

PROGRAMME



ICAR2020+2

Bologna, Italy

19th International Congress
on Animal Reproduction
BOLOGNA (ITALY), 26th-30th JUNE 2022

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INVITATIONS

Dear Colleagues and Friends,

On behalf of the Local Organising Committee, it is my pleasure to invite you to attend the 19th International Congress on Animal Reproduction that will be held at the Palazzo della Cultura e dei Congressi in Bologna (Italy) from 26th June to 30th June 2022.

As you possibly know, the Congress was to be held in Bologna from 28th June to 2nd July 2020; however, due to the Coronavirus outbreak that has paralyzed the scientific community (and not only) worldwide, it has been at first moved to 2021.

Unfortunately, the situation is still far from being quiet, the vaccination strategy is slowly going on but doubts still exist about the time necessary to come back to a normality; therefore, we decided to postpone again the Congress to 26th - 30th June 2022 and to refer to the Congress as ICAR2020+2.

As you possibly know, the International Congress on Animal Reproduction (ICAR) is a non-profit international organization that conducts conferences on animal reproduction. Founded in 1948, ICAR has no members but is governed by a Standing Committee made of scientists representatives of over 40 countries and has held a major conference every four years in many countries throughout the world.

When ICAR Board decided to move ICAR2020 to 2022, contextually decided to move the subsequent Congress from 2024 to 2026. The focus of the Congress is animal reproduction, including animal physiology, animal pathology and reproductive technologies.

The conference is organized in individual plenary sessions followed by concurrent symposia and workshops as well as poster sessions. A trade exhibition will remain open throughout the conference.

At ICAR 2020+2 we are expecting between 800 and 1200 delegates who will attend a 4-day Scientific Programme organized in 5 Plenary Sessions, 12 Symposia 23 Workshops and 3 Poster sessions.

Join us at the ICAR 2020+2 (in 2022)!



Prof. Carlo Tamanini
Chair of the Organising Committee

COMMITTEES

LOCAL ORGANIZING COMMITTEE



Carlo Tamanini (Chair)



Diego Bucci (Secretary)



Maria Laura Bacci



Giovanna Galeati



Cesare Galli



Gaetano Mari



Marcella Spinaci

Department of Veterinary Medical Sciences of the University of Bologna

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Carlo Tamanini
Department of Veterinary Medical Sciences, University of Bologna

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PROGRAMME AT A GLANCE

SUNDAY 26TH JUNE 2022

From 16.00 Registrations
19.00 Welcome Cocktail in Exhibition Area

MONDAY 27TH JUNE 2022

Time	AUDITORIUM	ROOM ITALIA	ROOM VERDE	ROOM AZZURRA
8.00 9.00	Opening Ceremony & Simmet Prize			
9.00 11.00	PLENARY 1 Sustainable breeding in a changing climate			
11.00 12.30	WORKSHOP 1 Opu: hormones, time and follicular size	WORKSHOP 2 Reproduction of cultured fish	WORKSHOP 3 Pregnancy and perinatal care	WORKSHOP 6 Reproduction in camelids
12.30 14.00	Lunch and Poster Session 1			
14.00 16.30	SYMPOSIUM 4 New aspects of corpus luteum regulation toward successful pregnancy	SYMPOSIUM 3 Cloning and genome editing	SYMPOSIUM 2 Devising new gonadotropins for the future...which strategies, which uses?	SYMPOSIUM 1 The nonconformist: conceptus-maternal communication in the dog
16.30 17.00	Coffee Break			WORKSHOP 19 Overview on equine chorionic gonadotropin (ECG, PMSG) use in breeding protocols: results of use of the native product and introduction of a recombinant alternative
17.00 18.30	WORKSHOP 4 Pluripotent embryonic stem cells: past, present and future	WORKSHOP 5 Improving livestock production: beyond genetic again	WORKSHOP 22 Reproduction technologies of the future in the data driven bovine industry	
			WORKSHOP 21 Stem cells and their products: applications in reproductive diseases of domestic animals	
19.00 20.00	Jazz & Food Event			

TUESDAY 28TH JUNE 2022

Time	AUDITORIUM	ROOM ITALIA	ROOM VERDE	ROOM AZZURRA
9.00 11.00	PLENARY 2 Extracellular vesicles in female reproductive function			
11.00 12.30	WORKSHOP 8 Improved mammalian embryo production by novel biomimic-designed 3d and microfluidic cell culture approaches	WORKSHOP 11 Gonadotropin secretion in cattle and sheep: new discoveries	WORKSHOP 24 New trends in swine production management	WORKSHOP 7 Advances in sperm cryopreservation technology for conservation of avian genetic resources
12.30 14.00	Lunch and Poster Session 2			
14.00 16.30	SYMPOSIUM 7 Effects of heat stress on reproduction: from conception to lactation	SYMPOSIUM 8 Cryopreservation: freezing, vitrification, freezing drying	SYMPOSIUM 5 Reproduction in non-domestic and endangered species	SYMPOSIUM 6 Immune regulation of oviduct/uterine function
16.30 17.00	Coffee Break			
17.00 18.30	WORKSHOP 10 The gait of assisted reproduction in the equids	WORKSHOP 12 Is a new star born? NGF role on ovulation induction and sperm traits	WORKSHOP 20 Strategy to improve bovine fertility: use of an animal free-protein medium	WORKSHOP 9 Reproductive toxicology in marine mammals

PROGRAMME AT A GLANCE

WEDNESDAY 29TH JUNE 2022

Time	AUDITORIUM	ROOM ITALIA	ROOM VERDE	ROOM AZZURRA
9.00 11.00	PLENARY 3 Epi/genetics genomics in reproduction			
11.00 12.30	WORKSHOP 15 Advances in the use of doppler ultrasonography in cattle reproduction	WORKSHOP 13 Multiple Functions of the Chorionic Girdle - A tribute to Twink Allen	WORKSHOP 23 Bacterial control in swine semen	WORKSHOP 17 Nutritional strategies to improve fertility in small and large ruminants
12.30 14.00	Lunch and Poster Session 3			
14.00 16.30	SYMPOSIUM 12 Novel insights on uterine immunology during pregnancy and disease	SYMPOSIUM 10 Reproduction in companion animals	SYMPOSIUM 11 New imaging systems for assessing gamete and embryo quality	SYMPOSIUM 9 New approaches in buffalo reproductive management
16.30 17.00	Coffee Break			
17.00 18.30	WORKSHOP 18 Genetically tailored pigs as disease models and organ donors for xenotransplantation	WORKSHOP 16 Embryonic diapause	WORKSHOP 25 Flow Cytometry, a necessary tool for Sperm Viability Assesment	WORKSHOP 14 Bovine reproduction
20.00	Congress Dinner			

THURSDAY 30TH JUNE 2022

Time	AUDITORIUM
8.00 10.00	PLENARY 4 Semen quality semen ómics: relation with male fertility
10.00 12.00	PLENARY 5 Adding a new dimension to reproduction
12.00 12.30	Closing Ceremony

ICAR BOARD MEETINGS

<u>Sunday 26th June 2022</u>		
17.00	Executive Committee	ROOM VERDE
<u>Monday 27th June 2022</u>		
12.30 - 14.00	Standing Committee	ROOM VERDE
<u>Tuesday 28th June 2022</u>		
12.30 - 14.00	Standing Committee	ROOM VERDE
<u>Thursday, 30th June 2022</u>		
12.30	Executive Committee	ROOM VERDE

SCIENTIFIC PROGRAMME

MONDAY 27TH JUNE 2022

8.00 - 9.00

AUDITORIUM

- 8.00 Opening Ceremony
Carlo Tamanini, President of LOC
Fulvio Gandolfi, President of ICAR.
Giovanni Molari, Rector of Bologna University
- 8.20 Simmet Prize. *Peter Hansen (USA), Gabriel Bo (Argentina)*

9.00 - 11.00



AUDITORIUM

PLENARY SESSION 1 - SUSTAINABLE BREEDING IN A CHANGING CLIMATE **Chair:** *Ann van Soom (Belgium)*

- 9.00 Breeding animals to feed people: the many roles of animal reproduction in ensuring global food security. *Robin White (USA)*
- 9.40 Managed wildlife breeding- an undervalued conservation tool? *Imke Lueders (Germany)*
- 10.20 The dog 2.0: lessons learned from the past. *Bart Broeckx (Belgium)*

11.00 - 12.30



AUDITORIUM

WORKSHOP 1 - OPU: HORMONES, TIME AND FOLLICULAR SIZE **Chair:** *Marc-André Sirard (Canada)*

