



AETE

Association Européenne des Technologies de l' Embryon
Association of Embryo Technology in Europe

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AETE Newsletter Issue 52

Editor: [Roger Sturme](#)

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PRESIDENTS LETTER

Dear members of the AETE, Dear Friends

Days are becoming shorter and temperatures are falling. It reminds us that time is flying and that 2019 is coming to an end. 2019 was a fantastic year for AETE and I hope you agree with my feeling. For the first time in our history, AETE was able to attract more than 260 people to travel to Murcia and attend our 35th annual conference.

Of course, this was only possible thanks to the fabulous work done by the Spanish LOC, headed by Raket Romar. Upon our first visit about a year ago to discuss the preparations of that meeting, I already felt that AETE2019 was going to be in excellent hands. What a fortunate situation.



Raket Romar and Jo Leroy, welcoming delegates

Raket and her team had to deliver this great work under very difficult conditions. The severe weather, thunderstorms and massive rain falls heavily impacted their work. But, honestly, nicely hidden in Hotel Nelva, AETE was secured from these disasters and our “party could go on”. Party ... and of course much more. We had an excellent program with very attractive invited talks, covering the central theme of “heat stress”. All invited speakers nicely summarized their recent findings and were able to provide the audience with a ready to use take home message. They made extra efforts to serve the scientists AND the practitioners sitting in the audience. This stimulated discussions and set the floor for the two excellent workshops. The workshops brought extra information and challenged our members to think, interact and discuss. Visit our website to study again the program, the proceedings and the link to all the published invited papers in the Journal of Animal Reproduction.



Prof Poul Hyttel

Prof **Felipe Perecin** from Brazil and Prof **Peter Hansen** both crossed the Atlantic and were willing to provide us with excellent talks. This year's Pioneer Award was given to Prof **Poul Hyttel** and the laudatio was kindly provided by his good friend Prof Trudee Fair.

The scientific board has worked very hard to design the program for the next year's meeting in Dublin. Please check this newsletter and the website for more information. Be assured, the program will be very attractive both from a scientist and a practitioners point of view. The central theme of this year is "the male side" and a series of 5 excellent invited speakers are excited to share their recent findings.

There are many more reasons why 2019 was a really good year for AETE. Our website and registrations platform were completely refurbished. Notably, the Conftool system was heavily appreciated by our members. For this I like to thank Jan Detterer (our treasurer) for his dedication to further improving the whole system. We can now use this platform to manage registrations, abstract submission and reviewing, certificate of attendances and much more ...!

Another new aspect of our society this year is the practitioners and sponsors forum that was organized for the first time as a parallel session during our meeting. About 90 people attended. Feedback has informed us that this initiative should be continued in the coming years. As promised last year, we are actively building further on an improved interaction between sponsors, practitioners and scientist. We strongly believe that this interaction should be one of the major tasks of our Society.

As discussed during the Generally assembly meeting, subscription and sponsor fees will be updated after more than 10 years of no change at all. On the other side, we decided to make our annual meetings free for Students. Students willing to attend our meeting will only have to pay a membership fee. So, please, inform your students and stimulate them to attend our annual meetings. It is an ideal place to network and to train their presentation skills. Our Murcia meeting was very successful in terms of students: 33 abstracts were submitted for student competition and in total 110 abstract were accepted for poster presentation. This is an absolute record and it shows that our AETE meeting is perceived as an attractive platform to present new data and to discuss with colleagues.

To end with, only good News. We go to Dublin, Ireland next year! Jan Detterer and myself were fortunate to travel and do a pre-visit in October! And I can tell you already now, AETE2020 is in fantastic hands, the hands of the LOC chaired by Patrick Lonergan (University College of Dublin). The budgets are approved, the conference venue is booked, the Croke Park stadium is reserved, the menus are decided and some major sponsors are

already on board. Please follow us on Facebook and our website for the latest updates.

Finally, allow me to thank via this way all the board members of our Society. They are working very hard as a team, behind the scenes, to make AETE to what it is today and to what it will be tomorrow. It is, believe me, an everyday commitment.

Anyway, stay with us, check our website regularly and submit your work and abstracts before the 1st of May 2020! Dublin will be a feast and I hope to welcome you there.

Merry Christmas and a happy and healthy New Year!

