

## BRIEF CURRICULUM VITAE

**NAME** Alberto MANTOVANI  
**SEX** Male  
**DATE AND PLACE OF BIRTH** October 29, 1948, Milan, Italy  
**CITIZENSHIP** Italian  
**MARITAL STATUS** Married, four children, six grandchildren  
**INSTITUTIONAL ADDRESS** Istituto Clinico Humanitas  
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### EDUCATION

**1973:** M.D., University of Milan, Italy  
**1976:** Specialist in Oncology, University of Pavia, Italy

### SELECTED HONORS

**1973:** Graduate summa cum laude  
**1973:** Fellow of the Italian Association Against Leukemias  
**1974:** Fellow of the Anna Villa Rusconi Foundation  
**1979:** Awarded a NATO fellowship  
**1987:** Eleanor Roosevelt UICC fellow  
**1998:** Biotec Award  
**2000:** Marie T. Bonazinga Award, Boston, USA  
**2003:** Otto Hertz Lecturer, Tel Aviv  
**2004:** Guido Venosta Award for Cancer Research by the President of the Republic of Italy  
**2005:** Premio Ippocrate per la Ricerca Biomedica  
**2006:** "Onorificenza al Merito della Repubblica Italiana" (Commendatore) for scientific contribution by the President of the Republic of Italy  
**2006:** European Federation of Immunological Societies – Schering Plough, 1<sup>st</sup> European Immunology Prize, Paris, France  
**2006:** XIV Premio per la Ricerca Finalizzata alla Lotta Contro i Tumori, Fond. Cassa di Risparmio di Asti  
**2007:** Galileo Galilei Prize for Research in Biomedical Sciences (International Jury)  
**2007:** Premio PISO (International Jury)  
**2009:** William Harvey Award, Outstanding Scientist 2009, London, UK.  
**2010:** Paul Kallos Lecturer, Collegium Internationale Allergologicum  
**2011:** IMID Award for Excellence in Immunology  
**2012:** Hans J. Müller-Eberhard Lecturer, Complement Workshop, Crete  
**2012:** Premio Nazionale "L'Altra Italia ... Vite da Premio"  
**2014:** Premio Rosa Camuna 2014, Regione Lombardia  
**2015:** Eur. Soc. Clin. Invest. Albert Struyvenberg Medal  
**2015:** The Milstein Award for Excellence in Interferon and Cytokine Research, International Cytokine & Interferon Society.  
**2015:** Ferrari-Soave International Prize, Accademia delle Scienze, Torino.  
**2016:** Premio Letterario Merck per la Saggistica, libro "Immunità e vaccini", Mondadori Ed.  
**2016:** OECI (Organization of European Cancer Institutes) Prize for contribution to cancer immunology and immunotherapy. OECI awards the OECI Prize every three years.  
**2016:** NIBIT Award, Siena  
**2016:** International Feltrinelli Prize from the Accademia dei Lincei.  
**2016:** Robert Koch Award, Robert Koch Stiftung, Germany  
**2016:** Premio Roma allo Sviluppo del Paese.

**2017:** EACR –OEI Keynote Award Lecture (due to be bestowed on May 9<sup>th</sup> 2017 in Amsterdam)

## **SELECTED MEMBERSHIPS AND BOARDS**

**1995-1998:** President, Italian Federation of Immunological Societies

**1998-2001:** President, Italian Society of Immunology

**2000 to date:** European Molecular Biology Organization (EMBO) Member

**2002:** Member, The Henry Kunkel Society

**2003:** Co-founder and President (2011-2012) of Gruppo 2003, the association of Italian highly cited scientists to promote Science awareness in Italy

**2005-2010:** Board Member of the Global Alliance for Vaccines and Immunization (GAVI Alliance)

**2008:** Member, Faculty of 1000 Biology

**2009-2010:** President, International Cytokine Society

**2011-to date:** Board Member, International Union of Immunological Societies (IUIS)

**2013-to date:** Vice-President/President Elect, International Union of Immunological Societies (IUIS)

**2016:** Member, Accademia dei Lincei, Rome, Italy

**2016:** Member, Robert Koch Stiftung, Berlin

**2016:** President, International Union of Immunological Societies (IUIS)

## **RESEARCH EXPERIENCE**

**1973-1975:** Research assistant Department of Tumor Immunobiology and Chemotherapy, Istituto di Ricerche Farmacologiche "Mario Negri", Milan, Italy.

