



9th INTERNATIONAL
CELL SENESCENCE
ASSOCIATION (**ICSA**)
CONFERENCE

PUERTO VARAS 2024

Program



Program

	Thursday, November 7	Friday, November 8	Saturday, November 9
09:00		09:00 - Session 3: Senescence versus Cancer: Antagonist or Allies in the biological Saga	09:00 - Session 6: Aging and Age-related diseases: Unveiling tomorrow's therapies today
10:00			10:30 - Coffee break
11:00		11:00 - Coffee break	11:00 - Session 7: Metabolism and Mitochondria's impact on senescence
12:00		11:30 - Session 4: Unveiling the mysteries of the Aging Brain: Exploring senescence and neuropathologies	
13:00		13:00 - Short talks (Part II)	12:30 - ICSA General Assembly
14:00	14:45 - Welcoming Remarks	13:30 - Lunchbox	13:30 - Lunchbox
15:00	15:00 - Session 1: Deep down in cellular senescence (Part I)	15:00 - Session 5: Senescence's impact on wound healing and regenerative processes	15:00 - Session 8: New targets and strategies to improve health and treat pathologies
16:00	16:30 - Short talks (Part I)		
17:00	17:00 - Coffee break	16:45 - Short talks (Part III)	17:15 - Coffee break
18:00	17:30 - Session 2: Virus's impact on senescence	17:30 - Coffee break	17:45 - Session 9: Deep down in cellular senescence (Part II)
19:00	19:00 - Keynote Lecture: Dr. Manuel Serrano	19:00 - yICSA Activity	19:15 - Closing Lecture: Dr. Fabrizio d'Adda di Fagagna
20:00	20:00 - Welcoming Reception		20:00 - Party
21:00			



Program

November 7th, afternoon - Day 1

14:45 **Welcoming Remarks** by Mónica Cáceres.

15:00 **Session 1: Deep down in cellular senescence (Part I).** Chairs: Frederick Antoine Mallette, Diego Ormeño.

25+5 min **Peter Adams** - One or two novel mechanisms to regulate the SASP.

25+5 min **Laura Niedernhofer** - Mapping senescent cells in human and mouse tissues.

10+2 min **Gerardo Ferbeyre** - Senescence: The Result of Signaling Beyond the Optimal Range

10+2 min **Roberto A. Avelar** - Mosaic Regulation of Stress Pathways: The Key to Understanding Senescent Cell Phenotypic Heterogeneity.

16:30 **Short talks (Part I).**

5 min **Ricardo Iván Martínez Zamudio** - Epigenetic mechanisms of CD8+ T cell senescence in aging humans.

5 min **Rodrigo Maldonado-Agurto** - Transcriptional Activation of Matrisome Genes in Endothelial Cells Induced to Senescence.

5 min **Grace Yu** - Effect of Senescent Dermal Fibroblasts on Human Skin Aging.

5 min **Zinnarky Ortiz Correa** - Senescence in adipose tissue and the proinflammatory SASP are associated with distinct skeletal muscle phenotypes in older adults.

5 min **Federica Mossa** - Uncovering the role of proteasomal dysregulation in cellular senescence and ageing.

17:00 **Coffee Break.**

17:30 **Session 2: Virus's impact on senescence.** Chairs: Nelson Brown, Eliana Chacon.

25+5 min **Pablo Gonzalez** - Asymptomatic herpes simplex brain infection elicits earlier onset and more severe multiple sclerosis-like disease in mice together with cellular senescence phenotypes in the central nervous system.

10+2 min **Julio Aguado** - The Role of Virus-Induced Senescence in Post-Acute Neurotropic Infection Syndrome.

10+2 min **Carmen Rivas** - Cellular senescence as the basis for HCMV-related

10+2 min **Peter Lidsky** - Antiviral activity of senescent cells: are they an immune "militia"?