Jo Leroy; *President of AETE*

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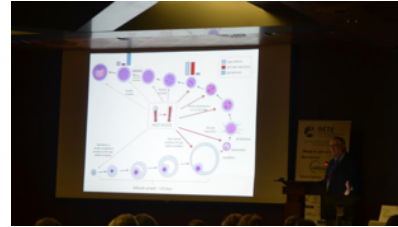


WORKSHOP REPORT 1

The impact of heat stress on dairy cow fertility – The management point of view

Zvi Roth

The impact of elevated temperature on the reproductive performance of dairy cows is becoming a worldwide problem, as a result of climate change and intensive genetic selection for high milk production. Reduced fertility is no longer confined to subtropical and tropical climates; adverse effects of elevated temperature have been reported in dairy farms located in cooler regions, such as Europe, and in temperate and Mediterranean climate zones. Furthermore, the effects of heat stress are not limited to the hot months as they carry over to the following cooler months, resulting in long-term effects throughout the year. Prof. **Zvi Roth** from the Hebrew University of Jerusalem, Israel, summarized the physiological response of high lactating cows to elevated temperature and introduced some of the heat-abatement strategies that have been developed so far; these include providing shade to block direct solar radiation, ventilation, and indirect and/or direct cooling with water. It was pointed out that by using efficient cooling management, it is possible to maintain 98% of the winter milk production in summer; however, summer conception rate reaches only 68% of that in winter therefore, additional means are required. With that respect, Prof. **Peter J Hansen** University of Florida, USA, introduced the embryo transfer procedure, the most promising tool for improving fertility during heat stress. The rationale underlying this approach is that the developing embryo develops increased resistance to maternal hyperthermia by Day 3 of pregnancy which makes embryo transfer, typically performed at Days 6 to 8 after estrus, an effective tool to increase fertility during heat stress. Pregnancy rates following embryo transfer in the summer can be twice as high as pregnancy rates after artificial insemination. Moreover, coupling embryo transfer with an ovulation synchronization scheme like 'Ovsynch' can make it possible to bypass the effects of heat stress on estrus detection. Nevertheless, the major limitation to the economic use of embryo transfer in commercial dairy and beef system is the cost of the procedure.



Prof Peter Hansen highlights the stages of early development that are sensitive to heat shock

Prof. **Fabiola Paula-Lopes** from the Federal University of Sao Paulo, Brazil, introduced another approach of using thermoprotective factors to alleviate the effects of heat stress on the ovarian pool of oocytes. In-vivo and in-vitro studies indicated that exposure of bovine oocytes to elevated temperature affects the cellular and molecular machinery required for proper oocyte function. Heat stress increased mitochondrial production of reactive oxygen species (ROS) which in turn alter the oocyte balance between ROS accumulation and removal by intracellular antioxidants. Heat stress also compromises mitochondrial function, nuclear and cytoplasmic maturation, induces cytoskeleton disorganization and apoptosis. Molecules such as insulin-like growth factor I, astaxanthin, melatonin, epigallocatechin gallate, caspase inhibitors and sphingosine-1-phosphate were identified as thermoprotective factors for bovine oocytes. These factors rescued several cellular functions damaged by heat stress, enhancing the ability of the oocyte to be fertilized and reach the blastocyst stage. It was suggested that manipulation of thermoprotective molecules has the potential to mitigate the deleterious effects of heat stress on the bovine oocyte and to improve fertility during summer. Given that heat stress is not limited to dairy cows, Dr. **Pol Lluch** from the Universitat Autònoma de Barcelona, described the effect of environmental changes on sows. According to FAO, more than 50% of pig production occurs in warm climates. It was pointed out that the effect of heat stress in pigs is diverse i.e. perturbing several body systems; increases respiration rate, decreases activity, increases satiety, alters feeding behavior and reduces feed intake. These in turn affect reproduction performance, expressed by anestrus, reduced farrowing rates, increased abortion rates and reduced litter size. The most extended strategy to mitigate heat stress in pigs is reduction of ambient temperature (5–7°C) inside swine barns by using evaporative cooling systems. However, the most efficient strategy is stimulating feed intake by dietary strategies and feeding management. Finally, breeding and epigenetic strategies have been suggested.

SPONSORS & PRACTITIONERS FORUM

Sponsors and Practitioners Forum: a great success!

For the first time, a **Sponsors and Practitioners Forum** has been organized during the Annual meeting in Murcia. This forum has taken place on Friday 13th in the afternoon in parallel to one of the scientific sessions in the main program. The objective of this forum was to give voice to sponsors and practitioners and create discussion about a specific product, a new protocol, innovations that should be highlighted.

