

ALESSANDRO MALARA (18/09/1982) Curriculum Vitae – 2015

Viale Forlanini 6, Dipartimento di Medicina Molecolare
Università degli Studi di Pavia

Tel: +390382502968
alessandro.malara@unipv.it

RICERCA:

Meccanismi midollari di regolazione della produzione delle piastrine in condizioni fisiologiche e patologiche

FORMAZIONE

11/06 – 11/09 Ph.D. in Scienze Biomolecolari e Biotecnologie, IUSS, Pavia, Italia

10/04 – 7/06 Laurea Magistrale in Biotecnologie Mediche e Farmaceutiche, Università degli di Pavia.

10/01-7/04 Laurea Triennale in Biotecnologie Mediche e Farmaceutiche, Università degli di Milano.

ATTIVITA' PROFESSIONALE

04/13 - pres. Ricercatore a Tempo Determinato, Dipartimento di Medicina Molecolare, Università degli Studi di Pavia.

Coordinatore Progetto FIRB (Ministero dell'Istruzione e dell'Università) RBFR1299KO

11/09 - 03/13. Assegnista, Dipartimento di Medicina Molecolare, Università degli Studi di Pavia, Laboratori di Biotecnologie, Fondazione San Matteo, Pavia.

11/06 - 11/09. Dottorato di Ricerca, IUSS, Dipartimento di Biochimica, Università degli Studi di Pavia

- Tesi di Dottorato: "New insights into pathogenetic mechanisms of inherited macrothrombocytopenias"

ATTIVITA' DIDATTICA

- Biochimica Clinica e Biologia Molecolare Clinica per il 1° anno della Laurea Magistrale Tecnico Diagnostica ed Assistenziale (3 CFU).
 - Attività didattica di Biochimica Clinica nei corsi di Biotecnologie Mediche e Farmaceutiche, Odontoiatria.
-

CONTRIBUTI A CONFERENZE NAZIONALI O INTERNAZIONALI

- Gordon Conference: Cell Biology of Megakaryocytes and Platelets. April 2015. Lucca, Italy. The EIIIA domain of fibronectin sustains megakaryocyte development. Malara A, Gruppi C, Muro AF, De Marco L, Balduini A.
- XIII Congress of the Italian Federation of Life Sciences (FISV) September 2014, Pisa Italy.
- 55th Meeting of the American Society of Hematology meeting 2013, New Orleans, LA,

USA. Megakaryocytes contribute to the establishment of bone marrow environments by expressing extracellular matrix proteins. Malara A, Currao M, Gruppi C and Balduini A.

- XXXIII Meeting of the Italian Society of Connective Tissue, 2013, Pavia, Italy. Gruppi C, Malara A, Muro A, De Marco L, Balduini C, Tira ME, Balduini A. Fibronectin And Megakaryocyte Development
- Meeting of the Society for Glycobiology and the American Society for Matrix Biology. 2012, San Diego, CA, USA. Malara A, Currao M, Gruppi C and Balduini A. Fibronectin, laminin and type IV collagen are key components of the sinusoid-associated megakaryocyte niche within bone marrow.
- 36th FEBS Meeting, 2011, Turin, Italy. Malara A, Gruppi C, Pallotta I, Spedden E, Tenni R, Raspanti M, Kaplan DL, Tira ME, Staii C, Balduini A. Extracellular matrix nano-mechanics determine megakaryocyte function.
- XXXI Meeting of the Italian Society of Connective Tissue, 2013, Varese, Italy Extracellular Matrix Nano-Mechanics Determine Megakaryocyte Function. Malara A, Gruppi C, Pallotta I, Spedden E, Raspanti M, Kaplan D, Tira ME, Staii C, Balduini A.
- XI Italian Meeting of Biotechnologies, 2011, Varese, Italy.
- Gordon Conference: Fibronectin, Integrins and related molecules 2011, Lucca, Italy. Malara A, Gruppi C, Pallotta I, Spedden E, Tenni R, Raspanti M, Kaplan DL, Tira ME, Staii C, Balduini A. Extracellular matrix nano-mechanics determine megakaryocyte function.
- 52th Meeting of the American Society of Hematology meeting 2010, Orlando, FL, USA. Malara A., Gruppi C, Rebuzzini P, Visai L, Tira ME, Balduini C, Balduini A. New roles for Fibronectin and Factor XIII within bone marrow.
- 6th international meeting ADP receptors: from basic science to clinical practice meeting 2010, Varese, Italy.
- 54th National Meeting of the Italian Society of Biochemistry and Molecular Biology (SIB), Catania, Italy, September 2009. Modulation Of Megakaryocyte Differentiation By Extracellular Matrix Components. Gruppi C, Malara A, Badalucco S, Visai L, Tenni R, Tira ME, Balduini C and Balduini A.
- Meeting of the International Society of thrombosis and Haemostasis 2009, Boston, MA, USA. Pecci A, Malara A, Badalucco S, Bozzi V, Balduini CL, Balduini A. The d1424n and r1933x mutations of MYH9 result in an altered proplatelet formation by human megakaryocytes.
- 50th Meeting of the American Society of Haematology 2008, San Francisco, CA, USA 2008. Balduini A, Malara A, Badalucco S, Bozzi V, Pallotta I, Noris P, Torti M, Balduini CL and Pecci A. Heterozygous Ala156Val Mutation in the GPIIb Alpha (Heterozygous Bernard-Soulier Syndrome Type Bolzano) Induces Macrothrombocytopenia by Hampering Proplatelet Formation.
- ABCD and UK Adhesion Society Meeting 2007, Rome, Italy. Balduini A, Pallotta I, Malara A, Lova P, Viarengo G, Pecci A, Balduini CL, Torti M: Von Willebrand Factor and GPIIb α regulates proplatelets formation by human megakaryocytes.
- Meeting of the International Society of Thrombosis and Haemostasis 2007, Geneva, Switzerland. Balduini A, Pallotta I, Malara A, Lova P, Viarengo G, Pecci A, Balduini CL, Torti M: Von Willebrand Factor and GPIIb α regulates proplatelets formation by human megakaryocytes.

