Raccolta informazioni su Gruppi di Ricerca- DiSCOG

CAPOGRUPPO

Nominativo	Emma D'ANDREA
Ruolo Universitario	Prof. ASSOCIATO
SSD	MED04
Ruolo ospedaliero (se presente)	Dirigente MEDICO
Sezione di appartenenza	ONCOLOGIA
Unità Operativa Semplice (se presente) **Unita' Operativa Complessa**	Dr. Marco Montagna (Ass.Biologo - I O V)

***LINEE DI RICERCA* (solo linee di ricerca attuali; se presenti piu' linee di ricerca indicarle con un numero e fare riferimento al numero per tutte le informazioni sottostanti, quando appropriato)**

1) Identificazione di nuovi geni di predisposizione ai i tumori della mammella e dell'ovaio

2) Caratterizzazione patogenetica di varianti di sequenza BRCA1/2 di significato ignoto in famiglie con tumore ereditario della mammella/ovaio

3) Ruolo di geni ad alta e bassa penetranza nella suscettibilità al melanoma multiplo

4) Significato bio-patologico delle varianti indeterminate (UV) del gene CDKN2A predisponenti al melanoma familiare

5) Collaborazioni varie

AFFERENTI AL GRUPPO DI RICERCA

1) PERSONALE UNIVERSITARIO (PROFESSORI E RICERCATORI)

Nominativo	**Ruolo (SSD)**	**Dipartimento di afferenza**
Emma D'ANDREA	Prof. ASSOCIATO	DiSCOG

2) PERSONALE NON STRUTTURATO (DOTTORANDI, SPECIALIZZANDI, ASSEGNISTI, BORSISTI)

Nominativo	**Ruolo** ** per gli specializzandi e dottorandi specificare la scuola di appartenenza	**Dipartimento di afferenza**

3) PERSONALE TECNICO DI LABORATORIO STRUTTURATO

Nominativo	**Livello**	**Dipartimento di afferenza**
QUAGGIO Monica		

4) PERSONALE DI RICERCA APPARTENENTE AD ALTRE AMMINISTRAZIONI (IOV, AZIENDA OSPEDALIERA, VIMM, ETC)

Nominativo	**Ruolo**	**Ente di appartenenza**
Chiara MENIN	Dirigente Biologo	IOV - IRCCS
Marco MONTAGNA	Dirigente Biologo	IOV - IRCCS

COLLABORAZIONI NAZIONALI E INTERNAZIONALI SOSTENUTI DA: PROGETTI DI RICERCA/PUBBLICAZIONI/SCAMBI DI PERSONALE (ultimi 5 anni, sostanziate da piu' pubblicazioni e/o progetti di ricerca in comune)

Linea di ricerca 1

- The Consortium of Investigators of Modifiers of BRCA1/2 (CIMBA)

Linea di ricerca 2

- Evidence-based Network for the Interpretation of Germline Mutant Alleles (ENIGMA)

Linea di ricerca 3

- Studio multicentrico dell'Intergruppo Melanoma Italiano (IMI), coordinato dall' AOU San Martino, Genova

Linea di ricerca 4

- Genetica Oncologica, Dip. universitario di Oncologia, Biologia, Genetica, e AOU san Martino, Genova

PARTECIPAZIONE A PROGETTI INTERNAZIONALI (ultimi 5 anni; indicare per ogni linea di ricerca)

Linea di ricerca 1

- Identificazione di marcatori genetici modificatori del rischio di malattia in portatori di mutazioni costitutive dei geni BRCA1 e BRCA2

Linea di ricerca 2

- Caratterizzazione patogenetica di varianti geniche dei geni BRCA1 e BRCA2 attraverso approcci multidisciplinare

Linea di ricerca 3

- Intergruppo Melanoma Italiano (IMI)

FINANZIAMENTI (ultimi 5 anni; indicare per ogni linea di ricerca)

- LINEA 1 - 2 - 3 - 4:

- 60% (UNIVERSITA' DI PADOVA; EMMA D'ANDREA)

- PROGRAMMA INTEGRATO ONCOLOGIA (PIO 5) : 2008-10 (EMMA D'ANDREA)

- ALLEANZA CONTRO IL CANCRO (ACC) : 2008-10 (MARCO MONTAGNA)

