

MONDAY 15

15:00 Registration

16:15 – 16:30 Welcome Remarks

16.30 – 17:30 Plenary talk ROOM: MITXELENA AUDITORIUM

Diego Cabrera

Mixologist. Guru Lab, Madrid, Spain

17:30 – 18:00 Coffee Break

18:00 – 19:30 **Parallel sessions**

18:00-19:30 SESSION 1- 150 YEARS OF GLOMERULI ROOM: MITXELENA AUDITORIUM

Symposium Organizer Peter Mombaerts

150 years of glomeruli Chair/s: *Peter Mombaerts*

Similar and yet different: the glomerulus in amphibians

Chair/s: Ivan Manzani

Convergence and divergence: the glomerulus as a physiological unit

Chair/s: Izumi Fukunaga

18:00-19:30 SESSION 2- BITTER TASTE ENIGMA – RECEPTORS, CIRCUITS, AND PERCEPTION ROOM: BAROJA

Symposium Organizer

Anan Moran

Molecular and functional evolution at the origin of vertebrate bitter taste

Chair/s: Sigrun I Korsching

The interaction of agonists, antagonists and mixtures with the human TAS2R repertoire

Chair/s: Maik Behrens

Neural and behavioral responses to bitterants: disentangling perception and coding in the

tastesystem

Chair/s: Anan Moran

19:30 – 21:00 Welcome Cocktail BIZKAIA ARETOA HALL

09:00 – 10:00 Plenary talk: NEUROGENESIS FOR ADULT OLFACTORY CIRCUITS

ROOM:MITXELENA AUDITORIUM

<u>Isabel Fariñas</u>

CIBERNED & Instituto de Biotecnología y Biomedicina, Universidad de Valencia

10:00 – 10:45 SELECTED SHORT TALKS - SESSION 1

Channel synapse mediates neurotransmission of airway protective chemoreflexes

Chair/s: Akiyuki Taruno

Taste regulation of immunity Chair/s: Pierre-Yves Musso

Role of the lingual GLP-1 system in sweet taste detection

Chair/s: Chometton Sandrine

Biomolecular and biophysical AFM probing reveals distinct binding of bitter peptide VAPFPEVF to TAS2R16 without inducing an intracellular calcium response

Chair/s: Phil Richter

10:45 – 11:15 Coffee Break

11:15 – 13:15 **Parallel sessions**

11:15-13:15 SESSION 3 - CELL DIVERSITY AND PLASTICITY IN THE MOUSE OLFACTORY SYSTEM

ROOM: BAROJA

Symposium Organizer Moritz Nesseler

Novel cell types mediating pheromone information processing in the mouse accessory olfactory bulb.

Chair/s: Andres Hernandez-Clavijo

A low-dimensional glomerular code for olfactory perception- SELECTED SHORT TALKS

Chair/s: Walter Bast

From detonation to dendritic spikes: how olfactory bulb interneurons coordinate flexible ensembles of mitral/tufted cells

Chair/s: Shawn Burton

Synaptic inhibition in the mouse olfactory bulb refines multimodal perception of mechanical and chemicalstimuli- SELECTED SHORT TALKS

Chair/s: Susobhan Das

The role of trigeminal activation in olfactory signal processing

Chair/s: Federica genovese

Neural dynamics underlying odor perceptual learning in olfactory bulb and piriform cortex

Chair/s: Kevin Bolding

11:15-12:15 SESSION 4 - MARS SYMPOSIUM-ADVANCES IN UNDERSTANDING THE PERCEPTION OF KOKUMI SUBSTANCES

ROOM: MITXELENA AUDITORIUM

Symposium Organizer Scott McGrane

Advances in understanding the perception of kokumi substances

Chair/s: Scott McGrane

Kokumi substances as taste modifiers: Sensory properties and Molecular mechanisms

Chair/s: Seiji Kitajima Kitajima

Involvement of multiple taste receptors in the actions of Kokumi taste stimuli

Chair/s: Rhyu Mee-Ra Rhyu

In silico framework for investigating the mechanics of kokumi taste: unveiling the chemistry to discover new kokumi compounds

Chair/s: Florinda Perugino

Exploring the mechanisms and role of kokumi taste for the domestic cat (Felis catus).

