

6th International EMT Meeting

2013 Alicante Meeting

Wednesday November 13 - Saturday November 16, 2013
Hotel Melia, Alicante, Spain

Convenors:

Angela Nieto *Instituto de Neurociencias (CSIC-UMH), Alicante*

Amparo Cano *Universidad Autónoma Madrid*

Local Committee:

Antonio Garcia de Herreros *Institute for Medical Research and Hospital del Mar, Barcelona*

Jose Luis de la Pompa *National Center for Cardiovascular Diseases, Madrid*

International Organizing Committee:

M. Angela NIETO | Instituto de Neurociencias (CSIC-UMH), Spain

Thomas BRABLETZ | Freiburg Medical School, Germany

Raghu KALLURI | Harvard Medical School, USA

Yeesim KHEW-GOODALL | Centre for Cancer Biology, SA Pathology, Australia

Don NEWGREEN | MCRI, Melbourne, Australia

Raymond RUNYAN | University of Arizona, USA

Pierre SAVAGNER | Institut de Recherche en Cancérologie de Montpellier, France

Guojun SHENG | RIKEN Center for Development Biology, Japan

Jean Paul THIERY | A*STAR - Institute of Molecular and Cell Biology, Singapore

Erik THOMPSON | University of Melbourne and St. Vincent's Institute, Australia

AWARDS

- **Betty Hay Award (deadline submission: August 15)**
- **TEMTIA Travel Bursaries (deadline submission: June 30)**
- **Travel Bursaries from the American Association of Anatomists (deadline submission: June 30)**
- **TEMTIA Poster awards (deadline submission: August 15)**

Wednesday 13th November

12.00- Registration

14.00:

14.15- **Inauguration/ Welcome address**

14.30 **M Angela Nieto** and local committee

14.30- **The EMBO lecture and Betty Hay Oration**

15.30 Chair Angela Nieto

The Multi-Faceted EMT Program - Robert Weinberg (Whitehead Inst Cancer Res., Cambridge, USA). EMBO member

15.30- **Symposium I. Cell/Molecular Biology of EMT**

17.40 Chair Ray Runyan

Beyond EMT: Insights from Snail1 Conditional Knockout Mic

Stephen Weiss (University of Michigan, Ann Arbor, USA)

Intravital imaging of metastasis - Eric Sahai (CRUK London Research Institute, UK)

New molecular mechanism involved in epithelialization during lumen morphogenesis in kidney cells - Fernando Martin-Belmonte (CBMSO, Madrid, Spain)

2 short talks

O.35: TGF β and MYC: the crossroads of cytostasis and invasion

Authors: D Radisky, M Cichon, M Moruzzi (Mayo Clinic)

O.128: The Twist box domain is required for TWIST1-induced metastasis of prostate cancer cells

Authors: P Tran, R Gajula, S Chettiar, R Williams, S Thiyagarajan, K Aziz, N Gandhi, A Wild, Y Kato, E Fertig, C Rudin, V Raman, S An
Johns Hopkins Medicine, Johns Hopkins Medicine, Johns Hopkins University

17.45- **Poster session** (drinks and snacks)

19.45

Thursday 14th November

8.30- **Symposium II. Developmental EMT**

10.40 Chair Goujun Sheng

Mesodermal EMT and germ layer formation in Drosophila can occur without an E- to-N-cadherin switch - Maria Leptin (EMBO, Germany)

EMT and collective cell migration

Jordi Casanova (IBMB(CSIC)/IRBB, Barcelona, Spain)

Self-generated directionality and tissue organisation during collective migration

Darren Gilmour (EMBL, Heidelberg, Germany)

2 short **O.85: Zeb1 regulates E cadherin and Epcam expression to control cell**
talks **behaviour in early development and cancer**

Authors: C Vannier, K Mock, T Brabletz, W Driever

Dept. of Visceral Surgery-University Medical Center Freiburg,

Developmental Biology-Institute Biology I

O.121: EMT in neural crest: new partners for an old process

Authors: E Martí, MA Rabadán

Instituto de Biología Molecular de Barcelona-CSIC

10.40- *Coffee break*

11.00

11.00- **Symposium III. Non-transcriptional regulation of EMT I.**

13.00 Chair: Yeesim Kew-Goodall

Epigenetic Basis of Cellular Reprogramming - Andrew P Feinberg (John Hopkins University, School Medicine, Baltimore, USA)

Epigenetic regulation of hypoxia-induced epithelial-mesenchymal transition

Kuo-Juey Wu (National Yang-Ming University, Taiwan)