- PROGETTO ORDINARIO ONCOLOGIA/TUMORI DI GENERE (IOV) 2009-11

- PROGETTO DI ATENEO 2010 (CHIARA MENIN)

PUBBLICAZIONI **(** ultimi 5 anni; solo publicazioni ISI e non abstract; indicare per ogni linea di ricerca)

Linea di ricerca 1

1. Nicoletto MO, Bertorelle R, Borgato L, De Salvo GL, Artioli G, Lombardi G, Zustovich F, Marcato R, Parenti A, Montagna M, Donach ME. Family history of cancer rather than p53 status predicts efficacy of pegylated liposomal doxorubicin and oxaliplatin in relapsed ovarian cancer. *Int J Gynecol Cancer* 2009. 19(6):1022-8.
2. Antoniou AC, Sinilnikova OM, McGuffog L, Healey S, Nevanlinna H, Heikkinen T, Simard J, Spurdle AB, Beesley J, Chen X; Kathleen Cuningham Foundation Consortium for Research into Familial Breast Cancer, Neuhausen SL, Ding YC, Couch FJ, Wang X, Fredericksen Z, .. Montagna M, et al. Common variants in LSP1, 2q35 and 8q24 and breast cancer risk for BRCA1 and BRCA2 mutation carriers. *Hum Mol Genet* 2009. 18(22):4442-56.
3. Osorio A, Milne RL, Pita G, Peterlongo P, Heikkinen T, Simard J, Chenevix-Trench G, Spurdle AB, Beesley J, Chen X, Healey S; KConFab, .. Montagna M, et al. Evaluation of a candidate breast cancer associated SNP in ERCC4 as a risk modifier in BRCA1 and BRCA2 mutation carriers. Results from the Consortium of Investigators of Modifiers of BRCA1/BRCA2 (CIMBA). *Br J Cancer* 2009. 101(12):2048-54.
4. Antoniou AC, Beesley J, McGuffog L, Sinilnikova OM, Healey S, Neuhausen SL, Ding YC, Rebbeck TR, Weitzel JN, Lynch HT, Isaacs C, Ganz PA, ..Montagna M, et al. Common breast cancer susceptibility alleles and the risk of breast cancer for BRCA1 and BRCA2 mutation carriers: implications for risk prediction. *Cancer Res* 2010. 70(23):9742-54.
5. Antoniou AC, Wang X, Fredericksen ZS, McGuffog L, Tarrell R, Sinilnikova OM, Healey S, Morrison J, Kartsonaki C, Lesnick T, Ghoussaini M, ..Montagna M, et al. A locus on 19p13 modifies risk of breast cancer in BRCA1 mutation carriers and is associated with hormone receptor-negative breast cancer in the general population. *Nat Genet* 2010. 42(10):885-92.
6. Gaudet MM, Kirchhoff T, Green T, Vijai J, Korn JM, Guiducci C, Segrè AV, McGee K, McGuffog L, Kartsonaki C, Morrison J, Healey S, ..Montagna M, et al. Common genetic variants and modification of penetrance of BRCA2-associated breast cancer. *PLoS Genet* 2010. 6(10):e1001183.
7. Antoniou AC, Kartsonaki C, Sinilnikova OM, Soucy P, McGuffog L, Healey S, Lee A, Peterlongo P, ..Montagna M, et al. Common alleles at 6q25.1 and 1p11.2 are associated with breast cancer risk for BRCA1 and BRCA2 mutation carriers. *Hum Mol Genet* 2011. 20(16):3304-21.
8. Pharoah PD, Palmieri RT, Ramus SJ, Gayther SA, Andrulis IL, Anton-Culver H, Antonenkova N, Antoniou AC, Goldgar D;.. Montagna M, et al. The role of KRAS rs61764370 in invasive epithelial ovarian cancer: implications for clinical testing. *Clin Cancer Res* 2011. 17(11):3742-50.
9. Ramus SJ, Kartsonaki C, Gayther SA, Pharoah PD, Sinilnikova OM, Beesley J, Chen X, McGuffog L, Healey S, Couch FJ, Wang X,... Montagna M, et al. Genetic variation at 9p22.2 and ovarian cancer risk for BRCA1 and BRCA2 mutation carriers. *J Natl Cancer Inst* 2011. 103(2):105-16.
10. Im KM, Kirchhoff T, Wang X, Green T, Chow CY, Vijai J, Korn J, Gaudet MM, Fredericksen Z, Shane Pankratz V, Guiducci C, Crenshaw A.. Montagna M, et al. Haplotype structure in Ashkenazi Jewish BRCA1 and BRCA2 mutation carriers. *Hum Genet*. 2011.130:685-99.
11. Cox DG, Simard J, Sinnett D, Hamdi Y, Soucy P, Ouimet M, Barjhoux L, Verny-Pierre C, McGuffog L, Healey S, Szabo C, Greene MH, .. Montagna M, et al. Common variants of the BRCA1 wild-type allele modify the risk of breast cancer in BRCA1 mutation carriers. *Hum Mol Genet* 2011. 20(23):4732-4747
12. Mulligan AM, Couch FJ, Barrowdale D, Domchek SM, Eccles D, Nevanlinna H, Ramus SJ, Robson M, Sherman M, Spurdle AB, .. Montagna M, et al. Common breast cancer susceptibility alleles are associated with tumor subtypes in BRCA1 and BRCA2 mutation carriers: results from the Consortium of Investigators of Modifiers of BRCA1/2. Breast Cancer Res 2011. 13(6):R110.
13. Couch FJ, Gaudet MM, Antoniou AC, Ramus SJ, Kuchenbaecker KB, Soucy P, Beesley J, Chen X, Wang X, Kirchhoff T, McGuffog L, Barrowdale D, Lee A, Healey S, Sinilnikova OM, .. Montagna M, et al. Common variants at the 19p13.1 and ZNF365 loci are associated with ER subtypes of breast cancer and ovarian cancer risk in BRCA1 and BRCA2 mutation carriers. Cancer Epidemiol Biomarkers Prev. 2012; 21:645-657.
14. Mavaddat N, Barrowdale D, Andrulis IL, Domchek SM, Eccles D, Nevanlinna H, Ramus SJ, Spurdle A, Robson M, Sherman M, Mulligan AM, Couch FJ, Engel C, McGuffog L, Healey S, ...Montagna M, D'Andrea E, et al. Pathology of Breast and Ovarian Cancers among BRCA1 and BRCA2 Mutation Carriers: Results from the Consortium of Investigators of Modifiers of BRCA1/2 (CIMBA). Cancer Epidemiol Biomarkers Prev. 2012; 21:134-47.

