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SMELL

IN THE LITERATURE



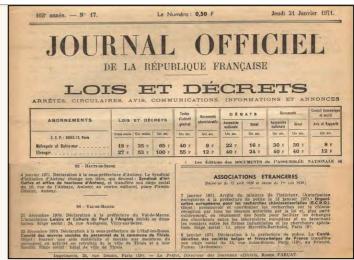
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Smelly homeopathy
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ECRO was inaugurated in 1970 at the International Summer Course on Odour Perception, in Utrecht, with the aim of promoting and coordinating research in chemoreception.

It was officially registered in Paris in 1971 and although it began as a European venture, it now has members from outside Europe and sees its function as world-wide. The goal of ECRO is to promote fundamental and applied research in chemosensory sciences, especially olfaction and taste. ECRO is financed by individual member subscriptions and by donations from industry and research institutions. Since 1978 ECRO has been affiliated with UNESCO.



The birth certificate of ECRO, 1971

The ECRO Board (2016-2018)



President: Prof. Peter Brennan, School of Physiology and Pharmacology, University of Bristol, UK

President Elect: Prof. Trese Leinders-Zufall, Institute of Physiology, Saarland University, Germany

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Biology and Genetics, Istanbul, Turkey

Co-opted member: Dr Marika Kapsimali, IBENS, Developmental Biology Section, Ecole Normale Supérieure, Paris, France

Board Communication Contact Address: Dr. Didier Trotier, ECRO General Secretary

Auditors: Prof. Thomas Hummel and Prof. Ottorino Belluzzi

Editor ECRO Newsletter: Prof. Paolo Pelosi University of Pisa, Italy

ECRO Honorary Members: Dr. R. Harper (Reading) Prof. Patrick Mac Leod (Jouy en Josas), Prof. E.P. Koster (Utrecht) Prof. A. Holley (Lyon), Dr. Dieter Glaser (Zurich), Dr. Karl-Ernst Kaissling (Seewiesen), Dr. Steve van Toller (Warwick), Dr. Gordon Birch (Reading).

Editorial

Dear readers,

in the last issue of these ECRO Newsletters an article contained some personal opinions on a published paper and the Authors asked who wrote that article. As a rule, I have never signed the pieces I wrote, because, apart from the regular contributions from the President, the Treasurer and the students, so far I have written all the articles (with perhaps only two or three exceptions) in the 20 issues published since I started editing these Newsletters in 2005.

Therefore I wrongly assumed that the regular readers of these pages knew that I was the author behind all the articles. From now on I shall not fail to sign every single of my contributions, as it was correctly suggested.

But this issue brings to the foreground an important question. The ECRO Newsletter is intended to be an expression of the all the ECRO community with varied contributions together with some discussions or debates on current issues.

So far has been the voice of a single member and, although I still enjoy doing this work, perhaps it would be more appropriate if I could collect more contributions from all the members. These could be of various types, such as:

- √ highlighting particularly interesting papers,
- ✓ exposing frauds and unethical behaviour,
- √ discussing topics of debate,
- ✓ reporting curiosities and anecdotes.
- ✓ reviews of books and events

and whatever could be interesting to scientists working in the field of chemical communication.

In this issue, I focused on one very important expression of what we might call *bad science* or perhaps more appropriately *fake science*, a huge fraud wearing the mask of science. We are talking about homeopathy, a philosophical discipline (to be generous) or a fairy tale (to be more realistic), that pretends to cure diseases with drops of pure water. Although the famous Nature paper from the group of Bienveniste in 1988 (*Nature* 333, 816–818) was proven to be a hoax, it was never retracted and still represents the scientific basis of homeopathy.

The concept behind is that water molecules retain the memory of solutes once present and long gone after so many dilutions that not even a single molecule was left.

The obvious consequence would be that, as the water we drink has been recycled so many times and has been in contacts with millions of *homeopathic remedies*, we should be immune from any disease just by drinking tap water.

I don't think the people selling *homeopathic* remedies on internet or *homeopathic doctors* (are they doctors?) prescribing their magic potions really believe in such nonsense.

I think the reason why homeopathic remedies are sold in respected pharmacies all around the world, while witchcraft and palm reading is confined to local folklore, is purely economical. There is a huge business behind this industry, at the expenses of people who die because they were "cured" with homeopathic remedies, instead of taking the appropriate medicines.

In the article I wrote for this issue, I focus on some curious and ridiculous aspects of homeopathy applied to olfactory disfunctions. It is interesting to observe how people advertising homeopathy have been attracted by the idea that smells are perceived through vibrations, not molecular interactions, wiping out decades of good research in favour of a disproved theory.

Recently, a friend of mine, upon asking for a medicine in a pharmacy was offered a homeopathic product instead (priced about five times more than the real medicine). She just replied: "Did you have serious problems with your chemistry exams as a student?".

I strongly believe it is the responsibility of all of us as scientists to expose such frauds and contribute to a better scientific information.

From the President

Dear ECRO members, colleagues and friends

Welcome to another newsletter and the first of my twoyear term as president of ECRO. Our 26th ECRO congress was held in Athens in September and was a resounding success, with 5 plenary lectures, 3 main symposia including Young Scientists Symposium, plus another 8 parallel symposia. Around 180 delegates heard about the latest advances in topics ranging from the regulation of olfactory receptor expression, to the expanding influence of chemosignals on social behavior, and from nutritional chemosensing and food intake regulation to the molecular basis for taste sensation in Drosophila. One of the joys of ECRO is the movement of ECRO congress around different European venues, providing the stimulation of different cultural environments and unexpected opportunities for new scientific interactions. Athens was a perfect destination in this respect, with the excellent conference venue right in the heart of Athens, just below the Acropolis and only a few hundred metres from vibrant and characterful cafés and restaurants, surrounded by thousands of years of civilization. But the main reason for the success of the congress was undoubtedly the organizational skills of Marika Kapsimali, who I'd like to thank once again for all her hard work.

The congress saw a changing of the guard for the ECRO board. Welcome to the new president-elect Trese Leinders-Zufall, and to Stefan Fuss who is the new elected board member. Thanks once again to the outgoing ECRO board members, past-president Anna Menini and elected board member Teun Dekker, for their service and contribution to ECRO over many years. Thanks also to those colleagues who took the opportunity to talk to me at the Athens congress, with advice and suggestions for how ECRO could be made more effective. I'll be taking them for further discussion and consideration at our next ECRO Board meeting at the beginning of December. Thoughts now turn to our next congress, which will be held from 2-5 September 2017 in Cambridge, UK.

To be more precise, the congress venue will be the purpose built conference centre at the Wellcome Genome Centre in Hinxton just south of Cambridge itself. The local organizing committee, of Greg Jeffries, Darren Logan, Simone Weyand are busy making plans, so watch out for the forthcoming call for symposia.

Finally, at a time of such winds of change in European and global politics it's more important than ever that we continue to foster international scientific collaboration and work together meet future scientific challenges. The ability of **ECRO** to promote chemoreception research and invest supporting the next generation of researchers depends directly on an active and flourishing membership. We need to increase the number of members, not only to provide direct income through their subscriptions, but also to maximize our support from the Polak Foundation, which in turn depends on the number of ECRO members. So I would like to implore you all not only to maintain your existing membership, but also to encourage colleagues, group members and especially students to become involved in ECRO and take advantage of the support that ECRO provides. We always welcome feedback in how ECRO can more effectively serve the needs and interests of the chemosensory research community. So if you do have any suggestions or want to become more involved then please get in contact with myself or any other members of the board.

