

# **Giovanni Barillari - *Curriculum Vitae*** (updated as of September 2, 2023)

## **Personal informations**

Surname, name: BARILLARI, Giovanni

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## **Qualifications**

1983: Degree in Medicine and Surgery, University of Rome "Sapienza".

1987: Specialization Diploma in General Pathology, University of Rome "Sapienza".

1989: Postgraduate Diploma in Cellular Biology, Foundation for Advanced Education in Sciences, National Institutes of Health, Bethesda (Maryland), United States of America.

1991: Postgraduate Diploma in Molecular Biology, Foundation for Advanced Education in Sciences, National Institutes of Health, Bethesda (Maryland), United States of America.

## **History of employment**

2006-present time: Full Professor of Clinical Pathology, Medical School, University of Rome "Tor Vergata".

2000-2006: Associed Professor of General Pathology, Medical School, University of Rome "Tor Vergata".

1993-2000: University Researcher at the Department of Experimental Medicine, University of Rome "Tor Vergata".

1991-1993: Researcher at the Laboratory of Tumor Cell Biology, National Cancer Institute, National Institutes of Health, Bethesda (Maryland), United States of America.

1988-1991: "Fogarty" international fellow at the Laboratory of Tumor Cell Biology, National Cancer Institute, National Institutes of Health, Bethesda (Maryland), United States of America.

1987-1988: Fellow at the Department of Experimental Medicine, University of Rome "Tor Vergata".

1983-1987: Fellow at the Institute of General Pathology, Medical School, University of Rome "Sapienza".

## **Didactic activity in the academic year 2022-2023**

*University of Rome "Tor Vergata", Rome, Italy.* Teaching "Clinical Pathology" and "General Pathology" at the Master's Degree Course in "Dentistry". Teaching "Clinical Pathology" at the Master's Degree Course in "Pharmacy". Teaching "Clinical Pathology" at the Bachelor Degree Courses in "Dental Hygienist" and in "Cardiocirculatory Physiopathology". Lecturer at the Medical Specialization Schools in "Clinical Pathology and Biochemistry", "Internal Medicine" and "Oncology". Lecturer at the Doctoral School in "Experimental Medicine".

*Catholic University "Zoja e Këshillit të Mirë", School of Medicine, Tirane, Albany.* Teaching "Clinical Pathology" and "General Pathology" at the Master's Degree Course in Dentistry.

*International University of Health and Medical Sciences “UniCamillus”, Rome, Italy. Teaching "Clinical Pathology" at the Master's Degree Course in Medicine and Surgery, and at the Master's Degree Course in Dentistry.*

### **Scientific assignments**

He is a reviewer of scientific research projects submitted to the Ministry of Health or the Ministry of University and Research. In this context, he is registered in the register of Italian and foreign scientific experts (*Register of Expert Peer Reviewers for Italian Scientific Evaluation, REPRISE*), established at the Ministry of University and Research. He is a member of the Editorial Committee of the International Journal of Molecular Sciences (Basel, Switzerland). He works as a scientific reviewer for international journals such as, for example, *Cancers, Current Oncology, International Journal of Molecular Sciences* and others. He is Ordinary Member of the Medical Academy of Rome (Rome, Italy).

### **Institutional positions**

2023: Coordinator of the Quality Assurance Commission, Department of Clinical Sciences and Translational Medicine, University of Rome Tor Vergata.

2023: Coordinator of the Didactic Commission, Department of Clinical Sciences and Translational Medicine, University of Rome Tor Vergata.

2020-2022: member of the Observatory on Didactics, Medical School, University Tor Vergata.

December 2013-November 2019: Vice Rector Delegated for University Didactics, University Tor Vergata.

2009-2013: President of the Didactic Commission of the Faculty of Medicine and Surgery, University Tor Vergata.

### **Scientific activity**

The research activity is focused on the study of: i) the formation of new blood and lymphatic vessels associated with neoplastic progression; ii) the mechanisms underlying neoplastic invasiveness and metastasis; iii) the oncogenic effects of viral proteins; iv) diagnostic and prognostic markers of cancer; and v) the anticancer effects of protease inhibitors.

