of the International Society of Microbiota (ISM).

Ageing is an international issue that has social, economic and individual impacts. Preventing it and decreasing its side effects (all related pathologies) are major challenges for humanity. Thus, the understanding of ageing and in particular skin ageing mechanisms will allow us to live longer, better and healthier.

During Skin Challenges 2022, the Scientific Committee will allocate significant time to discuss the latest advances related to skin homeostasis and ageing. Our objective is to provide answers and to give a future vision and trends on: how can the current researches delay the side effects of ageing and skin ageing?

Among the Topics which will be discussed during 2 days congress:

Skin microbiome and mycobiome, skin cancer, atopic skin inflammation, wound healing, engineered stem cells and silk biomaterials, exosome technology, mitochondrial transplantation, skin ageing, skin rejuvenation, senolytic flavonoids, skin photo-protection, facial aesthetics, diet and skin, artificial intelligence, electronic skin, the impact of olfactory receptors on microbiota & wound healing, and more…

As always, we are very much looking forward to meeting you.

Prof. Jean Krutmann,
President of Skin Ageing & Challenges 2022,
IUF – Leibniz Research Institute for Environmental Medicine
Leibniz, Germany
Skin Challenges 2022 Speakers

Rapid Detection and Online Analysis of Human Skin Microbial Changes by Flow Cytometry (FlowSoFineTM)
Jean Krutmann, President of Skin Challenges, Leibniz Research Institute for Environmental Medicine, Germany

Turning Back the Clock - Harnessing Reprogramming to Rejuvenate Cells
Inês Milagre, Instituto Gulbenkian de Ciência, Portugal

Electronic Skin that Anticipates and Perceives Touch from Different Directions
Oliver Schmidt, Chemnitz University of Technology, Germany

Elucidating the Molecular Landscape of the Stratum Corneum Using 3D OrbiSIMS
Nichola Starr, University of Nottingham, United Kingdom

Unlocking the Power of AI Skin Tech in the Dermatology Industry
Louis Chen, EVP and Chief Strategy Officer at PerfectCorp, Taiwan

Extracellular Vesicle Therapy for Skin Injuries
Paul S. Rabban, New York University School of Medicine, USA

Skin Microbiome Profile of Healthy Cameroonian and Japanese
Kazuhiro Ogai, Kanazawa University, Japan

Skin Microbiome and Mycobiome in Aging
Woo Jun Sul, Chung-Ang University, South Korea

Extracellular Vesicles in Facial Aesthetics
Jia Xian Law, Universiti Kebangsaan Malaysia, Malaysia

Science and Clinical Applications of Exosomes
Duncan Ross, Kimera Labs, Inc., USA

Recent Artificial Intelligence Developments for Skin Cancer Detection
Ricardo Vardasca, ISLA Santarém, Portugal

Doctor Jekyll and Mr Hyde - Two Faces of Opioids in a Wound Treatment
Marek Konop, Warsaw Medical University, Poland

Regeneration in the Fly Brain: Wake-Up Signals for Quiescent Neural Stem Cells
Christa Rhiner, Champalimaud Foundation, Portugal

Exosome Technology: Pearls & Pitfalls for Skin Rejuvenation
Saranya Wyles, Mayo Clinic Department of Dermatology, USA

Atmospheric Pollution Impairs Skin Barrier Function: Focus on PM-Associated Pollutants Under UVA Exposure
Laurent Marrot, L’Oréal R&D, France

Mitochondria-Targeted Hydrogen Sulfide Delivery Molecules for Skin Sun Protection and Aging Prevention
Uraiwan Panich, Mahidol University, Thailand

Olfactory Receptors, Microbiota & Wound Healing
Marvin Edeas, Institut Cochin, INSERM, Université de Paris, France

The Fungal Skin Microbiota in Health and in Atopic Dermatitis
Philipp Bosshard, University Hospital Zurich, Switzerland

Rapid Detection and Online Analysis of Human Skin Microbial Changes by Flow Cytometry (FlowSoFineTM)
Charlotte Esser, Leibniz Research Institute for Environmental Medicine, Germany

Skin Physiology and Two Staphylococci Associated with the Recurrence of Pressure Injuries
Kohel Ogura, Kanazawa University, Japan

The p-rp56-zone Delineates Wounding Response and the Healing Process
Mikolaj Ogrodnik, Ludwig Boltzmann Research Group Senescence and Healing of Wounds, Austria

Mechanisms Interconnecting Genotype, Transcriptome and Microbiome during Atopic Skin Inflammation
Bernhard Homey, University Hospital in Düsseldorf, Germany

Menopause, iron, and aging skin: Is there a connection?
Xi Huang, I-On Skincare, Inc., USA