I would like to wish you all an enjoyable and successful new year.

Peter Brennan

Treasurer's report

At the ECRO Congress 2016 the general assembly was held, and the audited accounts for ECRO were presented. These are summarised below.

Balance carried over from 2013	Euro
Membership Account	62170.51
Balance at the end of 2014	60854,15
Conference Account	18181.57
Total Assets	79035.82
Income	17653.38
Expenditure	(18339.80)
Net Change	315.12

Balance carried over from 2014	Euro
Membership Account	79,035.82
Balance at the end of 2015	78,864.81
Conference Account	22,646.03
Total Assets	101,510.84
Income	103,405.37
Expenditure	(85,311.12)
Net Change	18,094.25

Our current assets at September 2016 were 103699 Euro.

Unfortunately the number of paid up members have been falling. The chart below shows the trend over the last few years. We encourage young members to renew their subscriptions each year. This will help us to increase the number of grants that we can award every year to young scientists.

In autumn 2004, Ernest and Ghislaine made a large endowment to ECRO and AChems, established as "The Elsje Werner-Polak Memorial Fund in memory of our niece, gassed by the Nazis in 1944 at age 7." The annual income from this endowment is distributed to AChems and ECRO proportionately to the number of members in each organisation and is pledged for

- Awards to students, post graduates or junior researchers
- Student and invited speaker travel for annual meetings
- Symposia, workshops and seminars
- Seed grants e.g. to allow data to be collected for regular grant applications
- Meeting attendance fees for students
- Other similar purposes such as outward reach The amount of money we receive each year from the Polak foundation is dependent on the number of paid up members that we declare, so the greater the number of paid up members the better placed we shall be to support more young scientists.

We were very happy with the efficient organisation of the ECRO 2016 congress in Greece, and in particular thank Marika Kapsimali for her tireless work, and the local organisers Symvoli who did an excellent job. We are now in the process of organising ECRO 2017 at the Sanger Institute near Cambridge, UK, and news about this will be forthcoming.

Recent Student grants awarded

J.H.B. de Groot
Panagiota Tsitoura
Danja Porada
Maria Jimena Ricatti
Amir Banner
Beatriz Juan Córdoba
Johanna Bendas
Benjamin Stein
PengFei Han
Aline Robert-Hazotte
Qian Li

Krishna Persaud (ECRO Treasurer)





That captivating smell of roast lamb

Roast lamb is special and delicious for a lot of people all around the world and Chinese are no exception.

Although not in the best tradition of their cuisine, lamb has fast conquered the taste of Chinese people, first introduced by Muslim populations from the west and by

Mongolians from the north, has now become one of the typical dishes all around China.

The peculiar aroma of lamb meat (which we must observe is not appreciated by everyone) is due to medium chain fatty acids from six to ten carbon atoms, known by the revealing names of caproic, caprilic, capric and so on (capra is goat in latin). These acids are horrible to smell when you open the bottle in the lab, but taste irresistible at the low concentrations released by meat and when mixed with the other components of roast meat.

But lamb meat is expensive and even in China where food is comparatively cheap, its cost is posing some problems to small restaurants that cannot increase their prices above a certain level. However, if lamb is expensive, there are alternatives. The canals that criss-cross the city of Beijing are home to large populations of fat rats feeding on heaps of rubbish and the leftovers of street markets. And this explains why you can enjoy skewers of lamb at the price of 10 for one euro. But, do they really taste like lamb? Here comes the ingenuity of the Chinese

and their long tradition not only in culinary arts, but also in chemistry. To acquire that special flavor that make you believe you are tasting real lamb meat, the chunks of rats are marinated in lamb urine. Magic! People buy them by the dozen and leave convinced of having done a good deal.

You may not believe these stories, these could be just rumours going around and getting amplified and enriched as they passed between people with a bit of imagination.

But they might help explaining a case recently reported in the news. Someone felt sick after eating a number of these skewers and went to hospital. The cause of his problem was... rat poison... just a coincidence?

Paolo Pelosi



Add scent to your gas

This is the idea of a French inventor called Christian Poincheval, who has dedicated several years to counteract the unpleasant odour of farts.

He claims that his pills called *Pillule Pet* (fart pill) do the trick and add scent to your flatulence.

The idea came to him during a meal with friends:

"We were at table with friends and after a hearty meal, we almost suffocated as our farts were smelly. The winds were not very pleasant for our



fellow diners. I had to do something."

We wonder with what sort of people this guy regularly mixes, who quite normally engage in such entertainments.

"I wanted to undress the shame you feel when you fart at the table, the fear you feel that the fart may travel farther."

The pills come in a variety of scents, from roses, violet and



even chocolate (I believe the colour link was only coincidental). A ginger pill, released for Valentine's Day is intended, to help "your sweetheart feel your love!" Can you imagine anything more romantic than a scented concert?

And there is a version also for dogs.

"If you are tired of rolling down the car windows during long car trips then this is for you!" he writes advertising his pills for pets on the website <u>pilulepet.com</u>, where you can buy his products, ...if you belong to that sort of people.

Paolo Pelosi

A stinky weapon

With an opposite design in mind, you might want to cause discomfort and produce unpleasant situations with a bad smell.

This was the project "Who Me", developed during the Second World War by the Americans to be used against German officers.

Who Me contained a mixture of sulphurous compounds strongly smelling of fecal products. It was discretely sprayed on the victims to



humiliate them and demoralise the German forces.

But there was a problem: the smell, probably owing to the high volatility of the compounds used, was difficult to control and often this weapon attacked the operator before reaching the intended target.

Paolo Pelosi



Olfactory memories from Japan

James Falconer Kirkup, FRSL (23 April 1918 – 10 May 2009) was a prolific English poet, translator and travel writer. He wrote over 30 books, including autobiographies, novels and plays. He wrote under many pen-names including James Falconer, Jun Honda, Andrew James, Taeko Kawai, Felix Liston, Edward Raeburn, and Ivy B. Summerforest. He became a Fellow of the Royal Society of Literature in 1962.

The following passage is a vivid and lively description of the streets of Osaka, as perceived by the nose.

It is regrettable that such experiences become more and more rare in our cities, where the smells of foods, flowers and human activities have been replaced by the exhaust gases from cars and motorbikes or sometimes fumes from factories.