**1975-1976:** Visiting fellow at the Department of Tumor Immunology, Chester Beatty Research Institute, Belmont, Sutton, Surrey, England.

**1978 and 1979:** Visiting fellow at the Laboratory of Immunodiagnosis, NIH, Bethesda, MD., USA, supported by a NATO Grant.

**1979-1981:** Senior investigator, Department of Tumor Immunology and Chemotherapy, Istituto di Ricerche Farmacologiche "Mario Negri", Milan, Italy.

**1981:** Chief, Laboratory of Immunology, Istituto di Ricerche Farmacologiche "Mario Negri", Milan, Italy.

**1987:** Eleanor Roosevelt UICC Scholar, Laboratory of Molecular Immunoregulation, NIH, Frederick, MD., USA.

**1994 to 2001:** Full Professor of General Pathology, School of Medicine, University of Brescia, Italy.

**1996 to 2005:** Head, Department of Immunology and Cell Biology, Istituto di Ricerche Farmacologiche "Mario Negri", Milan, Italy.

**2001 to 2014:** Full Professor of General Pathology, School of Medicine, State University of Milan, Italy

**Sept. 2005 to date:** Scientific Director, Istituto Clinico Humanitas, and President, Fondazione Humanitas per la Ricerca.

**2014:**

Full Professor of General Pathology, School of Medicine, Humanitas University.

### **Main contributions**

Tumor biology. Demonstration in the late '70s of the protumor function of tumor-associated macrophages (TAM, an acronym now generally used and coined by him in the '70s) linking inflammation and cancer (reviewed in Balkwill and Mantovani, *Lancet*, 2001). TAM as a prototypic M2-like population (Mantovani et al., *Nature* 2008; Balkwill et al., *Cancer Cell* 2005). First molecular linking of a genetic event (RET/PTC rearrangement) causing cancer in humans to the construction of an inflammatory microenvironment (Borrello et al., *PNAS* 2005). Proof of principle that targeting tumor promoting macrophages has therapeutic value in humans (Germano et al, *Cancer Cell* 2013). Demonstration that PTX3 is an extrinsic oncosuppressor regulating Complement and macrophage driven tumor promoting inflammation (Bonavita et al *Cell* 2015). Alberto Mantovani is recognized among his peers as a forerunner in the '70s and a "founding father" of the renaissance of the inflammation-cancer connection.

Chemokines. Original description and role in TAM recruitment of a unique monocyte attractant, Monocyte Chemotactic Protein-1 (CCL2), as tumor-derived chemotactic factor (Bottazzi et al, *Science* 1983). Characterization of chemokines and role in pathophysiology, including dendritic cell and polarized T cell migration. Induction of chemokine production by IL-6 in endothelial cells via trans-signaling, a key component of chronic inflammation and cancer (Romano et al, *Immunity* 1997). Characterization of D6 as a decoy receptor for inflammatory CC chemokines (Mantovani et al, *Nature Rev. Immunol* 2006). Role of chemokines in carcinogenesis (for a recent contribution Bonavita et al *Cell* 2015). Role of the chemokines vMIPs in attracting Th2 cells and role of D6 (ACKR2) in Kaposi's sarcoma.

IL-1/Toll-like receptors (TLR). Endothelial cell activation by IL-1 and cytokines (Rossi et al., *Science* 1985; Bussolino et al, *Nature* 1989; Romano et al, *Immunity* 1997). Identification of the type II receptor as a decoy receptor, a novel concept in biology (Colotta et al, *Science* 1993); the discovery of a decoy receptor represented a paradigm shift after the original definition of the concept of "receptor" by Langley at the 1930'; decoy receptors are now recognized as a general, evolutionary conserved strategy to tune cytokines, chemokines and growth factors. Cloning of an intracellular isoform of the IL-1 receptor antagonist (Muzio et al., *J. Exp. Med.* 1995). First demonstration of MyD88 as the adaptor of mammalian Toll-Like Receptors (TLR) and identification of downstream transducers (Muzio et al., *J. Exp. Med.* 1998). Cloning and characterization of TIR8/SIGIRR (IL-1R8), a negative regulator of IL-1 receptor and TLR signalling (Garlanda, et al, *Immunity* 2013). Role in carcinogenesis.