15. Ramus SJ, Antoniou AC, Kuchenbaecker KB, Soucy P, Beesley J, Chen X, McGuffog L, Sinilnikova OM, Healey S, Barrowdale D, Lee A, Thomassen M, Gerdes AM, ..Montagna M, et al. Ovarian Cancer Susceptibility Alleles and Risk of Ovarian Cancer in *BRCA1* and *BRCA2* Mutation Carriers. Hum Mutat. 2012 Apr;33(4):690-702
16. Antoniou AC, Kuchenbaecker KB, Soucy P, Beesley J, Chen X, McGuffog L, Lee A, Barrowdale D, Healey S, Sinilnikova OM, Caligo MA, Loman N, Harbst K, Montagna M et al. Common variants at 12p11, 12q24, 9p21, 9q31.2 and in *ZNF365* are associated with breast cancer risk for *BRCA1* and/or *BRCA2* mutation carriers. Breast Cancer Res. 2012;14:R33.
17. Bolton KL, Chenevix-Trench G, Goh C, Sadetzki S, Ramus SJ, Karlan BY, Lambrechts D, Despierre E, Barrowdale D, McGuffog L, Healey S, Easton DF, Sinilnikova O, Benítez J, García MJ, Neuhausen S, Gail MH, Hartge P, Peock S, Frost D, Evans DG, Eeles R, Godwin AK, Daly MB, Kwong A, Ma ES, Lázaro C, Blanco I, Montagna M, D'Andrea E, Nicoletto MO, Johnatty SE, Kjær SK, Jensen A, Høgdall E, Goode EL, Fridley BL, Loud JT, Greene MH, Mai PL, Chetrit A, Lubin F, Hirsh-Yechezkel G, Glendon G, Andrulis IL, Toland AE, Senter L, Gore ME, Gourley C, Michie CO, Song H, Tyrer J, Whittemore AS, McGuire V, Sieh W, Kristoffersson U, Olsson H, Borg Å, Levine DA, Steele L, Beattie MS, Chan S, Nussbaum RL, Moysich KB, Gross J, Cass I, Walsh C, Li AJ, Leuchter R, Gordon O, Garcia-Closas M, Gayther SA, Chanock SJ, Antoniou AC, Pharoah PD; EMBRACE; kConFab Investigators; Cancer Genome Atlas Research Network. Association between BRCA1 and BRCA2 mutations and survival in women with invasive epithelial ovarian cancer. JAMA. 2012 Jan 25;307(4):382-90.
18. Ding YC, McGuffog L, Healey S, Friedman E, Laitman Y, Shimon-Paluch S, Kaufman B, Liljegren A, Lindblom A, Olsson H, Kristoffersson U, Stenmark Askmalm M, Melin B, .. Montagna M, et al. A non-synonymous polymorphism in IRS1 modifies risk of developing breast and ovarian cancers in BRCA1 and ovarian cancer in BRCA2 mutation carriers. Cancer Epidemiol Biomarkers Prev. 2012 Aug; 21(8):1362-70.
19. Ottini L, Silvestri V, Rizzolo P, Falchetti M, Zanna I, Saieva C, Masala G, Bianchi S, Manoukian S, Barile M, Peterlongo P, Varesco L, Tommasi S, Russo A, Giannini G, Cortesi L, Viel A, Montagna M, Radice P, Palli D. Clinical and pathologic characteristics of BRCA-positive and BRCA-negative male breast cancer patients: results from a collaborative multicenter study in Italy. Breast Cancer Res Treat. 2012 Jul;134(1):411-8. Epub 2012 Apr 18.
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22. Couch FJ, Wang X, McGuffog L, Lee A, Olswold C, Kuchenbaecker KB, Soucy P, Fredericksen Z, Barrowdale D, Dennis J, Gaudet MM, Dicks E, Kosel M, Healey S, Sinilnikova OM, Lee A, Bacot F, Vincent D, Hogervorst FB, Peock S, Stoppa-Lyonnet D, Jakubowska A, ..Montagna M, et al. Genome-Wide Association Study in BRCA1 Mutation Carriers Identifies Novel Loci Associated with Breast and Ovarian Cancer Risk. PLoS Genet. 2013 Mar;9(3):e1003212.
23. Gaudet MM, Kuchenbaecker KB, Vijai J, Klein RJ, Kirchhoff T, McGuffog L, Barrowdale D, Dunning AM, Lee A, Dennis J, Healey S, Dicks E, Soucy P, Sinilnikova OM, Pankratz VS, .. D'Andrea E, et al. Identification of a BRCA2-Specific Modifier Locus at 6p24 Related to Breast Cancer Risk. PLoS Genet. 2013 Mar;9(3):e1003173.

