CURRICULUM VITAE ET STUDIORUM

NAME: Susanna MANDRUZZATO

PRESENT APPOINTMENT: Associate Professor of Immunology, Department of Surgery, Oncology and Gastroenterology, Oncology and Immunology Section, University of Padova, Italy.

QUALIFICATIONS:
-Pharmaceutical Chemistry degree, 1989
-PhD in Oncology, University of Padova, 1999

PREVIOUS APPOINTMENTS :
-Institute of General Pathology, University of Padova, Italy, 1989 - 1990
-Institute of Oncology, Chair of Immunology, University of Padova, Italy, 1990- 1994
-Investigator, Ludwig Institute for Cancer Research (Brussels Branch) - Brussels, Belgium 1994 -1997
-Assistant Professor of Immunology, Department of Surgery, Oncology and Gastroenterology, University of Padova, 2006-2018

POSTGRADUATE AWARDS AND FELLOWSHIPS:
- Fellowship "Italian consortium for antitumoral vectors" 1990 - 1992
- Fellowship "Italian association for cancer research" 1993 -1994
- Post doctoral fellowship : Training and Mobility of Researchers (TMR), 1996.
- Post-doctoral fellowship : ICGEB 1998-1999
- Post-doctoral fellowship, University of Padova. 2000-2001
- UICC post-doctoral fellowship, October 2003
- Collaborative research contract with Padova University, 2001-2003

LEARNED SOCIETIES:
- CIP, CIMT Immunoguiding Program. Member of the steering Committee.
-SIICA, Italian Society of Immunology, Clinical Immunology and Allergology
- IMI, Italian Melanoma Intergroup

COORDINATION OF SCIENTIFIC ACTIVITITES :

-Coordinator of the immunological follow-up of patients enrolled in Padova in the following clinical trial :
"Phase I/II study of frequent and prolonged immunization with the NA17.A2 peptides in patients with detectable stage III/IV cutaneous melanoma, CP99-01" and "Phase I/II study of frequent and prolonged immunization with melanoma differentiation peptides in patients with detectable stage III/IV cutaneous melanoma III/IV, CP99-04". Multicenter open label trial coordinated by the Institute Curie, Paris, France.

- Coordinator of the proficiency panel to harmonize human MDSC phenotyping (CIMT Immunoguiding Group, CIP).

MAJOR RESEARCH INTERESTS :

-**Role of adaptive immune response in different mouse models and implications for adoptive cell therapy.** (Rosato et al., *Int J Cancer*, 1992; Zanovello et al., *Cancer Immunol Immunother.*, 1992; Mandruzzato et al., *Pharmacological Res.*, 1192; Pollis et al. *Pharmacological Res.*, 1992; Rosato et al., *Leukemia/s*, 1992; Pollis et al. *Leukemia/s, 1992;* Mandruzzato et al., *Cancer Res.*, 1994; Rosato et al., *Int J Cancer*, 1995; Rosato et al., *Int J Cancer*, 1996)

-**Tumor antigens recognized by cytotoxic T lymphocytes: molecular identification and characterization of their role in cancer patients.** (Herman et al., *Immunogenetics*, 1996; Mandruzzato et al., *J. Exp. Med.*,1997; Dalerba et al., *Int J Cancer*, 2001; Zambon et al., *Cancer*, 2001; Mandruzzato et al., *J Immunol*, 2002, Rosato et al., *Int J Cancer*).

-**Analysis of genes and miRNA expression in tumors and their role in tumor progression.** (Wang et al., *J Transl Med.*, 2004; Basil et al., *Cancer Res.*, 2006; Mandruzzato et al., *J Transl Med.*, 2006; Indraccolo et al., *J Immunol.*, 2007; Mandruzzato *Adv Exp Med Biol.*, 2007; Crende et al., *Am J Pathol.*, 2013; Pizzini et al., *BMC Genomics*, 2013; Bisognin et al., *Mol Onc.*, 2014; Perilli et al., *Oncotarget*, 2014; Perilli et al., *Genomics Data*, 2014).