Humoral innate immunity: cloning (cDNA and genomic, mouse and human), structural and functional characterization of the first pentraxin PTX3 as an IL-1 inducible gene (Garlanda et al, *Nature* 2002; Jeannin et al, *Immunity* 2005; Jaillon et al. *J. Exp Med* 2007 ; Deban et al, *Nature Immunol.* 2010; Jaillon et al. *Immunity* 2014; Bonavita et al. *Cell* 2015); structural immunobiology; role as a paradigm for humoral innate immunity; role as an extrinsic oncosuppressor in murine and human tumors regulating Complement and macrophage driven tumor promoting inflammation (Bonavita et al. *Cell* 2015); diagnostic and therapeutic translation (Cunha et al *New England J. Med.* 2014; ongoing). Thus, a regulator of macrophage-driven tumor promoting inflammation is a bona fide cancer gene, silenced in selected human tumors such as colorectal cancer, a finding now independently confirmed.

### **Contribution to Public Awareness of Science**

Alberto Mantovani has been actively involved in the fostering of science and scientific policy in Italy at various levels, with a focus on Immunology, Vaccines, Oncology and Public Health, taking public stands on several issues including quackery whenever appropriate. He regularly contributes to the most authoritative Italian daily newspapers (eg Corriere della Sera; La Repubblica; La Stampa; Il Sole 24 Ore) and magazines (Espresso and Panorama). He wrote three books on Immunology and Science targeted to the lay public (I Guardiani della Vita, Baldini e Castoldi, 2011; Immunità e Vaccini, Mondadori, 2016; Non avere Paura di Sognare, La Nave di Teseo, 2016). He contributed to scientific (eg SuperQuark; TGR Leonardo; Radiotre Scienza) and general radio (e.g. Radio Tre Scienza) and television (eg Geo; Che Tempo che Fa) programs. To promote science awareness and policy he cofounded the association "Gruppo2003" of Italian highly cited scientists (<http://www.gruppo2003.it>) and together with astrophysicist Tommaso Maccacaro founded the website <http://www.scienzainrete.it>.

## Impact

For several years now, bibliometric analyses have indicated that he is the most quoted Italian scientist ([http://www.topitalianscientists.org/Top\\_italian\\_scientists\\_VIA-Academy.aspx](http://www.topitalianscientists.org/Top_italian_scientists_VIA-Academy.aspx)). The broad impact of the contribution of Alberto Mantovani is testified by citations. As of February 2017 he has over 91,800 (Scopus), 66,700 (Web of Science) or 160,000 (Google Scholar) citations and an H-index of 147 (Scopus), 120 (Web of Science) or 191 (Google Scholar). A bibliometric analysis indicates that he is one of the most quoted immunologists ([http://www.tisreports.com/products/19-Top\\_scientists\\_in\\_the\\_world\\_the\\_Via\\_academy\\_compilation.aspx](http://www.tisreports.com/products/19-Top_scientists_in_the_world_the_Via_academy_compilation.aspx)).

## Selected publications

### Originals

Doni A, Musso T, Morone D, Bastone A, Zambelli V, Sironi M, Castagnoli C, Cambieri I, Stravalaci M, Pasqualini F, Laface I, Valentino S, Tartari S, Ponzetta A, Maina V, Barbieri SS, Tremoli E, Catapano AL, Norata GD, Bottazzi B, Garlanda C, Mantovani A. An acidic microenvironment sets the humoral pattern recognition molecule PTX3 in a tissue repair mode. *J Exp Med.* 212: 905-925, 2015.

Bonavita E, Gentile S, Rubino M, Maina V, Papait R, Kunderfranco P, Greco C, Feruglio F, Molgora M, Laface I, Tartari S, Doni A, Pasqualini F, Barbati E, Basso G, Galdiero MR, Nebuloni M, Roncalli M, Colombo PG, Laghi L, Lambris JD, Jaillon S, Garlanda C, Mantovani A. PTX3 is an extrinsic oncosuppressor regulating complement-dependent inflammation in cancer. *Cell* 160: 700-714, 2015.