Seven sponsors have been selected to participate (see the list below) and have presented with one or two practitioners coming from private companies field experiences or results related to the product presented. During one hour, exchanges with participants (close to 50) and sponsors have

been intense, even with a short electrical problem during the forum.

One again, we would like to thank all participants and sponsors and we already invite you to the 2020 Sponsors and Practitioners Forum in Dublin!



2019 AETE Sponsors & Practitioners forum: participants during the question session

Thanks to our sponsors!



Daniel Le Bourhis, H el ene Quinton & Jan Detterer; Co-Chairs

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WORKSHOP REPORT 2

Social Acceptance of Reproductive Technology in livestock

Roger Sturmeay

The final session of the AETE annual meeting in 2019 was a workshop event to consider the role of The Association in engaging with Social Acceptance of Reproductive Technology in livestock.

Reproductive technology is a rare example of scientific research that has made immediate translational impact into society. However, its position in society is broader than ‘science’ since it touches on an emotive subject – about which almost everyone has an opinion. There are a number of studies that explore the societal and ethical aspects of reproductive technology in human clinical medicine, however its use in agriculture can present even more challenging topics for society. The concept of combining of reproductive technology with agricultural practices can stir evocative and powerful views in wider society. However, these views may arise from limited information, or sensationalist representation in the media and online. The aim of this workshop was therefore to start thinking collectively about how the AETE might get involved in the conversation about societal views of assisted reproduction in livestock.

From the very start, the audience were ‘put to work’, using the online responseware “Mentimeter” (Mentimeter.com).

The workshop began with a little online survey, asking the delegates *Who is responsible for ‘ensuring’ social (public) acceptance of reproductive technology on livestock?* Interestingly, the delegates placed Scientific Societies at the top of the list (Figure 1), but with The Media and Government in 2nd and 3rd places. This really demonstrates a new important role for societies such as the AETE. It was encouraging to see that around two thirds of delegates already take part in outreach activities to engage with the public – so a really good effort there – but there is

more work to be done. Indeed, more than 80% of the audience felt that we should have a specific area on the website for communicating with the public; so again – more work for us.

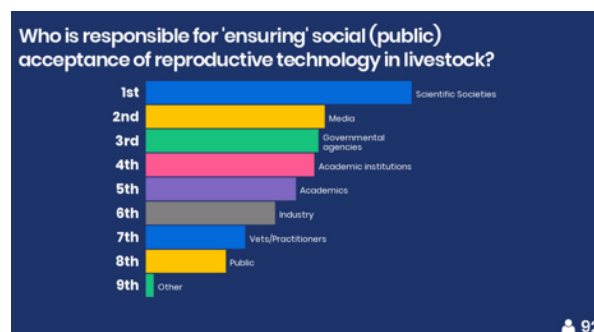


Figure 1 – Who is responsible for ensuring social acceptance?

We then turned to our first presentation, delivered by Professor **Darren Griffin** of the University of Kent. Darren reminded us of the importance of in vitro technologies for modern agriculture. Some pretty stark figures on the challenges of feeding an ever growing population were placed in the context of the need to reduce the pressures placed on the environment. Darren also reminded us of the role that animal reproductive technology can play in accelerating genetic improvement, as well as reducing the burdens of livestock wastage and stock changeover, whilst making improvements to animal welfare; notably making it easier to transport genetics without the need to move whole animals. In addition, reproductive technologies can play a crucial role in biobanking desirable and rare genetic traits.

After Darren’s talk, the audience were again set to work, and assembled a word cloud of all of the ‘scary jargon’ that we use on a daily basis as we go about our professions. The word cloud can be seen in **Figure 2**. This was a really useful exercise, as it gave us a list of terms that the audience felt might be useful to populate a “For the public” glossary on the AETE website – to better explain the work that we do.

While the delegates recovered from this, Professor **Ann Van Soom** of the University of Gent, gazed into the future to try to predict the uses of reproductive technology in the future. Of course, Ann began by looking back, reminding us that domestication took a long

University of Murcia worked hard to prepare for the pre-conference workshop that would be held on 12th September at the Veterinary Farm of University of Murcia. The workshop was announced and very quickly, the twenty available positions were filled. The LOC and people from different companies worked tirelessly to have everything ready: animals, facilities, labs, equipment, biological material, transport, etc.

