

PROGRAM



#MRS2022

The 19th Biennial Congress 2022

MRS **METASTASIS**
RESEARCH SOCIETY

NOVEMBER 13 TO 16 2022



BUENOS AIRES - ARGENTINA

The 19th Biennial Congress 2022



is organized by:

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Sunday NOVEMBER 13

MORNING

07:00 - 08:00 am	Registration	ONYX FOYER
08:00 - 08:05 am	Welcome and introductory remarks Julio Aguirre-Ghiso	ONYX ROOM
08:10 - 09:30 am	SESSION 1: Genetic and non-genetic pathways to metastasis	
08:10 - 08:35 am	<u>Chairperson:</u> Angela Nieto <u>Co-Chair:</u> Kent Hunter Peter Van Loo Molecular archeology of cancer	
08:35 - 09:00 am	Angela Nieto Cell plasticity trajectories in tumor evolution	ONYX ROOM
09:00 - 09:15 am	Delphine Merino Investigating the fitness of metastatic clones using cellular barcoding	
09:15 - 09:30 am	Selected Abstract: Anna Supernat Tracking metastasis through platelet transcriptome evolution	
09:35 - 10:20 am	Fidler Innovation Award Lecture <u>Chairperson:</u> Julio Aguirre-Ghiso Awardee: Johanna Joyce Microenvironmental Regulation of Metastasis	ONYX ROOM
10:30 - 11:00 am	Meeting Group Photo & Coffee Break	ONYX FOYER
11:00 am - 12:30 pm	SESSION 2: Minimal residual disease and dormancy	
11:00 - 11:25 am	<u>Chairperson:</u> Javier Bravo Cordero <u>Co-Chair:</u> Julio Aguirre-Ghiso Javier Bravo Cordero High-resolution intravital microscopy reveals the plastic behavior of disseminated dormant cells and their niches	
11:25 - 11:50 am	Cyrus Ghajar How do disseminated tumor cells evade immune surveillance?	ONYX ROOM
11:50 - 12:05 pm	Karuna Ganesh Single cell tissue and organoid analysis reveal progressive plasticity in colorectal cancer metastasis	
12:05 - 12:20 pm	Selected Abstract: Frances Turrell Age-associated microenvironmental changes highlight the role of PDGF-C in ER+ breast cancer metastatic relapse	
12:30 - 3:00pm	Lunch on your own	

Sunday NOVEMBER 13

AFTERNOON

01:00 - 03:00 pm	<p>Patient Advocacy and Metastatic Cancer Research & Lunch This Session is supported in part by Theresa's Research Foundation</p> <p><u>Panelists:</u> Dolores Arrabal, Paula Bos, Debbie Denardi, Christine Hodgdon, Fernando Petracci, Mario Rossi <u>Moderators:</u> Conor Lynch and Alana Welm</p> <p>No one is more invested in successful research on cancer metastasis than metastatic patients themselves. In this session we will discuss strategies for collaboration between patients and researchers that can accelerate progress in science and impact on the community. Potential topics include the benefits of research-advocate partnerships, barriers to research-advocate interactions and how to overcome them, and how working with advocates impacts research funding and success. We will start with a short presentation from Christine Hodgdon and then open the panel for discussion.</p> <p>Christine Hodgdon Involving Patient Advocates in Cancer Research</p>	ONYX ROOM
03:15 - 04:45 pm	SESSION 3: Epigenetic regulation of metastasis	
03:15 - 03:40 pm	<p><u>Chairperson:</u> Peter Scacheri <u>Co-Chair:</u> Conor Lynch</p> <p>Peter Scacheri How to target lung metastasis: Dynamic changes in chromatin accessibility during osteosarcoma lung metastasis expose vulnerabilities</p>	ONYX ROOM
03:40 - 04:05 pm	<p>Conor Lynch Therapeutic targeting of sensitive and treatment refractory metastases</p>	
04:05 - 04:20 pm	<p>Juan M. Arriaga CITED2 acts as a novel driver of prostate cancer bone metastasis</p>	
04:20 - 04:35 pm	<p>Selected Abstract: Hon Leong The Invadopodia Epitranscriptome Cytoplasmically Orchestrates Cancer Cell Extravasation and Metastasis Dynamics</p>	
05:00 - 08:00 pm	Poster Session I & Welcome Cocktail	ONYX FOYER