- 11.00 Using FSH and time to optimize oocyte quality prior to OPU. *Marc-André Sirard (Canada)*
- 11.30 Follicular wave synchronization prior to ovum pick-up. *Marcelo Marcondes Seneda (Brazil)*
- 12.00 Follicle priming by FSH and pre-maturational culture to improve oocyte quality in vivo and in vitro. *Kenichiro Sakaguchi (Japan)*

11.00 - 12.30



ROOM ITALIA

WORKSHOP 2 - REPRODUCTION OF CULTURED FISH **Chair:** *Aldo Corriero (Italy)*

- 11.00 Broodstock management of cultured grey mullet (*mugil cephalus*): application of a therapeutic approach to resolve reproductive dysfunctions. *Hanna Rosenfeld (Israel)*
- 11.18 Reproductive physiology of Atlantic salmon (*Salmo salar*) – applications for sustainable aquaculture. *Birgitta Norberg (Norway)*
- 11.36 The reproduction of European eel in captivity: a scientific challenge with multiple facets. *Juan F. Asturiano (Spain)*
- 11.54 The male contribution to reproductive success: paternal transmission of environmental effects to the spawn. *María Paz Herráez (Spain)*
- 12.12 Implications of spermatology to develop finfish aquaculture. *Hadi Alavi (Iran)*

11.00 - 12.30



ROOM VERDE

WORKSHOP 3 - PREGNANCY AND PERINATAL CARE

Chair: *Carolina Castagnetti (Italy)*

- 11.00 Biomarkers for placental disease and fetal well-being. *Igor Frederico Canisso (USA)*
- 11.30 Is stress affecting parturition and neonatal adaptation in the horse? *Christina Nagel (Austria)*
- 12.00 Maternal transmission of microbiome in mammals. *Monica Barone (Italy)*

11.00 - 12.30



ROOM AZZURRA

WORKSHOP 6 - REPRODUCTION IN CAMELIDS

Chair: *Lulu Skidmore (UAE)*

- 11.00 Unveiling the luteotrophic role of beta - NGF present in the seminal plasma of llamas. *Marcelo Ratto (Chile)*
- 11.30 New insights to predict and achieve better superovulatory responses in dromedary camel *Amir Niasari-Naslaji (Iran)*
- 12.00 Recent advances in AI technology in dromedary camels. *Samir Al-Bulushi (Oman)*

12.30 - 14.00

Lunch and Poster Session 1

14.00 - 16.30



ROOM AZZURRA

SYMPOSIUM 1 - THE NONCONFORMIST: CONCEPTUS-MATERNAL COMMUNICATION IN THE DOG

Chair: *Mariusz Kowalewski (Switzerland)*

- 14.00 Impact of the oviductal environment on IVF success and early embryo development in the dog. *Martina Colombo (Italy)*
- 14.30 Embryo-maternal communication in the canine uterus prior to and during implantation. *Sabine Schafer-Somi (Austria)*
- 15.00 Conceptus-maternal communication during maintenance and termination of pregnancy in the dog. *Mariusz P. Kowalewski (Switzerland)*

Oral Communications:

- 15.30 A high concentration of progesterone enhances the meiotic maturation of canine oocytes without influencing the gene expression of CX37 and CX43. *Monica De los Reyes (Chile)*
- 15.45 Genome-wide transcriptional effects in dog uterine stromal cells during decidualization and following antigestagen treatment. *Miguel Tavares Pereira (Switzerland)*
- 16.00 A modified Aglepristone protocol for mid-pregnancy termination in large dogs. *Rita Payan-Carreira (Portugal)*
- 16.15 Recent advances in understanding uterine inertia in the dog: focusing on selected contractile and contractility-associated proteins in the uterus. *Orsolya Balogh (USA)*

14.00 - 16.30



ROOM VERDE

SYMPOSIUM 2 - DEVISING NEW GONADOTROPINS FOR THE FUTURE...WHICH STRATEGIES, WHICH USES?

Chair: *Marc-Antoine Driancourt (France)*

- 14.00 What is the ideal FSH profile to maximize ovarian response in donor cows? *Gabriel Bo (Argentina)*
- 14.40 Gonadotropin priming before OPU: what are the benefits in cows and calves? *Richard Fry (Australia)*
- 15.20 Strategies to devise long acting gonadotropins.
David Ben Menahem (Israel)

Oral Communications:

- 16.00 Effect of 2000 IU of synthetic eCG-like glycoprotein on the follicular development and ovulation in beef cows (Bos taurus).
Lucas Cutaia (Argentina)
- 16.15 Efficiency of repeated superstimulations on ovum pick-up and in vitro production (OPU-IVP) of cattle embryos and donor health.
Jacob Thundathil (Canada)

14.00 - 16.30



ROOM ITALIA

SYMPOSIUM 3 - CLONING AND GENOME EDITING

Chairs: *Lino Loi (Italy), Cesare Galli (Italy)*

- 14.00 Somatic Cell Nuclear Transfer (SCNT): state of the art and applications.
Josè Cibelli (USA)
- 14.30 How to improve mouse cloning. *Atsuo Ogura (Japan)*
- 15.00 Current progress of genome editing in livestock. *Kiho Lee (USA)*
- 15.30 CRISPR in livestock: from editing to printing. *Alejo Menchaca (Uruguay)*

Oral Communications:

- 16.00 Effect of oocyte source on the development of equine embryos produced by somatic cell nuclear transfer.
Christopher G. Grupen (Australia)
- 16.15 Aphidicolin reduces mosaicism rate and embryo development of knock-out TPC1 porcine embryos edited by CRISPR/Cas9.
Sergio Navarro-Serna (Spain)



14.00 - 16.30



AUDITORIUM

SYMPOSIUM 4 - NEW ASPECTS OF CORPUS LUTEUM REGULATION TOWARD SUCCESSFUL PREGNANCY

Chair: *Akio Miyamoto (Japan)*

- 14.00 Roadmap to pregnancy in the first 7 days post-insemination in the cow: Immune cross-talk in the corpus luteum, oviduct and uterus. *Akio Miyamoto (Japan)*
- 14.30 Roadmap to pregnancy during the period of maternal recognition in the cow: Changes within the corpus luteum associated with luteal rescue. *Joy Pate (USA)*
- 15.00 Impact of the corpus luteum on survival of the developing embryo and early pregnancy in mares. *Carlos RF Pinto (USA)*
- 15.30 Factors affecting the fate of canine corpus luteum: Potential contributors for pregnancy and non-pregnancy. *Paula Papa (Switzerland)*

Oral Communications:

- 16.00 Are L-lactate effects during the folliculo-luteal transition mediated via NMDA receptors in bovine granulosa cells? *Anya Baufeld (Germany)*
- 16.15 Systemic administration of β -NGF from llama seminal plasma at LH peak induces an earlier increase of luteal progesterone in dairy heifers. *Gonzalo Gajardo (Chile)*

16.30 - 17.00

Coffee Break

17.00 - 18.30



AUDITORIUM

WORKSHOP 4 - PLURIPOTENT EMBRYONIC STEM CELLS: PAST, PRESENT AND FUTURE

Chairs: *Pablo Ross (USA), Jorge Piedrahita (USA)*

- 17.00 Historical perspective on ESC and iPSC in companion and domestic animals. *Jorge Piedrahita (USA)*
- 17.30 Capturing pluripotency in bovine embryonic stem cells: perspectives for in vitro breeding. *Pablo Ross (USA)*
- 18.00 Establishment of porcine expanded potential stem cells. *Monika Nowak-Imialek (Germany)*

17.00 - 18.30



ROOM ITALIA

WORKSHOP 5 - IMPROVING LIVESTOCK PRODUCTION: BEYOND GENETIC GAIN

Chair: *Darren Griffin (UK)*

- 17.00 Open session and Welcome. *Darren Griffin (UK)*
- 17.05 State of the ART in cattle and pig IVP. *Cuello Medina Cristina (Spain) and Darren Griffin (UK)*
- 17.35 Effect of the Sperm Selection Method on Basic Sperm Parameters and in vitro Fertilization Outcomes. *Maria Serrano-Albal (UK)*
- 17.50 Interaction of polyunsaturated fatty acids and melatonin during bovine in vitro maturation on cumulus-oocyte metabolism and embryo development. *Desmond Tutt (UK)*
- 18.05 Extracellular vesicles secretion, bovine embryos and the zona pellucida, highlights from 2 abstracts. *Lleretny Rodriguez-Alvarez (Chile)*
- 18.20 Analysis of mosaicism in bovine embryos using Preimplantation genetic testing (PGT-A) algorithms. *Carla Canedo-Ribeiro (UK)*