Jaillon S, Moalli F, Ragnarsdottir B, Bonavita E, Riva F, Barbati E, Nebuloni M, Krajcinovic LC, Markotic A, Valentino S, Doni A, Tartari S, Graziani G, Montanelli A, Delneste Y, Svanborg C, Garlanda C, Mantovani A. The humoral pattern recognition molecule PTX3 is a key component of innate immunity against urinary tract infection. *Immunity* 40: 621-632, 2014.

Cunha C, Aversa F, Lacerda JF, Busca A, Kurzai O, Grube M, Löffler J, Maertens JA, Bell AS, Inforzato A, Barbati E, Almeida B, Santos e Sousa P, Barbui A, Potenza L, Caira M, Ph.D., Rodrigues F, Salvatori G, Pagano L, Luppi M, Mantovani A, Velardi A, Romani L, Carvalho A. Genetic deficiency of PTX3 and aspergillosis in stem cell transplantation. *New Engl J Med*, 370:421-432, 2014.

Germano G, Frapolli R, Belgiovine C, Anselmo A, Pesce S, Liguori M, Erba E, Uboldi S, Zucchetti M, Pasqualini F, Nebuloni M, van Rooijen N, Mortarini R, Beltrame L, Marchini S, Fuso Nerini I, Sanfilippo R, Casali PG, Pilotti S, Galmarini CM, Anichini A, Mantovani A, D'Incalci M, Allavena P. Role of macrophage targeting in the antitumor activity of trabectedin. *Cancer Cell* 23: 249-262, 2013.

Deban L, Castro Russo R, Sironi M, Moalli F, Scanziani M, Zambelli V, Cuccovillo I, Bastone A, Gobbi M, Valentino S, Doni A, Garlanda C, Danese S, Salvatori G, Sassano M, Evangelista V, Rossi B, Zenaro E, Constantin G, Laudanna C, Bottazzi B, Mantovani A  
Regulation of leukocyte recruitment by the long pentraxin PTX3. *Nature Immunol*, 11: 328-334, 2010.

Di Liberto D, Locati M, Caccamo N, Vecchi A, Meraviglia S, Salerno A, Sireci G, Nebuloni M, Cardona P-J, Dieli F, Mantovani A. Role of the chemokine decoy receptor D6 in balancing inflammation, immune activation and antimicrobial resistance in *Mycobacterium tuberculosis* infection. *J. Exp. Med.* 205: 2075-2084, 2008.

Lech M, Kulkarni OP, Pfeiffer S, Savarese E, Krug A, Garlanda C, Mantovani A, Anders H-J. TIR8/SigIRR prevents murine lupus by suppressing the immunostimulatory effects of lupus autoantigens. *J. Exp. Med.* 205: 1879-1888, 2008.

Jaillon S, Peri G, Delneste Y, Frèmaux I, Doni A, Moalli F, Garlanda C, Romani L, Gascan H, Bellocchio S, Bozza S, Cassatella MA, Jeannin P, Mantovani A. The humoral pattern recognition receptor PTX3 is stored in neutrophil granules and localized in extracellular traps. *J. Exp. Med.*, 204, 793-804, 2007.

Martinez de la Torre Y, Buracchi C, Borroni EM, Dupor J, Bonecchi R, Nebuloni M, Pasqualini F, Doni A, Lauri E et al. Protection against inflammation- and autoantibody- caused fetal loss by the chemokine decoy receptor D6. *PNAS* 104:2319-2324, 2007

Biswas SK, Gangi L, Paul S, Schioppa T, Saccani A, Sironi M, Bottazzi B, Doni A, Vincenzo B, Pasqualini F, Vago L, Nebuloni M, Mantovani A\*, Sica A. (\* corresponding author). A distinct and unique transcriptional program expressed by tumor-associated macrophages (defective NF-kappaB and enhanced IRF-3/STAT1 activation). *Blood* 107:2112-2122, 2006.

Borrello MG, Alberti L, Fischer A, Degl'Innocenti D, Ferrario C, Gariboldi M, Marchesi F, Allavena P, Greco A, Collini P, Pilotti S, Cassinelli G, Bressan P, Fugazzola L, Mantovani A\*, Pierotti M\* (\*corresponding authors). Induction of a proinflammatory programme in normal human thyrocytes by the RET/PTC1 oncogene. *PNAS*, 102: 14825-14830, 2005.