PREMI

2014: MEDAGLIA SIB in qualità di giovane ricercatore dalla Società Italiana di Biochimica, Pisa, Italia.

2012: ISMB (International Society for Matrix Biology) Travel Award per il congresso della "Society for Glycobiology and the American Society for Matrix Biology". San Diego, CA, USA

2011: CNB (Congresso Nazionale per le Biotecnologie) Travel Award per l'XI CNB, Varese, Italy.

2011: Premio di studio sull'ambiente midollare da "Associazione per lo studio della Mielofibrosi G.Mazzini", Crema (CR), Italia.

2011: FEBS (Federation of the Societies of Biochemistry and Molecular Biology) Travel Award per l'11th Young Scientist forum, Torino, Italia.

2010: CIB (Consorzio Italiano per le Biotecnologie) borsa di studio come visiting student presso la TUFTS University, Medford, MA, USA.

GRANTS

2013: Finanziamento dal Ministero dell'Istruzione, dell'Università e della Ricerca. Coordinatore nazionale del progetto RBF1299KO, "Bio-mimetic System for the expansion and differentiation of human hematopoietic progenitor cells".

SOCIETA' SCIENTIFICHE

Membro della "International Society of Thrombosis and Haemostasis" (ISTH) dal 2010

Membro della "Italian society of Biochemistry" (SIB) dal 2010,

Membro della "International Society of Matrix Biology" (ISMB) dal 2012,

Membro della "Italian Society for Connective Tissues" (SISC) dal 2011.

Membro del "Gruppo di Studio per le Piastrine" (GSP) dal 2009.

PUBBLICAZIONI

1) Di Buduo CA, Wray LS, Tozzi L, Malara A, Chen Y, Ghezzi CE, Smoot D, Sfara C, Antonelli A, Spedden E, Bruni G, Staii C, De Marco L, Magnani M, Kaplan DL, Balduini A. Programmable 3D silk bone marrow niche for platelet generation ex vivo and modeling of megakaryopoiesis pathologies. *Blood*. 2015 Apr 2;125(14):2254-64. doi: 10.1182/blood-2014-08-595561.

2) Malara A, Abbonante V, Di Buduo CA, Tozzi L, Currao M, Balduini A. The secret life of a megakaryocyte: emerging roles in bone marrow homeostasis control. *Cell Mol Life Sci*. 2015 Apr;72(8):1517-36. doi: 10.1007/s00018-014-1813-y.

3) Achilli C, Jadhav SA, Guidetti GF, Ciana A, Abbonante V, Malara A, Fagnoni M, Torti M, Balduini A, Balduini C, Minetti G. Folic acid-conjugated 4-amino-phenylboronate, a boron-containing compound designed for boron neutron capture therapy, is an unexpected agonist for human neutrophils and platelets. *Chem Biol Drug Des*. 2014 May;83(5):532-40. doi: 10.1111/cbdd.12264.