16.30 - 19.00



ROOM AZZURRA

Sponsored by Syntex

WORKSHOP 19 - OVERVIEW ON EQUINE CHORIONIC GONADOTROPIN (eCG, PMSG) USE IN BREEDING PROTOCOLS: RESULTS OF USE OF THE NATIVE PRODUCT AND INTRODUCTION OF A RECOMBINANT ALTERNATIVE

Chair: *Reuben Maplettoft (Canada)*

- 16.30 Welcome and Opening.
Reuben Maplettoft (Canada)
- 16.45 Equine chorionic gonadotropin (eCG) in sheep and goats: Past, present and future. *Alejo Menchaca (Uruguay)*
- 17.00 Use of eCG for manipulation of reproductive function in swine.
Johannes Kauffold (Germany)
- 17.15 The use of eCG in reproductive programs in cattle: Physiological basis and productive impact. *Gabriel Bo (Argentina), Pietro Baruselli (Brazil)*
- 17.45 Multi-glyco engineering of recombinant gonadotropin alpha-beta fusion protein confers in vivo eCG- (PMSG) like activity.
Juan Manuel Pérez Sáenz (Argentina)
- 18.15 Results of field trials evaluating a synthetic eCG-Like glycoprotein produced by Syntex for use in different species.
Lucas Cutaia (Argentina), Santiago Perez Wallace (Argentina)
- 18.45 Questions, Discussion and Closing

17.00 - 17.40



ROOM VERDE

Sponsored by IMV Technologies

WORKSHOP 22 - REPRODUCTION TECHNOLOGIES OF THE FUTURE IN THE DATA DRIVEN BOVINE INDUSTRY

Chairs: *Lee Cairns (Scotland)*

17.40 - 19.10



ROOM VERDE

WORKSHOP 21 - STEM CELLS AND THEIR PRODUCTS: APPLICATIONS IN REPRODUCTIVE DISEASES OF DOMESTIC ANIMALS

Chairs: *Fausto Cremonesi (Italy), Xavier Donadeu (Scotland)*



- 17.40 Endometrial Mesenchymal Stem/Stromal Cells – regenerative properties. *Cristina Esteves (Scotland)*
- 18.00 Mesenchymal cell secretome applications in large animal reproductive regenerative medicine. *Anna Lange-Consiglio (Italy)*
- 18.20 Mesenchymal Stem Cells in livestock cattle: potential applications in reproduction for germilines derivation.
Oscar Alejandro Peralta Troncoso (Chile)
- 18.40 Discussion

20.00

EVENING: JAZZ & FOOD EVENT at Cantina Bentivoglio

TUESDAY 28TH JUNE 2022

9.00 - 11.00



AUDITORIUM

PLENARY SESSION 2 - EXTRACELLULAR VESICLES IN FEMALE REPRODUCTIVE FUNCTION

Chair: *Pascal Mermillod (France)*

- 9.00 Extracellular vesicle mediated molecular signaling in ovarian follicle: implication for oocyte developmental competence. *Dawit Tesfaye (USA)*
- 9.40 Extracellular vesicles: multi-signal messengers in the gametes/embryo-oviduct crosstalk. *Carmen Alminãna (Switzerland)*
- 10.20 Extracellular vesicles: novel regulators of conceptus-uterine interactions? *Thomas Spencer (USA)*

11.00 - 12.30



ROOM AZZURRA

WORKSHOP 7 - ADVANCES IN SPERM CRYOPRESERVATION TECHNOLOGY FOR CONSERVATION OF AVIAN GENETIC RESOURCES

Chair: *Silvia Cerolini (Italy)*

- 11.00 Relation between cryoprotectant concentration, sperm functional integrity and fertilizing ability of frozen/thawed chicken sperm. *Silvia Cerolini (Italy)*
- 11.30 Role of endogenous and external factors on poultry sperm cryoresistance. *Julian Santiago-Moreno (Spain)*
- 11.50 Membrane lipid regulation of cryopreserved sperm function in poultry. *Atsushi Asano (Japan)*
- 12.10 Advantages and limits in the implementation of a sperm cryobank for avian genetic resources. *Elisabeth Blesbois (France)*

11.00 - 12.30



AUDITORIUM

WORKSHOP 8 - IMPROVED MAMMALIAN EMBRYO PRODUCTION BY NOVEL BIOMIMIC-DESIGNED 3D AND MICROFLUIDIC CELL CULTURE APPROACHES

Chair: *Bart Gadella (The Netherlands)*

- 11.00 Engineering the female reproductive tract using microfluidic devices provide new insights into ovulation and ovarian cancer. *Joanna Burdette (USA)*
- 11.30 Air-liquid interface models of the oviduct epithelium: advantages, applications, and challenges. *Jennifer Schön (Germany)*
- 11.50 Oviduct-on-a-chip: Considerations for design, fabrication, cell culture, and the impact on embryo development. *Heiko Henning (The Netherlands)*
- 12.10 CRISPR-Cas9 editing of organs-on-a-chip to create reproductive models: a serous tubal intraepithelial carcinoma-on-a-chip. *Marcia Ferraz (USA)*

11.00 - 12.30



ROOM ITALIA

WORKSHOP 11 - GONADOTROPIN SECRETION IN CATTLE AND SHEEP: NEW DISCOVERIES

Chair: *Terry Nett (USA)*

- 11.00 Intra-pituitary mechanisms underlie annual time measurement to regulate seasonal reproduction. *Domingo Tortonese (UK)*
- 11.30 Discoveries of new receptors on bovine gonadotrophs: possible new mechanisms to control reproductive functions. *Hiroya Kadokawa (Japan)*
- 12.00 Use of an antiestrogen delivered centrally to override the estradiol negative feedback on LH secretion during anestrus in ewes. *Terry Nett (USA)*

11.00 - 12.30



ROOM VERDE

Sponsored by Medi Nova

WORKSHOP 24 - NEW TRENDS IN SWINE PRODUCTION MANAGEMENT

- 11.30 Technological and formulative innovation for revitalizing a mature business such that of the semen extenders for pig artificial insemination. *Ruggero Bettini (Italy)*
- 11.50 Pathways to antibiotic-free preservation of boar spermatozoa. *Dagmar Waberski (Germany)*
- 12.10 Innovative semen extender formulations without antibiotics. *Diana Angel (Italy)*

12.30 - 14.00

Lunch and Poster Session 2

14.00 - 16.30



ROOM VERDE

SYMPOSIUM 5 - REPRODUCTION IN NON-DOMESTIC AND ENDANGERED SPECIES

Chair: *Pierre Comizzoli (USA)*

- 14.00 Reproductive biology and biotechnologies in wild felids. *Ampika Thongphakdee (Thailand)*
- 14.30 Influence of seasonality on assisted reproduction in wild bovids. *Gabriela Mastromonaco (Canada)*
- 15.00 Understanding and sustaining reproduction at the Panama Amphibian Rescue and Conservation Project. *Gina Della Togna (Panama)*
- 15.30 Marsupials the alternative therians – From gametes to birth. *John Rodgers (Australia)*

Oral Communications:

- 16.00 Enigmatic Story of Embryonic Diapause behind the Scaly Armor: Non-invasive Assessment of Reproductive Cycle in wild Taiwanese Pangolin (*Manis.p. pentadactyla*) Using Fecal Steroid Metabolites. *Arora Bharti (India)*
- 16.15 Anti-Müllerian hormone (AMH) levels in Amazonian manatees (*Trichechus inunguis*): sex and age class variations. *Rodrigo Amaral (Brasil)*

14.00 - 16.30



ROOM AZZURRA

SYMPOSIUM 6 - IMMUNE REGULATION OF OVIDUCT/UTERINE FUNCTION

Chair: Graça Ferreira-Dias (Portugal)

- 14.00 Challenges in studying preimplantation embryo-maternal interaction in cattle. *Dimitrios Rizos (Spain)*
- 14.30 Neutrophils and monocytes in the equine endometrium: friends or foes? *Dariusz Skarzynski (Poland)*
- 15.00 Preventing postpartum uterine disease in dairy cattle depends on avoiding, tolerating and resisting pathogenic bacteria. *Iain Martin Sheldon (UK)*

Oral Communications:

- 15.30 The role of interleukin-1 as ovulation inducing factor in rabbits (*Oryctolagus cuniculus*). *Margherita Maranesi (Italy)*
- 15.45 Mating induces down-regulation of miR-671, a key repressor of binding function by fibronectin type 1 (FN1) in the sow internal genital tract. *Manuel Alvarez-Rodriguez (Spain)*
- 16.00 Maternal age results in altered endometrial miRNA profile in a novel bovine model. *Thiago Teixeira (Australia)*
- 16.15 Effect of growth factors derived from commercial ovine placental extract on early pregnancy loss in mares. *Hamed Farnia (Iran)*

14.00 - 16.45



AUDITORIUM

**SYMPOSIUM 7 - EFFECTS OF HEAT STRESS ON REPRODUCTION:
FROM CONCEPTION TO LACTATION**

Chair: Geoffrey Dahl (USA)

- 14.00 Effects of periconceptional heat stress on primiparous and multiparous daughters of Holstein dairy cows. *Michelle Rhoads (USA)*
- 14.30 Effects of temperature rise during in vitro maturation on embryo production in dairy and beef cattle. *Georgios S. Amiridis (Greece)*
- 14.45 Late gestation heat stress: effects on dam and daughter. *Geoffrey Dahl (USA)*
- 15.15 Elevated environmental temperature increases the incidence of uterine disease in dairy cows independent of elevated bacterial load. *John Bromfield (USA)*
- 15.30 Impact of heat stress on lactational performance of dairy cows. *Sha Tao (USA)*
- 16.00 Lactation status during gestation is associated with the size of the ovarian reserve of female offspring in dairy cattle. *Francesca Mossa (Italy)*
- 16.15 Effects of heat stress on mammary function: mediators and mechanisms. *Tom McFadden (USA)*

14.00 - 16.30



ROOM ITALIA

SYMPOSIUM 8 - CRYOPRESERVATION: FREEZING, VITRIFICATION, FREEZING DRYING

Chair: Amir Arav (Israel)

- 14.00 Vitrication in ART: past, present, and future. *Gabor Vajta (Australia)*
14.20 Dry biobanking as a conservation tool in the anthropocene.
Joseph Saragusty (Italy)
14.40 The ART of bringing extinction to a freeze – history and future of species conservation, exemplified by rhinos. *Thomas Hildebrandt (Germany)*
15.00 VitDrying (vitrification and drying) of reproductive cells and stem cells.
Amir Arav (Israel)

Oral Communications:

- 15.30 Efficient and safe separation of stallion and bull sperm without centrifugation. *Amos Frishling (Israel)*
15.45 Antifreeze protein type i in extender for potential cryosurvival enhancement of frozen/thawed sheep semen.
Lucas Francisco Leodido Correia (Brazil)
16.00 Effect of DHA and DHA-loaded cyclodextrin on the equine frozen semen quality. *Edjalma Rodrigues da Silva-Junior (Brazil)*
16.15 The oxidative stress index (OSI) in seminal plasma could be a freezability marker in donkey semen. *Iván Yáñez-Ortiz (Spain)*

16.30 - 17.00

Coffee Break

17.00 - 18.30



ROOM AZZURRA

WORKSHOP 9 - REPRODUCTIVE TOXICOLOGY IN MARINE MAMMALS

Chair: Ulf Magnusson (Sweden)

- 17.00 Reproduction in Baltic seals - history of environmental pollution effects and present status. *Sara Persson (Sweden)*
17.45 Under pressure - the scientific challenge of studying effects of environmental pollutants on the reproductive success of harbour porpoises (*Phocoena phocoena*). *Tina Kesselring (Germany)*

17.00 - 18.30



AUDITORIUM

WORKSHOP 10 - THE GAIT OF ASSISTED REPRODUCTION IN THE EQUIDS

Chairs: Alberto M. Luciano (Italy), Giovanna Lazzari (Italy)



- 17.00 An extensive characterization of horse oocytes suggests the use of different cultural strategies in order to improve in vitro embryo production. *Federica Franciosi (Italy)*
17.30 Embryo and recipient mare cycle characteristics affect the likelihood of pregnancy and foaling after transfer of ICSI embryos.
Tom A.E. Stout (The Netherlands)
17.50 Fatty acid composition of the equine sperm plasma membrane and its implication on sperm function. *Christine Aurich (Austria)*
18.10 Assisted reproduction in donkeys: a new challenge.
Diana Fanelli (Italy)

17.00 - 18.30



ROOM ITALIA

WORKSHOP 12 - IS A NEW STAR BORN? NGF ROLE ON OVULATION INDUCTION AND SPERM TRAITS

Chair: *Rosa M Garcia-Garcia (Spain)*

17.00 Induced ovulation in South American camelids: new insights on the role of b-NGF. *Mauricio Silva (Chile)*

17.30 Effect of nerve growth factor on the main traits of rabbit sperm. *Cesare Castellini (Italy)*

17.50 Insights into NGF role in bovine reproduction. *Fabio Lima (USA)*

17.00 - 18.00



ROOM VERDE

Sponsored by IMV Technologies

WORKSHOP 20 - STRATEGY TO IMPROVE BOVINE FERTILITY: USE OF AN ANIMAL FREE-PROTEIN MEDIUM

Chair: *Lucie Gavin-Plagne (France)*

WEDNESDAY, 29TH JUNE 2022

9.00 - 11.00



AUDITORIUM

PLENARY SESSION 3 - EPI/GENETICS GENOMICS IN REPRODUCTION

Chair: Antonio Gonzales – Bulnes (Spain)

- 9.00 The impact of prenatal environment on postnatal life and performance. *Antonio Gonzalez-Bulnes (Spain)*
- 9.30 Developmental principles of bilaminar disc embryos. *Ramiro Alberio (UK)*
- 10.00 Fetal development and cardiovascular health: causes and consequences. *Janna Morrison (Australia)*
- 10.30 Interferon Tau: influences on growth and development of the conceptus. *Fuller Bazer (USA)*

11.00 - 12.30



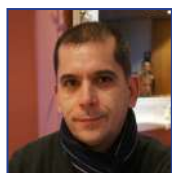
ROOM ITALIA

WORKSHOP 13 - MULTIPLE FUNCTIONS OF THE CHORIONIC GIRDLE - A TRIBUTE TO TWINK ALLEN

Chair: Amanda De Mestre (UK)

- 11.00 Molecular mechanisms of equine trophoblast development and invasion. *Amanda de Mestre (UK)*
- 11.30 Genetic regulation of equine chorionic girdle development: linking invasion with immunomodulation. *Doug Antczak (USA)*
- 12.00 Talking to the mother's immune system: invasive equine trophoblast cells secrete pregnancy-specific glycoproteins which activate latent TGFβ *Robert Kammerer (Germany)*

11.00 - 12.30



AUDITORIUM

WORKSHOP 15 - ADVANCES IN THE USE OF DOPPLER ULTRASONOGRAPHY IN CATTLE REPRODUCTION

Chair: Joao Henrique Moreira Viana (Brasil)

- 11.00 Application of color Doppler ultrasonography to improve efficiency of hormonal treatment: estimation of follicle and luteal activity and prediction of estrous cycle. *Motozumi Matsui (Japan)*
- 11.20 Uterine and luteal blood flow after artificial insemination and embryo transfer in cattle. *Heinrich Bollwein (Switzerland)*
- 11.40 Potentials and flaws of the early diagnosis of nonpregnancy based on corpus luteum blood flow. *João Henrique Moreira Viana (Brazil)*
- 12.10 Applications of color Doppler ultrasonography in commercial fixed-time programs in cattle. *Guilherme Pugliesi (Brazil)*

11.00 - 12.30



ROOM AZZURRA

WORKSHOP 17 - NUTRITIONAL STRATEGIES TO IMPROVE FERTILITY IN SMALL AND LARGE RUMINANTS

Chair: *Jo Leroy (Belgium)*

- 11.00 Managing for fertility in dairy cows, the oocyte deserves center stage. *Jo Leroy (Belgium)*
- 11.25 Role of fatty acids on fertility in dairy cows. *Josè E. P. Santos (USA)*
- 11.50 Effect of free fatty acids during early embryonic development on the cryosurvival of blastocysts. *Hilde Aardema (The Netherlands)*
- 12.00 Maternal nutrition and developmental origins of health and disease (DOHAD) - Relevance to male fertility in research and livestock production. *Francesca Mossa (Italy), Graciela Pedrana (Uruguay)*