Jeannin P., Bottazzi B., Sironi M., Doni A., Rusnati M., Presta M., Maina V., Magistrelli G., Haeuw J.F., Hoeffel G., Thieblemont N., Corvaia N., Garlanda C., Delneste Y., Mantovani A. Complexity and complementarity of outer membrane protein-A recognition by cellular and humoral innate immunity receptors *Immunity* 22: 551-560, 2005.

Bertini R, Allegretti M, Bizzarri C, Moriconi A, Locati M, Zampella G, Cervellera M N, Di Cioccio V, Cesta M C, Galliera E, Martinez F O, Di Bitondo R, Troiani G, Sabbatini V, Anacardio R, Cutrin J C, Cavalieri B, Mainiero F, Strippoli R, Villa P, Di Girolamo M, Martin F, Gentile M, Santoni A, Corda D, Ghezzi P, Poli Giuseppe, Mantovani A, Colotta F. A new class of non-competitive allosteric inhibitors of the inflammatory chemokine receptors CXCR1 and CXCR2: Prevention of reperfusion injury. *Proc Natl Acad Sci USA* 101: 11791-11796, 2004

Garlanda C, Riva F, Polentarutti N, Buracchi C, Sironi M, De Bortoli M., Muzio M, Bergottini R, Scanziani E, Vecchi A, Hirsch E, Mantovani A. Intestinal inflammation in mice deficient in TIR8, an inhibitory member of the IL-1 receptor family. *Proc Natl Acad Sci USA* 101: 3522-3526, 2004

Schioppa T., Uranchimeg B., Saccani A., Biswas S., Doni A., Rapisarda A., Bernasconi S., Saccani S., Nebuloni M., Vago L., Mantovani A., Melillo G., Sica A. Regulation of the chemokine receptor CXCR4 by hypoxia. *J. Exp. Med.* 198: 1391-1402, 2003

Wittamer V, Franssen J D, Vulcano M, Mirjolet J F, Le Poul E, Migeotte I, Brezillon S, Tyldesley R, Blanpain C, Detheux M, Mantovani A, Sozzani S, Vassart G, Parmentier M, Communi D. Specific recruitment of antigen-presenting cells by Chemerin, a novel processed ligand from human inflammatory fluids. *J Exp Med* 198: 977-985, 2003

Garlanda C., Hirsch E., Bozza S., Salustri A., De Acetis M., Nota R., Maccagno A., Riva F., Bottazzi B., Peri G., Doni A., Vago L., Botto M., De Santis R., Carminati P., Siracusa G., Altruda A., Vecchi A., Romani L., Mantovani