Linea di ricerca 2

1. Malacrida S, Agata S, Callegaro M, Casella C, Barana D, Scaini MC, Manoukian S, Oliani C, Radice P, Barile M, Menin C, D'Andrea E, Montagna M. BRCA1 p.Val1688del is a deleterious mutation that recurs in breast and ovarian cancer families from Northeast Italy. *J Clin Oncol* 2008. 26(1):26-31.
2. Montagna M and Malacrida S In reply to: Clinical Classification of *BRCA1* DNA Missense Variants:

H1686Q Is a Novel Pathogenic Mutation Occurring in the Ontogenetically Invariant THV Motif of the N-Terminal BRCT Domain. *J Clin Oncol* 2008. 26: 4214–15

3. Thomassen M, Blanco A, Montagna M, Hansen TV, Pedersen IS, Gutiérrez-Enríquez S, Menéndez M, Fachal L, Santamariña M, Steffensen AY, Jønson L, Agata S, Whiley P, Tognazzo S, Tornero E, Jensen UB, Balmaña J, Kruse TA, Goldgar DE, Lázaro C, Diez O, Spurdle AB, Vega A. Characterization of BRCA1 and BRCA2 splicing variants: a collaborative report by ENIGMA consortium members. Breast Cancer Res Treat. 2012 Apr;132(3):1009-23.