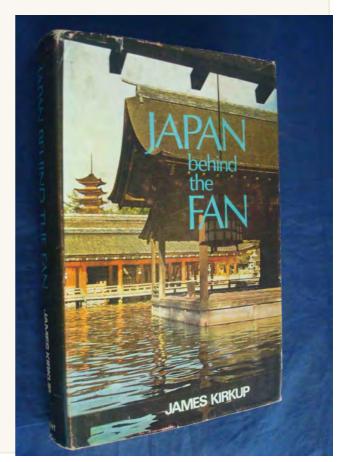
Paolo Pelosi

from "Japan Behind the Fan", 1970, by James Kirkup

The smells of Japan

I knew at last, as I walked the winter streets of Osaka, that I was back in Japan, because of the peculiarly delightful fragrances of the air. Just as one knows one is in France from the smells of Gitanes, coffee, chestnuts, beer and garlic, so one knows one is in Japan from the mingled aromas of bath-fumes, woodsmoke, Peace and Ikoi cigarettes, hot soy sauce, dried fish, pickles and seaweed. But the most typical fragrance of all, and one uniquely Japanese, is that of pomade: the crisp, clear air of winter was drugged with the scent of rich, black, pomaded hair.

It is spiced too with the clean, fresh smell of Japanese bodies, savory with the breath of peppery rice crackers wrapped in seaweed, laced with hot sake and the sweet tang of boot polish rising from the rows of shoe-shiners kneeling on bits of old tatami matting along the edges of the pavements, where their little tin braziers were odorous with burning sushi and o-bento boxes - the disposable wood-shaving lunchboxes of Japan. All this had haunted my nostrils ever since I had left Japan just over a year ago, and now came back to me like a remembered dream perfectly realized. At every step I was wafted along on waves of this delicious mixture of erotic aromas.



Homeopathy and the sense of smell

We are all aware of how sensitive is the sense of smell, reaching astonishing performances. The antenna of an insect can detect just few molecules!

But, what is the limit of biological systems? In some

cases we can go down to a single molecule, actually single events of ionchannels opening have been recorded... so why don't make the final jump and get a response to zero molecules? From one to zero it is only a small step. decrease the stimulus by one molecule!

I know what you are

muttering at this point, ... "do you think I am so stupid to follow this crazy reasoning? even a child would see the absurdities of such logic!".

Yes, of course small children would not buy this sort of argument, but there are adults, calling themselves scientists and medical doctors, who can follow such nonsense, they believe that a solution without a solute, where not even a molecule of substances other than water is present, can cure diseases and make large profits at the expenses of swindled people.

They have a discipline (or a sort of philosophy, science fiction or harrypottery, as you might like to define) they call *homeopathy*, which

was generated out of the blue by the fervid imagination of a person called Samuel Hahnemann in 1796.

The principle of homeopathy is well described by this sentence, describing how to magic a magic potion out of common table salt, that they call Natrum Muriaticum, or, to make the name even more cryptic, just Nat Mur:

"...the coarse salt is boiled and filtered; the resultant substance is triturated with lactose sugar to make the mother tincture. The mother tincture is then diluted and shaken, or

succussed, many times to create the homeopathic remedy. According to the National Center for Complementary and Alternative Medicine, most homeopathic remedies are so dilute that no molecules of the healing substance remain; however, homeopaths believe that the substance has left behind its imprint, or essence, in the remedy."

Believe! This is the key behind the attitude and behaviour of homeopaths, believing of course does not require understanding, on the contrary, you believe in something you cannot prove scientifically, otherwise you do not believe any more, you just see.



Certainly anyone is free to believe whatever (s)he likes, witches, palm readers and fortune tellers, but the problem is that belief in the case of homeopathy is smuggled as scientific evidence. And based on such fake scientific evidence, they pretend to cure diseases with nothing else than pure water, but sold at a price.

Now we come to our field, olfaction. Could homeopathy miss the opportunity of exploiting the general ignorance and that aura of mystery and magic that still dominates among most people when we talk about smells?

But homeopaths are aware of many years of scientific research in the field of olfaction and very appropriately have selected the only reports that have been proved wrong by the scientific community. Here is an interesting passage, part of a longer discussion on how to use homeopathy to cure olfaction disorders

How does the olfaction method work?

Homeopathy depends on the transfer of energetic information into the body to trigger a healing response - it doesn't use the chemicals of conventional medicine. While the pills and liquids used in the preparation of a remedy act as carriers for this information, the inhalation of their vapours produces equally good effects.

How this happens is not yet fully understood but recent research is providing clues. For example, we now know that the human nose identifies odours as vibrational patterns and not by odour molecules binding to receptors as was previously thought. With this knowledge, it is easier to understand how olfaction doses produce the results they do - its all about exposing the body to vibrational patterns encoded within the remedy.

For the millions worldwide who use homeopathy though, how it works is far less important than the fact that it does. So next time you need a remedy, why not try a dose by olfaction... you too can then say, "I sniff at homeopathy."

Should we rather say: "I sniff a rat in homeopathy".

These vibrational patterns can cure a lot of dysfunctions related to olfaction, even anosmia!

This is good news, because, as far as we know, often anosmia is caused by the absence or the non function of genes encoding olfactory receptors. Total anosmia, of course can have more basic anatomical defects. Well, few drops of water, that during their history have felt the presence of some foreign molecules can do the trick. And what these magic molecules would be? One of the most common remedy is Nat-Mur, the common table salt already mentioned. The healing powers of sodium chloride (that persist in the water it has visited) can be related to the Ocean, mother ocean, a concept linked to the maternal womb, to which we can add a pinch of ...salt?, no of Biblical history, if we remember that Loth was turned into a statue of salt. But, why don't you stop and savour that poetic words of David Lilley, sprouting from the web site: http://www.britishhomeopathic.org/bha-charity/how-wecan-help/medicine-a-z/nat-mur/

Behind the rather grand name of Natrum muriaticum, hides sodium chloride or common salt. Common it may be, but it provides the homeopathic materia medica with a remedy of profound importance in the treatment of emotional suffering: the pangs and hurts of life, which are most often hidden from others.

The main source of sodium chloride is the sea.

The relationship between Nat mur, common salt, and the ocean is immediately apparent; to a child they are as one. It was from the bosom of the ocean, in primordial times, that the first primitive and undifferentiated life forms sprang. The ocean is the mother and source of all organic life, and Natrum muriaticum is her main mineral constituent.

Mother Ocean is not like Mother Nature. She is chill and forbidding.

Unlike Mother Nature the ocean is an aloof, impersonal and often harsh mother. She does not cosset or spoil her children; she stands back and leaves them to fend for themselves. She appears distant, cold and unfeeling and applies discipline with uncompromising strictness and severity.

The Nat mur personality

The role of the mother figure is particularly critical in the healthy development of the Nat mur personality. There is a deep and often unfulfilled need for the security and warmth of maternal love, protection and nurturing in the Nat mur being, with an inability or unconscious reluctance to solicit, attract or accept the very sustenance they long for

If you need a break from your work and want to have a good laugh at all this nonsense, look at the following websites, picked-up among the many you can search yourself just typing the word *homeopathy* with *olfaction* or *anosmia* or *smell* and similar.

homeopathyplus.com/i-sniff-at-homeopathy/

www.starhomeopathy.com/anosmia.php

http://www.drhomeo.com/odour/homeopathic-remedies-for-body-odour/

Did you know that homeopathy can also cure nasal polyps?

You do not need the scalpel of the surgeon any more, but just use Calc carb, which is short for Calcarea carbonica, what we traditional chemists, not yet initiated to the magic powers of homeopathy, plainly call calcium carbonate. Here is the recipe to prepare this concoction:

Calcarea carbonica is a preparation used in homeopathy. It's made from an inner lining in shells that have been prepared in a process known as trituration, which involves grinding something into a very fine powder for the purpose of purifying it. The remedy is provided in small pills that are placed under the tongue and allowed to dissolve slowly.