-**Immune-evasion in cancer: role of myeloid-derived suppressor cells (MDSC).** (Bronte et al., Immunol Invest, 2006; Mandruzzato et al., *J. Immunol*., 2009; Peranzoni et al., *Curr Opin Immunol* 2010; Marigo et al., *Immunity*, 2010; Chioda et al., *Cancer Metastasis Rev*, 2011; Solito et al., *J Leukoc Biol.*, 2011; Solito et al., *Blood*, 2011; Montero et al., *J Immunother.*, 2012; Walter et al., *Nature Medicine*, 2012; Solito et al., *Immunol Invest,* 2012; Ugel et al., *Cell Reports*, 2012; Zoso et al., *Eur. J. Immunol.*, 2014; Mazza et al. *Genomics Data*, 2014; Solito et al., Annals of the NY Academy of Sc, 2014; Damuzzo et al., Cytometry part B, 2015; Ugel et al., J. Clin. Invest., 2015; Pinton et al., Oncotarget, *2015;* Mandruzzato et al., Cancer Immunol. Immunother., *2016*; Solito et al., J. of Pathol., 2017, Pinton et al., OncoImmunology, 2018).

CURRENT RESEARCH FUNDING INFORMATION:

-Università degli Studi di Padova: year 2006. Project title: Aspetti funzionali e patologici delle cellule mielo-monocitarie in pazienti portatori di tumore, € 56.000 per 2 anni (2007-2008)

-PRIN: Ministry of University and Research.

-year 2007, project title: Identificazione di reti regolatorie nelle cellule soppressorie umane di derivazione mieloide mediante integrazione di dati di espressione genica e di microRNA, € 40.900 per 2 anni

-year 2009, project title: Caratterizzazione di cellule di derivazione mieloide con funzione di soppressione della risposta immunitaria nei pazienti con tumore, € 44.500 per 2 anni.

-Progetti di eccellenza Fondazione Cariparo: year 2008. Project title: Myeloid-derived suppressor cells in chronic inflammation and cancer, € 135.000 per 3 anni (2008-2010)

-AIRC Investigator Grant IG 2012. Project title: The dynamic interplay of MDSCs with T cells: envisioning new approaches for cancer immunotherapy. € 270.000 per 3 anni (2013-2015)

-EURONANOMED II - Joint Transnational Call for Proposals (2013) Project title: Nano-Immuno-CHEmotherapy, Acronym: NICHE. € 197.000 per 3 anni (2014-2016)

-Progetto di Ricerca di Ateneo: bando 2014. Project title: "Novel strategies to activate the host immune response: exploiting chemotherapy to eliminate myeloid-derived suppressor cells". € 45.011 per 2 anni (2015-2016)

-AIRC Investigator Grant IG 2016. Project title: "Unveiling the role of myeloid-derived suppressor cells in checkpoint blockade therapy". € 245.000 per 3 anni (2016-2018)

TRANSCAN-2: "Immunology and immunotherapy of cancer: strengthening the translational aspects". Project title: Deciphering immune response against Glioblastoma to find new Targets. Acronym: Immunoglio. € 300.000 per 3 anni (2017-2019)

International Patents:

1) United States Patent : van der Bruggen P., Mandruzzato S., Boon T. Nucleic acid molecule encoding a bifunctional protein, the protein so encoded and uses thereof. Patent number 5,932,694. Aug. 3, 1999.

2) United States Patent : van der Bruggen P., Mandruzzato S., Boon T. Isolated cytolytic T cells which are specific for complexes of HLA-B35 molecules and the peptide Phe Pro Ser Asp Ser Trp Cys Tyr Phe and uses thereof. Patent number 5,952,228. Sep. 14, 1999.