On September 11th, instructors and staff arrived Murcia for the final arrangements and everything was ready for workshop. The weather forecast for that days announced a DANA, an atmospheric phenomenon involving heavy rainfall, winds and storms; and **for the first time in history the Region of Murcia was under weather red alert.**

The worst forecasts were confirmed and in the morning of 12th September; the University of Murcia officially cancelled all activities in its facilities, which involved approximately 35,000 students and 4,000 staff, due to the high risk of flooding, electrical shutdown and roads cut. Given this situation, access to Veterinary Farm of University of Murcia was restricted for security reasons, and under the responsibility of the preconference workshop organizers.

According with this exceptional and highly risky situation, the LOC and AETE board took the difficult decision to cancel the workshop to avoid putting the participants and instructors at risk. Workshop attendees were immediately notified about the unexpected situation and AETE refunded the workshop fees. Instructors and LOC felt frustrated and sad about this decision but a few hours later it would be confirmed that it was the right one. In the 12 hours that followed, it rained 100 liters per square meter. From 11 to 14th September 2019, Murcia Region received more than 400 liters per square meter. The Segura river overflowed at some points and unfortunately 6 people died in the surrounding area during those days. The farm was partially flooded, isolated by road and with power cuts. The LOC was happy no one from the AETE was injured but even so, there was a bittersweet taste. The selfless work of many people and participating companies that could not be carried out is deeply appreciated.

2019 PRIZE WINNERS

STUDENT COMPETITION

Chosen by the AETE Board

Winner: Lucía Martínez-Fresneda

University of Bonn, Germany

PROTEOMIC ANALYSIS OF EJACULATED AND EPIDIDYMAL SPERM ASSOCIATED WITH FREEZABILITY IN IBERIAN IBEX (CAPRA PYRENAICA)

Lucía Martínez-Fresneda^{1,2,5}, Marc Sylvester³, Farhad Shakeri⁴, Andreas Bunes⁴, Juan C. Del Pozo⁶, Francisco A. García-Vázquez⁵, Christiane Neuhoff¹, Dawit Tesfaye¹, Karl Schellander¹, Julian Santiago-Moreno²

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The sperm proteome is known to affect cell cryoresistance and is also reported to differ between epididymal and ejaculated sperm in small ruminants (C.J. Li et al., *Animal Reproduction Science*, 173, 1–7, 2016; T. Pini et al., *Journal of Proteome Research*, 15, 3700-11, 2016). However, studies aiming at identifying proteins involved on sperm freezing-tolerance are scarce. The aim of this study was to investigate the association between the freezing capacity and the proteome of ejaculated and epididymal sperm of the Iberian ibex. Ejaculates were collected from anesthetized animals by transrectal ultrasound-guided massage of the accessory sex glands combined with electroejaculation (n = 6), whereas epididymal samples were collected post-mortem by flushing (n = 6). After seminal/epididymal fluid removal, sperm cells were conventionally cryopreserved by slow cooling rates in straws. Sperm quality parameters were assessed in fresh and frozen-thawed sperm in order to evaluate sperm freezability. Motility parameters were assessed by computer-assisted sperm analysis system (CASA; Sperm Class Analyzer®) and membrane and acrosome integrity were assessed by fluorescence microscopy. Tandem mass tag-

labeled peptides were analyzed by high performance liquid chromatography coupled to a mass spectrometer (MS; Orbitrap Fusion Lumos mass spectrometer, Thermo Fisher Scientific, Bremen, Germany) in three technical replicates. A false discovery rate of 1% was applied as protein identification threshold. The MS raw data were processed in Proteome Discoverer 2.2.0.388 (Thermo Fisher Scientific) and the statistical analysis was done using the moderated t-test of the R package limma. Epididymal sperm showed higher post-thaw total motility ($57.46 \pm 8.58\%$ vs $23.19 \pm 3.05\%$), progressive motility ($37.70 \pm 6.38\%$ vs $8.65 \pm 1.83\%$), curvilinear velocity (VCL), straight-line velocity (VSL) and average path velocity (VAP) than ejaculated sperm ($P < 0.0001$). Post-thaw acrosome ($89.50 \pm 0.56\%$ vs $61.95 \pm 3.48\%$; $P < 0.001$) and membrane integrity ($57.33 \pm 7.26\%$ vs $35.73 \pm 3.39\%$; $P < 0.05$) were also higher in epididymal than ejaculated sperm. A total of 1660 proteins were quantified in both epididymal and ejaculated samples among which 310 proteins (18.7% of the total) were differentially expressed between both types of sperm when using a cut-off for significance (adjusted p-value < 0.05) and fold-change ($|\log_2(\text{fold-change})| > 1$). Out of those proteins, 212 were significantly more abundant in epididymal sperm and 98 were more abundant in ejaculated sperm. Besides updating the sperm proteome of small ruminants, this study revealed differences of cryoresistance between epididymal and ejaculated sperm of the Iberian ibex contributing to identification of candidate markers of sperm freezability. This work was supported by funding from European Union (Horizon 2020 Marie Skłodowska-Curie Action, REPBIOTECH 675526; AGL2017-85753-R).