10+2 min **Concepción Peiró** - SARS-COV-2 s protein reduces cytoprotective defenses and promotes premature human endothelial cell senescence and vascular dysfunction.

19:00 **Manuel Serrano** - Exploring Judith Campisi's discoveries: The key role of mitochondria in the SASP. (Introduction by Marco Demaria)

20:00 **Welcoming Reception.**



November 8th, morning - Day 2

09:00 **Session 3: Senescence versus Cancer: Antagonist or Allies in the biological Saga.** Chair: Eduardo Artz, Florencia Herbstein.

- 25+5 min **Sheila Stewart** - Tumor progression and therapy-induced comorbidities, a role for senescence.
- 25+5 min **Manuel Collado** - Reprogramming cell senescence and cancer.
- 25+5 min **Daniel Muñoz-Espín** - Role of senescence in the lung tumour microenvironment: therapeutic and detection modalities.
- 10+2 min **Omelyan Trompak** - Spontaneous tumor senescence drives cancer metastasis.
- 10+2 min **Julien Cherfils-Vicini** - Targeting the Senescence associated Immune Checkpoint to blunt age-related diseases and cancers.

11:00 **Coffee Break.**

11:30 **Session 4: Unveiling the mysteries of the Aging Brain: Exploring senescence and neuropathologies.** Chair: Diana Jurk, Veronica Villalobos.

- 25+5 min **Susana Castro Obregón** - Targeting nuclear-cytoplasmic transport to delay brain aging
- 25+5 min **Felipe Court** - Senescent Peripheral Glia as a Barrier to Nerve Regeneration in Aging and Chronic Denervation.
- 10+2 min **Michel Lopez-Teros** - Comparative analysis of cytokine secretion and RNA-seq profiles in palmitate-induced senescent and reactive rat primary astrocytes.
- 10+2 min **Akang Bassey** - Senescent cell ablation and modulation of their secretome prevents tumour formation in mouse models of adamantinomatous craniopharyngioma (ACP).

13:00 **Short talks (Part II).**

- 5 min **Blake Monroe** - Lipid-Derived Electrophiles Induce Carbonyl Stress, Mitochondrial Dysfunction, and Cellular Senescence: 4-Hydroxynonenal as a Physiological Determinant of Adipose Senescence in Obesity and Aging.
- 5 min **Hernán Huerta** - Targeting Chemotherapy-Induced Senescence with Ketogenic Diet for Breast Cancer Treatment.
- 5 min **Andreia Cadar** - The Impact of D+Q on Influenza Vaccine and Infection Responses in Young and Aged Mice.
- 5 min **Rebecca Sereda** - Role of Chaperone-Mediated Autophagy in Cellular Senescence and Aging.
- 5 min **Vanessa Smer-Barreto** - AI to identify novel glioblastoma therapies.
- 5 min **Veronica Villalobos** - The Age-Related Decline of CD204 in Macrophages and Their Impact on Gingival Aging and Disease.

13:30 **Lunchbox.**



November 8th, afternoon - Day 2

15:00 **Session 5: Senescence's impact on wound healing and regenerative processes.** Chairs: Mónica Cáceres, Christian Fernandez.

- 25+5 min **Maximina Yun** - Salamander insights into negligible senescence.
- 25+5 min **Mikolaj Ogrodnik** - Spatiotemporal controls over senescent cells in wounds and the healing process.
- 10+2 min **Karla Valdivieso** - Induction of rapid-onset senescence is integral to healing and is independent of transcription.
- 10+2 min **Giovanni Lombardi** - Harnessing the molecular signature of senescent muscle cells and their released factors: implications for osteoblast differentiation and function.
- 10+2 min **Almudena Chaves-Perez** - Metabolic Reprogramming and Senescence: Unveiling the Role of OGDH and α -Ketoglutarate in Cell Fate and Tissue Regeneration.