3) United States Patent : van der Bruggen P., Mandruzzato S., Boon T. Nucleic acid molecule encoding a bifunctional protein, the protein so encoded uses thereof. Patent number 5,955,313. Sep. 21, 1999.

4) European Patent : Bronte V., Mandruzzato S. Myeloid-derived suppressor cells generated *in vitro*. Istituto Oncologico Veneto IRCCS. Patent number 09785791.6. 28-01-2009

5) Singh H., Mendrzyk R., Walter S., Bronte V., Mandruzzato S. (2010). Use of myeloid cell biomarkers for the diagnosis of cancer. Immatics Biotechnologies GmbH. 2912919-026000.

Reviewer:

Ad Hoc Reviewer *Blood*
Ad Hoc Reviewer *Cancer Research*
Ad Hoc Reviewer *Journal of Immunology*
Ad Hoc Reviewer *Cancer Immunology Immunotherapy*
Ad Hoc Reviewer *International Journal of Cancer*
Ad Hoc Reviewer *Immunology Letters*
Ad Hoc Reviewer *Journal of Translational Medicine*
Ad hoc reviewer *Frontiers in Immunology*
Ad hoc reviewer *PlosOne*
Ad hoc reviewer *AIDS*

TEACHING EXPERIENCE :

- Coadiutor for the Course of Molecular Immunology, Specialization School of Allergology and Clinical Immunology, University of Padova, during the academic years **1999-2000** and **2000-2001**.
- Immunology and Immunopathology Course, Faculty of Pharmacy, University of Padova, during the academics years **2006-2007, 2007-2008 and 2009-2010**.
-Immunology Course, Padova Medical School, University di Padova, during the academics years **2006-2007, 2007-2008, 2008-2009, 2009-2010 and 2010-2011**.
- Immunochemitry, Corso di Laurea Magistrale di Biotecnologie Farmaceutiche, Faculty of Pharmacy, University of Padova, during the academics years **2009-2010, 2010-2011, 2011-2012 and 2012-2013**.

- Immunology, Specialization School of Farmacia Ospedaliera, Faculty of Pharmacy, University of Padova during the academics years **2006-2007** e **2007-2008**.

- Immunology and Immunopathology Specialization School of Allergology and Clinical Immunology, University of Padova, during the academic years **2009-2010, 2010-2011 e 2010-2011.**

INVITED LECTURES:

Cyto Asia 2017, Singapore, 26 October 2017. *Characterization of myeloid-derived suppressor cells in cancer patients.*

ESCCA European Society for Clinical Cell Analysis 2017. 26 September 2017, Thessaloniki, Greece. *The different facets of myeloid-derived suppressor cells in cancer patients.*

University of Tianjin, Department of Pharmacological Sciences, 21 June 2017. *Immune evasion in cancer patients: role of myeloid-derived suppressor cells.*

Intergroup Melanoma Italiano, IMI. Workshop Immuno-oncologia. 7 April 2017, Padova. *Cellule immunosoppressorie ed immunoterapia.*

Brain cancer Immunotherapy: an update. Workshop, Istituto Neurologico Besta, Milano, 29 November 2016. *"Myeloid-dependent immune regulation of anti-tumor response"*

Ludwig Institute for Cancer Research, de Duve Institute, Université Catholique de Louvain. Brussels, 20 October 2016. *"Immune evasion in cancer: role of myeloid-derived suppressor cells"*

Belgian Society for Advancement of Cytometry, Brussels, 21 October 2016. *"Toward harmonized phenotyping of human myeloid-derived suppressor cells by flow cytometry"*

University Hospital Essen, Department of Otorhinolaryngology, Essen, 31 May 2016. *"Immune evasion in cancer: role of myeloid-derived suppressor cells"*

Flow cytometry in translational cancer research: believe in rare! Workshop presso Istituto Clinico Humanitas Rozzano (MI) - 10 June 2015. *"Immune evasion in cancer: role of myeloid-derived suppressor cells"*