Lucia wins €750 plus free registration to our next annual meeting.

BEST ORAL PRESENTATION

Winner: Shira Yaacobi-Artzi
Hebrew University of Jerusalem, Israel

Using a time-lapse system to study the morphokinetics of blastocysts derived from heat-shocked oocytes.

Shira wins €250 plus free registration for our next annual meeting

BEST POSTER PRESENTATION

Winner: Yulia Caja
INIA, Madrid

Nobiletin supplementation prior to EGA improves development and quality of bovine blastocysts in vitro

Yulia wins free registration for our next annual meeting

AETE 2020 PROGRAMME

NOTES

We are looking forward very much to the AETE 36th Scientific meeting in Dublin 2020. The theme for this meeting is “the male effect in reproduction” which is obviously an important concept influencing embryo development and beyond. The scientific programme includes four invited speakers. **Adam Watkins** will talk about 'Defining the male contribution to embryo quality and offspring health in assisted reproduction in farm animals'. **Marcella Milazzotto** will inform us about “Erasing gametes to write blastocysts: metabolism as the new player in epigenetic reprogramming”. **Albert de Vries** will present “Economics of assisted reproduction in farm animals”. **Inmaculada Parilla** will discuss “Boar seminal plasma: overview and current insights on its potential role in assisted reproductive technologies in swine”. The pioneer award winner, **Hilary Dobson**, will update us on “Understanding the trade-off between the environment and fertility”. In addition, there will be two workshops during the meeting: the first workshop on Quality in the IVF lab will be organised by Ana Lopes and the second workshop on Sperm preparation for Assisted Reproduction. These are not to be missed! We are also eagerly awaiting contributions from our younger members who will inform us about some of their stimulating and exciting research. Save the date today and join us in Dublin in September!

Full speaker profiles, along with titles of talks can be found on aete.eu/news

INVITATION TO DUBLIN

2020

On behalf of the Association of Embryo Technology in Europe, the local organizing committee, chaired by Pat Lonergan, is pleased to invite you to the 36th annual scientific meeting in Ireland's capital city of Dublin, from the 10th to 11th of September 2020.



Match Day at the iconic Croke Park, home to the Gaelic Athletic Association

Located just north of Dublin city centre, only 15 minutes from Dublin Airport, the venue, Croke Park, is the home of Ireland's largest sporting and cultural organisation, the Gaelic Athletic Association (GAA) which is celebrated as one of the great amateur sporting associations in the world. The GAA is part of the Irish consciousness and plays an influential role in Irish society that extends far beyond the basic aim of promoting Gaelic games. With a capacity of 82,300, Croke Park is Europe's third largest stadium after the Nou Camp in Barcelona and Wembley in London. It has played host to iconic moments in Irish sport & history and to major cultural and international events, not to mention international conferences.



Conference facilities high up in the stadium.

Every September, the GAA's two annual marquee events - the GAA All-Ireland Football and Hurling Championship Finals – attract a capacity 82,300 fans, to witness the pinnacle of Gaelic games action in this world-renowned cathedral of sport. Note that this is a slight deviation next year from the traditional Friday/Saturday dates, which was necessary to secure the location, but we hope that it will give attendees an extra day to perhaps catch a game at this iconic venue and enjoy what Dublin has to offer



Hurling, one of the fastest (and perhaps most dangerous?) sports in the world

There is lots to see and do in Dublin. Don't be alarmed if someone asks if there is 'any craic?' *Craic* (fun) is something that comes naturally to Irish people in general. Walk in to practically any one of the hundreds of great bars in the city and you'll have a great night out. Just some of the things to see are listed below. And of course remember that Dublin is the gateway to exploring the rest of Ireland – only a few hours by car from Galway in the West, Cork in the South and Belfast in the North.