11.00 - 11.40



ROOM VERDE

Sponsored by IMV Technologies

WORKSHOP 23 - BACTERIAL CONTROL IN SWINE SEMEN

Chairs: *Perrine Nogues, Aranxta Aechegaray*



12.30 - 14.00

Lunch and Poster Session 3

14.00 - 16.30



ROOM AZZURRA

SYMPOSIUM 9 - NEW APPROACHES IN BUFFALO REPRODUCTIVE MANAGEMENT

Chair: *Giuseppe Campanile (Italy)*

- 14.00 Embryo production in buffalo cows. *Pietro Baruselli (Brasil)*
- 14.30 Exogenous and endogenous factors in seasonality of reproduction in buffaloes: a review. *Michael D'Occhio (Australia)*
- 15.00 Reproductive management in buffalo by artificial insemination. *Gianluca Neglia (Italy)*
- 15.30 Synchronization and re-synchronization strategies to improve fertility in Dairy Buffaloes. *Nasim Ahmad (Pakistan)*

Oral Communications:

- 16.00 Melatonin implants or progesterone device added to the ovsynch protocol in dairy buffaloes. *Nelcio Antonio Tonizza de Carvalho (Brazil)*
- 16.15 Metabolic status and pregnancy rate in Italian Mediterranean Buffaloes. *Angela Salzano (Italy)*

14.00 - 16.30 ROOM ITALIA



SYMPOSIUM 10 - REPRODUCTION IN COMPANION ANIMALS

Chair: *George Mantziaras (Greece)*

- 14.00 Cold Case: Small Animal gametes cryobanking. *Gaia Cecilia Luvoni (Italy)*
- 14.30 Small animal reproduction: scientific facts versus dogmas or unverified beliefs. *Alain Fontbonne (France)*
- 15.00 The bitch around parturition. *Sebastian Artl (Germany)*
- 15.30 Developmental intestinal microbiome alterations in canine fading puppy syndrome: a prospective observational study. *Smadar Tal (Israel)*
- 16.00 Imaging of the male reproductive tract: not so easy as it looks like. *George Mantziaras (Greece)*

14.00 - 16.30



ROOM VERDE

SYMPOSIUM 11 - NEW IMAGING SYSTEMS FOR ASSESSING GAMETE AND EMBRYO QUALITY

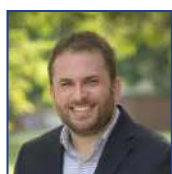
Chair: *Sergio Ledda (Italy)*

- 14.00 Raman spectroscopy based approach to study the female gamete. *Luisa Bogliolo (Italy)*
- 14.30 Oocyte and embryo evaluation by AI and multi-spectral auto-fluorescence imaging. *Jeremy Thompson (Australia)*
- 15.00 The label-free microscopy a non-invasive new tool to assess gametes and embryo quality. *Marcello Rubessa (USA)*
- 15.30 Assessments of sperm quality integrating morphology, swimming patterns, bioenergetics and cell signaling. *Eduardo Roldan (Spain)*

Oral Communications:

- 16.00 Identification of secretory proteins from bovine cumulus oocyte complexes during in vitro maturation. *Jasmin Walter (Switzerland)*
- 16.15 Validation of the isperm(r) portable device for the analysis of ram sperm motility. *Adriana Casao (Spain)*

14.00 - 16.30



AUDITORIUM

SYMPOSIUM 12 - NOVEL INSIGHTS ON UTERINE IMMUNOLOGY DURING PREGNANCY AND DISEASE

Chair: *Eduardo de Souza Ribeiro (Canada)*

- 14.00 Immunological detection of pregnancy: Evidence for systemic immune modulation during early pregnancy in ruminants. *Troy Ott (USA)*
- 14.30 Immunological memory of the maternal-fetal interface: implications for reproductive management of mares. *Doug Antczak (USA)*
- 15.00 Immunological memory in the postpartum uterus: potential use of vaccines to control metritis. *Vinicius Machado (Brasil)*
- 15.30 Modulation of immune function in the bovine uterus peripartum. *Stephen LeBlanc (Canada)*

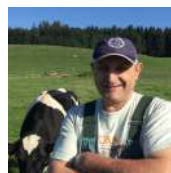
Oral Communications:

- 16.00 Assessment of the anti-inflammatory potential of horse endometrial and adipose mesenchymal stem cells in an vivo model of mare induced endometritis. *Fidel Castro (Chile)*
- 16.15 Utero-placental immune events in the dog during pregnancy. *Miguel Tavares Pereira (Switzerland)*

16.30 - 17.00

Coffee Break

17.00 - 18.30



ROOM AZZURRA

WORKSHOP 14 - BOVINE REPRODUCTION

Chairs: Ana Meikle (Uruguay), Giovanni Gnemmi (Italy)

- 17.00 Recent advances in dairy research that affect reproductive management in confinement and grazing systems. *Matthew Lucy (USA)*
- 17.45 The fine line between clinical and subclinical endometritis in dairy cows. *Oswaldo Bogado Pascottini (Belgium)*

17.00 - 18.30



ROOM ITALIA

WORKSHOP 16 - EMBRYONIC DIAPAUSE

Chair: Susanne Ulbrich (Switzerland)

- 17.00 Putting pregnancy on hold down under. *Jane Fenelon (Australia)*
- 17.30 Molecular cues controlling embryonic developmental pace. *Vera van der Weijden (Switzerland)*
- 18.00 Embryonic derived signals for communicating with the uterus: Clues from studying embryonic diapause in mice. *Shuangbo Kong (China)*

17.00 - 18.30



AUDITORIUM

WORKSHOP 18 - GENETICALLY TAILORED PIGS AS DISEASE MODELS AND ORGAN DONORS FOR XENOTRANSPLANTATION

Chair: Eckard Wolf (Germany)

- 17.00 Modelling Duchenne muscular dystrophy in pigs - recent progress. *Hiroshi Nagashima (Japan)*
- 17.20 A pig model for Hutchinson-Gilford progeria syndrome. *Vicente Andrés (Spain)*
- 17.40 The Role of Adult Stem Cells in Homeostasis and Repair. The Expanding Story of LGR5 Stem Cells. *Jorge Piedrahita (USA)*
- 18.00 Recent breakthroughs in pig-to-primate xenotransplantation. *Eckhard Wolf (Germany)*

17.00 - 18.00



ROOM VERDE

Sponsored by Beckman Coulter

WORKSHOP 25 - FLOW CYTOMETRY, A NECESSARY TOOL FOR SPERM VIABILITY ASSESSMENT

Chair: Diego Bucci (Italy)

- 17.00 Flow Cytometry, a necessary tool for Sperm Viability Assessment
Multiparametric flow cytometry: a potent tool for the study of sperm biology. *Fernando Peña Vega (Spain)*
- 17.20 Detection and Immunophenotypic Analysis of Seminal Fluid Extracellular Vesicles by Flow Cytometry. *Alberto Álvarez-Barrientos (Spain)*
- 17.40 Flow Cytometry as emerging technology in Veterinary applications. *Andreas Wicovsky*
- 17.55 Questions

20.00

EVENING: CONGRESS DINNER at Royal Hotel Carlton

THURSDAY 30TH JUNE 2022

8.00 - 10.00



AUDITORIUM

PLENARY SESSION 4 - SEMEN QUALITY SEMEN ÓMICS: RELATION WITH MALE FERTILITY

Chair: *Marc Yeste (Spain)*

- 8.00 Proteomics in pig semen: Recent achievements and future challenges.
Isabel Barranco (Italy)
- 8.40 Intact cell MALDI-TOF mass spectrometry, a promising proteomic profiling method in farm animal clinical and reproduction research.
Xavier Druart (France)
- 9.20 Sperm surface changes and their consequences for sperm transit through the female reproductive tract *Jessica Rickard (Australia)*

10.00 - 12.00



AUDITORIUM

PLENARY SESSION 5 - ADDING A NEW DIMENSION TO REPRODUCTION

Chair: *Tiziana A. L. Brevini (Italy)*

- 10.00 A 3D approach to reproduction. *Tiziana A.L. Brevini (Italy)*
- 10.40 Mother knows best. *Alireza Fazeli (United Kingdom/Estonia)*
- 11.20 Engineering the 3D printed bioprosthetic ovary.
Monica M. Laronda (USA)

12.00 - 12.30

CLOSING CEREMONY

THE MICHELSON PRIZE AND GRANTS

**Encouraging and incentivizing scientists
to make what would be the single
biggest breakthrough in the fight against
animal overpopulation.**

**UP TO
\$750,000
PER GRANT**

**FOR THE PURSUIT OF NEW
STERILIZATION TECHNOLOGY**

Qualifying scientists will have an innovative approach to the development of a single-dose, permanent, non-surgical sterilization method for male and female dogs and cats. Proposed research doesn't need to meet all the criteria for the Michelson Prize, but it would definitely help your chances of receiving grant funding.