Monday NOVEMBER 14

MORNING

08:00 - 08:30 am	Registration	ONYX FOYER
08:30 - 10:00 am	SESSION 4: Plasticity of metastatic cells: EMT and stem cell programs	
08:30 - 08:55 am	<p><u>Chairperson:</u> Edith Kordon <u>Co-Chair:</u> Barbara Fingleton</p> <p>Edith Kordon The tumor suppressor anti-inflammatory mRNA destabilizer Tristetraprolin (TTP) promotes mammary progenitor cell survival by inhibiting the TNFalpha-p38 signaling pathway</p>	ONYX ROOM
08:55 - 09:20 am	<p>Sandra S. McAllister A New Tool to Study EMT, Metastasis, and Therapeutic Resistance</p>	

Monday NOVEMBER 14

MORNING

09:20 - 09:35 am	Nami Sugiyama Distinct contributions of partial and full EMT in breast cancer malignancy	ONYX ROOM
09:35 - 09:50 am	Selected Abstract: Christine Chaffer State-gating cancer cell plasticity prevents metastasis and the development of chemotherapy-resistant disease	
10:00 - 10:30 am	Coffee Break	ONYX FOYER
10:30 am - 12:00 pm	SESSION 5: Cell Migration and the Extracellular Matrix in Metastasis	
10:30 - 10:55 am	<u>Chairperson:</u> Paolo Provenzano <u>Co-Chair:</u> Alana Welm Paolo Provenzano Matrix architecture directs early dissemination and immunosuppression in pancreatic cancer	ONYX ROOM
10:55 - 11:20 am	John Condeelis Virtual A vascular doorway that both induces cancer stem cells and injects them into the systemic circulation	
11:20 - 11:35 am	Thomas Cox Deconstructing Solid Tumour Heterogeneity: The Matrix Perspective	
11:35 - 11:50 am	Selected Abstract: Lena Wiedmann HAPLN1 is a driver for peritoneal carcinomatosis in pancreatic cancer	

12:00 - 1:30pm	Lunch on your own
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AFTERNOON

01:30 - 02:30 pm	Young Investigator Award Lecture Chairperson: Erik Sahai Awardee: Soledad Sosa Origins and Behavior of Disseminated Tumor Cells during Minimal Residual Disease	ONYX ROOM
02:30 - 04:00 pm	SESSION 6: Metabolism and metastasis: from solitary DTCs to overt lesions	
02:30 - 02:55 pm	<u>Chairperson:</u> Clare Isacke <u>Co-Chair:</u> Soledad Sosa Clare Isacke Targeting the metastatic microenvironment	ONYX ROOM
02:55 - 03:20 pm	Sarah Maria Fendt Virtual Nutrient dependencies of metastasis formation	
03:20 - 03:35 pm	Selected Abstract: Niveditha Nerlakanti Epigenetic regulation of vesicular glutamate transporter, SLC17A7, promotes osteosarcoma growth	
03:35 - 03:50 pm	Selected Abstract: Varsha Prakash Ribosome biogenesis as a novel driver of pro-metastatic tumor cell	
04:00 - 07:00 pm	Poster Session II - Coffee Break & Social Hour	ONYX FOYER