Conferenza Nazionale di Citometria, 25-28 September 2014 Urbino *"Fenotipo di cellule mieloidi soppressorie"*

XI International Conference "Haematopoiesis Immunology", "Bone marrow in cancer patients". June 6-7, 2014 Budapest Hungary.*"Bone marrow myeloid-derived suppressor cells"*

13th Euroconference on Clinical Cell Analysis (ESCCA) 12-14 November 2013 Luxembourg. *"Immunologic tolerance induced by myeloid derived suppressor cells"*

XXX Conferenza Nazionale di Citometria, 25-28 September 2012 Urbino.*"Fenotipo di cellule mieloidi soppressorie"*

Corso avanzato di citometria a flusso. Applicazioni in Oncologia e Immunologia. 22-23 May 2012 Verona. *"Fenotipo di cellule mieloidi soppressorie"*

Stato dell'arte nel trattamento del carcinoma colo-rettale e delle metastasi epatiche 28 November 2011, PADOVA. *"Construction of regulatory networks of colorectal cancer by integrating gene expression, alternative splicing and microRNA expression data"*

Melanoma oggi e domani. 25 June 2005, Padova. *"Nuovi fattori predittivi di risposta"*

PUBLICATIONS

PRIMARY RESEARCH ARTICLES:

1) Rosato A., Bronte V., Mandruzzato S., Zambon A., Calderazzo F., Biasi G., Zanovello P. and Collavo D. Role of adhesion molecules in the immune reaction to M-MSV-induced tumors. International Journal of Cancer, 7 : 24-27, 1992.

2) Zanovello P., Rosato A., Bronte V., Mandruzzato S., Cerundolo V. and Collavo D. Anti-tumor efficacy of lymphokyne-activated killer cells loaded with ricin against experimentally-induced lung metastases. Cancer Immunology Immunotherapy, 35 : 27-32, 1992.

3) Mandruzzato S., Rosato A., Bronte V., Pollis F., Zambon A., Zanovello P. and Collavo D. Therapeutical effect of 4'-iodoxorubicin-loaded LAK cells in mice bearing lung metastases. Pharmacological Researh, Suppl. 2, 26 : 124-125, 1992.

4) Pollis F., Bronte V., Mandruzzato S., Rosato A., Zambon A., Zanovello P., Zambello R., Callegaro L. and Collavo D. Inhibition of CTL-line lysis after gangliosides treatment. Pharmacological Research, Suppl. 2., 26 : 190-191, 1992.

5) Rosato A., Bronte V., Pollis F., Mandruzzato S., Zambon A., Zanovello P. and Collavo D. The in vivo role of leukocyte function associated antigen-1 (LFA-1) in cytotoxic cell activity against tumors induced by the retroviral comples M-MSV/M-MulV. Leukemia/s, 6 : 166s-167s, 1992.

6) Pollis F., Rosato A., Bronte V., Mandruzzato S., Zambon A., Zambello R., Pizzo P. and Zanovello P. Interaction of large granular lymphocytes with susceptible target does not induce second messenger generation and cytolytic granule exocytosis. Leukemia/s, 6 : 92s-93s, 1992.

7) Rosato A., Mandruzzato S., Bronte V., Zambon A., Zanovello P. and Collavo D. L'inibizione della fosforilazione in residui di tirosina previene la citotossicita' cellulo-mediata. Atti del XXI Congresso Nationale della Societa' Italiana di Patologia, 512-514, 1992.

8) Bronte V., Zanovello P., Rosato A., Zambon A., Mandruzzato S., Pizzo P., Di Virgilio F. and Collavo D. Synergistic effect of ATPo and TNF/LT on DNA degradation. Cellular Immunology, 152 : 110-119, 1993.