THE \$25 MILLION PRIZE

**As much as we want to give away this \$25 million,
there are some criteria that need to be met...**

- The winning entry will be safe and effective for cats and dogs, both male and female.
- It will ablate sex steroids and/or their effects.
- There will be a viable pathway for regulatory approval.
- It will be suitable for use in a field setting.
- The manufacturing process and cost will be reasonable.
- It must be a single-dose, permanent, nonsurgical sterilant.

For more information, visit:

MICHELSONPRIZEANDGRANTS.ORG

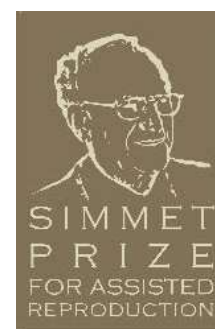
The Michelson Prize & Grants is open to any entity and all well-qualified individuals or groups. Scientists from a diverse range of fields are encouraged to apply.

**Michelson
Found Animals
Prize & Grants**

SIMMET PRIZE

Through the auspices of the International Congress of Animal Reproduction (ICAR), Minitube International, a science-driven biotechnology company, is sponsoring the **4th Simmet Prize in Assisted Reproduction**.

The award, which recognizes the scientific advances in assisted reproduction pioneered by **Dr. Ludwig Simmet**, founder of Minitube, recognizes an active research scientist for outstanding basic and applied research published during the previous six years in the area of assisted reproductive technologies for animal production systems.



The Simmet Prize, which comes with a 50,000 euro honorarium, is the largest of its type in the world and is presented every four years at the ICAR meeting.



Dr. Gabriel Bó of the Instituto de Reproducción Animal Córdoba (IRAC) in Córdoba, Argentina is the recipient of the **2020+2 Simmet Prize for Assisted Reproduction**.

The prize, which is the most prestigious award in animal reproduction and one of the largest of its kind, was given for the pioneering efforts of Dr. Bó to develop practical protocols for fixed-time artificial insemination, superovulation and embryo transfer in cattle.

Dr. Bó is currently President and Director of Research and Post-graduate training at IRAC and Professor of Obstetrics and Biotechnology of Reproduction at the Veterinary School of the Instituto de Ciencias Basicas y Aplicadas, Universidad Nacional de Villa Maria in Cordoba, Argentina. IRAC is one of the few organizations of its kind with missions in research, teaching, and clinical service including embryo transfer, artificial insemination, and gamete and embryo cryopreservation. Over 1300 veterinarians in South and Central America have received education on animal reproduction since IRAC opened in 1995.

Bó and his colleagues have developed what are now the de facto standard protocols for superovulation in cattle. Research conducted by him and his collaborators on estrus synchronization and fixed-time artificial insemination has been one of the key drivers for implementation of these technologies by producers throughout South America and globally. Together, these practices are revolutionizing genetic selection and reproductive management of cattle.



FINANCIAL SUPPORT TO YOUNG RESEARCHERS

More than 130 applications received in 2019 for the Financial Support to Young Researchers. We would like to thank everyone of our applicants.

The Committee had a very difficult task of selecting the 10 recipients out of such a large pool of worthy applicants.

Congratulations to the award recipients!

The Committee decided to maintain the 10 recipients selected in 2020.

- Almeida Praxedes Erika, Brazil
- Bertuzzi Mariana Lucia, Argentina
- Bharti Arora, India
- De Oliveira Santos Maria Valeria, Brazil
- Mohammed Stephanie, Trinidad and Tobago
- Nabi Ibrahim, Algeria
- Navarro Micaela, Argentina
- Panahi Farnaz, Iran
- Santos Jimenez Zurisaday, Mexico
- Von Mengden Lucia, Brazil

REGISTRATION INFORMATION

All delegates must register for the congress. Registration fees are as follows:

UNTIL 31st MARCH 2022

Delegate € 470,00
Students* € 370,00

FROM 1st APRIL TO 13th JUNE 2022

Delegate € 570,00
Students* € 470,00

ON-SITE REGISTRATION

Delegate € 640,00
Students* € 540,00

VAT 22% included

THE REGISTRATION FEE INCLUDES:

- Admission to full scientific program
- Congress Kit
- Buffet Lunches
- Coffee breaks
- Access to exhibition and posters
- Certificate of Attendance
- Welcome cocktail

Extra Social Program Fee (per person):

- Jazz & Food Event, 27th June 2022 € 70,00
- Congress Dinner, 29th June 2022 € 100,00
- Welcome Cocktail for accompanyin person € 50,00

VAT 10% included

* Registration in the STUDENT category is only open to people able to provide a valid official certificate. To validate this, documentary proof of this status must be forwarded to the e-mail: registrations@icar2020-2.org

REMITTANCE

Registration fees shall be paid by credit card or bank transfer through the on-line system available. When paying by bank transfer, a copy of the transfer receipt must be sent at registrations@icar2020-2.org

Registrations without proof of payment will not be accepted. The organising secretariat will send registration receipt upon receipt of payment, by e-mail. Please be sure your e-mail address is filled in correctly.

PERSONAL INVITATION FOR VISA PURPOSES

To facilitate congress attendance a personal invitation can be sent on request. This invitation does not exempt the recipient from registering and paying the proper congress fee. Please inform the congress secretariat if you need a personal invitation letter.

CANCELLATION AND REFUND

Cancellations must be sent to registrations@icar2020-2.org

The amount equal to 50% of the fee paid will be refunded for cancellations received by 31st May 2022.

After 31st May 2022 no refunds will be issued.

All refunds will be paid in euros after the congress.

CANCELLATION OF THE CONGRESS

The congress secretariat reserves the right to cancel the congress, shift venue, or change dates, in case of "force majeure". Neither VET International or the Congress Organising Committee shall be liable for any damage claims.

LIABILITY AND INSURANCE

Registration fees do not include the insurance of participants against personal accidents, sickness and cancellations by any party, theft, loss or damage to personal possessions. Participants are advised to take out adequate personal insurance to cover travel, accommodation, cancellation and personal effects.

ABSTRACT SUBMISSION

ABSTRACT TOPICS

- Bovine reproduction
- Buffalo reproduction
- Camelid reproduction
- Canine and feline reproduction
- Control of estrous cycle
- Cryobiology of gametes and embryos
- Embryo development and differentiation
- Embryogenesis in vitro
- Female reproductive physiology
- Horse reproduction
- Imaging methods in reproduction
- Male reproductive physiology
- Metabolism and reproduction
- Neuroendocrine control of reproduction
- Nutrition and reproduction
- Ovary and oocyte
- Oviduct
- Pig reproduction
- Pregnancy, placental function and parturition
- Reproduction in avian species
- Reproduction in exotic animals and wild species
- Reproduction in fish
- Reproduction in sheep and goats
- Reproductive pathologies
- Reproductive system diseases
- Spermatology and sperm quality
- Testis
- Uterus
- Other

Congress delegates are invited to submit abstracts of their scientific work for presentation as a free communication at ICAR 2020+2.

Abstracts of scientific contributions, covering the topics below are welcome.

GENERAL REQUIREMENTS

The text must be clear, concise, and written in proper English.

The content must not have been previously published in academic journals or subjected to peer review. Significant technical information must not be withheld.

Abstracts must absolutely contain results. Statements such as "results will be discussed" are not acceptable and will lead to rejection.

At least one Congress registration is needed every two accepted abstracts; abstracts not respecting these indications will be not published.

STRUCTURE OF THE ABSTRACT

Abstracts can be structured and may include:

- 1 BACKGROUND a brief introduction stating the purpose of the investigation and its relevance to laboratory medicine;
- 2 METHODS a description of the methodology used;
- 3 RESULTS to be supported by statistical analysis or other evidence to show their validity;
- 4 CONCLUSIONS The body of the abstract must not exceed 2300 characters, spaces included.

GENERAL INFORMATION

Submission deadline:

16th December 2021

Confirmation of receipt:

Receipt of the abstract will be acknowledged by e-mail immediately after submission.

Notification of acceptance or rejection:

authors will be notified of acceptance or rejection by 31st January 2022.

Registration:

At least one Congress registration is needed every two accepted abstracts; abstracts not respecting these indications will be not published.