- A. Non-redundant role of the long pentraxin PTX3 in anti-fungal innate immune response. *Nature* 420: 182-186, 2002.
- Fraticegli P, Sironi M, Bianchi G, D'Ambrosio D, Albanesi C, Stoppacciaro A, Chieppa M, Allavena P, Ruco L, Girolomoni G, Sinigaglia F, Vecchi A, Mantovani A. Fractalkine (CX3CL1) as an amplification circuit of polarized Th1 responses. *J Clin Invest.* 107: 1173-1181, 2001
- D'Amico G, Frascaroli G, Bianchi G, Doni A, Transidico P, Vecchi A, Sozzani S, Allavena P, Mantovani A. Uncoupling of inflammatory chemokine receptors by interleukin 10: Generation of functional decoys. *Nature Immunol.* 1: 387-391, 2000.
- Hirsch E, Katanaev V L, Garlanda C, Azzolino O, Silengo L, Sozzani S, Mantovani A, Altruda F, Wymann M P. Central role for G protein-coupled phosphoinositide 3-kinase in inflammation. *Science* 287: 1049-1053, 2000.
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- Sozzani S, Allavena P, D'Amico G, Luini W, Bianchi G, Kataura M, Imai T, Yoshie O, Bonecchi R, Mantovani A. Differential regulation of chemokine receptors during dendritic cell maturation: A model for their trafficking properties. *J. Immunol.* 161: 1083-1086, 1998.
- Sozzani S, Ghezzi G, Iannolo W, Luini A, Borsatti N, Polentarutti A, Sica M, Locati C, Mackay T. N. C. Wells P, Biswas E, Vicenzi G, Poli, and A. Mantovani. Interleukin-10 increases CCR5 expression and HIV infection in human monocytes. *J. Exp. Med.* 187:439-444, 1998
- Bonecchi R, Bianchi G, Panina Bordignon P, D'Ambrosio D, Lang R, Borsatti A, Sozzani S, Allavena P, Gray P A, Mantovani A, Sinigaglia F. Differential expression of chemokine receptors and chemotactic responsiveness of type 1 T helper cells (Th1s) and Th2s. *J. Exp. Med.* 187: 129-134, 1998.
- Romano M, Sironi M, Toniatti C, Polentarutti N, Fruscella P, Ghezzi P, Faggioni R, Luini W, Van Hinsberg V, Sozzani S, Bussolino F, Poli V, Ciliberto G, Mantovani A. Role of IL-6 and its soluble receptor in induction of chemokines and leukocyte recruitment. *Immunity* 6: 315-325, 1997.
- Godiska R, Chantry D, Raport C J, Sozzani S, Allavena P, Leviten D, Mantovani A, Gray P W. Human macrophage-derived chemokine (MDC), a novel chemoattractant for monocytes, monocyte-derived dendritic cells, and natural killer cells. *J. Exp. Med.* 185: 1595-1604, 1997.
- Sica A, Sacconi A, Borsatti C. A. Power, T. N. C. Wells, W. Luini, N. Polentarutti, S. Sozzani, and A. Mantovani. Bacterial lipopolysaccharide rapidly inhibits expression of C-C chemokine receptors in human monocytes. *J. Exp. Med.* 185:969-974, 1997.
- Re, F., M. Sironi, M. Muzio, C. Matteucci, M. Introna, S. Orlando, G. Penton-Rol, S. K. Dower, J. E. Sims, F. Colotta, and A. Mantovani. Inhibition of interleukin-1 responsiveness by type II receptor gene transfer: a surface "receptor" with anti-interleukin-1 function. *J. Exp. Med.* 183: 1841-1850, 1996
- Sozzani S, Sallusto F, Luini W, Zhou D, Piemonti L, Allavena P, Van Damme J, Valitutti S, Lanzavecchia A, Mantovani A. Migration of dendritic cells in response to formyl peptides, C5a, and a distinct set of chemokines. *J. Immunol.* 155: 3292-3295, 1995
- Colotta, F., S. Orlando, E. J. Fadlon, S. Sozzani, C. Matteucci, and A. Mantovani. Chemoattractants induce rapid release of the interleukin 1 type II decoy receptor in human polymorphonuclear cells. *J. Exp. Med.* 181:2181-2188, 1995.
- Muzio, M., N. Polentarutti, M. Sironi, G. Poli, L. De Gioia, M. Introna, A. Mantovani, and F. Colotta. Cloning and characterization of a new isoform of the interleukin-1 receptor antagonist. *J. Exp. Med.* 182:623-628, 1995

Colotta, F., F. Re, M. Muzio, R. Bertini, N. Polentarutti, M. Sironi, J. G. Giri, S. K. Dower, J. E. Sims, and A. Mantovani. Interleukin-1 type II receptor: a decoy target for IL-1 that is regulated by IL-4. *Science* 261: 472-475, 1993

Bussolino, F., J. M. Wang, P. Defilippi, F. Turrini, F. Sanavio, C. J. Edgell, M. Aglietta, P. Arese, and A. Mantovani. Granulocyte- and granulocyte-macrophage-colony stimulating factors induce human endothelial cells to migrate and proliferate. *Nature* 337: 471-473, 1989.

Rossi, V., F. Breviario, P. Ghezzi, E. Dejana, and A. Mantovani. Prostacyclin synthesis induced in vascular cells by interleukin-1. *Science* 229: 174-176, 1985.

Bottazzi, B., N. Polentarutti, R. Acero, A. Balsari, D. Boraschi, P. Ghezzi, M. Salmona, and A. Mantovani. Regulation of the macrophage content of neoplasms by chemoattractants. *Science* 220:210-212, 1983.