9) Mandruzzato S., Rosato A., Bronte V., Zanovello P., Amboldi N., Ballinari D. and Collavo D. Adoptive transfer of lymphokine activated killer cells loaded with 4'-deoxy-4'-iododoxorubicin : therapeutical effect in mice bearing lung metastases. Cancer Research, 54 : 1016-1020, 1994.

10) Rosato A., Zambon A., Mandruzzato S., Bronte V., Macino B., Calderazzo F., Collavo D. and Zanovello P. Inhibition of protein tyrosinase phosphorilation prevents T-cell-mediated cytotoxicity. Cellular Immunology, 159 : 294-305, 1994.

11) Rosato A., Mandruzzato S., Bronte V., Zambon A., Macino B., Calderazzo F., Zanovello P. and Collavo D. Role of anti-LFA-1 and ICAM-1 combined mAb treatment in the rejection of tumors induced by Moloney murine sarcoma virus (M-MSV). International Journal of Cancer, 61 : 355-362, 1995.

12) Herman J., van der Bruggen P., Luescher I., Mandruzzato S., Romero P., Thonnard J., Fleischhauer K., Boon T. and Coulie P.G. A peptide encoded by human gene MAGE-3 and presented by HLA-B44 induces cytolytic T lymphocytes that recognize tumor cells expressing MAGE-3. Immunogenetics, 43 : 377-383, 1996.

13) Rosato A., Zambon A., Macino B., Mandruzzato S., Bronte V., Milan G., Zanovello P. and Collavo D. Anti-L-selectin monoclonal antibody treatment in mice enhances tumor growth by preventing CTL sensitization in peripheral lymph nodes draining the tumor area. International Journal of Cancer, 65 : 847-851, 1996.

14) Bronte V., Macino B., Zambon A., Rosato A., Mandruzzato S., Zanovello P. and Collavo D. Protein tyrosine kinases and phosphatases control apoptosis induced by extracellular adenosine 5'-triphosphate. Biochemical and Biophysical Research Communications, 218 : 344-351, 1996.

15) Macino B., Zambon A., Milan G., Cabrelle A., Ruzzene M., Rosato A., Mandruzzato S., Quintiery L., Zanovello P. and Collavo D. CD45 regulates apoptosis induced by extracellular adenosine triphosphate and cytotoxic T lymphocytes. Biochemical and Biophysical Research Communications, 226 : 769-776, 1996.

16) Mandruzzato S., Brasseur F., Andry G., Boon T. and van der Bruggen P. A CASP-8 mutation recognized by cytolytic T lymphocytes on a human head and neck carcinoma. Journal of Experimental Medicine, 186 : 785-793, 1997.

17) Van de Craen M., Van Loo G., Declerq W., Schotte P., Van den Brande I., Mandruzzato S., van der Bruggen P., Fiers W., Vandenabele P. Molecular cloning and identification of murine caspase-8. Journal of Molecular Biology, 284 : 1017-1026, 1998.

18) Mandruzzato S., Stroobant V., Demotte N., van der Bruggen P. A human cytolytic T lymphocyte recognizes a caspase-8-derived peptide on autologous HLA-B*3503 molecules, and two unrelated petides on allogeneic HLA-B*3501 molecules. Journal of Immunology, 164 :4130-4134, 2000.

19) Dalerba P., Frascella E., Macino B., Mandruzzato S., Zambon A., Rosolen A., Carli M., Ninfo V., Zanovello P. *MAGE*, *BAGE* and *GAGE* gene expression in human rhabdomyosarcomas. International journal of Cancer, 93 : 85-90, 2001.

20) Zambon A., Mandruzzato S., Parenti A., Macino B., Dalerba P., Ruol A., Merigliano S., Zaninotto G., Zanovello P. *MAGE*, *BAGE* and *GAGE* gene expression in patients with esophageal squamous cell carcinoma and adenocarcinoma of the gastric cardia. Cancer, 91 :1882-1888, 2001.