What is in the pills we do not know, certainly not calcium carbonate, which is insoluble in water. In any case, according to the homeopathy basic principles, the medicament (or whatever you want to call it) is diluted so many times that not a single molecule is left.

If you still do not believe in these magic potions, why not try Sinuswars, the ultimate remedy for curing all sort of smell and taste problems:

https://www.sinuswars.com/remedies/SinusWars30.asp SinusWars30 -An All in One Loss of Smell and Taste remedy:

- Improving loss of smell
- · Improving loss of taste
- Reducing a loss of smell and taste caused by Nasal Polyps
- Reducing a loss of smell and taste caused by sinus problems and allergies
- Treating anosmia (the complete loss of one's ability to smell)
- Alleviating hyposmia (partial loss of one's ability to smell)
- Treating ageusia (a complete loss of one's ability to taste)
- Reducing hypogeusia (partial loss of one's ability to taste)
- Assisting with parosmia (a condition were one's sense of smell is distorted or where one smells certain odors that are not present, i.e. phantom odors)
- Alleviating dysgeusia (a condition were one tastes abnormal phantom tastes)

We can guarantee that the treatment is perfectly safe (except for your wallet): only contains pure water.

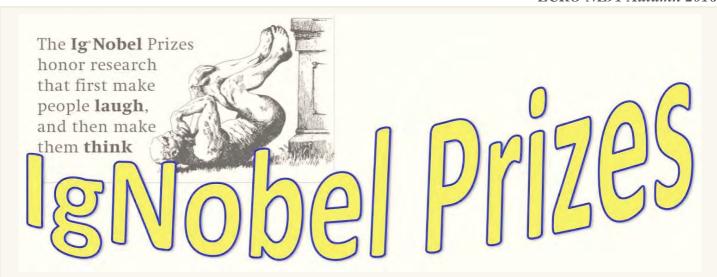
To build better credibility (among the stupids and ignorants), homeopaths have a faculty, where they attend several courses and get qualified as homeopath doctors!

http://facultyofhomeopathy.org

Yes, they call themselves doctors! But this should not surprise you, don't we have the expression *witch doctor*?

Paolo Pelosi





As usual we present a concise report of the IgNobel Prizes assigned last September at the 26th First Annual Ig Nobel Prize Ceremony, at Harvard's Sanders Theatre.

Recently the IgNobel Prizes have been assigned to pieces of research not particularly funny or curious, as it was in the past.

The works selected this year, as well as those of the previous edition, represent, with few exceptions, only studies useless and of low level, while they do not make us laugh (first) nor think (later), to qualify for IgNobel Prizes, according the the motto of this Institution.

Here below is a summary of prizes assigned for different

categories, taken from the website:

www.improbable.com/ig

I would like to comment on only two of them, while the others do not deserve special interest and are reported here only for the sake of information.

The Prize for Literature is assigned to Fredrik Sjöberg "The Fly Trap", wonderful little book that I have very much enjoyed reading, the where Author communicates his pleasant life on a small island, fully immersed in an uncontaminated nature. His methodical days, where small things make life worthwhile, flow regularly on the background of his passion as a collector of hoverflies.

In the simplicity of his narration, he shares with readers the joy of small things and the excitement of always rediscovering his backyard.

It is a wonderful book, deserving more serious and prestigious prizes than this one.

The Prize for Physics is assigned to two pieces of research both serious and of some interest, where the only curious element is that black gravestones are particularly attracting to dragonflies.

Paolo Pelosi

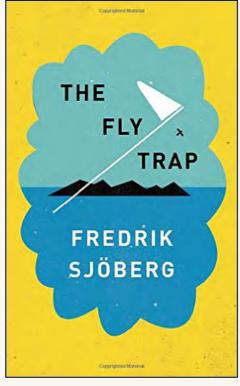
LITERATURE PRIZE [SWEDEN] — Fredrik Sjöberg, for his three-volume autobiographical work about the pleasures of collecting flies that are dead, and flies that

are not yet dead.

black tombstones

REFERENCE: *The Fly Trap* is the first volume of Fredrik Sjöberg's autobiographical trilogy, *En Flugsamlares Vag* ("The Path of a Fly Collector"), and the first to be published in English. Pantheon Books, 2015, ISBN 978-1101870150. Fredrik Sjöberg attended the ceremony.

PHYSICS PRIZE [HUNGARY, SPAIN, SWEDEN, SWITZERLAND] — Gábor Horváth, Miklós Blahó, György Kriska, Ramón Hegedüs, Balázs Gerics, Róbert Farkas, Susanne Åkesson, Péter Malik, and Hansruedi Wildermuth, for discovering why white-haired horses are the most horsefly-proof horses, and for discovering why dragonflies are fatally attracted to



REFERENCE: "An Unexpected Advantage of Whiteness in Horses: The Most Horsefly-Proof Horse Has a Depolarizing White Coat," Gábor Horváth, Miklós Blahó, György Kriska, Ramón Hegedüs, Balázs Gerics, Róbert Farkas and Susanne Åkesson, Proceedings of the Royal Society B, vol. 277 no. 1688, pp. June 2010, pp. 1643-1650.

REFERENCE: "Ecological Traps for Dragonflies in a Cemetery: The Attraction of Sympetrum species (Odonata: Libellulidae) by Horizontally Polarizing Black Grave-Stones," Gábor Horváth, Péter Malik, György Kriska, Hansruedi Wildermuth, Freshwater Biology, vol. 52, vol. 9, September 2007, pp. 1700–9. Susanne Åkesson attended the ceremony

PSYCHOLOGY PRIZE [BELGIUM, THE NETHERLANDS, GERMANY, CANADA, USA] — Evelyne Debey, Maarten De Schryver, Gordon Logan, Kristina Suchotzki, and Bruno Verschuere, for asking a thousand liars how often they lie, and for deciding whether to believe those answers.

REFERENCE: "From Junior to Senior Pinocchio: A Cross-Sectional Lifespan Investigation of Deception," Evelyne Debey, Maarten De Schryver, Gordon D. Logan, Kristina Suchotzki, and Bruno Verschuere, Acta Psychologica, vol. 160, 2015, pp. 58-68. Bruno Verschuere attended the ceremony.

BIOLOGY PRIZE [UK] — Awarded jointly to: Charles Foster, for living in the wild as, at different times, a badger, an otter, a deer, a fox, and a bird; and to Thomas Thwaites, for creating prosthetic extensions of his limbs that allowed him to move in the manner of, and spend time roaming hills in the company of, goats. REFERENCE: GoatMan; How I Took a Holiday from Being Human, Thomas Thwaites, Princeton Architectural Press, 2016, ISBN 978-1616894054. REFERENCE: Being a Beast, by Charles Foster, Profile Books, 2016, ISBN 978-1781255346. Charles Foster, Thomas Thwaites attended the ceremony.

