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2022

WEINSTEIN

Cardiovascular Development & Regeneration

CONFERENCE 2022

Palais du Pharo

Marseille - France

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FULL SCHEDULE

THURSDAY MAY 12TH

1.00-1.15 PM WELCOME

1.00-3.00 PM **Session I: Early heart development**
Chairs: Miguel Torres (CNIC, Madrid), Sigolene Meilhac (Imagine and Pasteur Institutes, Paris)

001 - Spatiotemporal sequence of endocardium and myocardium specification in the mammalian primitive heart tube

[Miquel Sendra](#), [Morena Raiola](#), [Katie McDole](#), [Léo Guignard](#), [Jorge N. Domínguez](#), [Miguel Torres](#)

002 - A Mesp1-dependent developmental breakpoint in transcriptional and epigenomic specification of early cardiac precursors

[Alexis Leigh Krup](#), [Sarah A. B. Winchester](#), [Sanjeev S. Ranade](#), [W. Patrick Devine](#), [Deepak Srivastava](#), [Benoit G. Bruneau](#)

003 - Precardiac mesoderm auto-regulates second heart field cell fate via Wnt secretion

[Matthew Miyamoto](#), [Suraj Kannan](#), [Xihe Liu](#), [David Suh](#), [Myo Htet](#), [Tejasvi Kakani](#), [Sean Murphy](#), [Emmanouil Tampakakis](#), [Peter Andersen](#), [Hideki Uosaki](#), [Chulan Kwon](#), [Biyi Li](#)

004 - Dissecting Mechanisms of Chamber-Specific Cardiac Differentiation and its Perturbation Following Retinoic Acid Exposure

[David Gonzalez](#), [Nadine Schrode](#), [Tasneem A.M Ebramin](#), [Nicolas Broguiere](#), [Guiliana Rossi](#), [Lika Drakhlis](#), [Robert Zweigerdt](#), [Matthias P. Lutolf](#), [Kristin G. Beaumont](#), [Robert Sebra](#), [Nicole Dubois](#)

005 - Nkx2.7 is a novel regulator of pharyngeal arch development

[Caitlin Ford](#), [Carmen de Sema Tomás](#), [Cynthia Gao](#), [Uday Rangaswamy](#), [Michael See](#), [Hieu Nim](#), [Remo Sanges](#), [Mirana Ramialison](#), [Kimara Targoff](#)

3.00-3.30 PM COFFEE BREAK

3.30-5.15 PM **Session II: CHD Mechanisms I**
Chairs: Antonio Baldini (University of Naples Federico II), Didier Stainier (Max Planck Institute for Heart and Lung Research Bad Nauheim)

006 - Nuclear envelope integrity is essential for proper cardiac development

[Jacob Ross](#), [Matthew Stroud](#)

007 - Dissecting the cell type-specific roles of Hand2 during cardiac development in zebrafish

[Yanli Xu](#), [Stefan Guenther](#), [Guilherme Valente](#), [Mario Looso](#), [Didier Stainier](#)

008 - Tbx5-sensitive cues guide early progenitors for cardiac septation

[Irfan Kathiriya](#), [Martin Dominguez](#), [W. Patrick Devine](#), [Kavitha Rao](#), [Kevin Hu](#), [Jonathon Muncie](#), [Swetansu Hota](#), [Bayardo Garay](#), [Diego Quintero](#), [Piyush Goyal](#), [Sarah Winchester](#), [Benoit Bruneau](#)

009 - Multimodal Single Cell Analysis Reveals Regulatory Mechanisms Underlying Cell Signaling Defects in DiGeorge Syndrome

[Sanjeev Ranade](#), [Sean Whalen](#), [Ivana Zlatanova](#), [Lin Ye](#), [Benjamin van Soldt](#), [Tomohiro Nishino](#), [Angelo Pelonero](#), [Langley Grace Wallace](#), [Pawel Przytycki](#), [Casey Gifford](#), [Brian Black](#), [Katie Pollard](#), [Deepak Srivastava](#)

010 - Single-cell transcriptomics uncovers a Tbx1-dependent genetic program controlling cardiac neural crest cell deployment and progression.