## Reviews

Mantovani A., Marchesi F., Laghi L., Malesci A., Allavena P. Tumor-associated macrophages as treatment targets in oncology. *Nature Rev, Clin. Oncol.*; adv. online publication 2017 doi: 10.1038/nrclinonc.2016.217

Mantovani A, Allavena P. The interaction of anticancer therapies with tumor-associated macrophages. *J Exp Med.* 2015 Apr 6;212(4):435-445.

Garlanda C., Dinarello C.A., Mantovani A. The IL-1 family: back to the future. *Immunity* 39: 1003-1018, 2013.

Locati M., Mantovani A., Sica A. Macrophage activation and polarization as an adaptive component of innate immunity. *Adv. Immunol.* 120: 163-184, 2013

Sica A, Mantovani A. Macrophage plasticity and polarization: in vivo veritas. *J Clin Invest.* 122: 787-795, 2012.

Biswas S.K. and Mantovani A. Orchestration of metabolism by macrophages. *Cell Metab.* 15: 432-437, 2012.

Mantovani A, Cassatella MA, Costantini C, Jaillon S. Neutrophils in the activation and regulation of innate and adaptive immunity. *Nat Rev Immunol.* 11: 519-531, 2011.

Biswas S.K. and Mantovani A. Macrophage plasticity and interaction with lymphocyte subsets: cancer as paradigm. *Nat Immunol* 11: 889-896, 2010.

Bottazzi B, Doni A, Garlanda C, Mantovani A. An Integrated View of Humoral Innate Immunity: Pentraxins as a Paradigm. *Annu Rev Immunol.* 28:157-183, 2010.

Garlanda C, Anders HJ, Mantovani A. TIR8/SIGIRR: an IL-1R/TLR family member with regulatory functions in inflammation and T cell polarization. *Trends Immunol.* 30: 439-446, 2009.

Mantovani A. Cancer: Inflaming metastasis. *Nature* 45: 36-37, 2009.

Mantovani A, Allavena P, Sica A, Balkwill F. Cancer-Related Inflammation. *Nature* 454: 436-444, 2008.

Mantovani, A., Romero, P., Paluka, AK., Marincola, FM. Tumor immunity: effector response to tumor and the influence of the microenvironment. *Lancet* 371:771-783, 2008.

Mantovani A, Bonecchi R, Locati M. Tuning inflammation and immunity by chemokine sequestration: decoys and more. *Nature Rev. Immunol.* 6: 907-918, 2006.

Balkwill F, Charles KA, Mantovani A. Smouldering and polarized inflammation in the initiation and promotion of malignant disease. *Cancer Cell* 7: 211-217, 2005.

Garlanda C., Bottazzi B., Bastone A., Mantovani A., Pentraxins at the crossroads between innate immunity, inflammation, matrix deposition, and female fertility *Annu. Rev. Immunol.*, 23: 337-366, 2005.

Mantovani A., Sica A., Sozzani S., Allavena P., Vecchi A., Locati M. The chemokine system in diverse forms of macrophage activation and polarization. *Trends Immunol.* 25: 677-686, 2004.

Mantovani A., Sozzani S., Locati M., Allavena P., Sica A. Macrophage polarization: tumor-associated macrophages as a paradigm for polarized M2 mononuclear phagocytes. *Trends Immunol.* 23: 549-555, 2002.

Mantovani A., Locati M., Vecchi A., Sozzani S., Allavena P. Decoy receptors as a strategy to regulate inflammatory cytokines and chemokines. *Trends Immunol.* 22: 328-336, 2001.

Balkwill F. and Mantovani A. Inflammation and cancer: back to Virchow? *Lancet* 357: 539-545, 2001.

Mantovani A. The chemokine system: redundancy for robust outputs. *Immunol. Today* 20: 254-257, 1999.

Mantovani, A., F. Bussolino, and M. Introna. Cytokine regulation of endothelial cell function: from molecular level to the bed side. *Immunol. Today.* 18:231-239, 1997

Colotta, F., S. K. Dower, J. E. Sims, and A. Mantovani. The type II 'decoy' receptor: novel regulatory pathway for interleukin-1. *Immunol. Today.* 15:562-566, 1994.

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Mantovani, A., B. Bottazzi, F. Colotta, S. Sozzani, and L. Ruco. The origin and function of tumor-associated macrophages. *Immunol. Today.* 13:265-270, 1992.

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Alberto Mantovani