Tuesday NOVEMBER 15

MORNING

08:30 - 10:00 am	SESSION 7: The creation and exploitation of metastatic niches	
08:30 - 08:55 am	<p><u>Chairperson:</u> Yibin Kang <u>Co-Chair:</u> Neta Erez</p> <p>Yibin Kang Targeting cancer fitness gene Metadherin in metastatic cancers</p>	ONYX ROOM
08:55 - 09:20 am	<p>Neta Erez Stromal and immune plasticity shape the metastatic microenvironment</p>	
09:20 - 09:35 am	<p>Leonora Balaj Virtual Using liquid biopsy to detect and track gliomas</p>	
09:35 - 09:50 am	<p>Selected Abstract: Jacob Insua-Rodriguez Commonalities of metastatic ecosystems across organs identified by single-cell RNA sequencing</p>	
10:00 - 10:30 am	Coffee Break	ONYX FOYER
10:30 am - 12:00 pm	SESSION 8: Brain and Bone Metastasis	
10:30 - 10:55 am	<p><u>Chairperson:</u> Manuel Valiente <u>Co-Chair:</u> Dihua Yu</p> <p>Manuel Valiente Strategies to challenge brain metastasis lethality in mice and human</p>	ONYX ROOM
10:55 - 11:20 am	<p>Xiang Zhang The molecular and cellular profiling of bone metastasis niches</p>	
11:20 - 11:35 am	<p>Adrienne Boire Inflammatory cytokines support leptomeningeal metastasis</p>	
11:35 - 11:50 am	<p>Selected Abstract: Srinivas Malladi Targetable vulnerabilities of latent breast cancer brain metastatic cells</p>	
12:00 - 2:30pm	Lunch on your own	

AFTERNOON

12:30 - 02:15 pm	<p>MRS General Member Meeting & Lunch <u>Chairperson:</u> Julio Aguirre-Ghiso</p>	ONYX ROOM
02:30 - 03:30 pm	<p>Paget-Ewing Award Lecture <u>Chairperson:</u> Erik Sahai</p> <p>Keynote Speaker: Ashani Weeraratna Johns Hopkins University, USA Age against the machine- how aging impacts tumor progression</p>	ONYX ROOM
03:30 - 4:00 pm	Coffee Break	ONYX FOYER

Tuesday NOVEMBER 15

AFTERNOON

04:00 - 05:30 pm	SESSION g: Immune regulation of metastasis	
04:00 - 04:25 pm	Chairperson: Gabriel Rabinovich Co-Chair: Erik Sahai	
04:25 - 04:50 pm	Gabriel Rabinovich Galectins: emerging glycocheckpoints linking immunity, inflammation and angiogenesis in cancer	ONYX ROOM
04:50 - 05:05 pm	Erik Sahai Organ-specific responses to immunotherapy - why are liver metastases so hard to treat?	
05:05 - 05:20 pm	Paula Bos Treg cell-dependent mechanisms of metastatic dissemination	
05:20 - 05:30 pm	Selected Abstract: : Madeleine Benguigui A multi-model preclinical approach identifies interferon-stimulated neutrophils as a biomarker for immunotherapy response in human	
07:00 - 10:00 pm	MRS Closing Cocktail (open to all who registered for a ticket) Address: Gorriti 5417, Palermo, Buenos Aires Transportation provided from & to Alvear Icon Hotel Assembly in Hotel Lobby at 6.30 pm	EL GALPÓN

Wednesday NOVEMBER 16

MORNING

08:15 - 10:00 am	<p>Special Session of Short Talks from Selected ECR Abstracts Chairperson: Lucia Borriello</p> <p>Selected Abstracts:</p> <p>Stanislav Drapela HIRA is a master regulator of the proliferation-to-dormancy switch in breast cancer</p> <p>Silvia Materna-Reichelt Modelling the interactions between niches and tumour cells to study metastasis and drug efficacy</p> <p>Michael Papanicolaou Lung-resident alveolar macrophages limit breast cancer metastasis by inducing an M-like state associated with restriction of solitary DCC expansion</p> <p>Nicole Barth Does The Metastatic Environment Determine Poor Immunotherapy Responses?</p> <p>Lucia Borriello Cancer Cell Dissemination and Dormancy: A Tumor Microenvironment Perspective</p>	ONYX ROOM
10:00 - 10:30 am	Coffee Break	ONYX FOYER