21) Milan, G. Apolloni, E. Bronte, V. Dalla Santa, S. Macino, B. Mandruzzato, B. Mandruzzato, S. Rosato, A. Quintieri, L. Serafini, P. Zoso, A. Zanovello, P. Vaccini tumorali a DNA. EOS, XXI : 86-93, 2001.

22) Mandruzzato, S. Rossi, E. Bernardi, F. Tosello, V. Macino, B. Basso, G. Chiarion-Sileni, V. Rossi, C. R. Montesco, C. Zanovello, P. Large and dissimilar repertoire of Melan-A/MART-1-specific CTL in metastatic lesions and blood of a melanoma patient. Journal of Immunology, 169 : 4017-4024, 2002.

23) Mocellin, S. Mandruzzato, S. Bronte, V. Lise, M. Nitti, D. Part I : Vaccines for solid tumors. The Lancet Oncology. 5: 681-689, 2004.

24) Mocellin, S. Semenzato, GP. Mandruzzato, S. Rossi, CR. Part II: Vaccines for haematological malignant disorders. The Lancet Oncology. 5: 727-737, 2004.

25) Wang, E. Panelli, MC. Zavaglia, K. Mandruzzato, S. Hu, N. Taylor, PR. Seliger, B. Zanovello, P. Freedman, R. Marincola, FM. Melanoma-restricted genes. Journal of translational Medicine.

26) Mocellin, S. Mandruzzato, S. Bronte, V. Marincola, F. Cancer vaccines: pessimism in check. Nature Medicine. 10: 1-2, 2004.

27) Mocellin, S. Mandruzzato, S. Zanovello, P. Bronte, V
Cancer rejection by the immune system: forcing the check-points of tumor immune escape. Drug discovery today: disease mechanisms. 2: 191-197, 2005.

28) Basil,CF. Zhao,Y. Zavaglia, K. Jin,PJ. Panelli,MC. Voiculescu,S. Mandruzzato,S. Lee,HM. Seliger,B. Freedman,RS. Taylor,PR. Hu,N. Zanovello,P. Marincola, FM and Wang E. Common Cancer Biomarkers. Cancer Res. 66: 2953-61, 2006.

29) Belluco C., Bicciato S., Bronte V., Mandruzzato S., Mammano E., Marconato G., Callegaro A., Digito M., Lise M., Nitti D. Lymph node metastatic fingerprint revealed by genome-wide transcriptional profiling of primary breast cancer. ANNALS OF SURGICAL ONCOLOGY. vol. 13, pp. 26-26, 2006.

30) Rosato, A. Pivetta, M. Parenti, A. Iaderosa, G.A. Zoso, A. Milan, G. Mandruzzato, S. Epifani, M. Ruol, A. Zaninotto, G. Zanovello P. A dualistic role of survivin in esophageal cancer: survivin overexpression is a critical prognostic molecular marker for squamous cell carcinoma but not adenocarcinoma. Int. J. Cancer 2006 119, pp. 1717-22, 2006.

31) Bronte, V., Cingarlini S., Marigo I., De Santo C., Gallina G., Dolcetti L., Ugel S., Peranzoni E., Mandruzzato S., Zanovello P. Leukocyte Infiltration in Cancer Creates an Unfavorable Environment for Antitumor Immune Responses: A Novel Target for Therapeutic Intervention. Immunological Investigations. 35, pp. 327-357, 2006.

32) Indraccolo, S. Pfeffer, U. Minuzzo, S. Esposito, G. Roni, V. Mandruzzato, S. Ferrari, N. Anfosso, L. Dell'Eva, N. Noonan, D.M. Chieco-Bianchi, L. Albini, A. Amadori, A. Identification of genes selectively regulated by IFNs in endothelial cells. J. Immunology. 178, pp. 1122-35 2007.

33) Mandruzzato S., Callegaro A., Turcatel G., Francescato S., Montesco MC, Chiarion-Sileni V., Mocellin S., Rossi C.R., Bicciato S., Wang E., Marincola F.M., Zanovello P. A gene expression signature associated with survival in metastatic melanoma. Journal of Translational Medicine. 4:50 2006.