4) Malara A, Currao M, Gruppi C, Celesti G, Viarengo G, Buracchi C, Laghi L, Kaplan DL, Balduini A. Megakaryocytes contribute to the bone marrow-matrix environment by expressing fibronectin, type IV collagen, and laminin. *Stem Cells*. 2014 Apr;32(4):926-37. doi: 10.1002/stem.1626.

5) Achilli C, Grandi S, Ciana A, Guidetti GF, Malara A, Abbonante V, Cansolino L, Tomasi C, Balduini A, Fagnoni M, Merli D, Mustarelli P, Canobbio I, Balduini C, Minetti G. Biocompatibility of functionalized boron phosphate (BPO₄) nanoparticles for boron neutron capture therapy (BNCT) application. *Nanomedicine*. 2014 Apr;10(3):589-97. doi: 10.1016/j.nano.2013.10.003.

6) Balduini A, Di Buduo CA, Malara A, Lecchi A, Rebuzzini P, Currao M, Pallotta I, Jakubowski JA, Cattaneo M. Constitutively released adenosine diphosphate regulates proplatelet formation by human megakaryocytes. *Haematologica*. 2012 Nov;97(11):1657-65. doi: 10.3324/haematol.2011.059212.

7) Bury L, Malara A, Gresele P, Balduini A. Outside-in signalling generated by a constitutively activated integrin $\alpha\text{IIb}\beta\text{3}$ impairs proplatelet formation in human megakaryocytes. *PLoS One*. 2012;7(4):e34449. doi: 10.1371/journal.pone.0034449.

- 8) Malara A, Balduini A. Blood platelet production and morphology. *Thromb Res.* 2012 Mar;129(3):241-4. doi: 10.1016/j.thromres.2011.11.042.
- 9) Vettore S, Tezza F, Malara A, Vianello F, Pecci A, Scandellari R, Floris M, Balduini A, Fabris F. A A386G biallelic GPIIb/IIIa gene mutation with anomalous behavior: a new mechanism suggested for Bernard-Soulier syndrome pathogenesis. *Haematologica.* 2011 Dec;96(12):1878-82. doi: 10.3324/haematol.2010.039008.
- 10) Malara A, Gruppi C, Pallotta I, Spedden E, Tenni R, Raspanti M, Kaplan D, Tira ME, Staii C, Balduini A. Extracellular matrix structure and nano-mechanics determine megakaryocyte function. *Blood.* 2011 Oct 20;118(16):4449-53. doi: 10.1182/blood-2011-04-345876.
- 11) Balduini A, Malara A, Balduini CL, Noris P. Megakaryocytes derived from patients with the classical form of Bernard-Soulier syndrome show no ability to extend proplatelets in vitro. *Platelets.* 2011;22(4):308-11. doi: 10.3109/09537104.2010.547960.
- 12) Malara A, Gruppi C, Rebuzzini P, Visai L, Perotti C, Moratti R, Balduini C, Tira ME, Balduini A. Megakaryocyte-matrix interaction within bone marrow: new roles for fibronectin and factor XIII-A. *Blood.* 2011 Feb 24;117(8):2476-83. doi: 10.1182/blood-2010-06-288795.
- 13) Pecci A, Malara A, Badalucco S, Bozzi V, Torti M, Balduini CL, Balduini A. Megakaryocytes of patients with MYH9-related thrombocytopenia present an altered proplatelet formation. *Thromb Haemost.* 2009 Jul;102(1):90-6. doi: 10.1160/TH09-01-0068.
- 14) Balduini A, Malara A, Pecci A, Badalucco S, Bozzi V, Pallotta I, Noris P, Torti M, Balduini CL. Proplatelet formation in heterozygous Bernard-Soulier syndrome type Bolzano. *J Thromb Haemost.* 2009 Mar;7(3):478-84. doi: 10.1111/j.1538-7836.2008.03255.x.
- 15) Balduini A, Pallotta I, Malara A, Lova P, Pecci A, Viarengo G, Balduini CL, Torti M. Adhesive receptors, extracellular proteins and myosin IIA orchestrate proplatelet formation by human megakaryocytes. *J Thromb Haemost.* 2008 Nov;6(11):1900-7. doi: 10.1111/j.1538-7836.2008.03132.x. Epub 2008 Aug 22.

Pavia, 25/04/2015