REPRODUCTION PRIZE [EGYPT] — The late Ahmed Shafik, for studying the effects of wearing polyester, cotton, or wool trousers on the sex life of rats, and for conducting similar tests with human males.

REFERENCE: "Effect of Different Types of Textiles on Sexual Activity. Experimental study," Ahmed Shafik, European Urology, vol. 24, no. 3, 1993, pp. 375-80.

REFERENCE: "Contraceptive Efficacy of Polyester-Induced Azoospermia in Normal Men," Ahmed Shafik, Contraception, vol. 45, 1992, pp. 439-451

PERCEPTION PRIZE [JAPAN] — Atsuki Higashiyama and Kohei Adachi, for investigating whether things look different when you bend over and view them between your leas.

REFERENCE: "Perceived size and Perceived Distance of Targets Viewed From Between the Legs: Evidence for Proprioceptive Theory," Atsuki Higashiyama and Kohei Adachi, Vision Research, vol. 46, no. 23, November 2006, pp. 3961–76.

Atsuki Higashiyama attended the ceremony

CHEMISTRY PRIZE [GERMANY] — Volkswagen, for solving the problem of excessive automobile pollution emissions by automatically, electromechanically producing fewer emissions whenever the cars are being tested.

REFERENCE: "EPA, California Notify Volkswagen of Clean Air Act Violations", U.S. Environmental Protection Agency news release, September 18, 2015.

MEDICINE PRIZE [GERMANY] — Christoph Helmchen, Carina Palzer, Thomas Münte, Silke Anders, and Andreas Sprenger, for discovering that if you have an itch on the left side of your body, you can relieve it by looking into a mirror and scratching the right side of your body (and vice versa). REFERENCE: "Itch Relief by Mirror Scratching. A Psychophysical Study," Christoph Helmchen, Carina Palzer, Thomas F. Münte, Silke Anders, Andreas Sprenger, PLoS ONE, vol. 8, no 12, December 26, 2013, e82756.

Andreas Sprenger attended the ceremony.

PEACE PRIZE [CANADA, USA] — Gordon Pennycook, James Allan Cheyne, Nathaniel Barr, Derek Koehler, and Jonathan Fugelsang for their scholarly study called "On the Reception and Detection of Pseudo-Profound Bullshit".

REFERENCE: "On the Reception and Detection of Pseudo-Profound Bullshit," Gordon Pennycook, James Allan Cheyne, Nathaniel Barr, Derek J. Koehler, and Jonathan A. Fugelsang, Judgment and Decision Making, Vol. 10, No. 6, November 2015, pp. 549–563.

Gordon Pennycook, Nathaniel Barr, Derek Koehler, and Jonathan Fugelsang attended the ceremony.

ECONOMICS PRIZE [NEW ZEALAND, UK] — Mark Avis, Sarah Forbes, and Shelagh Ferguson, for assessing the perceived personalities of rocks, from a sales and marketing perspective.

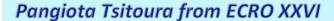
REFERENCE: "The Brand Personality of Rocks: A Critical Evaluation of a Brand Personality Scale," Mark Avis, Sarah Forbes, and Shelagh Ferguson, Marketing Theory, vol. 14, no. 4, 2014, pp. 451-475.

WHO ATTENDED THE CEREMONY: Mark Avis and Sarah Forbes

Students'

Every year ECRO offers many students and young scientists the opportunity of attending Conferences or visit other labs for short periods, providing them with grants. In this space, they report on their experiences, both scientific and human.

Please, go to the end of this section for some advice and suggestions on how to write your report $\star\star\star$



Attending the XXVIth Annual Meeting of the European Chemoreception Research Organization in Athens has been a great opportunity to present our work on allosteric regulation of mosquito odorant receptors (ORs). Over the last years, we have been engaged in the study of important molecular players of insect olfaction, with a special focus on selected members of the malaria vector Anopheles gambiae OR repertoire. Insect odorant receptors have emerged as a novel family of ligand-gated ion channels, whose study is receiving much attention both in the context of basic biology and evolution and also for the potential for pest control applications. Insect ORs are unrelated to the vertebrate ones, both structurally genetically; however there are interesting and commonalities between the insect and vertebrate olfactory systems.

Although insect chemoreception was a little bit underrepresented in ECRO2016, however it proved a good opportunity to get a picture of the broadness and wealth of what is considered as «chemosensory research» nowadays. The program consisted of plenary lectures, numerous symposia including the young scientists' one, and poster sessions, all fostering scientific discussions; we will attempt to indicatively highlight a few points.



First, a number of important questions related to fundamental chemosensory biology were touched upon, such as the monogenic/monoallelic OR expression in olfactory sensory neurons and taste bud cell renewal. For the former, it was very interesting to see how a network of interchromosomal enhancer interactions might be implicated in the singular OR expression (S. Lomvardas), while results were also presented supporting the transient «one-neuron-oligo-receptors» hypothesis, as tested with single-cell transcriptomic sequencing (Q. Li). Concerning the latter, taste bud cell renewal emerged not only as an interesting biological question concerning progenitor proliferation differentiation, shown by investigation of the major signaling pathways involved possible implication of neurotrophic factors (L. Barlow), but was also examined in light of the differential effects of radiation and chemotherapy to the renewal process, as both treatments affect negatively the taste.

The topics otherwise covered a wide range, bearing witness that chemosensation, beyond perception of odors and taste, extends to detection of lipids, carbon dioxide and amino acids, and is further related to nociception, nutrient sensing in the gut, immune response and airway inflammation diseases, to name but a few. Reciprocally, the presentations addressing the effects of various pathophysiological conditions on system, addition chemosensory in aforementioned cancer treatments, such as ageing, neurodegenerative diseases and depression treatments, as well as the existing natural human diversity, were also intriguing. In another context, it must be clearer for the ECRO2016 attendants how many aspects exist in the sought-after discovery and use of new sweeteners, ranging from the development of screening assays, to their effect to gut or putative behavioral/brain changes that could emerge upon chronic consumption of the sweeteners.

In conclusion, ECRO2016 was an excellent overview of the important questions that are being raised in fundamental level and the tools used to address them, but also of the potential applications to industry, nutrition, health and well-being, as well as behavior. The evidence that olfactory cues might be associated with resilience and determination, as well as maternal behavior in mice left many of us with philosophical questions. Beyond the scientific program, I would like to mention the friendly environment created by the ECRO board, as well as every effort taken by the organizers and especially Dr. Marika Kapsimali to make the meeting both constructive and pleasant, and the participants feel «at home». I would like to once again express my gratitude to the European Chemoreception Research Organization and the Polak Foundation for generously supporting my participation in the meeting.

Panagiota Tsitoura National Centre for Scientific Research «Demokritos»

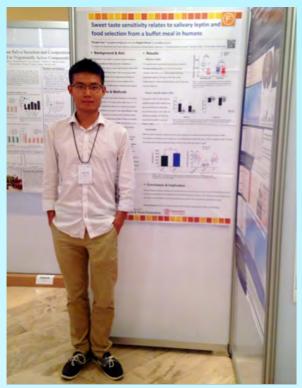
Penfei Han from ECRO XXVI

My name is Pengfei Han. I was a doctoral student from the University of Queensland, Australia, and my thesis investigated the relationships between chemoreception and food behaviors in humans. I was honored to be awarded of the ECRO travel grant to attend the XXVIth meeting held in Athens, Greece from the 7th to 10th Sep, 2016.