Wednesday NOVEMBER 16

MORNING

10:30 - 11:10 am	<p>Women in Science Award Lecture <u>Chairperson:</u> Barbara Fingleton</p> <p>Awardee: Ulrike Stein - Cancer metastasis: translating gene discovery into clinical application</p>	ONYX ROOM
11:15 - 11:55 am	<p>Young Investigator Travel Awards <u>Chairpersons:</u> Juan Arriaga & Nami Sugiyama</p> <p>Selected Abstracts:</p> <p>Ana Krotenberg Cell competition drives growth of primary and metastatic intestinal cancer</p> <p>Natalia Brenda Fernández RUNX1 is regulated by the Androgen Receptor, a new potential way to target chemotherapy resistant Triple Negative Breast Cancer</p> <p>Jeremy Frieling Dissecting mesenchymal stem cell functions during $\gamma\delta$ CAR-T cell mediated eradication of bone metastatic castrate resistant prostate cancer</p>	ONYX ROOM

12:00 - 1:00 pm	Lunch on your own
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AFTERNOON

01:00 - 2:30 pm	SESSION 10: Metastasis biology-specific clinical trials	
01:00 - 01:25 pm	<p><u>Chairperson:</u> Alana Welm <u>Co-Chair:</u> Thomas Cox</p> <p>Julio Aguirre-Ghiso Pre-clinical and clinical strategies derived from understanding cancer cell dormancy</p>	ONYX ROOM
01:25 - 01:40 pm	<p>Alana Welm Functional precision oncology trials for metastatic breast cancer</p>	
01:40 - 01:55 pm	<p>Lajos Pusztai Can we cure oligometastatic stage IV breast cancer?</p>	
01:55 - 02:10 pm	<p>Selected Abstract: Hon Leong Phenomic Prediction of Immunotherapy Response with PDXovos (Patient-Derived Xenografts Ex Ovo) and Super-Resolution Ultrasound Imaging</p>	
02:20 - 2:40 pm	Closing Remarks by Julio Aguirre-Ghiso & Erik Sahai	

SELECTED ABSTRACTS

FOR ORAL PRESENTATION		
SESSION	TITLE	RESPONSIBLE AUTHOR
Session 1	Tracking metastasis through platelet transcriptome evolution	Supernat, Anna
Session 2	Age-associated microenvironmental changes highlight the role of PDGF-C in ER+ breast cancer metastatic relapse	Turrell, Frances
Session 3	The Invadopodia Epitranscriptome Cytoplasmically Orchestrates Cancer Cell Extravasation and Metastasis Dynamics	Leong, Hon
Session 4	State-gating cancer cell plasticity prevents metastasis and the development of chemotherapy-resistant disease	Chaffer, Christine
Session 5	HAPLN1 is a driver for peritoneal carcinomatosis in pancreatic cancer	Wiedmann, Lena
Session 6	Epigenetic regulation of vesicular glutamate transporter, SLC17A7, promotes osteosarcoma growth	Nerlakanti, Niveditha
	Ribosome biogenesis as a novel driver of pro-metastatic tumor cell	Prakash, Varsha
Session 7	Commonalities of metastatic ecosystems across organs identified by single-cell RNA sequencing	Insua-Rodriguez, Jacob
Session 8	Targetable vulnerabilities of latent breast cancer brain metastatic cells	Malladi, Srinivas
Session 9	A multi-model preclinical approach identifies interferon-stimulated neutrophils as a biomarker for immunotherapy response in human	Benguigui, Madeleine
Session 10	Phenomic Prediction of Immunotherapy Response with PDXovos (Patient-Derived Xenografts Ex Ovo) and Super-Resolution Ultrasound Imaging	Leong, Hon
Young Investigator Travel Awards Session	Cell competition drives growth of primary and metastatic intestinal cancer	Krotenberg, Ana
	RUNX1 is regulated by the Androgen Receptor, a new potential way to target chemotherapy resistant Triple Negative Breast Cancer	Fernández, Natalia Brenda
	Dissecting mesenchymal stem cell functions during $\gamma\delta$ CAR-T cell mediated eradication of bone metastatic castrate resistant prostate cancer	Frieling, Jeremy
Special Session of Short talks from Selected ECR Abstracts	HIRA is a master regulator of the proliferation-to-dormancy switch in breast cancer	Drapela, Stanislav
	Modelling the interactions between niches and tumour cells to study metastasis and drug efficacy	Materna-Reichelt, Silvia
	Cancer Cell Dissemination and Dormancy: A Tumor Microenvironment Perspective.	Borriello, Lucia
	Lung-resident alveolar macrophages limit breast cancer metastasis by inducing an M-like state associated with restriction of solitary DCC expansion	Papanicolaou, Michael
	Does The Metastatic Environment Determine Poor Immunotherapy Responses?	Barth, Nicole