Chair/s: Anni Laffitte Laffitte

12:15-13:15 SESSION 4- BIOLOGICALLY INSPIRED AND BIO-BASED SENSORS IN OLFACTION AND TASTE

ROOM: MITXELENA AUDITORIUM

Symposium Organizer Topin Jérémie

Discriminating Ligands via the Capacitive Response of hOR1A1

Chair/s: Anna Lagunas

Olfactory receptors for charge-sensitive sensors

Chair/s: Moreau Christophe

From molecular binding to conformational change, an extensive study on Olfactory Binding Protein (OBPs)

Chair/s: Maxence Lalis

Bioinspired electronic nose for artificial olfaction development

Chair/s: HOU Yanxia

13.15 – 14:30 Lunch

14:30 – 16:30 Parallel sessions

14.30-15:30 SESSION 5 - HUMAN OLFACTORY-DERIVED IN VITRO MODELS FOR TRANSLATIONAL RESEARCH

ROOM: MITXELENA AUDITORIUM

Symposium Organizer Maria Figueres-Oñate

Translational potential of olfactory-derived models and their applications across various biomedical fields.

Chair/s: Maria figueres-oñate

Impact of air pollution exposure in olfactory mucosal cells in Alzheimer's disease

Chair/s: Katja kanninen

Patient-Derived Olfactory Tumor Models: Insights into Disease Mechanisms and Therapeutic Approaches

Chair/s: Bradley Goldstein

Isolation and Differentiation of Neurons and Glial Cells from Olfactory Epithelium in Living Subjects: Advancing Neuropsychiatric and Neurodegenerative Disease Research

Chair/s: : Lleyre urigüen echeverria

15.30-16:30 SESSION 5 - OPEN-ACCESS TOOLS AND INNOVATION FOR OLFACTORY EXPERIMENTATION

ROOM:MITXELENA AUDITORIUM

Symposium Organizer Guillaume Chloé Kevin Bolding

Olfactometry, not rocket science: simple, inexpensive designs for flexible, high-fidelity odor delivery supporting neuroscientific and perceptual studies.

Chair/s: Matt Wachowiak wachowiak

Visualizing and sonifying neurodata (ViSoND): closing the loop between observation and computation

Chair/s: Matt Smear

Reinforcement Learning and Fluid Dynamics Approaches to Olfactory Navigation and Swarming of Copepods in Turbulence

Chair/s: Martin James

Accessible and automated behavioural testing in freely moving mice: open-source tools for multisensory conditioning and odour-driven behaviour.

Chair/s: Guillaume Chloé

14.30-15:30 SESSION 6 - SCENT AND SEXUALITY: EXPLORING THE INTERSECTION OF SMELL, RELATIONSHIPS, AND HEALTH

ROOM: BAROJA

Symposium Organizers Marlise Hofer Jessica Gaby

The impact of COVID-19 related smell dysfunction on sexual and mental wellbeing: data from a longitudinal sample.

Chair/s: Marlise Hofer

There's Chemistry Between Us: Romantic Partner's Smell and Relationship Quality

Chair/s: Egenaz Kiraz

A survey-based look at the effects of hormone therapy on body odor production and perception

Chair/s: Jessica Gaby

SESSION 6 - SELECTED SHORT TALKS

Smelling the romantic partner's body odor increases psychological and autonomic but not cortisol stress responses

Chair/s: Franny Spengler

SESSION 6 - THE MEXICAN NETWORK OF OLFACTION: A COLLABORATIVE HUB FOR CUTTING-EDGE 15:30-16:30 RESEARCH AND INNOVATION IN OLFACTORY SCIENCES

ROOM: BAROJA

Symposium Organizer

Rebeca Corona

Presentation of the mexican network of olfaction

Chair/s: Rebeca Corona

Experimental development of olfactory system in mexico

Chair/s: Verónica Viñuela Berni

Olfactory System: The Remarkable Contributions of a Mexican Neuroanatomist

Chair/s: Teresa Morales Guzmán

Diseases that affect olfaction, studies in Mexico

Chair/s: Benito Ordaz Sánchez

16:30 - 18:00 Poster SESSION 1 and Coffee Break ROOM: CHILLIDA

18:00 - 19:00Plenary talk: SENSING WITH PHEROMONES IN FREELY MOVING MICE ROOM:MITXELENA AUDITORIUM

Lisa Stowers Anderson

The Scripps Research Institute, La Jolla, USA

19:30 Social Activities

BOAT ROUTE Detail information avalable soon

TXAKOLI WINE TASTING— Designation of Origin Basque Country Free activity ROOM: LABOA