34) Mandruzzato S. Technological platforms for microarray gene expression profiling. Adv Exp Med Biol. 2007;593:12-8.

35) Tosello, V. Zamarchi, R., Merlo, A., Gorza, M. Piovan, E., Mandruzzato, S. Bronte, V. Wang, X. Ferrone, S. Amadori, A. Zanovello, P. Differential expression of constitutive and inducible proteasome subunits

in human monocyte-derived DC differentiated in the presence of IFN-α or IL-4. Eur. J. Immunol. 2009; 39: pp 56-66.

36) Mandruzzato, S. Solito, S., Falisi, E., Francescato, S., Chiarion-Sileni, V., Mocellin, S., Zanon, A., Rossi, C. R., Nitti. D., Bronte, A. Zanovello, P. IL4Rα^{+} myeloid-derived suppressor cell expansion in cancer patients. J. Immunol. 2009; 182 pp 6562-6568.

37) Bobisse S., Rondina M.B., Merlo A., Tisato V., Mandruzzato S. Amendola M., Naldini L., Willemsen R.A., Debets R., Zanovello P., Rosato A. Reprogramming T lymphocytes for melanoma adoptive immunotherapy by T-cell receptor gene transfer with lentiviral vectors. Cancer Research, 2009; 69: 9385-94.

38) Marigo, I., Bosio, E., Solito, S., Mesa-Pardillo, C., Gomez Fernandez, A., Dolcetti, L., Ugel, S., Sonda, N., Bicciato, S., Falisi, E., Calabresi, F., Zanovello, P., Basso, G., Cozzi, E., Mandruzzato, S., Bronte, V. Tumor-Induced Tolerance and Immune Suppression Depend on the C/EBPbeta Transcription Factor. Immunity, 2010; 32(6):790-802.

39) Chioda, C., Peranzoni, E., Desantis, G., Papalini, F., Falisi, E., Solito, S., Mandruzzato, S., Bronte. Myeloid cell diversification and complexity: an old concept with new turns in oncology. Cancer Metastasis Rev. 30(1):27-43.

40) Rotondo, R., Bertolotto, M., Barisione, G., Astigiano, S., Mandruzzato, S., Ottonello, O., Dallegri, F., Bronte, V., Ferrini. S., Barbieri, O. Exocytosis of azurophil and arginase 1-containing granules by actviated polymorphonuclear neutrophils is required to inhibit T lymphocyte proliferation. J. Leukocyte Biol., 2011; 89(5):721-7.

41) Solito, S., Bronte, V., Mandruzzato, S. Antigen specificity of immune suppression by myeloid-derived suppressor cells. J. Leukocyte Biol., 2011; *In press*.

42) Solito, S., Falisi, E., Diaz-Montero, CM., Doni, A., Pinton, L., Rosato, A., Francescato, S., Basso, G., Zanovello, P., Oniescu, G., Garrett-Mayer, E., Montero, AJ., Bronte, V., Mandruzzato, S. A human promyelocytic-like population is responsible for the immune suppression mediated by myeloid-derived suppressor cells. Blood, 2011;118(8):2254-65. I.F. 10.558

43) Montero, AJ., Diaz-Montero, CM., Kyriakopoulos, CE., Bronte, V., Mandruzzato, S. Myeloid-derived suppressor cells in cancer patients: a clinical perspective. Journal of Immunotherapy. 2012 Feb;35(2):107-15. I.F. 3.593