16:45 **Short talks (Part III).**

- 5 min **Vidyani Suryadevara** - Detection of senescence in human osteoarthritis talus joints using a novel β -galactosidase responsive Gd-chelate.
- 5 min **Iryna Moskalevska** - Impact of sexual dimorphism on senescence immune checkpoints (SIC) modulation of immunosurveillance and implications in age-related diseases.
- 5 min **Juliana Delgado** - Multi-omics analyses reveal heterogeneity in the therapy-induced senescent landscape.
- 5 min **Esi Taci** - Targeting cellular senescence in 2D and 3D in vitro models through p300 inhibition.
- 5 min **Guillermo Díaz Araya** - Resolvin D1 mitigates TGF- β 1-induced senescence in cardiac fibroblasts.
- 5 min **Camilla Romagnoli** - Exploring the Role of Mechanobiology on Endothelial Senescence.
- 5 min **Florencia Herbstein** - Intracrine action of IL-6 in tumor senescence.
- 5 min **Maximilian Schmid-Siegel** - Proteostasis and metabolism profoundly differ between non-proliferative senescent and quiescent dermal fibroblasts.

17:30 **Coffee Break.**

18:00 **Poster Session.** (The exhibitor list can be found in the "Posters" section)

19:00 **yICSA Activity.**



November 9th, morning - Day 3

09:00 **Session 6: Aging and Age-related diseases: Unveiling tomorrow's therapies today.**
Chairs: Gerardo Ferbeyre, Daniela Rebolledo.

- 25+5 min **Han Li** - The new tricks of an old dog: cellular senescence and cell plasticity in health and disease.
- 25+5 min **Marco Demaria** - Modulating the balance between cell death and senescence for optimal tissue repair.
- 10+2 min **Genève Perron-Deshaies** - Ovariectomy-Induced Senescence in Mice: Insights into Menopausal Aging.
- 10+2 min **Paolo S. Turano** - Functional and Transcriptional Profiling of Senescent SA-βGal Expressing CD8+ T Cells Suggests Their Involvement in Disease and Aging.

10:30 **Coffee Break.**

11:00 **Session 7: Metabolism and Mitochondria's impact on senescence.** Chairs: John Sedivy, Andrea Puebla.

- 25+5 min **Cesar Cardenas** - MERCS, calcium and therapy induce senescence.
- 25+5 min **Joao Passos** - Mitochondria and Cellular Senescence: A Matter of Life and Death.
- 10+2 min **Romain Villot** - Exploring the role of cholesterol metabolism during cellular senescence: regulation of the senescence-associated secretory phenotype by the CH25H/25-HC axis.
- 10+2 min **Celia Quijano** - Metabolic fates of acetyl-CoA in oncogene-induced senescence.

12:30 **ICSA General Assembly.**

13:30 **Lunchbox.**



November 9th, afternoon - Day 3

15:00 **Session 8: New targets and strategies to improve health and treat pathologies.** Chairs: Christian Gonzalez B, Camila Romagnoli.

- 25+5 min **Paul Robbins** - Development of Novel Senotherapeutics to Extend Healthspan
- 25+5 min **David Bernard** - Emerging role of ITPR channels and ER-mitochondria contacts and exchanges in cellular senescence, aging and cancer.
- 10+2 min **Allancer Nunes** - Extra-oral Bitter Taste Receptors: New Targets for Suppressing Cellular Senescence.
- 10+2 min **Marta Kovtcheva** - Dynamic BH3 profiling for improved senolysis strategies
- 10+2 min **Darko Bosnakovski** - Targeting EWS::FLI1-Driven Senescence Evasion via P300/CBP Inhibition and Senolytics: A Novel Therapeutic Strategy for Ewing Sarcoma.
- 10+2 min **Valentin J. A. Barthet** - Targeting Senescent Cells with Precision: A Nanoparticle Approach to Combat Fibrosis and Enhance Cancer Immunotherapy.
- 10+2 min **John Sedivy** - The Epigenomic Landscape of Retrotransposon Expression in Cellular Senescence and Neurodegeneration.