[Christopher De Bono](#), [Yang Liu](#), [Alexander Ferrena](#), [Deyou Zheng](#), [Bernice Morrow](#)

5.15-5.45 PM **Robert Poelmann: Memorial for Adriana Gittenberger-de Groot**
Chair: Robert Kelly (Aix Marseille University)

5.45-8.00 PM **Posters I (Even number posters)**

8.00-10.00 PM **Evening Reception at the Musée des Regards de Provence**

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FRIDAY MAY 13TH

8.45-10.45 AM **Session III: CHD Mechanisms II**
Chairs: Brian Black (UCSF), Kelly Smith (University of Melbourne)

011 - A phenotypic rescue approach identifies lineage regionalization defects in a mouse model of DiGeorge syndrome

[Gabriella Lania](#), [Monica Franzese](#), [Noritaka Adachi](#), [Annalaura Russo](#), [Erika D'agostino](#), [Claudia Angelini](#), [Robert G. Kelly](#), [Antonio Baldini](#)

012 - A deeply conserved GATA4/5/6-dependent cis-regulatory architecture in cardiac development and disease

[Mengyi Song](#), [Anna Prentice](#), [Xuefei Yuan](#), [Huayun Hou](#), [Casey Carlisle](#), [Eleanor Duncan](#), [Cherith Somerville](#), [Simon Monis](#), [Raymond Kim](#), [Rebekah Jobling](#), [Ian Scott](#), [Michael Wilson](#)

013 - FOXF1 mediates Hedgehog signaling-dependent heterochronic control of cardiac development

[Joshua W. M. Theisen](#), [Ariel Rydeen](#), [Jeffrey D. Steimle](#), [Megan Rowton](#), [Carlos Perez-Cervantes](#), [Xinan Holly Yang](#), [Jessica Jacobs-Li](#), [Suzy Hur](#), [Alex M. Hoover](#), [Sunny Sun-Kin Chan](#), [Michael Kyba](#), [Ivan P. Moskowitz](#)

014 - Conserved transcriptional mechanisms directing Nr2f1 expression in vertebrate atria

[Ugo Coppola](#), [Joshua S. Waxman](#)

015 - Ribosomal protein genes as a novel class of Congenital Heart Disease candidates regulating cardiac growth and proliferation in concert with cardiac transcription factors

[Tanja Nielsen](#), [Anais Kervadec](#), [X-X. I Zeng](#), [Analyne Schroeder](#), [Jeanne L Theis](#), [Timothy M. Olson](#), [Karen Ocorr](#), [Alexandre Colas](#), [Georg Vogler](#), [Rolf Bodmer](#)

016 - Modeling MYBPC3-related Hypertrophic Cardiomyopathy and Left Ventricular Non-Compaction in mice

[Alejandro Salguero-Jiménez](#), [María Sabater-Molina](#), [Bin Zhou](#), [Juan R. Gimeno-Blanes](#), [José Luis de la Pompa](#)

10.45-11.15 AM **COFFEE BREAK**

11.15-1.00 PM **Session IV: Conduction System**
Chairs: Lucile Miquerol (Aix Marseille University), Vincent Christoffels (University of Amsterdam)

017 - Hippo signaling pathway maintains sinoatrial node homeostasis

[Mingjie Zheng](#)

018 - IRX5 transcription factor cooperates with the TBX5/GATA4/NKX2-5 complex to regulate human cardiomyocyte functions

[Robin Canac](#), [Bastien Cimarosti](#), [Aurore Girardeau](#), [Virginie Forest](#), [Cynthia Fourgeux](#), [Jeremie Poschmann](#), [Guillaume Lamirault](#), [Patricia Lemarchand](#), [Nathalie Gaborit](#)