Deadline registration: 31st March 2022

Key dates of the abstract submission procedure

From 22nd December to 16th January 2022: Authors should review their abstracts if required

31st January 2022: Abstract final evaluation and notification letters sending

31st March 2022: Deadline for authors' registrations

For information regarding poster submission: posters@icar2020-2.org

IMPORTANT NOTICE

Abstract Authors are asked to indicate the most suitable topic for presentation of their work.

Abstracts should be submitted via the on-line submission system only.

Do not send in an abstract more than once!

GENERAL INFORMATION

CONGRESS VENUE

Palazzo della Cultura e dei Congressi
P.zza Costituzione, 4/a - 40128 Bologna (Bo) Italia
Phone: +39 051.63.75.111 - Fax. +39 051 63.75.170
info@bolognacongressi.it
www.bolognacongressi.it



HOW TO REACH THE CONFERENCE VENUE

Bologna is a compact city, it is friendly, positive, cosmopolitan, easy to get around. The public transport system efficiently connects all points in the city, from the centre to the suburbs. City buses are frequent and cheap. Single tickets can be purchased at the authorized points of sale or directly on board. They must be stamped at the beginning of the journey and the validity is 75 minutes from the time of validation. Taxis can be hired at taxi ranks located near the main points of interest, booking the service calling the city's taxi co-operatives.

BY BUS

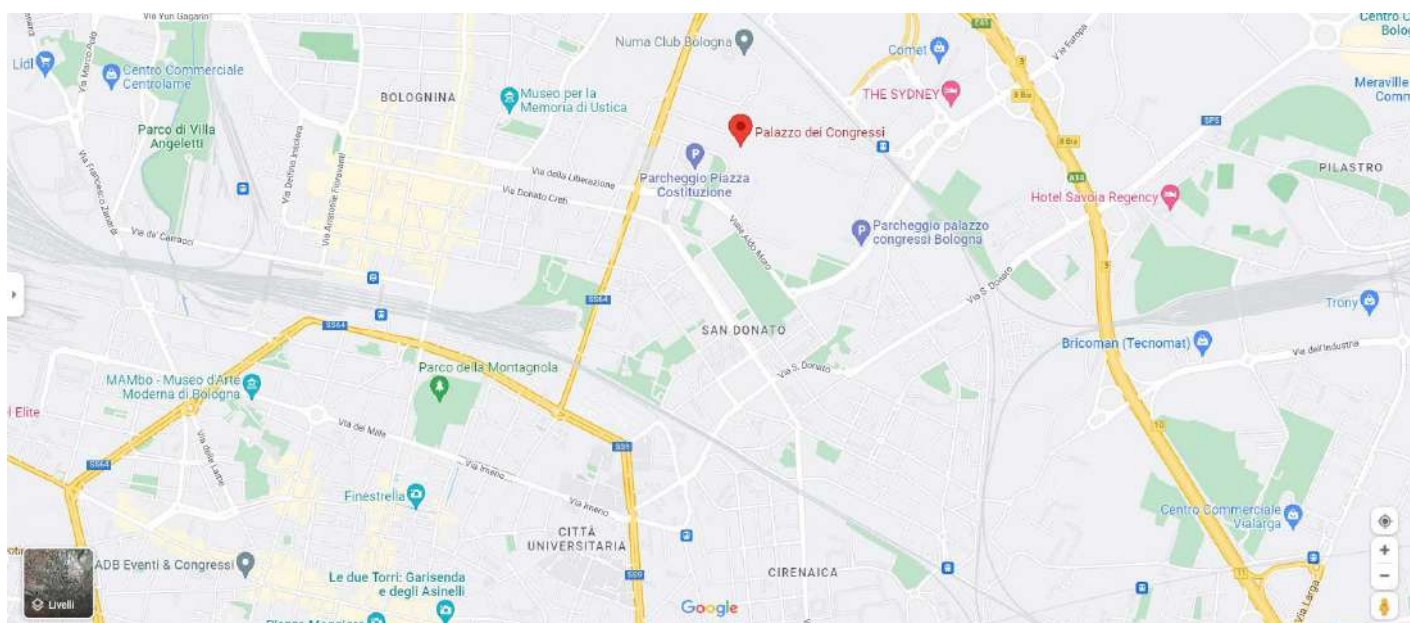
From the City Centre Bus N. 28 to Palazzo della Cultura e dei Congressi
From the Station FS Bus N. 35 or 39 to Palazzo della Cultura e dei Congressi
From Palazzo della Cultura e dei Congressi to the Station Bus n. 35 or 38
€ 1,30 One way valid 60 minutes
€ 12,00 city pass – 10 single journeys

BY TAXI

+39 051 372727
+39 051 4590

BOLOGNA WELCOME

Bologna Welcome will be present during the congress with a booth. During the Congress Bologna Welcome can help you with tourist information, bus tickets and tour tickets.



ORGANIZING SECRETARIAT



VET INTERNATIONAL srl

Via Carlo Farini 81 - 20159 Milano – Italy

Phone: +39 02 66802323 - Fax: +39 02 6686699

Email: info@icar2020-2.org

REGISTRATION DESK

The registration desk will be located at the entrance and it will be open at the following times:

Sunday, 26 th June 2022	16.00 - 19.00
Monday, 27 th June 2022	7.30 - 18.30
Tuesday, 28 th June 2022	8.00 - 18.00
Wednesday, 29 th June 2022	8.00 - 18.00
Thursday, 30 th June 2022	7.30 - 13.30

CONGRESS LANGUAGE

The official language of the Congress is English. Simultaneous translation is not provided.

NAME BADGE

A name badge will be required to access to the congress area. Participants will receive a name tag when they check in at the registration desk.

Delegates and exhibitors must display the official badge at all time.

AUDIOVISUAL CENTRE

The audiovisual centre is located in the Exhibition Area. Speakers are kindly requested to bring their presentation to the audiovisual centre on a USB drive one day before the presentation is scheduled. Personal laptops cannot be connected to the system.

COFFEE AND LUNCH

In the exhibition area coffee and lunches are offered to all delegates.

FOOD FOR GOOD

Put a stop to food waste at events!

Food for Good is the project of recovery of surplus food from organized events by Federcongressi&eventi in collaboration with Banco Alimentare and Equoevento.

The recovered food is then delivered to charitable organizations (family homes, soup kitchens and refugee centers).



CERTIFICATE OF ATTENDANCE

A certificate of attendance will be issued to properly registered attendees.

Certificates of attendance will be sent by email after the congress.

INVITATION LETTER

An official letter of invitation will be sent to you upon request. The invitation letter may be used by visitors to raise travel funds or to obtain a visa, but is not a commitment on the part of the organisers to provide any financial support.

Please contact the Organising Secretariat, registrations@icar2020-2.org, to request a letter of invitation.

USEFUL INFORMATION

HOW TO REACH BOLOGNA

There are many different and easy ways to reach Bologna.



BY PLANE

Guglielmo Marconi International Airport, 15 minutes by bus from Historic Downtown, connecting Bologna to the main Italian and European airports.

To city centre

The Aerobus shuttle bus connects Bologna Airport to the city centre.
The service operates from 5am to 12pm: buses leave approx. every 10 minutes.
Aerobus tickets can be purchased on board.
One way Aerobus ticket from/to Airport
(also valid on all buses in the urban area up to 75 minutes) costs € 6,00.

Otherwise you can take the express train from Airport to Bologna Central Station. It will take 7 minutes.



BY TRAIN

Bologna Central Station

For the strategic geographic location - between downtown and the north - Bologna is the main Italian railway junction, made even more efficient by the high-speed trains, which, together with the new railway station project, has led to greater development and a significant increase of daily transit of trains and passengers.



BY CAR

Highways

In Bologna there are two main motorways that converge, linking the north and south of the country (A1 and A14), that can be reached directly from all major Italian cities.

TOURIST INFORMATION, HOTEL AND TRAVEL

On-line booking system is available on the [congress website](#).

Travel information are available on the [congress website](#).

For any information you can contact:

Bologna Welcome

+ 39 051 65 83 150/147

agenzia@bolognawelcome.it

www.bolognawelcome.com/en/



Bologna Welcome

MOBILE PHONES

All participants are asked to switch mobile phones off or to silent mode during the scientific sessions.

ELECTRICITY

In Italy the electrical current is 220 volts AC (50 Hz). Electrical sockets comply with European regulations.

In most hotels you will find adaptors for different types of plugs.

CURRENCY

What currency is used in Italy?