SELECTED ABSTRACTS

FOR POSTER PRESENTATION

TITLE	RESPONSIBLE AUTHOR
An Emerging Paradigm of Cxcl12/Cxcr4 Involvement in Breast Cancer Metastasis	Anastasiadou, Dimitra
A spontaneous mouse model of breast cancer with lymphatic, liver and pulmonary metastasis	Andrechek, Eran
The Effects of Tissue Processing and Microfluidic Factors on Single-Cell RNA-Sequencing Data Quality in Colorectal Tissues	Arceneaux, Deronisha
Platelets might boost progression of non-metastatic luminal breast carcinomas	Bednarz-Knoll, Natalia
Apoptosis-associated speck-like protein containing a CARD domain - novel prognostic factor in osteosarcoma	Benes, Petr
Lung-Derived Soluble Factors Influence Stemness/Plasticity and Metastatic Behaviour of Breast Cancer Stem Cells	Bhat, Vasudeva
Investigating the role of type II IL4 receptor in breast cancer brain metastasis	Bindeman, Wendy
Caveolae microdomains mediate STAT5 signaling induced by insulin in MCF-7 breast cancer cells	Castillo Sánchez, Rocio
Preliminary characterization of spontaneous metastases in patient-derived xenografts of acral melanoma	da Silva, Istéfani
NADK upregulation is an essential metabolic adaptation of metastatic breast cancer	Drapela, Stanislav
RON inhibition as an anti-resorptive and immunotherapeutic treatment strategy for bone metastasis	Fornetti, Jaime
The influence of sex on the immune microenvironment in male and female breast cancer	Hargrove-Wiley, Ebony
Characterizing the evolving immune microenvironment during breast cancer bone metastasis progression	Lea, Monteran
Cancer Cell Extravasation Requires iPlectin Mediated Choreography of MT1-MMP to Invadopodia	Leong, Hon
Phenotypic heterogeneity of epithelial-mesenchymal transition markers in circulating tumour cells of non-metastatic breast cancer patients	Markiewicz, Aleksandra
TNF α blockade as a new therapeutic approach for metastatic triple negative breast cancer	Mauro, Florencia
HIVEP2 expression induces chemoresistance and tumor relapse in colorectal cancer	Mur Espinosa, Alex
Pericyte reprogramming supports disseminated tumor cell colonization and metastatic outgrowth	Murgai, Meera
PRDM16 is a key regulator of prostate cancer entry into dormancy	Nasr, Mostafa
lncRNA BORG:TRIM28 Complexes Dysregulate Chromatin State and Alternative Splicing to Drive Cancer Stem Cell Phenotypes in TNBC	Parker, Kimberly
Spatial and temporal characterization of matrix signatures in mouse and patient-derived pancreatic tumors	Pereira, Brooke
METSCAN™, a novel and proprietary algorithm to predict the metastatic potential of primary tumor patients	Roy, Samrat
TGF β 2 and retinoic acid signaling control dormancy of uveal melanoma disseminated cancer cells	Seeneevassen, Lornella
Involvement of RUNx1 in CSC generation and drug resistance in TNBC cell lines	Sosa, Sofia maria
YB1 is a potential therapeutic target for metastatic Triple Negative Breast Cancer	Sossey-Alaoui, Khalid
Cancer stem cell dynamics in breast cancer metastatic lung colonization	Tang, Binwu
Dissecting the role of ULK3 in mediating Triple Negative Breast Cancer progression and metastasis	Tauro, Marilena
BCRP drives intrinsic chemoresistance in chemotherapy-naïve breast cancer brain metastasis	Uceda Castro, Rebeca

The MRS gratefully acknowledges the sponsorship of the following

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