Induction of the Transcription Factor FOXM1 Drives Healthspan Extension in Progeroid and Naturally Aged Mice
Elsa Logarinho, IJS Association, Universidade do Porto, Portugal

DA Gene Variant of AKR1C3 Contributes to Interindividual Susceptibilities to Atopic Dermatitis Triggered by Particulate Air Pollution
Thomas Haarmann-Stemmann, Leibniz Research Institute for Environmental Medicine, Germany

Connecting the Intracellular Labile Ibrnon to Susceptibility of Skin Cells to Sunlight: a Powerful Approach Towards Personalised Sun Protection
Charareh Pourzand, University of Bath, The United Kingdom

www.skin-challenges.com
Congress Program Day 1 - November 17, 202

8h00 – Materials Distribution & Welcome Coffee

8h50 – Welcome Note & Introductory Remarks
Jean Krutmann, President of Skin Ageing & Challenges 2022, Leibniz Research Institute for Environmental Medicine, Germany

Marvin Edeas, Chairman of Skin Ageing & Challenges 2022, Institut Cochin, INSERM, Université de Paris, France

Session 1: Skin Microbiota – Recent Scientific Advances

Presentations lengths: 20 minutes + 5 minutes of discussion

Chairs: Charlotte Esser & Marvin Edeas

9h00 - Rapid Detection and Online Analysis of Human Skin Microbial Changes by Flow Cytometry (FloSoFineTM)
Charlotte Esser, Leibniz Research Institute for Environmental Medicine, Germany

9h25 - The Fungal Skin Microbiota in Health and in Atopic Dermatitis
Philipp Bosshard, University Hospital Zurich, Switzerland
9h50 - **Skin Microbiome and Mycobiome in Aging**  
*Woo Jun Sul, Chung-Ang University, South Korea*

10h15 - **Skin Microbiome Profile of Healthy Cameroonians and Japanese**
Kazuhiro Ogai, Kanazawa University, Japan (online talk)

**10h30 - Coffee Break Networking & Poster Session**
Chair: Philipp Bosshard

11h15 - **A Gene Variant of AKR1C3 Contributes to Interindividual Susceptibilities to Atopic Dermatitis Triggered by Particulate Air Pollution**
*Thomas Haarmann-Stemmann, Leibniz Research Institute for Environmental Medicine, Germany*

11h40 - **Mechanisms Interconnecting Genotype, Transcriptome and Microbiome during Atopic Skin Inflammation**
Bernhard Homey, University Hospital in Düsseldorf, Germany (online talk)

12h05 – **Skin Microbiome in Ageing Meta-analysis: New Challenges for the Future of Skin Science**
*Antonia Bruno, University of Milano-Bicocca, Italy (online talk)*

**12h15 - Lunch Break Networking & Poster Session**

## Session 2: Wound Healing and Skin Regeneration

*Presentations lengths: 20 minutes + 5 minutes of discussion*

Chair: Thomas Haarmann-Stemmann

13h45 - **Olfactory Receptors, Microbiota & Wound Healing**
*Marvin Edeas, Institut Cochin, INSERM, Université de Paris, France*
14h10 - The p-rpS6-zone Delineates Wounding Response and the Healing Process
Mikolaj Ogrodnik, Ludwig Boltzmann Research Group Senescence and Healing of Wounds, Austria

14h35 - Doctor Jekyll and Mr. Hyde – Two Faces of Opioids in a Wound Treatment
Marek Konop, Warsaw Medical University, Poland

15h00 - Skin Physiology and Two Staphylococci Associated with the Recurrence of Pressure Injuries
Kohei Ogura, Kanazawa University, Japan (online talk)

15h25 – Role of the Trpv3 Channel in the Default of Cutaneous Thermoregulation During Aging
Lisa Martin, Claude Bernard University, France

15h35 - Coffee Break, Networking, & Poster Session

Session 3: Lifestyle, Diet and Skin Aging: The Inside Beauty

Presentations lengths: 20 minutes + 5 minutes of discussion

Chairs: Charareh Pourzand & Laurent Marrot

16h10 - Atmospheric Pollution Impairs Skin Barrier Function: Focus on PM-Associated Pollutants Under UVA Exposure
Laurent Marrot, L’Oréal, France

16h35 - Connecting the Intracellular Labile Ironome to Susceptibility of Skin Cells to Sunlight: a Powerful Approach Towards Personalised Sun Protection
Charareh Pourzand, University of Bath, United Kingdom
17h00 - Menopause, iron, and aging skin: Is there a connection?
Xi Huang, I-On Skincare, Inc., USA