Trinity College Dublin is right in the centre of the city. One of the most famous universities in the world, take a stroll through this ancient seat of learning. Located in Trinity College, the Book of Kells Exhibition is a must-see on the itinerary of all visitors to Dublin. The Book of Kells, a 9th century manuscript that documents the four Gospels of the life of Jesus Christ, is one of Ireland's greatest cultural treasure and the world's most famous medieval manuscript. The exhibition also features access to the Long Room, one of the world's most beautiful libraries, that houses 250,000 of the college's oldest books.



The beautiful Long Room in Trinity College Dublin.

Dublin's **General Post Office or GPO**, is a significant building on Dublin's main street, O'Connell Street, because of its role in Irish history. In 1916, during the so-called Easter Rising, launched by Irish republicans to end British rule in Ireland and establish an independent Irish Republic, the GPO was the headquarters of the uprising's leaders.

You may want to swing through some of Dublin's oldest **pubs**, like the *Brazen Head* (dating to 1198!), which counted writer Jonathan Swift among its customers. *The Stag's Head* was established in the late 18th century; James Joyce was one of the notables who stopped by.

Its hard to visit Ireland without coming in contact, at least once, with a pint of Guinness. The **Guinness Storehouse** is now the most popular attraction in Ireland in visitor numbers (the Cliffs of Moher on the west coast being second). Not only will you learn about how Guinness was originally discovered and how it has developed over the last 250 years, you'll also get to pour your very own pint and then sample it. If beer is not your thing, fear not, the **Jameson Distillery** is located just across the river Liffey from the Guinness factory. This is where Ireland's most famous whiskey was distilled since 1870 but today it is a museum and visitor's centre which features guided tours, whiskey tasting, bars, restaurant and a gift shop.

Dublin has dozens of other general and specialist tours for you to take. From the Viking Splash Tour to Literary Pub Crawl to personalised walking tour podcasts.



Temple Bar on the banks of the Liffey is a hive of activity with many pubs and restaurants to suit all tastes.

Other things worth visiting if time permits include:

- **Dublin Castle**, originally built to help defend the Norman city of Dublin, the castle was the seat of the UK government's administration in Ireland until 1922. Today it has been completely restored and is a major Irish government complex where many official and important government events are held.
- **St. Patrick's Cathedral**, dating back to 1191, is the tallest and largest church in Ireland and one of the few buildings left from medieval Dublin.
- **Temple Bar**, with it's narrow cobbled streets full of art spaces, restaurants and really good bars like the Palace Bar, the Temple Bar Pub, Oliver St. John Gogarty's and The Auld Dubliner.
- **Kilmainham Gaol**, opened from 1796 to 1924 and now one of the biggest unoccupied gaols in Europe.
- **St. Stephen's Green**, a focal point for hundreds of years, it was only formally laid out (in the current design) by in the 1870s.
- The **Phoenix Park** is the largest walled city park in Europe and is a treasure trove of parkland, woods, walks, lakes and home a large herd of wild Fallow deer and to Dublin Zoo, founded in 1831.



The Ha'penny Bridge, built in May 1816, is a pedestrian bridge across the Liffey river that splits Dublin into north and south. It was originally tolled, costing a half penny to use it.

How to get there

It could not be easier!



Being a capital city, Dublin is served from all major international airports. On arrival, it is a only 15 minutes to Croke Park and a further 5 minutes to the city centre. Given the proximity to the city centre, there are many accommodation options. Perhaps most convenient is The Croke Park Hotel (www.doylecollection.com/hotels/) located across the road from the venue. However, many other possibilities exist.

More information including details of the Welcome Reception, Gala Dinner and last night activities will appear in due course on the AETE website. Ireland is famous for its *C ad Mile F ailte* (a hundred thousand welcomes) - the same warm Irish welcome awaits the you at the 2020 AETE meeting in Dublin. We look forward to seeing you there!

WEBSITE NEWS

Have you been keeping up with the latest news from the AETE?

Want to know how to get the announcements first?

Check aete.eu – regularly.

We have recently made a number of updates to our website, including a invigorated and active news page, as well as a regularly updated home page.

In addition, we have an active presence on Social Media, with our very own Facebook page – [Facebook.com/aete](https://www.facebook.com/aete), where you can ‘like’ and ‘follow’ the society to receive updates right in your newsfeed.