019 - The cis-regulatory architecture of a gene desert controlling pleiotropic Shox2 expression and cardiac pacemaker development

[Marco Osterwalder](#), [Samuel Abassah-Oppong](#), [Brandon J. Mannion](#), [Raquel Rouco](#), [Matteo Zoia](#), [Virginie Tissieres](#), [Virginia Roland](#), [Iros Barozzi](#), [Diane E. Dickel](#), [Javier Lopez-Rios](#), [Guillaume Andrey](#), [Len A. Pennacchio](#), [Axel Visel](#), [John Cobb](#)

020 - A multi-model system approach identifies genetic interactions underlying Atrial Fibrillation Susceptibility

[James Kezos](#), [Anais Kervadec](#), [Alexandre Colas](#), [Philippe Chevalier](#), [Karen Ocorr](#)

021 - The zebrafish grime mutant uncovers an evolutionarily conserved role for Tmem161b in the control of cardiac rhythm

[Kelly Smith](#)

1.00-2.00 PM **LUNCH** (*Young investigators Career Lunch with Didier Stainier, Brian Black and Rolf Bodmer*)

2.00-3.50 PM **Session V: Single Ventricle**
Chairs: Tony Firulli (Indiana University), Jose Luis de la Pompa (CNIC, Madrid)

2.00-2.10 PM **Session introduction by Additional Ventures (Kaitlin Davis)**

022 - The role of RNA-binding protein QKI in ventricular wall development.

[Ying Liu](#), [Weinan Shou](#)

023 - The novel MYH6-E1584K tail domain variant associated with hypoplastic left heart syndrome impairs cardiomyocyte relaxation in vitro

[Melissa Anfinson](#), [Melissa Anfinson](#), [Suma Thareja](#), [Ryan Brown](#), [Matthew Cavanaugh](#), [Karl Stamm](#), [Huan-Ling Liang](#), [Peter Lambertson](#), [Jackson Radandt](#), [Min-Su Kim](#), [Michael Mitchell](#), [Robert Fitts](#), [Aoy Tomita-Mitchell](#)

024 - Torsion of the heart tube by shortage of progenitor cells: identification of Greb1l as a genetic determinant of criss-cross hearts in mice

[Segolene Bernheim](#), [Adrien Borgel](#), [Jean-Francois Le Garrec](#), [Emeline Perthame](#), [Audrey Desgrange](#), [Wojciech Krezel](#), [Francesca Raimondi](#), [Damien Bonnet](#), [Lucile Houyel](#), [Sigolène Meilhac](#)

025 - Myocardial-intrinsic defects underlie an Rbfox-mediated zebrafish model of hypoplastic left heart syndrome

[Mengmeng Huang](#), [Alexander Akerberg](#), [Xiaoran Zhang](#), [Haejin Yoon](#), [Shakchi Joshi](#), [Christopher Nguyen](#), [William Pu](#), [Marcia Haigis](#), [Geoffrey Burns](#), [Caroline Burns](#)

026 - The role of embryonic senescence in cardiac trabeculation and compaction

[Audrey Ibret](#), [Michel Puzeat](#)

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3.50-4.20 PM COFFEE BREAK

FRIDAY MAY 13TH

4.20-6.15 PM **Session VI: Regeneration I - Inflammation and Signalling**
Chairs: Jim Martin (Baylor College of Medicine), Francesca Rochais (Aix Marseille University)

4.20-4.30 PM **Session introduction by The Leducq Foundation (David Tancredi)**

027 - Characterising differences between the regenerative and non-regenerative immune response in *Astyanax mexicanus*

[Helen Potts](#), [Madeleine Lemieux](#), [William Stockdale](#), [Esra Sengul](#), [Robin Choudhury](#), [Mathilda Mommersteeg](#)

028 - Role of autophagy during cell competition in heart development and regeneration

[Lorena Esteban-Martinez](#), [Rocio Sierra](#), [Miguel Torres](#)

029 - Spatial transcriptomics reveal a colocalized cellular triad required for heart renewal