3 short **O.144: Identification of a double-negative feedback loop which**
talks **regulates epithelial-mesenchymal transition and metastasis** (New title)

Authors: L Shi, R Jackstadt, H Siemens, H Li, T Kirchner, H Hermeking

Ludwig-Maximilians-University München

O.5: Regulation of Heterochromatin Transcription by Snail1/ LOXL2 during Epithelial to Mesenchymal Transition

Authors: S Peiró, Fundación IMIM

O.138: Novel Snail-regulated miRNAs coordinate vasculogenic mimicry and EMT in breast cancer

Authors: E Langer, M Capecchi, R Sears

Oregon Health and Science University, University of Utah

13.00- *Lunch time (many local restaurants and snack bars close-by)*

14.00

14.00- **Symposium IV. Non-transcriptional regulation of EMT II.**

16.10 Chair Aristidis Moustakas

Deconstructing tumour metastasis in Drosophila

Maria Dominguez (Inst. Neurociencias CSIC-UMH, Alicante, Spain)

Post transcriptional Regulation of Snail1 in Tumor Metastasis

Gregory D Longmore (The BRIGHT Institute, St. Louis, USA)

Epithelial-mesenchymal transition in Basal-like Breast Cancer

Binhua P. Zhou (University of Kentucky Markey Cancer Center, USA)

2 short
talks

O.29: eEF1A mediates the nuclear export of SNAG-containing proteins

via the Exportin5- aatRNA complex

Authors: JM Mingot, S Vega, A Cano, F Portillo, MA Nieto
Instituto de Neurociencias de Alicante, CSIC-UMH/ Instituto de
Neurociencias de Alicante, CSIC-UAM/

O.41: Nuclear ubiquitination by FBXL5 modulates Snail1 DNA binding and stability upon gamma-irradiation

Authors: VM Díaz Cortés, R Viñas-Castells, E Robles-Lanuza, A Frías, K Zhang, G Longmore, AG de Herreros
Institut Hospital del Mar d'Investigacions Mèdiques - Universitat Pompeu Fabra-Parc de Recerca; Biomèdica de Barcelona, BRIGHT Institute and Departments of Cell Biology and Physiology-Washington University

16.10- *Coffee break*

16.30

16.30- **Symposium V. Organ Fibrosis and wound repair**

18.40 Chair Raghu Kalluri

Endothelial- Mesenchymal Transition as a Novel Mechanism for Tissue Regeneration - Damian Medici (Brown University, Providence, USA)

Lung epithelial stem cells activate a mesenchymal program to regenerate lung tissue after major injury -Harold Chapman (UCSF, USA)

The EMBO Young Investigator Lecture Cedric Blanpain (Universite Libre de Bruxelles, Belgium)

Epithelial mesenchymal transition controls tumor heterogeneity and stemness in skin squamous cell carcinoma - Cedric Blanpain (Universite Libre de Bruxelles, Belgium)

2 short
talks

O.50: Caveolin-1 controls epithelial-mesenchymal transition and fibrosis in peritoneum through modulation of MEK-ERK1/2-Snail pathway

Authors: R Strippoli, J Loureiro, I Benedicto, ML Pérez-Lozano, V Moreno, O Barreiro, T Pellinen, S Minguet, M Foronda, MT Osteso, M López Cabrera, MA del Pozo

Fundación CNIC Carlos III - Centro Nacional de Investigaciones Cardiovasculares, Centro de Biología; Molecular-Severo Ochoa-CSIC-UAM, Department of Molecular Immunology, Max-Planck-Institute of Immunobiology and Faculty of Biology-University of Freiburg, Centro Nacional de Investigaciones Oncológicas de Madrid

O.141: The Fragile X Protein binds mRNAs involved in cancer progression and modulates metastasis formation

C Bagni¹, R Luca², M Aversa², F Zalfa³, M Vecchi⁴, F Bianchi⁴, G La Fata⁵, G Neri⁶, P Neven⁷, GD Evans⁸, P Carmeliet⁹, M Mazzone⁹, C Bagni

University Center for Human Genetics, KUUniversity Leuven, Belgium; VIB Center for the Biology of Disease, Leuven, Belgium; Department of Biomedicine and Prevention, University 'Tor Vergata', Rome, Italy University 'Campus Bio-Medico' of Rome, Faculty of Medicine, Department of Biomedical Research (CIR), Rome, Italy IFOM, The FIRC Institute for Molecular Oncology, Foundation, Milan, Italy Center for Human Genetics, KUUniversity Leuven, Belgium; VIB Center for the Biology of Disease, Leuven, Belgium; Institute of Medical Genetics, Catholic University, Rome, Italy Department of Obstetrics and Gynaecology, University Hospitals