17h25 - Short Oral Presentations

Skin-Aging Enzyme Inhibition and Oxidative Stress Protection by Hairless Canary Seed (Phalaris Canariensis L.) Peptides
Andrea Liceaga, Purdue University, USA

Cell Imaging for Dermocosmetic Claims Substantiation Through In vitro Assessment on Cellular Skin Models
Oceane Guyot, HCS Pharma, France

The Effect of Facial Exercise on Perceived Appearance, Self-esteem, Face Image, and Well-being Among Adult Women
Topaz Broitman-Shaharabani, Reichman University, Israel (online talk)

17h55 – End of Conference Day 1

20h00 – Speakers Dinner (for ticket holders only)
Register for the dinner.
Congress Program Day 2 - November 18, 2022

8h50 – Welcome & Introductory Talk

Session 4: Artificial Intelligence & Skin: Advances & Perspective

Presentations lengths: 20 minutes + 5 minutes of discussion

Chair: Ricardo Vardasca

9h00 - Unlocking the Power of AI Skin Tech in the Dermatology Industry  
*Louis Chen*, EVP and Chief Strategy Officer at Perfect Corp., Taiwan

9h25 - Recent Artificial Intelligence Developments for Skin Cancer Detection  
*Ricardo Vardasca*, ISLA Santarém, Portugal

9h50 - Electronic Skin that Anticipates and Perceives Touch from Different Directions  
*Oliver Schmidt*, Chemnitz University of Technology, Germany

10h15 - Coffee Break Networking & Poster Session

Session 5: Extracellular Vesicles & Skin: The Points of View

Presentations lengths: 20 minutes + 5 minutes of discussion

Chairs: Uraiwan Panich, Oliver Schmidt

10h50 - Science and Clinical Applications of Exosomes  
*Duncan Ross*, Kimera Labs, Inc., USA

11h15 - Exosome Technology: Pearls & Pitfalls for Skin Rejuvenation  
*Saranya Wyles*, Mayo Clinic Department of Dermatology, USA (online talk)
11h40 - Extracellular Vesicle Therapy for Skin Injuries

Piul S. Rabbani, New York University School of Medicine, USA (online talk)

12h05 - Extracellular Vesicles in Facial Aesthetics

Jia Xian Law, Universiti Kebangsaan Malaysia (online talk)

12h30 - Comparative Profiling of Stem Cell Derived Extracellular Vesicle Sources for Applications in Skin Rejuvenation

Soraya Williams, Loughborough University, United Kingdom

12h40 - Exosome-Like Nanovesicles Derived from Phellinus Linteus Inhibit Mical2 Expression through Cross-kingdom Regulation and Inhibit Ultraviolet-Induced Skin Aging

Caibin Zhu, Shanghai Cheermore Biotech Co., Ltd, China (online talk)

12h45 – Lunch Break, Networking, & Poster Session

Session 6: Skin Ageing & Challenges 2022 Innovations

Presentations lengths: 20 minutes + 5 minutes of discussion

Chair: Inês Milagre, Christa Rhiner

13h45 - Turning Back the Clock – Harnessing Reprogramming to Rejuvenate Cells

Inês Milagre, Católica Biomedical Research Centre / Católica Medical School/ Universidade Católica Portuguesa, Portugal

14h10 - Regeneration in the Fly Brain: Wake-Up Signals for Quiescent Neural Stem Cells

Christa Rhiner, Champalimaud Foundation, Portugal

14h35 - Novel Mitochondria-Targeted Sulfide Delivery Molecules Prevent Photo-Ageing

Uraiwan Panich, Mahidol University, Thailand
15h00 - Elucidating the Molecular Landscape of the Stratum Corneum Using 3D OrbiSIMS
Nichola Starr, University of Nottingham, United Kingdom

15h25 - Coffee Break Networking & Poster Session

15h55 - Induction of the Transcription Factor FOXM1 Drives Healthspan Extension in Progeroid and Naturally Aged Mice
Elsa Logarinho, I3S Association, University of Porto, Portugal (online talk)

16h20 - Short Oral Presentations

Natural and Sustainable Sugarcane Based Cosmetic Ingredient with Anti-Aging Properties
Maria João Carvalho, Universidade Católica Portuguesa, Portugal

Mauritius Tea Extract Activate Skin Antioxidant and Bioenergetic Systems
Tanesha Naiken, LVMH Recherche, France

New Method for Claim Substantiation for Cosmetics Using Lipidomics Analysis
Paolo Bonini, oloBion S.L., Parc Científic de Barcelona, Spain

Anti-aging Potentials of Methylene Blue for Human Skin Longevity
Kan Cao, University of Maryland College Park, USA (online talk)

17h00 – Discussion: Skin Ageing & Challenges 2022 – AI & Beauty: Where is the Target?