The ECRO annual meeting, as one of the leading conferences in chemosensory area, attracts scientists and researchers around the world every year. At the XXVIth meeting, all the keynote speakers gave informative talks at a very high level. For example, I was fascinated by the talk "Interrogating sweet taste cells" given by Prof. Robert Margolskee. Prof. Margolskee introduced the basic mechanisms of sweet taste transduction, and elaborated on the T1R taste receptor independent sweet taste perceptions in animal models. His talk not only reinforced my knowledge and understanding of the molecular mechanism of taste transduction, but also inspired me on the ideas downstream human studies, such as the interrelationships between sweet taste, food preference and energy consumption. For example, how does the T1R3 independent sweet perception influence food choice and intake in humans? Another deep feeling from attending ECRO was that it widely covered topics in the chemoreception area, from taste mechanisms at molecular level, to improvement of olfactory perceptions olfactory training; from the oral pungent sensation to the taste-based genetic variations in HIV medication acceptance or avoidance. The meeting was successful as a window to learn the importance of the chemoreception research.

The poster sessions were also quite impressive. First, all the posters were displayed through the whole period of the three-day meeting in a room just next to the main venue. Hence, we had plenty of time to present our own works to others and discuss them with other researchers.

I was captured by one poster entitled "Odor objectrelated activity in PCC increases with number of stimulated senses". I talked to the author who was from Sweden about the details of the study, and the potential of applying multiple sensory modalities for olfactory



tanning in smell-loss patients. The poster interested me as I just started to do research on the mechanism and treatment of olfactory dysfunction. The conference poster session was beneficial, especially for research student and younger researchers, to communicate the most recent research questions and results in the chemosensory field.

Every moment was a learning experience and I appreciated for the social gatherings. I enjoyed the short trip and dinner on the last day where I met and talked to one researcher from the U.S. We had a pleasant chat on the research and personal lives in different countries. And he encouraged me to learn techniques from different labs in.

Finally, I would like to thank the ECRO for supporting my trip to Athens and I also want to thank the organizers of this great meeting. I was so proud to be part of the chemoreception community. The chemoreception is such a vibrant and fascinating research field that I definitely hope to attend the future meetings of ECRO, and other chemosensory conferences.

Pengfei Han The University of Queensland, Australia

Beatriz Juan-Cordoba from ECRO XXVI

My name is Beatriz Juan-Cordoba and I am a PhD Student in the Doctoral Program in Psychology at the University of Granada, in Spain. My PhD Supervisor is Prof. Milagros Gallo and our lab is focused on taste recognition memory and the effect of aging.

As a PhD Student without funding, receiving one of the ECRO travel grants gave me the opportunity to attend the XXVIth Annual Meeting of the European Chemoreception Research Organization in Athens, Greece. It has been an enriching opportunity in which I could meet some inspiring people and attend stimulating meetings of researchers working on interesting projects both in taste and olfaction areas. One thing of the meeting I really enjoyed was the interdisciplinary approach. As a psychology student I have been able to acquire new and useful knowledge from different disciplines that can enrich my research in the taste area.

One of the lectures I enjoyed the most was that entitled "Sour: More than a Primary Taste" by Dr. T. Finger about sour as a compound sensation. He explained the transduction mechanisms, the direct acid activation of acid nerve-fibers and the taste quality map. I also interesting many other talks, for example "fMRI activation during hunger and satiety in young and older individuals with metabolic syndrome" by C. Murphy because it was related to our research, i.e., the influence of aging in taste processing. I also enjoyed "Oral and intestinal sweet taste T1R2/R3 receptors in mice; effect on consumption, over weight, blood glucose and insulin levels" by G. Hellekant because I find really interesting research on overweight and obesity.

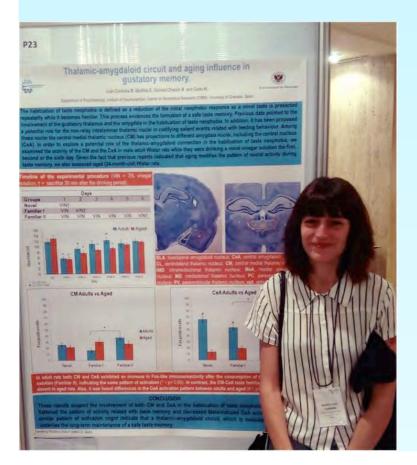
The poster's sessions were very important for me because I presented part of my data on my poster entitled "Thalamic-amygdaloid circuit and aging influence in gustatory memory". At this point, I was able to explain my data and to talk with researchers of different fields, which provided me new ideas and very useful feedback. I really felt welcome and learned many things in these sessions.

Regarding the ECRO policy with young scientists, I really appreciate the opportunities that the society provides through travel grants to attend the meeting in order to present their research projects to well-known experts in the area

Finally, we can't forget the fabulous place where the meeting took place. Staying in Athens was a beautiful experience and I hope to visit it again in the future.

In all, I want to thank you for allowing this experience to me. I am very grateful to have been considered a good candidate for one of your travel grants and I would recommend it to any student in the field of chemoreception sciences.

Juan-Cordoba University of Granada, Spain



Maria Jimena Ricatti from ECRO XXVI

First at all, I would like to thank the board for giving me the opportunity to attend the 26th annual meeting of the European Chemoreception Research Organization in Athens, receiving one of the 2016 ECRO travel grants.

It was the first time for me in Greece, and the third time at an ECRO congress, after Leuven and Dijon. I have to say that I really liked the experience. From the location under the Acropolis, the program of the meeting and the reception dinner. Moreover, I have to mention that every single detail of the meeting was carefully organized by Dr. Marika Kapsimali.

As an MD and PhD in neuroscience, graduated at the University of Buenos Aires (Argentina), chemical senses in human subjects represents the most exiting topic for me. For this reason, I was pleased to attend the Symposium on "Trends in human chemosensation: olfactory enhancement and chemosignalling" like the one given by Professor Thomas Hummel from Germany, among several interesting talks.

In addition, I have had the possibility to hear great speakers addessing also relevant topics on worldwide health issues, as nutritional chemosensing and food intake. This symposium was organized by Claire Murphy, Annick Faurion, Eugene Roura and even David Val-Laillet, who is well known by his work on dietary sugars intake and obesity.

During the poster session I have had the chance to present my results on Taste in Parkinson's Disease, a four-year perspective evaluation on italian patients, conducted at the Department of Neurosciences, Biomedicine and Movement Sciences, Anatomy and Histology Section, University of Verona in collaboration with the Neurology Unit at the Major Civil Hospital of Verona, Italy.

This experience gave me the chance to discuss with members of the scientific community about the strengths and weaknesses of my work before publishing. I felt very comfortable exchanging ideas with them, even asking for some advice, and also it was an opportunity to speak using my English, Italian and Spanish.