09:00 – 10:00 Plenary talk: BRAIN MYELIN AS AN ENERGY SOURCE IN HEALTH AND DISEAS ROOM: MITXELENA AUDITORIUM Carlos José Matute Almau

CIBERNED, Biobizkaia y Universidad del País Vasco (UPV/EHU)

10:00 - 10:45 SELECTED SHORT TALKS- SESSION 2

Predicting appetitive response to food odours from expected gustatory properties and taste-liker status

Chair/s: Putu Agus Khorisantono

Glp-1 receptor agonists significantly impair taste function

Chair/s: Richard Doty

Chemosensory inputs to the drosophila navigation center maps odor to action

Chair/s: Kavin Nunez

Tuft (Taste) Cell-Like Subtypes in Human Biliary Inflammation: Chemosensory Epithelial Diversity Revealed

by Single-Cell Profiling

Chair/s: Dr. Keshavarz Maryam

10:45 - 11:15 Coffee Break

11:15 – 13:15 **Parallel sessions**

SESSION 7- CHEMOSENSORY LOSS IN LONG COVID

ROOM:MITXELENA AUDITORIUM

Symposium Organizer Thomas Hummel Finger Thomas

Long-term effects of COVID-19 on taste function: psychophysics, histology and molecular markers

Chair/s: Finger Thomas

Psychophysical assessment of gustatory dysfunction in COVID-19

Chair/s: Constantin Hintschich

Protocol for endoscopic sampling and histomolecular analysis of human olfactory cleft mucosa in an

outpatient setting

Chair/s: Van Gerven Laura

Parosmia following COVID-19: clinical aspects, pathophysiology, therapeutic perspectives

Chair/s: Susanne Weise

SESSION 7 - SELECTED SHORT TALKS

Olfactory substitution by the trigeminal system in humans: a promising therapeutic approach

Chair/s: Thomas Hummel

Grey matter alterations in persistent COVID-19-related quantitative and qualitative olfactory

dysfunction

Chair/s: Birgit van Dijk

11:15-12:15 SESSION 8- CHRONIC RHINOSINUSITIS AND OLFACTORY DYSFUNCTION

Symposium Organizer Steven Munger

Introduction-Chronic rhinosinusitis and olfactory dysfunction

Chair/s: Steven Munger

What nasal mucus can teach us about CRS-related olfactory los

Chair/s: Jennifer Mulligan

Restoring Smell in Chronic Rhinosinusitis with Nasal Polyps: Mechanistic Insights from Biologic Therapy and Real-World Outcomes

Chair/s: Jose Mattos

The MACRO Trial: Assessing the effectiveness of medical and surgical treatments for the treatment of chronic rinosinusitis

Chair/s: Carl Philpott

12:15-13:15 SESSION 8- HEALTHY SMELLING: HOW SMELLING WELL IMPACTS OUR WELL-BEING

ROOM: BAROJA

ROOM: BAROJA

Symposium Organizer Dr. Mehmet Mahmut

Cognitive and emotional well-being in people with an olfactory dysfunction

Chair/s: Michal Pieniak

Olfaction, nature contact, and human well-being

Chair/s: Gregory Bratman

How smelling good helps build healthy social and romantic relationships

Chair/s: Dr Mehmet Mahmut

Smell and Emotion – Myths, Mechanisms, and Clinical Implications

Chair/s: Ilona Croy

Healthy Smelling: Concluding Remarks

Chair/s: Anna Oleszkiewicz

11:15-13:15 SESSION 9 - VOMERONASAL ORGAN: DEVELOPMENT, FUNCTION, AND FUTURE PERSPECTIVES

ROOM: ARRIAGA

Symposium Organizer Jean-François Cloutier Paolo E. Forni

One System, Many Strategies: Morphological and Functional Diversity of the Mamalian VNS