17h30 – Skin Ageing & Challenges 2022 Awards

The best short oral and best poster presentation awards will be discerned.

17h45 – End of Skin Ageing & Challenges 2022
Skin Ageing & Challenges 2022 Posters

Posters will be displayed during the coffee & lunch breaks

Dermal Offsets Impact of Glucose on Blood Levels of Metalloproteinases and Cytokines that Regulate Extracellular Matrix
Zbigniew Pietrzkowski, FutureCeuticals, USA

How to Save Your Own Skin with Tomatoes
Oliver Dillon, University of East Anglia, The United Kingdom

Umbilical Cord Mesenchymal Stem Cells Characterization: In Vitro Preliminary Assessments for Chronic Wound Healing
Patricia Sousa, University of Porto, Portugal

MIR-30A-5P Alters Epidermal Terminal Differentiation During Aging by Regulating BNIP3L/NIX-Dependent Mitophagy
Fabien Chevalier, Claude Bernard University Lyon, France

Brazilian Red Propolis – A Product from Natural Origin for Healing Skin Lesions of Secondary Intention
Claudia Helena Pellizzon, São Paulo State University, Brazil

Interaction of Skin Cells with Skin Microbiota
Zeynab Moinipoor, University of West Minster, The United Kingdom

Ameliorative Effect of Fermented Cabbage Extracts on Wound Healing and Contact Dermatitis
Sooah Kim, Jeonju University, Republic of Korea

Fisetin Inhibits UVA-Induced Expression of MMP-1 and MMP-3 Through the NOX/ROS/MAPK Pathway in Human Dermal Fibroblasts and Human Epidermal Keratinocytes
Thi-Hung Le, Jeonbuk National University, Korea

Protective Effects of Quercetin-loaded PLGA Nanoparticles Against UVA-Induced Photoaging in Mouse Skin
Weerawon Thangboonjit, Mahidol University, Thailand

Is It Just Skin Deep? Exploring the Host Skin Response to Bacteria
Katie Griffiths, University of East Anglia, The United Kingdom

Influence of Water-Filtered Infrared-A (wIRA) Hyperthermia on Autophagy of Human Skin Fibroblasts
Barbara Hochecker, Albstadt-Sigmaringen University, Germany

Basigin Controls Matrix Remodeling, the Secretory Phenotype and Metabolic Adaptations of Senescent Keratinocytes and Their Epidermal Microenvironment
Florian Gruber, Medical University of Vienna, Austria

Effect on the Skin of Extracts Isolated from the Portuguese Coast’s Sargaço
Cláudia Pereira, University of Coimbra, Portugal

In Vitro and In Vivo Evaluation of Keratin-trimethylamine N-oxide as a Potential Novel Therapeutics Wound Dressing in Diabetic Rats
Mateusz Szudzik, Medical University of Warsaw, Poland
Inflammation in Skin – An Age-old Problem
Damon Bevan, University of East Anglia, The United Kingdom

MultiLamellar Vesicle Conjugated to Polymer – A New Platform for Skin-Care Products
Asaf Levin, Liposphere Ltd., Israel

Skin Cell Lines Response to Death Pathway Modulation
Malgorzata Adamiec-Organiściok, Silesian University of Technology, Poland

Anti-Aging Effects of Dimocarpus Longan Fruit Concentrate on Skin
Theodor Braun, Austrian Drug Screening Institute GmbH, Austria

Screening the Dermatological Potential of Water-based Extract from Defatted Microalgae Biomass
Michał Szczepanczyk, Malmö University, Sweden

Ketoprofen Nanoemulsions for Melanoma Treatment: Formulation, Development and Characterization
Ana Cláudia Paiva-Santos, University of Coimbra, Portugal

**Online Posters**

Effect of Hesperidin and Its Structural Part Hesperetin, Rutinose and Rhamnose on Collagen I and Matrix Metalloproteinase 1 Production in the Normal Dermal Human Fibroblasts
Denisa Škařupová, Palacký University Olomouc, Czech Republic

Interaction of TAGLN and USP1 Promotes ZEB1 Ubiquitination Degradation in UV-Induced Skin Photoaging
Youjie Zheng, Shanghai Cheermore Biological Products Co., Ltd, China

Exosome-Like Nanovesicles Derived from Phellinus Linteus Inhibit Mical2 Expression through Cross-kingdom Regulation and Inhibit Ultraviolet-Induced Skin Aging
Caibin Zhu, Shanghai Cheermore Biotech Co., Ltd, China

New Marine-Inspired Compounds As Dual Anti-Pruritic/Anti-Inflammatory Agents
Isabel F. Almeida, University of Porto, Portugal