Peer-reviewed publications produced in journals with ISSN = 112; H Index = 34 (*WEB of SCIENCE*); total citations number = 6071 (*WEB of SCIENCE*)

### **List of publications**

1. Cifaldi L, Melaiu O, Giovannoni R, Benvenuto M, Focaccetti C, Nardozi D, Barillari G, Bei R. DNAM-1 chimeric receptor-engineered NK cells: a new frontier for CAR-NK cell-based immunotherapy. *Front Immunol* 2023; 14: 1197053. doi: 10.3389/fimmu.2023.1197053. PMID: 37359555 (Perspective review).
2. Benvenuto M, Angiolini V, Focaccetti C, Nardozi D, Palumbo C, Carrano R, Rufini A, Barillari G, Tundo GR, Bei R. Antitumoral effects of Bortezomib in malignant mesothelioma: evidence of mild endoplasmic reticulum stress in vitro and activation of T cell response in vivo. *BIOLOGY DIRECT* 2023; 18(1): 17. doi 10.1186/s13062-023-00374-w (article).
3. Pomella S, Cassandri M, Melaiu O, Marampon F, Gargari M, Campanella V, Rota R, Barillari G. DNA damage response gene signature as potential treatment markers for oral

- squamous cell carcinoma. *Int J Mol Sci.* 2023 Jan 31;24(3):2673. doi: 10.3390/ijms24032673 (article, PMID: 36768994).
4. Melaiu O, Vanni G, Portarena I, Pistolese CA, Anemona L, Pomella S, Bei R, Buonomo OC, Roselli M, Mauriello A, Barillari G. The combination of immune checkpoint blockade with tumor vessel normalization as a promising therapeutic strategy for breast cancer: an overview of preclinical and clinical studies. *Int. J. Mol. Sci.* 2023, 24(4), 3226; <https://doi.org/10.3390/ijms24043226> (Review).
  5. Rota R, Perrone C, Pomella S, Cassandri M, Pezzella M, Giuliani S, Gasperi T, Porrazzo A, Alisi A, Pastore A, Codenotti S, Fanzani A, Barillari G, Conti LA, De Angelis B, Quintarelli C, Mariottini P, Locatelli F, Marampon F, Cervelli M. Spermine oxidase induces DNA damage and sensitizes Fusion Negative Rhabdomyosarcoma cells to irradiation. *Frontiers in Cell and Developmental Biology.* *Front Cell Dev Biol.* 2023 Jan 23; 11:1061570. doi: 10.3389/fcell.2023.1061570 (article, PMID: 36755974).
  6. Vaccaro S, Rossetti A, Porrazzo A, Camero S, Cassandri M, Pomella S, Tomaciello M, Macioce G, Pedini F, Barillari G, Marchese C, Rota R, Cenci G, Tombolini M, Newman RA, Yang P, Codenotti S, Fanzani A, Megiorni F, Festuccia C, Minniti G, Gravina GL, Vulcano F, Milazzo L, Marampon F. The Botanical Drug PBI-05204, a Supercritical CO<sub>2</sub> Extract of Nerium Oleander, Sensitizes Alveolar and Embryonal Rhabdomyosarcoma to Radiotherapy in vitro and in vivo. *Frontiers in Pharmacology 2022 (Research article):* 13, 1071176 [10.3389/fphar.2022.1071176].
  7. Pomella S, Porrazzo A, Cassandri M, Megiorni F, Rota R, Milazzo L, Vulcano F, Barillari G, Cenci G, Marchese C, Fanzani A, Marampon F. Translational Implications for Radiosensitizing Strategies in Rhabdomyosarcoma. *International Journal of Molecular Sciences 2022 (review):* 23(21), 13281 [10.3390/ijms232113281].
  8. Lucarini V, Melaiu O, D'Amico S, Pastorino F, Tempora P, Scarsella M, Pezzullo M, De Ninno A, D'Oria V, Cilli M, Emionite L, Infante P, Di Marcotullio L, De Ioris MA, Barillari G, Alaggio R, Businaro L, Ponzoni M, Locatelli F, Fruci D. Combined mitoxantrone and anti-TGF $\beta$  treatment with PD-1 blockade enhances antitumor immunity by remodelling the tumor immune landscape in neuroblastoma. *Journal of Experimental & Clinical Cancer Research 2022:* 41(1), 326 [10.1186/s13046-022-02525-9].
  9. Camero S, Cassandri M, Pomella S, Milazzo L, Vulcano F, Porrazzo A, Barillari G, Marchese C, Codenotti S, Tomaciello M, Rota R, Fanzani A, Megiorni F, Marampon F. Radioresistance in rhabdomyosarcomas: Much more than a question of dose. *Front Oncol.* 2022 Sep 29; 12:1016894. (review, doi: 10.3389/fonc.2022.1016894. PMID: 36248991; PMCID: PMC9559533).
  10. Barillari G, Melaiu O, Gargari M, Pomella S, Bei R, Campanella V. The Multiple Roles of CD147 in the Development and Progression of Oral Squamous Cell Carcinoma: An Overview. *Int J Mol Sci* 2022; 23: 8336. (review, doi: 10.3390/ijms23158336. PMID: 35955471; PMCID: PMC9369056).
  11. Bei R, Benvenuto M, Focaccetti C, Fazi S, Moretti M, Nardozi D, Angiolini V, Ciuffa S, Cifaldi L, Carrano R, Palumbo C, Miele MT, Bei R, Barillari G, Manzari V, De Smaele E, Modesti A, Masuelli L. Combined treatment with inhibitors of ErbB Receptors and Hh signaling pathways is more effective than single treatment in reducing the growth of malignant mesothelioma both in vitro and in vivo. *J Transl Med* 2022; 20: 286. (article, doi: 10.1186/s12967-022-03490-9. PMID: 35752861; PMCID: PMC9233819).
  12. Barillari G, Bei R, Manzari V, Modesti A. Infection by High-Risk Human Papillomaviruses, Epithelial-to-Mesenchymal Transition and Squamous Pre-Malignant or Malignant Lesions of the Uterine Cervix: A Series of Chained Events? *Int J Mol Sci* 2021; 22: 13543. doi: 10.3390/ijms222413543. PMID: 34948338; PMCID: PMC8703928 (review, ISSN 14220067, publisher: MDPI).