Chair/s: Pablo Sanchez Quinteiro

The molecular diversity of the endoplasmic reticulum in vomeronasal sensory neurons is essential for maintaining their homeostasis and identity

Chair/s: Paolo E. Forni

Glomerular map formation in the control of social behaviours

Chair/s: Jean-François Cloutier

How conspecific chemical communication controls complex behaviors

Chair/s: Marc Spehr

SESSION 9 - SELECTED SHORT TALKS

The main and accessory olfactory pathways converge in distinct amygdaloid nuclei

Chair/s: Moritz Nesseler M

13.15 – 14:30 Lunch

14:30 – 16:30 Parallel sessions

14.30-16:30 SESSION 10- NEUROMODULATION AND PLASTICITY IN OLFACTORY CIRCUITS ACROSS SPECIES

ROOM: BAROJA

Symposium Organizer Elisa Galliano

Neuromodulators drive sex-specific behavioral plasticity in C. elegans

Chair/s: Sonu Peedikayil Kurien

Synaptic depression outperforms potentiation in learned stimulus discrimination under relative integration of opposing outputs

Chair/s: Andrew Lin

Neural bases of childhood olfactory memory in mice

Chair/s: Dejou Jules Dejou

Olfactory dopaminergic cells: key players in sexual odor perception

Chair/s: Serena Bovetti

SESSION 10 - SELECTED SHORT TALKS

Glial modulation of peripheral olfactory responses via Eaat2 in Drosophila

Chair/s: Alejandro Muñoz-Jimenez

Brain-Wide Coding of Stimulus Valence and Behavior in the Larval Zebrafish Chemosensory System

Chair/s: Thomas Frank

14.30-16:30 SESSION 11- ODORS AND THE BRAIN: A JOURNEY WITH THE SPANISH OLFACTORY NETWORK

ROOM: MITXELENA AUDITORIUM

Symposium Organizer Raúl Fernández Arias Angel Gonzalez Wong

Computational Studies of the Molecular Determinants of Human Olfaction: From Odorant Chemistry to Receptor Variation

Chair/s: Angel Gonzalez Wong

The Vomeronasal Organ as a Natural Chromatographic Column: Differential Processing of Chemical Signals in Ungulates

Chair/s: Irene Ortiz Leal

Neural mechanisms for state-dependent female socio-sexual behavior

Chair/s: Nicolas Gutierrez Castellanos

Uncovering the synaptic involvement of NG2-glia in the olfactory connectome

Chair/s: Raúl Fernández Arias

SESSION 11 - SELECTED SHORT TALKS

Signature-based therapeutic repurposing of HDAC1 and PARP-1 inhibitors in Parkinson's disease Chair/s: Paz Cartas Cejudo

Cystic fibrosis alters the structure of the olfactory epithelium and the expression of olfactory receptors affecting odor perception

Chair/s: Ignacio Caballero Caballero

14.30-16:30 SESSION 12 - AI IN OLFACTORY SCIENCE - BRIDGING CHEMISTRY, BIOLOGY, SEMANTICS, AND SENSOR TECHNOLOGY ROOM:ARRIAGA

Symposium Organizer Antonella Di Pizio

Al and the structural landscape of odorant receptors

Chair/s: Antonella Di Pizio

Code2smell: a bio-inspired model of combinatorial code for predicting olfactory perception

Chair/s: Topin Jérémie

Evaluating language models potential for capturing odor-perceptual and odor-semantic information

Chair/s: Thomas Hörberg Hörberg

Machine Learning for Molecular Sensing

Chair/s: Gianaurelio Cuniberti

SESSION 12 - SELECTED SHORT TALKS

Through the Fermi hole of fragrance: machine learning the quantum signatures of smell

Chair/s: Pinaki Saha

Watching degree of deterioration of dry aged meat, by an electronic nose equipped with artificial intelligence.