17:15 **Coffee Break.**

17:45 **Session 9: Deep down in cellular senescence (Part II).** Chairs: Florencia Barbé-Tuana, Roberto Rosales Rojas.

- 25+5 min **Myriam Gorospe** - Insights into human cell senescence from RNA biology
- 25+5 min **Marcelo Mori** - An Adipocentric View of Aging: The Role of microRNAs.
- 10+2 min **Susana Gonzalo** - A non-canonical STING pathway drives cellular and organismal aging.
- 10+2 min **Christian Fernández** - Unraveling the Mechanisms of Senescent Cell Accumulation during Aging and Immune Evasion.

19:15 **Fabrizio d'Adda di Fagagna** - Telomere biology in aging and disease. Leonard Hayflick memorial lecture.

20:00 **Party.**



Posters

1. **Rebecca Sereda** - Role of Chaperone-Mediated Autophagy in Cellular Senescence and Aging.
2. **Rafael Cancado de Faria** - STING-STAT1 axis drives cellular, tissular, and organismal aging in Progeria.
3. **Roberto Rosales-Rojas** - Targeting protein-protein interactions involve in senescence.
4. **Lucas Grun** - Inhaled nitric oxide therapy enhances immune response by reducing senescence and T-cell exhaustion in younger Covid-19 Patients.
5. **Andreia Cadar** - The Impact of D+Q on Influenza Vaccine and Infection Responses in Young and Aged Mice.
6. **Barbara Teodoro-Castro** - Lamins dysfunction-induced replication fork instability and its consequences for progeria.
7. **Francisca Díaz** - Expression and alpaca's immunization of p16 for nanobody discovery using surface-displayed bacteria.
8. **Iryna Moskalevska** - Impact of sexual dimorphism on senescence immune checkpoints (SIC) modulation of immunosurveillance and implications in age-related diseases.
9. **Christian Fernández** - Unraveling the Mechanisms of Senescent Cell Accumulation during Aging and Immune Evasion.
10. **Karina Girardi** - Interplay of senescent cells and macrophage polarization in peripheral nerve repair in aging and chronic denervation.
11. **Juliana Delgado** - Multi-omics analyses reveal heterogeneity in the therapy-induced senescent landscape.
12. **Rebekah-Louise Scanlan** - Systematic transcriptomic analysis and temporal modelling of the senescent fibroblast.
13. **Diego Ormeño** - Nuclear analysis for characterization of senescent cells in gingival tissue.
14. **Esi Taci** - Targeting cellular senescence in 2D and 3D in vitro models through p300 inhibition.
15. **Karine Boulay** - Identification of a novel class of compounds promoting targeted clearance of senescent cells.
16. **Hernán Huerta** - Targeting Chemotherapy-Induced Senescence with Ketogenic Diet for Breast Cancer Treatment.
17. **Daniela Rebolledo** - Targeting cell senescence and fibrosis to enhance peripheral nerve regeneration following chronic damage.
18. **Ignacia González Cortés** - Transcriptional Activation of Matrisome Genes in Endothelial Cells Induced to Senescence.
19. **Andrea Puebla** - Interaction between Bcl-xL and VDAC1 regulates mitochondrial Ca²⁺ uptake as a survival mechanism in early stage of Therapy-Induced Senescence (TIS).
20. **Vanessa Smer-Barreto** - AI to identify novel glioblastoma therapies.