Since 2001, the currency used in Italy is the euro. One euro is divided up into 100 euro-cents. There are eight different coins (1, 2, 5, 10, 20 and 50 euro-cents) and seven notes (5, 10, 20, 50, 100, 200 and 500 euros).

CREDIT CARDS

As well as in cash, purchases can be paid for using the most common credit cards. This payment system is common in Italian shops, which generally display the symbols of the credit cards they accept on the outside door.

If you pay by credit card you will be asked to show an identity document.

Travellers cheques (in USD or Euros) can also be cashed in Italian banks.

TIPS

Tips are not compulsory and in Italy there are no generally established rules, although it is common practice to leave a sum amounting to around 10% of the bill if you are satisfied with the service you have received.

BOLOGNA: DISCOVER THE CITY

Bologna with over 400.000 inhabitants, is the capital city of Emilia Romagna, one of the wealthiest and most industrial regions in Italy, whose per capita income and employment rate are way higher than the national average.

Bologna is known in Italy as "La Dotta, La Rossa, La Grassa", which translates as "the Educated, the Red, the Fat".

"Educated" is for the city's University, the oldest in Europe and home to such intellectual greats as the novelist Umberto Eco.

"Red" refers both to the red bricks that most of Bologna's historic buildings and porticoes are made from, and to the city's history of leftist politics.

"Fat", of course, is for Bologna's culinary history, based on creamy pasta sauces and rich meat dishes.

Bologna is located in a strategic position: being just in the heart of Italy, Bologna is at crossroads in Italy and Europe as well as a transport hub and natural crossroads for international business and trade.

As artistic city Bologna has over 50 museums, including the MAMbo Museum, a reference point for contemporary art.

The Churches and noble Palaces contribute to make of Bologna an open air museum.

Thanks to its culinary traditions Bologna has become the capital city of taste and quality food.

The food of Bologna is principally based upon egg handmade pasta, such as tagliatelle, tortellini, or the famous mortadella.

Bologna is an easy city to visit, and many visitors find it one of Italy's most appealing one.

THE WEATHER IN JUNE

Bologna has a warm humid temperate climate with hot summers and no dry season.

The month of June is characterized by gradually rising daily high temperatures.

The average temperature in Bologna in June is 28 to 35 degree Celsius.

Rain is rare in this period.

SOCIAL EVENTS

JAZZ & FOOD EVENT, 27TH JUNE 2022 AT CANTINA BENTIVOGLIO

Time: 20.00

Address: Via Mascarella 4/b, 40126, Bologna

Price: € 70,00 VAT included

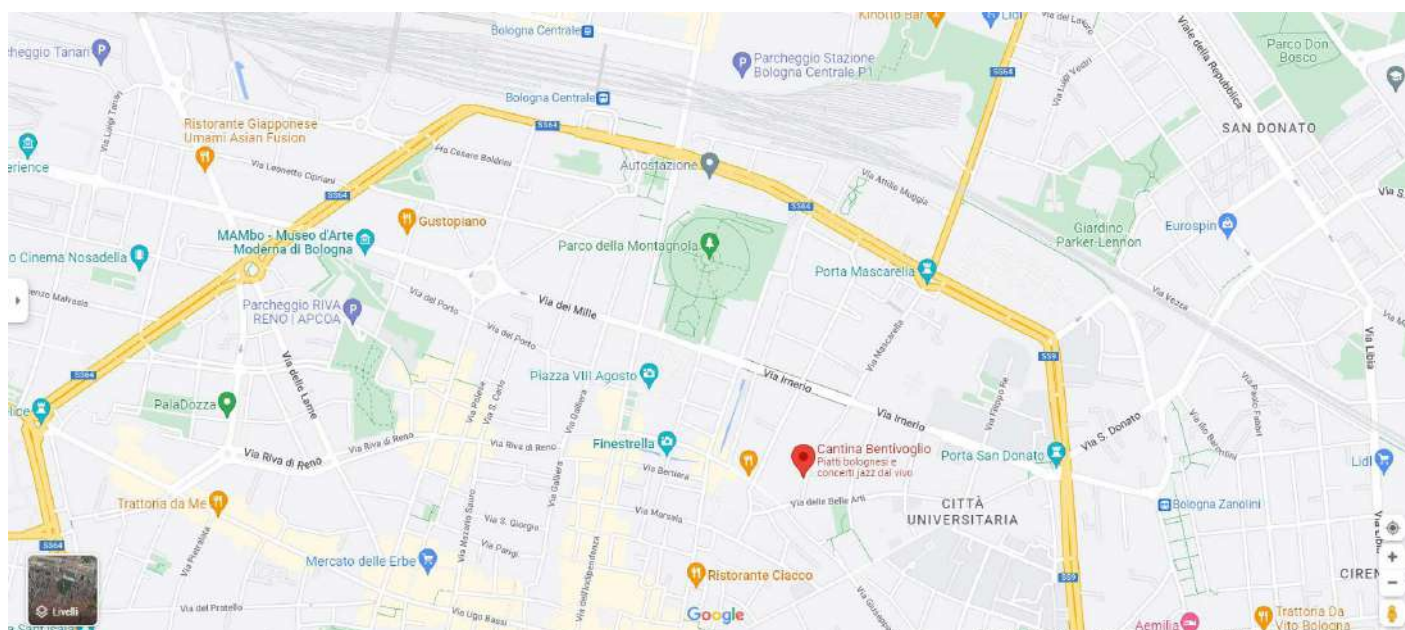
Cantina Bentivoglio is located in Bologna's historical city center since 1987.

From more than 30 years, 6 nights a week, 270 events in our music lounge and 60 in our outdoor summer stages.

Cantina Bentivoglio is featured since 2002 on the american magazine "DownBeat", proudly standing in the top 100 most important world jazz club ranking.

Alberto Armaroli and Giovanni Serrazanetti, artistic directors, take care of every live performance, scheduling not only jazz concerts but also swing, manouche, blues and funky ones.

During the years Cantina Bentivoglio has hosted various important international festivals such as: Heineken Music Club, Alhambra Jazz Club, Alfa Soul Tour and all the Bologna Jazz Festival editions.



CONGRESS DINNER, 29TH JUNE 2022 AT ROYAL HOTEL CARLTON

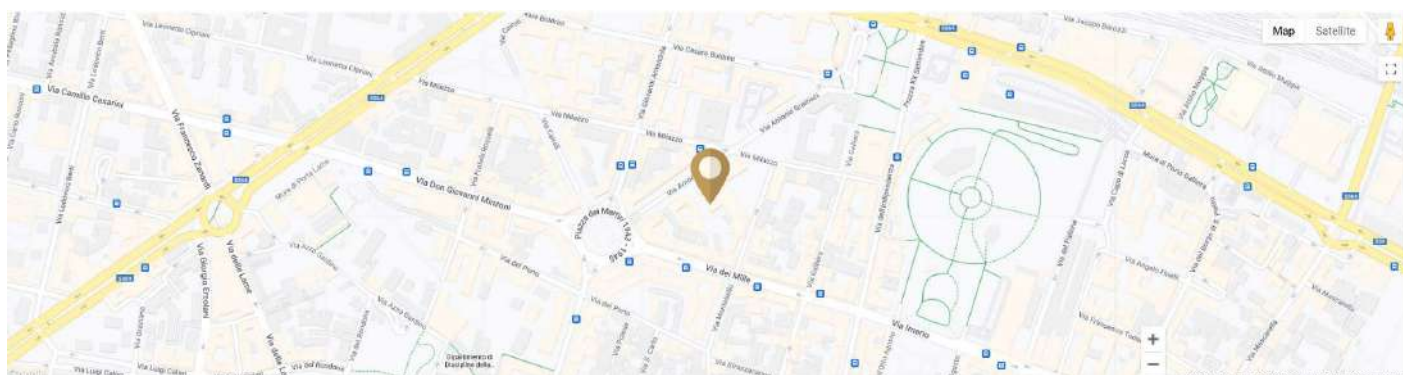
Time: 20.00

Address: Via Montebello, 8 - 40121, Bologna

Price: € 100,00 VAT included

Royal Hotel Carlton is located next to the pedestrian area in the heart of Bologna, and it belongs to the highest class among Bologna's hotels. It can be defined as a City Resort, with leisure-oriented offerings, bringing together both the needs of businessmen and a laid-back environment, in perfect harmony.

Built in the seventies on the ruins of the old "Il Resto del Carlino" building by architect Enzo Zacchioli, the prestigious architectural works of which, such as the John Hopkins University and the Malpighi Hospital, enrich the city of Bologna



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See you in Bologna!

Organising Secretariat



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