44) Walter, S., Weinschenk, T., Stenzl, A., Zdrojowy R., Pluzanska, A., Szczylik, C.,Staehler, M., Brugger, W., Dietrich, PY., Mendrzyk, R., Hilf, N., Schoor, O., Fritsche, J., Mahr, A., Maurer, D., Vass, V., Trautwein, C., Lewandrowski, P., Flohr, C., Pohla, H., Stanczak, JJ., Bronte, V., Mandruzzato, S., Biedermann, T., Pawelec, G., Derhovanessian, E., Yamagishi, H., Miki, T., Hongo, F., Takaha, N., Hirakawa, K., Tanaka, H., Stevanovic, S., Frisch, J., Mayer-Mokler, A., Kirner, A., Rammensee, HG., Reinhardt, C. and Singh-Jasuja, H. Multi-peptide immune response to cancer vaccine IMA901 after cyclophosphamide associates with longer patient survival. Nature Medicine, 2012, in press. I.F. 22.462

45) Solito, S., Pinton, L., Damuzzo, V. and Mandruzzato, S. Highlights on Molecular Mechanisms of MDSC-Mediated Immune Suppression: Paving

the Way for New Working Hypotheses. Immunological Investigations, 2012. I.F. 1.164

46) Ugel, S., Peranzoni, E., Desantis, G., Chioda, MC., Walter, S., Weinschenk, T., Ochando, JC., Cabrelle, A., Mandruzzato, S., Bronte, V. Immune tolerance to tumor antigens occurs in a specialized niche of the spleen. Cell Reports, (2012), http://dx.doi.org/10.1016/j.celrep.2012.08.006. IF=8.358

47) Crende, O., Sabatino, M., Carrascal, T., Riestra, P., López-Guerrero, JA., Nagore, E., Mandruzzato, S., Wang, E., Marincola, FM., Vidal-Vanaclocha, F. Metastatic Lesions with and without Interleukin-18-Dependent Genes in Advanced Stage Melanoma Patients. Am. J. Pathol. I.F. 4.890

48) Pizzini, S., Biasiolo, M., Mandruzzato, S., Bisognin, A., Facciolli, A., Perilli, L., Rossi, E., Esposito, G., Rugge, M., Pilati, P., Mocellin, S., Nitti, D., Bortoluzzi, S., Zanovello, P. Impact of microRNAs on regulatory networks and pathways in human colorecal carcinogenesis and metastasis development. *BMC Genomics. 2013 Aug 29;14(1):589. IF.* 4.397

49) Bisognin, A., Pizzini, S., Perilli, L., Esposito, G., Mocellin, S., Nitti, D., Zanovello, P., Bortoluzzi, S., Mandruzzato, S. An integrative framework identifies alternative splicing events in colorectal cancer development. *Molecular Oncology, 2014, Feb 8 (1):129-141. I.F.* 6.701

50) Zoso, A., Mazza, E., Bicciato, S., Mandruzzato, S., Bronte, V., Serafini, P., Inverardi, L. Molecular and functional characterization of IDO-expressing human fibrocytic myeloid-derived suppressor cells. *European Journal of Immunology. 2014, 11: 3307-3319 IF= 4.034*

51) Perilli, L., Vicentini, C., Agostini, M., Pizzini, S., Pizzi, M., D'Angelo, E., Bortoluzzi, S., Mandruzzato, S., Mammano, E. Rugge, M. Nitti, D., Scarpa, A., Fassan, M., Zanovello, P. Circulating miR-182 is a biomarker of colorectal adenocarcinoma progression. Oncotarget, 2014, 5 (16): 6611-6619. IF= 6.359

52) Mazza, E.M.C., Zoso, A., Mandruzzato, S., Bronte, V., Serafini, P., Inverardi, L. Bicciato, S. Gene expression profiling of human fibrocytic myeloid-derived suppressor cells (f-MDSCs). *Genomics Data.* 2014, 2: 389-392

53) Damuzzo, V, Pinton L, Desantis G, Solito S, Marigo I, Bronte V, Mandruzzato S. Complexity and challenges in defining myeloid-derived suppressor cells. Cytometry B Clin Cytom., 2015. Mar;88(2):77-91. IF= 2.398

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