21. **Hailey Goldberg** - A Nanoparticle-Based Platform for the Treatment of Senescence-Related Pathologies.
22. **Cesar Casanova** - α -Ketoglutarate dehydrogenase (α -KGDH) as a regulator of chemotherapy-induced cellular senescence escape in a cellular model of glioblastoma multiforme.
23. **Pablo Morgado-Cáceres** - DRP1 and Bcl-xL interaction in therapy-induced senescence progression in a model of colorectal cancer.
24. **Cristian Gerónimo-Olvera** - Exceptional Longevity Modifying Gene APOE2 Promotes DNA damage repair and Senescence Resilience.
25. **Inés Marmisolle** - The senescence-inducing stimulus defines the bioenergetic profile of human fibroblasts.
26. **Zinnarky Ortiz-Correa** - Senescence in adipose tissue and the proinflammatory SASP are associated with distinct skeletal muscle phenotypes in older adults.
27. **Cristopher Villablanca** - Cytoskeleton remodeling in senescent astrocytes leads to morphological changes and SASP production.
28. **Bianca Bossé** - Pancreatic cancer cells escape FOLFIRINOX-induced senescence by the action of the S6K protein.
29. **Blake Monroe** - Lipid-Derived Electrophiles Induce Carbonyl Stress, Mitochondrial Dysfunction, and Cellular Senescence: 4-Hydroxynonenal as a Physiological Determinant of Adipose Senescence in Obesity and Aging.
30. **Janina Borgonovo** - *Nothobranchius furzeri* as an ageing model to study sporadic synucleinopathy in the gut-brain axis.
31. **Hiroya Mizuno** - B cell senescence promotes age-related changes in IgA secretion and oral microbiota.
32. **Veronique Bourdeau** - Identification of a Senescence Restriction Point Involving a Network of Transcription Factors that Induce Chromatin Opening and Senescence.
33. **Nahuel Matías Martínez** - UVB induced senescent dermal papilla cells cause paracrine senescence on hair follicle keratinocytes, altering hair follicle regeneration cycle.
34. **Eliana Chacón** - Development of a Senotherapeutic Agent that Targets the Senescent Associated Secretory Phenotype.
35. **Verónica Villalobos** - The Age-Related Decline of CD204 in Macrophages and Their Impact on Gingival Aging and Disease.
36. **Jennyfer Martínez** - P53 regulates mitochondrial bioenergetics in therapy-induced senescence: a role for 4-aminobutyrate aminotransferase (ABAT).
37. **Silvina Sonzogni** - Prenatal protein malnutrition alters cellular senescence mechanisms and induces epigenetic changes in a mouse embryonic fibroblast model.
38. **Mauricio Garrido** - Topological Evaluation of Proliferation and Senescence Markers in the Pulp and Apical Papilla of Immature Permanent Teeth with Deep Caries.
39. **Maria Isabel Sanchez Perez** - Iodido Platinum Compounds Exhibit Promising Anti-Tumor Activity by Disrupting Cancer Cell Metabolism and Inducing ROS and Senescence in Gastrointestinal Cancer Cells.



40. **Daniely Kertesz** - Hyperglycemia and fibroblasts senescence: Effects of supplementation with Vitamins C and E.
41. **Emilio Sosa-Diaz** - Single cell analysis dissects the effects of Vitamin D on genetic senescent signatures across murine tissues.
42. **Chen Zhang** - Functions of Small Maf Proteins in Senescence.
43. **Camilla Romagnoli** - Exploring the Role of Mechanobiology on Endothelial Senescence.
44. **Alexandra Guelton** - The rate of medullary mesenchymal stromal cell senescence in patients with acute myeloid leukemia is associated with their outcome after allogeneic hematopoietic stem cell.
45. **Romain Perouf** - Metabolic Alterations in Senescent Mesenchymal Stromal Cells of Acute Myeloid Leukemia Patients: Impact on Mitochondrial Transfer ability and Immunomodulatory Functions.
46. **Federica Mossa** - Uncovering the role of proteasomal dysregulation in cellular senescence and ageing.
47. **Carlos Palma Flores** - Restorative effects of (+)-epicatechin in a rodent model of aging induced muscle atrophy: underlying mechanisms.
48. **Pault Yeison Minaya Ferruzo** - Establishing a new class of senolytics to eliminate senescent cells in vivo.