[Gang \(Rich\) Li](#), [Francisco Grisanti](#), [Xiao Li](#), [Yuka Morikawa](#), [Fansen Meng](#), [Jong Kim](#), [Bing Xie](#), [Shijie Liu](#),

[Md Abul Hassan Samee](#), [James Martin](#)

030 - The macrophage regenerative response

[Chris Jopling](#), [Laura Rolland](#), [Alenca Harrington](#), [Adèle Faucherre](#), [Jourdano Mancilla Arbaroa](#), [Girisaran Gangatharan](#),

[Laurent Gamba](#), [Dany Severac](#), [Marine Pratlong](#), [Thomas Moore-Morris](#)

031 - Re-activation of HIF signalling in the epicardium improves heart regeneration after myocardial infarction

[Elisabetta Gamen](#), [Eleonor L. Price](#), [Daniela Pezzolla](#), [Carla De Villiers](#), [Mala Gunadasa-Rohling](#), [Rafik Salama](#),

[David R Mole](#), [Tammie Bishop](#), [Chris W Pugh](#), [Robin P Choudhury](#), [Carolyn A Carr](#), [Joaquim M Vieira](#), [Paul R Riley](#)

6.15-7.00 PM **Keynote Speaker 1 Giacomo Cavalli**
Chair: Michel Puceat (Aix Marseille University)

7.00-8.45 PM **Poster session II (Odd number posters)**

SATURDAY MAY 14TH

8.45-10.45 AM **Session VII: Regeneration II - Role of Endothelium and Fibroblasts**
Chairs: Eldad Tzahor (Weizmann Institute), Chris Jopling (University of Montpellier)

032 - An injury responsive mmp14b enhancer promotes heart regeneration in zebrafish

[Ivana Zlatanova](#), [Pauline Colombier](#), [Tanvi Sinha](#), [Barbara Celona](#), [Shan-Mei Xu](#), [Stefan Materna](#), [Kenneth Poss](#), [Brian Black](#)

033 - The novel regenerative capacity of embryonic endothelium rescues congenital heart defects

[AnnJosette Ramirez](#), [Sophie Astrof](#)

034 - Sequential Bmp2-Cxcr4 signaling in the cell fate trajectory from endocardium to coronary artery during heart development and regeneration.

[Gaetano D'Amato](#), [Ragini Phansalkar](#), [Jeffrey A. Naftaly](#), [Pamela E. Rios Coronado](#), [Dale O. Cowley](#), [Kelsey E. Quinn](#),

[Bikram Sharma](#), [Kathleen M. Caron](#), [Alessandra Vigilante Vigilante](#), [Kristy Red-Horse](#)

035 - Origin and function of activated fibroblast states during zebrafish heart regeneration

[Sara Lelek-Greskovic](#), [Bo Hu](#), [Baastian Spanjaard](#), [Hadil El-Sammak](#), [Mariana Guedes Simoes](#), [Janita Mintcheva](#), [Aliee Hananeh](#),

[Fabian Theis](#), [Didier Stainier](#), [Jan Philipp Junker](#), [Daniela Panakova](#)

036 - Targeting the autocrine loop of cardiac myofibroblasts to fight fibrosis

[Shoval Miyara](#), [Miri Adler](#), [Avi Mayo](#), [Yalin Divinsky](#), [Kfir Umansky](#), [Jacob Elkahal](#), [Avraham Shakked](#), [Lingling Zhang](#),

[Alexander Genzelinakh](#), [Gal Aviel](#), [David Kain](#), [Daria Lendengolts](#), [Ruslan Medzhitov](#), [Uri Alon](#), [Eldad Tzahor](#)

037 - Activation of nkx2.5 transcriptional program is required for adult myocardial repair

[Carmen de Sena Tomás](#), [Angelika G. Aleman](#), [Caitlin Ford](#), [Akriti Varshney](#), [Di Yao](#), [Jamie K. Harrington](#), [Leonor Saúde](#),