At the most recent Board meeting, there was a discussion about how the AETE communicates with its members. We have now released 52 issues of this newsletter, but we think it worthwhile to reach out to the membership to find out if we can improve our communications.

With that in mind, we would invite you to complete a very short survey on how you interact with the various aspects of communication from the aete. Please spare 5 moments and head to <https://forms.gle/8ZoC6fZWap8eRRaL8>

Thank you!

DATE FOR THE DIARY

AETE 2020 ABSTRACT DEADLINE

MAY 1, 2020

Add to your diaries now!

Tell you students to start planning!

See you in Dublin?

UPCOMING EVENTS

IETS – 46TH ANNUAL MEETING

16-19 January 2020

New York, USA

<https://www.iets.org/2020/>

SYMPOSIUM: FEEDING FOR OPTIMAL DAIRY COW FERTILITY: YES WE CAN!

5 February 2020

University of Antwerp, Belgium

<https://www.uantwerpen.be/en/conferences/dairy-cow-fertility/>

AET-D

18-19 June 2020

Giessen, Germany

<https://www.aet-d.de/aktuelle-tagung/>

ICAR

28 June – 2 July 2020

Bologna, Italy

<http://animalreproduction.org/current/>

SOCIETY FOR THE STUDY OF REPRODUCTION

9-12 JULY 2020

Ottawa, Canada

<https://www.ssr.org/news-events/2020am>

CRYO2020 – SOCIETY FOR CRYOBIOLOGY

21-24 July 2020

Chicago, USA

<https://cryo2020.com>

AETE

10-11 September 2020

Dublin, Ireland

<https://www.aete.eu>

ESDAR

15-18 October 2020

Thessaloniki, Greece

<https://www.esdar.org>

AETA & CETA/ACTE JOINT ANNUAL CONVENTION

5-7 October 2020

Mason, Wisconsin, USA

<https://www.aeta.org/2020/>



AETE

Association Européenne des Technologies de l' Embryon

Association of Embryo Technology in Europe

36th SCIENTIFIC MEETING

CROKE PARK

Dublin, Ireland

PROGRAMME

10th and 11th September, 2020

WEDNESDAY, September 9th 2020

18.30-20.00: Registration

20.00-22.00: Welcome Reception

THURSDAY, September 10th 2020

08.00-17.00: Registration

08.45-18.00: Opening meeting

SESSION 1: First invited lecture:

Marcella Milazzotto, Center of Natural and Human Science of Federal University of ABC, São Paulo, Brazil

Erasing gametes to write blastocysts: metabolism as the new player in epigenetic reprogramming.

Second invited lecture:

Adam Watkins, Division of Child Health, Obstetrics and Gynaecology, University of Nottingham, UK

Defining the male contribution to embryo quality and offspring health in assisted reproduction in farm animals

POSTER SESSION 1 and coffee break

Short oral communications: *Student Competition*

Sponsor presentation

Lunch

SESSION 2: Third invited lecture:

Inmaculada Parrilla, Department of Animal Medicine and Surgery, University of Murcia, Murcia, Spain

Boar seminal plasma: overview and current insights on its potential role in assisted reproductive technologies in swine

Short oral communications

POSTER SESSION 2 and coffee break

Workshop I: Preparing semen for practical use in and out the IVF-lab

chaired by Sean Fair, Department of Biological Sciences, University of Limerick, Ireland

20.00-02:00: Gala Dinner. Croke Park

FRIDAY, September 11th 2020

08:00-18.00:

SESSION 3: *Fourth invited lecture:*

Albert De Vries, Department of Animal Sciences, University of Florida, USA
Economics of assisted reproduction in farm animals.

Short oral communications

POSTER SESSION 3 and coffee break

General Assembly

Lunch/Student Lunch

SESSION 4: Short oral communications

Fifth invited lecture

Hilary Dobson, School of Veterinary Science, University of Liverpool, Liverpool,
UK

Understanding the trade-off between the environment and fertility
Pioneer award 2020 - Hilary Dobson AETE Medalist Presentation
introduced by Martin Sheldon (UK)

POSTER SESSION 4 and coffee break

Workshop II: Rigor in the IVF laboratory.

chaired by Ana Sousa Lopes, Esco Medical, Denmark

Closing session:

Student Competition results and invitation to the AETE Conference 2021

20.00-24:00: Farewell party

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