Leuven, Leuven, Belgium Genesis Prevention Centre, University Hospital of South Manchester, Manchester, UK Laboratory of Angiogenesis and Neurovascular Link, Vesalius Research Center, VIB - K.U. Leuven, Leuven Belgium

18.40- **Poster session** (drinks and snacks)

20.30

19.30- **TEMTIA Assembly**

20.30

Friday 15th November

Friday, 15th
Nov

8.30-10.40 **Symposium VI. Cancer and EMT I**

Chair Antonio García de Herreros

Using a lineage-traced mouse model to study EMT in vivo

Ben Z Stanger (University of Pennsylvania, Philadelphia, USA)

Vitamin D represses EMT in human colon cancer cells

Alberto Muñoz (IIB CSIC-UAM, Madrid, Spain)

YAP and TAZ as effectors of mechanotransduction and EMT-induced stemness

Stefano Piccolo (University of Padua, Italy)

2 short talks

0-51 A switch in the expression of embryonic EMT-inducers drives the development of malignant melanoma.

E Tulchinsky (1), J Caramel (2), E Papadogeorgakis (3), L Hill (3), G Browne (3), G Richard (4), A Wierinckx (4), G Saldanha (5), J Lachuer (5), P Hutchinson (5), A Puisieux (6), H Pringle (6), S Ansieau (6)

(1) University of Leicester, (2) Centre de Recherche en cancérologie de Lyon, Lyon, France, (3) Department of Cancer Studies and Molecular Medicine, University of Leicester, Leicester, UK, (4) Centre de Recherche en Cancérologie de Lyon, Lyon, France, (5) Department of Cancer Studies and Molecular Medicine, University of Leicester, Leicester, (6) Centre de Recherche en cancérologie de Lyon, Lyon, France

O.149: Identification of a ZEB2-ZEB1-MITF transcriptional network that controls melanogenesis and melanoma progression

Authors: G Berx, N Vandamme, Ö Akay, B De Craene, L Brochez, J van den Oord, W Gallagher, G Ghanem, L Larue, J Haigh, I Davidson, JC Marine, G Denecker

Department of Pathology-KU Leuven, UCD School of Biomolecular and Biomedical Science- University College Dublin, Institut Jules Bordet-UCL, Curie Institute-INSERM, Institut de Génétique et de Biologie Moléculaire et Cellulaire-INSERM, Center for Human Genetics-VIB & KU Leuven

10.40-11.00 *Coffee break*

11.00-13.00 **Symposium VII. Cancer and EMT II**

Chair Rik Thompson

Spatiotemporal Regulation of Epithelial-

Mesenchymal Plasticity in Carcinoma Metastasis - Jin Yang (UCSD, San Diego, USA)

Tumor-derived exosomes promote pre-metastatic niche formation and organotropism - David Lyden (Cornel University, New York, USA)

4 short talks

O.9: Integrin-Liked Kinase (ILK) is a critical regulator of the Hippo/YAP signaling pathway and EMT

S Dedhar, S Dedhar, I Serrano

BC Cancer Research Centre

O.132: Tgf- β -induced epithelial-mesenchymal transition activates mammary tumor cells for lymphatic dissemination

Authors: MF Pang, AM Georgoudaki, V Tabor, K Hagikura, Y Jin, M Jansson, L Jakobsson, C Betsholtz, M Sund, MCI Karlsson, J Fuxe
Karolinska Institutet, University School of Medicine-Tokyo, Umea University

O.115: Understanding the contribution of different EMT-TFs to epithelial plasticity

Authors: G Moreno-Bueno, A Díaz-López, J Díaz, J Palacios, F Portillo, A Cano

Biochemistry department-Medicine faculty-IIB-UAM-CISC, Virgen del Rocio Hospital, Ramon y Cajal Hospital

O.124: Epithelial Mesenchymal Plasticity is Associated with Intercellular Heterogeneity, Tumourigenicity and Tumour growth in the PMC42 H

Authors: C Pinto, T Blick, Y Handoko, K Gould, K Simpson, I Haviv, M Waltham, E Thompson

St. Vincents Institute of Medical Research-Australia, Peter MacCallum Cancer Institute- Australia, Bar Ilan University Israel

13.00-14.00 *Lunch time (many local restaurants and snack bars close-by)*

14.00-16.10 **Symposium VIII. Cancer stem cells, reprogramming and EMT**

Chair Thomas Brabletz

Mechanisms of Metastasis by colorectal cancer stem cells

Eduard Batlle (IRB, Barcelona, Spain)