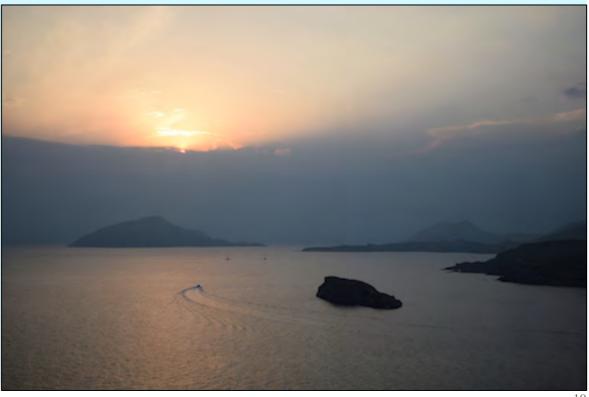


The meeting had so many other interesting social events, and talking about this, one thing I enjoyed especially about the congress was the Cape Sounion tour and gala dinner. We had the unique opportunity to see an exceptional sunset over the Aegean Sea and islands, with the Temple of Poseidon just behind us, followed by an exquisite mediterranean dinner at Vouliagmeni. This aspect of the congress was also excellent, the participants were very open to conversation and it was funny to see all those people enjoying the whole relaxing experience.

As a conclusion, the 25th ECRO Congress was a great update on my knowledge on chemical senses, in all the different aspects of this attractive research field, as well as meeting people from many countries around the world, and sharing with them the same interest and passion.

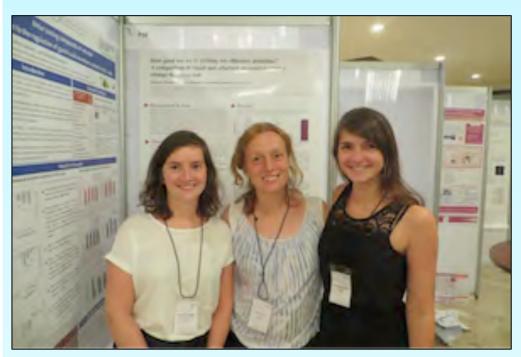
I'm really happy to have had this opportunity and let me take this occasion to thank you again.

Maria Jimena Ricatti



Johanna Bendas from ECRO XXVI

With this short report, I would like to kindly share my experiences at the 26th Annual Meeting of the European Chemoreception Research Organization from September 7 to 10 in Athens, Greece, generously supported by an ECRO Travel Grant of the Polak Foundation. As a medical student of Dresden University of Technology, I have started working on a clinical study in the course of my MD degree at the beginning of 2015 at the University Hospital's Department for Psychotherapy and Psychosomatics. The study investigated the influence of the perception and assessment of different sensory inputs in sexual desire and performance in young and healthy individuals. In May I started my obligatory internship rotation at the hospital, which limits my work on the project time-wise, but still gave me the opportunity to complete the analysis of my data and start working on the according thesis.



In order to introduce the olfaction-related results of my study, I submitted an abstract to ECRO for the Congress in Athens in September 2016 and was very grateful to have been given the opportunity to represent this cooperation between the Psychosomatics Department and the Smell and Taste Clinic at the University Hospital in Dresden.

My attendance at this Congress illustrated the first participation in an international research meeting for me and, at that, it was very fruitful and absorbing days to spend in a highly interesting city like Athens. Not only exchanging experiences in presenting your work for the first time in front of "big fishes" with other PhD students, but also brainstorming about potential follow-up ideas concerning your own work or the one of fellow researchers targeting similar and objectives present important themes advantages and chances of such a gathering. Also, the amount of highly interesting talks, lectures, presentations and discussions was hard to grasp in the course of the days being, but even more stimulating. I enjoyed the crowded poster sessions that had a very inspiring and motivating atmosphere and appreciated the nice and warm ambience of the Congress in general. On Saturday, at the "Young Scientists Symposium" I was finally able to present my results in a short presentation next to 5 other PhD students and young Post docs from Germany, Sweden and the United States above else. I was very impressed by the amount of interested

> researchers joining the Symposium and have to express my gratitude for the existence of such a format voung and less experienced iuniors to present their work in a friendly and open environment. Altogether, the ECRO Congress 2017 was not only a success itself, but personally I consider the participation in the conference and the experiences I could gather there a great personal and professional gain that I would recommend to any other MD or PhD student.

Johanna Bendas Department for Psychotherapy and Psychosomatics, University Hospital, Dresden, Germany

Qian Li from ECRO XXVI

My name is Qian Li, currently a postdoc in Dr. Stephen Liberles' lab at Harvard Medical School. I also just accepted a principal investigator position at Shanghai Jiao Tong University School of Medicine, in the Departments of Anatomy, Histology, and Embryology. I will start my own lab in the early October this year to study olfaction-mediated animal innate behaviors and molecular mechanisms governing receptor gene choice.

I attended the ECRO2016 annual meeting held in Athens. And I was very fortunate to receive the ECRO travel grant funded by Polak Foundation. I spent 4 full days in Athens, including 3 days in the conference and 1 day of tourism. In the meeting, I

heard very exciting researches from top scientists. I also made many new friends and established potential collaborations. In the last day, I visited several historical sights, including Acropolis, ancient agora, Kerameikos archaeological site and several museums. I was so amazed by the beauty of the city. Thanks to the support from ECRO travel grant, I was able to enjoy the conference and the journey in Athens.

The conference was very well organized. All the sessions ran smoothly as scheduled. Everyday there were plenary lectures in the very beginning of the morning and afternoon. After that, single or parallel symposiums composed of 4-5 speakers with individual 15-20 minutes talk were held. The 2-hour poster sessions were arranged either at noon or in the evening. Coffee breaks were planned between symposiums when different drinks and refreshments were served.

The organizers also arranged group dinners and gala excursion to Cape Sounion in the closing day. Overall I was very satisfied with all the activities. I do have a suggestion to control the presentation time precisely to make the symposium more efficient.

The scientific merit of the symposia was very impressive. Many leading scientists in the field of chemoreception attended the conference and gave exciting talks. For example, the plenary lecture by Dr. Stavoras Lomvardas showed us the great efforts in his lab to understand the mechanisms of singular receptor gene choice in olfactory sensory neurons.

After reviewing the recent findings from his lab, Dr. Stavoras Lomvardas told us a nice story of Ebf1 and Lhx2-dependent receptor expression by acting on enhancers of olfactory receptor clusters.



Dr. Hitoshi Sakano presented two stories on how the connections between olfactory sensory neurons, mitral cells in the olfactory bulb, and medial amygdala neurons are established. While Dr. Lisa Stowers introduced a new behavioral paradigm developed in her lab to study dominant and subordinate animal behaviors. In the mean time, I also learned a lot on the insect and mammalian taste systems from lectures by Dr. Robert Margolskee, Dr. Craig Montell, Dr. Thomas Finger, and several other speakers. I also appreciated the opportunities to discuss with students and postdocs on their new findings in the poster sessions. I had a nice conversation with Kanika Sharma from Korsching group on zebrafish TAAR13c receptor and ligand interaction during her poster presentation.

> Qian Li Harvard Medical School

Benjamin Stein from ECRO XXVI

I am a Ph.D. student at the Center for Integrative Physiology and Molecular Medicine (CIPMM), University of Saarland School of Medicine. Our CIPMM houses physiological and biophysical working groups offering great opportunities to cooperate and learn from people with different scientific backgrounds. This interdisciplinarity within the CIPMM but also within our group was a decisive factor for me to start my PhD project in Neurophysiology at the CIPMM.

