



**9<sup>th</sup>** INTERNATIONAL  
CELL SENESCENCE  
ASSOCIATION (**ICSA**)  
CONFERENCE

**PUERTO VARAS 2024**

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Program

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## 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 Comments	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	18:00 - Poster session	
20:00	20:00 - Welcoming Reception	19:00 - yICSA Activity	19:15 - Closing Lecture: Dr. Fabrizio d'Adda di Fagagna
21:00			20:00 - Party



## Program

November 7th, afternoon - Day 1

14:45 Welcoming Comments.

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 Basse - 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: Monica Caceres, Christian Fernandez.

- 25+5 min Maximina Yun - Salamander insights into negligible senescence.
- 25+5 min Mikolaj Ogradnik - 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  $\alpha$ -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  $\beta$ -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- $\beta$ 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- $\beta$ Gal 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 Fernandez - 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 Ca<sup>2+</sup> 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 -  $\alpha$ -Ketoglutarate dehydrogenase ( $\alpha$ -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. Carlos Palma Flores - Restorative effects of (+)-epicatechin in a rodent model of aging induced muscle atrophy: underlying mechanisms.
45. Pault Yeison Minaya Ferruzo - Establishing a new class of senolytics to eliminate senescent cells in vivo.
46. 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.
47. Romain Perouf - Metabolic Alterations in Senescent Mesenchymal Stromal Cells of Acute Myeloid Leukemia Patients: Impact on Mitochondrial Transfer ability and Immunomodulatory Functions.