[Mirana Ramialison](#), [Kimara L. Targoff](#)

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10.45-11.15 AM COFFEE BREAK

11.15- 1.00 PM

Session VIII: Cardiac Maturation

Chairs: Nicole Dubois (Ichan School of Medicine, Mount Sinai), Gregor Andelfinger (CHU Sainte Justine)

38 - Investigating the role of ACTN2 enhancer in cardiomyocyte maturation

[Myo Htet](#), [Marios Arvanitis](#), [Brian Lin](#), [Harshi Gangrade](#), [Sean Murphy](#), [Elaine Chen](#), [Renjun Zhu](#), [Asimina Zoitou](#), [Chulan Kwon](#), [Emmanouil Tampakakis](#)

39 - LRRFIP2 modulates the response to hypoxia during embryonic cardiogenesis

[Laura Ben Driss](#), [Christophe Houbron](#), [Florian Britto](#), [Philippe Daubas](#), [Pascal Maire](#)

40 - Abnormal nucleotide metabolism in the embryonic heart of diabetic pregnancy causes mitochondrial dysfunction via AMPK

[Haruko Nakano](#), [Cesar Perez-Ramirez](#), [Naofumi Kawahira](#), [Jennifer Thompson](#), [Heather Christofk](#), [Atsushi Nakano](#)

41 - Vangl2-dependent changes in nuclear mechanosensing regulate YAP/TAZ signaling in heart muscle development.

[Anne Merks](#), [Sara Lelek](#), [Kevin Méndez-Acevedo](#), [Laura C. Zelarayán](#), [Daniela Panakova](#)

42 - Slit signaling is required for mammalian cardiomyocyte cytokinesis

[Chi-Chung Wu](#), [Susann Bruche](#), [Sylvia Jeratsch](#), [Johannes Graumann](#), [Stefan Günther](#), [Mathilda Mommersteeg](#), [Didier Stainier](#)

1.00-2.00 PM LUNCH

2.00-3.15 PM

Business Meeting (Chair: Deborah Yelon, UCSD)

- 10 minute presentations:
- Fondation Lefoulon Delalande (Margaret Buckingham)
- European Society of Cardiology Working Group on Development Anatomy and Pathology (Maurice van den Hoff)
- Cardiovascular Development Data Resource Center (Joseph Yost)

3.15-4.00 PM

Keynote Speaker II: Alfonso Martinez-Arias

Chair: Stéphane Zaffran (Aix Marseille University)

4.00-4.30 PM COFFEE BREAK

4.30-6.15 PM

Session IX: Valves and Vessels

Chairs: Joy Lincoln (Medical College of Wisconsin), Anabela Bensimon-Brito (Aix Marseille University)

43 - Cell-ECM interaction regulate symmetrical allocation of endothelial progenitors of the pharyngeal arch arteries

[Michael Warkala](#), [Sophie Astrof](#)

44 - Fluid shear and hydrostatic stress potentiate YAP mechanotransduction to control distinct growth vs maturation programs in remodeling endocardial cushions

[Shuofei Sun](#), [Mingkun Wang](#), [Belle Lin](#), [Jonathan Butcher](#)

45 - Single cell multi-omics reveal novel cardiac subpopulation critical to valve morphogenesis

[Alexander Merriman](#), [Mauro Costa](#), [Chun Ye](#), [Deepak Srivastava](#)

46 - Blood flow-dependent and -independent roles of Wnt9 during zebrafish heart morphogenesis

[Alessio Paolini](#), [Tim Lange](#), [Dinara Sharipova](#), [Salim Abdelilah-Seyfried](#)

47 - A unidirectional shear stress operated Notch-CXCR4 molecular switch controls semilunar valve maturation

[Charles Dai](#), [Belle Lin](#), [Duc Pham](#), [Jonathan Butcher](#)

6.15-6.30 PM

Closing comments

7.00 PM

Gala dinner (Palais du Pharo)