Especially, for me this environment helped lot to learn and understand neurophysiological concepts and questions since I was working during my Diploma thesis mainly in the field of molecular biology. neurophysiology Olfactory attracted interest for the first time when I visited a talk of my current supervisor during my biology studies. The idea that different subsystem, each specialized with various receptor proteins, encode and regulate fundamental behavioral outputs like aggression or mating was fascinating. To go deeper in this intriguing world of odorants, chemostimuli and receptors I started some years ago my PhD project aiming to shed some light on receptor-ligand interactions by developing an ex vivo system, which new allows identification of potential receptor-ligand interactions. Some time later and almost finishing my PhD thesis work I decided to attend the annual ECRO meeting in Athens to discuss the results of my PhD project with the most important scientists in the field. This meeting was also an excellent opportunity to explore and assess research done by other groups and establish appropriate connections particularly in the context of seeking and considering offers for an eventual postdoc in the near future.

Fortunately, the conference started off with a welcome reception on the roof garden with an extraordinary view of Athens famous landmark, the acropolis. This event offers a good opportunity to meet and greet other participants. Sooner than might be thought, I discussed with PhD student from the Netherlands problems of approaches to detect chemostimuli.`

The following days, I had the opportunity to listen to lectures from experts of the field but also from PhD students reporting about their current work but also about their problemswhich reminds me sometimes on problems I also had during my practical thesis work. Overall, the programme covered many modern olfactory research, aspects of including molecular, medical and biological aspects of information perception and processing in olfactory systems. As I am working in the "periphery" of sensory perception, where ligand and receptor meet each other, I benefitted a lot from the talks ligand-induced about processing of information in higher brain areas. This insights enable me to interpret and embed my data in a overall concept of information processing.

Benjamin Stein

IMPORTANT NOTICE

How to submit your reports

Students and young scientists who have received a grant from ECRO to meet the expenses for a Conference, a course or a visit to another lab are requested to submit a short report, which will be published in these pages of the next issue of the ECRO Newsletters.

Purpose of the report

Such reports are mainly intended for other ECRO members and readers, who might get interesting information from the experiences of their colleagues. They should not be regarded as polite and formal duties to thank ECRO for the help received.

Length and style

Therefore, reports should be useful, written in a simple, concise, but informative style with facts and data, rather than just emotional feelings (although personal experiences and their impact on the scientific formation of the reporter are welcome). Some information about home institution, type of scientific background and personal interests are important to complete the report.

As an indication, a length of 500-600 words could be appropriate, corresponding to about one page of the ECRO Newsletter, but this is not a strict rule and longer reports are welcome, provided they are written in concise and fluent style.

One or two pictures, even if not related to scientific events, can make the report more attractive and are strongly encouraged.

Reports are NOT edited and get published as they are.

PLEASE: send your text in plain Word (no PDF!) without any formatting and do NOT embed your pictures in the text.



As you can perceive from the enthusiastic reports of the students, the ECRO Congress in Athens proved to be very productive and highly enjoyable.

Thanks must go to the organisers to the excellent work they did in planning and managing the meeting to single details, and to all the participants for their interesting contributions.

Particularly successful was The Young Scientists Symposium organised by Peter Mombaerts and Stefan Fuss (see picture below).

Another important moment saw the awarding of the Poster Prize to Kanika Sharma which was collected by Sigrun Korsching on her behalf (see picture on the right).





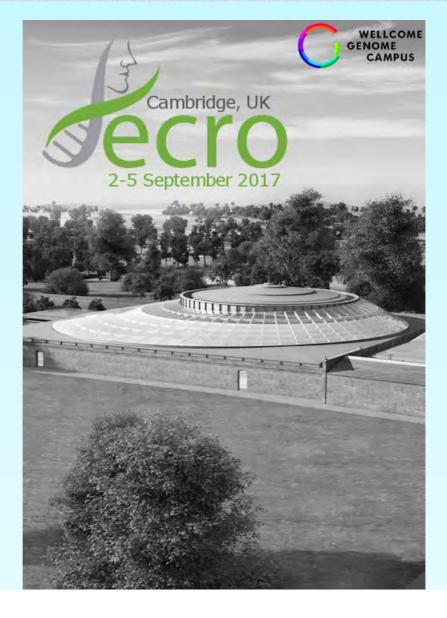
Forthcoming Meetings



GENOME

CAMPUS





Chemical Signals in Vertebrates XIV

Cardiff, August 29th-September 1st, 2017

We are pleased to announce that the next Chemical Signals in Vertebrates Conference, CSiV XIV, will take place in Cardiff, Wales (UK), 29th August - 1st September 2017 (http://sites.cardiff.ac.uk/events/view/2017-meeting-of-the-chemical-signals-in-vertebrates-group/,

Aside from open sessions, we are planning to organise several more subject-specific sessions and workshops, and would like to invite suggestions for potential topics. Please email us your suggestions to CSiV2017@cardiff.ac.uk no later than the 16th of December, and also indicate if you'd be interested in organising and/ or chairing one of the sessions.

A preliminary programme and the first call for talk and poster contributions will then be send out in January 2017.

In a break from tradition, we are currently also investigating the possibility of publishing the conference proceedings as open access, rather than as a further book in the Springer series, and would welcome your thoughts on this.

We are looking forward to seeing you next year in Wales,

With best wishes

Carsten Mueller & Christina Buesching



From the website: http://www.digital-olfaction.com/dos2016/welcome-note.html

Digital Olfaction Society held the first congress on digital olfaction in 2013 in Berlin, Germany and the second congress in Tokyo, Japan in 2014. In both events, we had demonstrations of olfactory displays in addition to oral presentations. People were excited about those demos since they enjoyed mysterious experience. We should continue our effort to have digital olfaction in our daily life. Thus, **3rd Digital Olfaction Society World Congress** will be held in **Tokyo** in **December 7-8, 2016**.

The aim of the third Digital Olfaction Society World Congress 2016 is to discuss:

- The advances of digital olfaction Research & Development
- The practical applications of digital olfaction
- The impact of these applications on our life and lifestyle

Digital Olfaction Society World Congress2016 will highlight:

- The interdisciplinary sciences related to Olfaction and Digital olfaction.
- The way in which we can transfer the concrete breakthroughs of Research & Development towards
- The industrial applications concerned by digital olfaction
- How to design and extend the applications of digital smell technologies to everyday life?

Among hot topics presented at the Digital Olfaction Society Congress 2016

- Recent Advances of Digital Olfaction Research & Development
- Odor Sensing and Odor Visualization
- Olfactory Display & its Applications
- Digital Olfaction Displaying & Demonstrations

Digital Olfaction Society-Network Session

The Network Session is organized during DOS demonstrations session. The objective of the Network Session is to provide a platform which brings together stakeholders involved in olfaction and digital olfaction, and especially in the field the valorization of digital olfaction applications and products:

- Food industries
- Cosmetics
- Phone companies
- Car Industries
- Others

We look forward to welcoming you in Tokyo for this particular event.