MET first and then EMT before that en route to pluripotency

Duanqing Pei (Chinese Academy of Sciences, Guangzhou, China)

Coordination of Polarity Signalling in Cancer

Jeffrey L Wrana (Mount Sinai Hospital, Toronto, Canada)

2 short talks

O.110: Phenotypic plasticity in mammary epithelial stem cells and breast cancer is regulated by Axl signalling

Authors: C Tiron, F Pelissier, K Wnuk-Lipinska, I Stefansson, R Virtakoivu, M Miyano, T Sandal, D Micklem, V Fey, J Ivaska, L Akslen, M LaBarge, J Lorens

University of Bergen, University of Turku, Lawrence Berkeley Natl Laboratory, BerGenBio

O.44: Slug/P-cadherin pathway controls mammary stem/progenitor cell growth dynamics and motility

Authors: Y Idoux-Gillet, M Nassour, P Savagner

Institut de Recherche en Cancérologie de Montpellier, CEA Paris

16.10-16.30 *Coffee break*

16.30-18.30 **Symposium IX. Systems and Mathematical modelling of EMT**

Chair Muhammad Zaman

Keratins significantly contribute to cell stiffness and impact invasive behaviour

Josef Käs (University of Leipzig, Germany)

A Multiscale Computational Model of Cell Population Dynamics in Two-Dimensional In Silico Cultures - Mark Chaplain (University of Dundee, UK)

3 short talks

O.75: EMT in epidermal cell migration: A multi-system analysis of epidermis, cells, proteins, RNA, miRNA and the maths behind

it all

Authors: K Manton, L Mohanty, B Hollier, R Dawson, L Wagner, K Treloar, B Binder, P Haridas, S McElwain, R Baker, Z Upton, D Leavesley, M Simpson

Queensland University of Technology, University of Adelaide, University of Oxford

O.76: Regulatory networks through which miR-200 affects cell invasion and metastasis

G Goodall, C Bracken, X Li, J Wright, M Anderson, D Lawrence, A Yap, Y Khew-Goodall (Centre for Cancer Biology-SA Pathology, University of Queensland)

O.21: Epigenetic control and feed-forward signaling loops connect HMGA2, Snail1 and Smad proteins in EMT and tumor cell invasiveness

Authors: A Moustakas, L Caja, K Kahata, CH Heldin, K Savary , EJ Tan, S Thuault, K Tzavlaki

Uppsala University Department of Medical Biochemistry and Microbiology, Ludwig Institute for Cancer Research

18.30-19.30 **Poster session** (drinks and snacks)

20.15-22.00 **Conference dinner**

Saturday 16th November

8.30-10.40 **Symposium X. Therapies and Drug Discovery**

Chair Jean Paul Thiery

Mouse Models of Neural Tumors: Therapeutic Insights - Luis Parada (University of Texas Southwestern MC, USA)

Chemical-Genetics Identifies a Key Vulnerability of EMT cells -

Piyush B. Gupta (Whitehead Institute, Cambridge, USA)

Mesenchymal-like cancer cell networks contributing to tumor progression and cell survival - John Haley (OSI/Astellas, USA)

2 short talks

O. 116: Conective Tissue Growth Factor Regulates Epithelial-Mesenchymal Transition by

Interacting with Epidermal Growth Factor Receptor

Authors: S Rayego-Mateos, J Morgado-Pascual, M Alique, C Lavoz, R Rodrigues-Diez, J Pato, G Kery, S Mas, J Egido, A Ortiz, M Ruiz-Ortega

IIS- Fundacion Jimenez Diaz Universidad Autónoma de Madrid, Semmelweis University-Vichem Chemie Ltd. Budapest

O.105: An EMT Spectrum defines an anoikis resistant and spheroidogenic Intermediate Mesenchymal state that is sensitive to E-cadherin res

Authors: RY Huang, MK Wong, TZ Tan, KT Kuay, HC Ng, VY Chung, YS Chu, N Masumura, HC Lai, S Mori, J Low, MA Choolani, JP Thiery

National University of Singapore, NUS, IMCB, Kyoto University, National Defense Medical Center of Taipei, Cancer Institute of Japanese Foundation for Cancer Research

10.40-11.10 *Coffee break*

11.15-12.15 **The ISDB-MOD Lecture**

Chair Amparo Cano

At the end you should want to know what a cell can do rather than what it does do - Mina Bissell (Lawrence Berkeley Laboratory, Berkeley, USA)

12.15-12.30 **Concluding remarks**

Chair Amparo Cano

Remarks: Angela Nieto

Prizes: Pierre Savagner

Next meeting: Rik Thompson