Chair/s: Jose Iñaki Alava Marquinez

Towards a Linear Framework for Predicting Olfactory Mixture Perception

Chair/s: Robert Pellegrino

16:30 – 18:00 Poster SESSION 2 and Coffee Break

18.00 – 19:30 Plenary talk: LOCUST OLFACTORY NEUROECOLOGY

ROOM: MITXELENA AUDITORIUM

ROOM: CHILLIDA

Bill Hansson

Director Max Planck Institute for Chemical Ecology. Department of Evolutionary Neuroethology. Germany

21:00 **Gala Dinner-** Hotel Carlton

09:00 - 10:00Plenary talk: INVISIBLE HERITAGE: SMELLS AS CULTURAL RECORDS ROOM: MITXELENA AUDITORIUM

Cecilia Bembibre

Deputy director MSc Sustainable Heritage University College London, London, United Kingdom

10:00-10:30 Coffee Break

Parallel sessions 10:30 - 12:30

10:30-12:30 SESSION 13- STRUCTURAL ADVANCES IN CHEMOSENSORY RECEPTORS ROOM: MITXELENA AUDITORIUM

Symposium Organizer Masha Niv Niv

Bitter Taste Receptors: What Have We Learned by Combining Structural Biology and Al

Chair/s: Masha Niv Niv

Activation and structural features of the related metabotropic glutamate (mGlu) and umami/sweet taste receptors

Chair/s: Laurent Prézeau

Molecular simulations assess the structure-based design of GPCR chemical modulators - methods and success stories

Chair/s: Hugo Gutiérrez de Terán Castañón

Structural Insights into How Mammals Discriminate Odorants

Chair/s: Hiroaki Matsunami Matsunami

SESSION 13 - SELECTED SHORT TALKS

Conformational landscape of the entire odorant receptor repertoire

Chair/s: Alessandro Nicoli

Optimizing odorant receptor stability and expresión

Chair/s: Puech Mathis

An updated phylogenetic classification of the human olfactory receptor repertoire

Chair/s: Sylvester Holt

10:30-12:30 SESSION 14 - SCENTED EMOTIONS: THE ROLE OF EMOTIONAL HUMAN CHEMOSIGNALS IN SOCIAL AND **EMOTIONAL EXCHANGE**

ROOM:BAROJA

Symposium Organizer Cinzia Cecchetto

Scented Emotions: The Role of Emotional Human Chemosignals in Social and Emotional Exchange

Chair/s: Cinzia Cecchetto

Neural insights into emotional body odors processing in affective disorders

Chair/s: Elisa Dal Bò

Spatio-temporal independent component analysis of sweat volatile organic compounds for the identification of potential human fear chemosignals: the POTION framework

Chair/s: Alberto Greco



Decoding Social Interaction: The Role of Emotional Body Odours in Group Dynamics

Chair/s: Maria Eleonora Minissi

Testing Human and Artificial Chemosignals in Mindfulness-Based Interventions for Social AnxietY

Chair/s: Elisa Vigna

SESSION 14 - SELECTED SHORT TALKS

State-dependent variation of human body odors: from molecular changes to perception *Chair/s: Antonie Bierling*

10:30-11:30 SESSION 15 - OLFACTORY FUNCTION IN MENTAL AND NEURODEVELOPMENTAL DISORDERS

ROOM:ARRIAGA

Symposium Organizer

Maria Geraldine Veldhuize

In Non-Clinical Depression in Undergraduates, Odor-Evoked Autobiographical Memories Are Relatively Less Vivid Than Those Evoked With Words or Photographs

Chair/s: Berçem Yar Yar

Differential effects of odors on reward-seeking behavior in individuals with anorexia nervosa

Chair/s: Androula Savva

Olfactory Function in Autism Spectrum Disorder: A Meta-Analytic Perspective with New Insights from Chemosensory Profiling and Neural Data

Chair/s: Isabelle Cullen

11:30-12:30 SESSION 15- SENSORY ALTERATIONS IN PATIENTS WITH CANCER: FROM FUNDAMENTAL

INSIGHTS TO CLINICAL SOLUTIONS

ROOM:ARRIAGA

Symposium Organizer Sanne Boesveldt

Oral somatosensory perception of cancer patients: variability and influence on eating experience

Chair/s: Anestis Dougkas

Drivers of nutritional disorders in patients with cancer

Chair/s: Meropi Kontogianni

The TASTY project: taste steering and taste and smell training in oncology patiënts

Chair/s: Madieke Douma

SESSION 15 - SELECTED SHORT TALKS

Clinical screening with color-associated olfactory testing: a crossmodal tool for early detection of neurodegenerative disorders

Chair/s: Sally Arnhardt

12.30 Closing Remarks

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