Linea di ricerca 3

1. K.F. Kerstann, P.T. Bradford, R. Steighner, D. Calista, M.C. Fargnoli, K. Peris, M.C. Scaini, C. Menin, P. Ghiorzo, G. Bianchi-Scarra, A.M. Goldstein, M.T. Landi, No evidence for linkage with melanoma in Italian melanoma-prone families, Cancer Epidemiol Biomarkers Prev 17 (2008) 1838-1840.
2. W. Bruno, P. Ghiorzo, L. Battistuzzi, P.A. Ascierto, M. Barile, S. Gargiulo, F. Gensini, S. Gliori, M. Guida, M. Lombardo, S. Manoukian, C. Menin, S. Nasti, P. Origone, B. Pasini, L. Pastorino, B. Peissel, M.A. Pizzichetta, P. Queirolo, M. Rodolfo, A. Romanini, M.C. Scaini, A. Testori, M.G. Tibiletti, D. Turchetti, S.A. Leachman, G. Bianchi Scarra, Clinical genetic testing for familial melanoma in Italy: a cooperative study, J Am Acad Dermatol 61 (2009) 775-782.
3. Menin C, Vecchiato A, Scaini MC, Elefanti L, Funari G, De Salvo GL, Quaggio M, Tognazzo S, Agata S, Dalla Santa S, Montagna M, Alaibac M, Chiarion-Sileni V, D'Andrea E. Contribution of susceptibility gene variants to melanoma risk in families from the Veneto region of Italy. Pigment Cell Melanoma Res 2011. 24(4):728-30.
4. Vecchiato A, Pasquali S, Menin C, Montesco MC, Alaibac M, Mocellin S, Campana LG, Nitti D, Rossi CR. Histopathological characteristics of subsequent melanomas in patients with multiple primary melanomas. J Eur Acad Dermatol Venereol 2012. doi: 10.1111/jdv.12055

Linea di ricerca 4

1. Scaini MC, Rossi E, de Siqueira Torres PL, Zullato D, Callegaro M, Casella C, Quaggio M, Agata S, Malacrida S, Chiarion-Sileni V, Vecchiato A, Alaibac M, Montagna M, Mann GJ, Menin C, D'Andrea E. Functional impairment of p16(INK4A) due to CDKN2A p.Gly23Asp missense mutation. *Mutat Res* 2009. 671(1-2):26-32.
2. M. Vignoli, M.C. Scaini, P. Ghiorzo, R. Sestini, W. Bruno, C. Menin, F. Gensini, M. Piazzini, A. Testori, S. Manoukian, C. Orlando, E. D'Andrea, G. Bianchi-Scarra, M. Genuardi, Genomic rearrangements of the CDKN2A locus are infrequent in Italian malignant melanoma families without evidence of CDKN2A/CDK4 point mutations, Melanoma Res 18 (2008) 431-437

Linea di ricerca 5

1. R. Schwab, R. Bussolari, D. Corvetta, O. Chayka, G. Santilli, J.M. Kwok, G. Ferrari-Amorotti, G.P. Tonini, L. Iacoviello, R. Bertorelle, C. Menin, M. Hubank, B. Calabretta, A. Sala, Isolation and functional assessment of common, polymorphic variants of the B-MYB proto-oncogene associated with a reduced cancer risk, *Oncogene* 27 (2008) 2929-2933.

2. Furlan, F. Pietrogrande, F. Marino, C. Menin, G. Polato, F. Vianello, Sequential development of large B cell lymphoma in a patient with peripheral T-cell lymphoma, Haematologica 93 (2008) e6-8.

3. S. Cattelani, R. Defferrari, S. Marsilio, R. Bussolari, O. Candini, F. Corradini, G. Ferrari-Amorotti, C. Guerzoni, L. Pecorari, C. Menin, R. Bertorelle, P. Altavista, H.P. McDowell, R. Boldrini, C. Dominici, G.P. Tonini, G. Raschella, B. Calabretta, Impact of a single nucleotide polymorphism in the MDM2 gene on neuroblastoma development and aggressiveness: results of a pilot study on 239 patients, *Clin Cancer Res* 14 (2008) 3248-3253.

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poor-prognosis neuroblastoma patients: correlation with reduced apoptosis and enhanced senescence by the p53-72P isoform. *Neoplasia* 2012. 14(7):634-43.

TECNOLOGIA, METODICHE, COMPETENZE DISPONIBILI PER POSSIBILI FUTURE COLLABORAZIONI

QUELLE STANDARD PROPRIE DELLA GENETICA MOLECOLARE