13. Benvenuto M, Ciuffa S, Focaccetti C, Sbardella D, Fazi S, Scimeca M, Tundo GR, Barillari G, Segni M, Bonanno E, Manzari V, Modesti A, Masuelli L, Coletta M, Bei R. Proteasome inhibition by bortezomib parallels a reduction in head and neck cancer cells growth, and an increase in tumor-infiltrating immune cells. *Sci Rep* 2021; 11: 19051 (article, doi: 10.1038/s41598-021-98450-6. PMID: 34561494; PMCID: PMC8463577).
14. Cafaro A, Barillari G, Moretti S, Palladino C, Tripiciano A, Falchi M, Picconi O, Pavone Cossut MR, Campagna M, Arancio A, Sgadari C, Andreini C, Banci L, Monini P, Ensoli B. HIV-1 Tat Protein Enters Dysfunctional Endothelial Cells via Integrins and Renders Them Permissive to Virus Replication. *Int J Mol Sci* 2021; 22: 317-340. <https://doi.org/10.3390/ijms22010317> (article, ISSN 14220067, publisher: MDPI).
15. Qiu Y, Maione F, Capano S, Meda C, Picconi O, Brundu S, Pisacane A, Sapino A, Palladino C, Barillari G, Monini P, Bussolino F, Ensoli B, Sgadari C, Giraud E. HIV-protease inhibitors block HPV16-induced murine cervical carcinoma and promote vessel normalization in association with MMP-9 inhibition and TIMP-3 induction. *Mol Cancer Ther* 2020; 19: 2476-2489. doi: 10.1158/1535-7163.MCT-20-0055 (article, ISSN 15357163, publisher: American Association for Cancer Research).
16. Barillari G. The Impact of Matrix Metalloproteinase-9 on the Sequential Steps of the Metastatic Process. *Int J Mol Sci* 2020; 21: 4526. doi: 10.3390/ijms21124526 (review, ISSN 14220067, publisher: MDPI).
17. Barillari G. The Anti-Angiogenic Effects of Anti-Human Immunodeficiency Virus Drugs. *Front Oncol* 2020; 10:806. doi: 10.3389/fonc.2020.00806 (review, ISSN 2234943, publisher: Frontiers Media).
18. Barillari G, Monini P, Sgadari C, Ensoli B. The impact of human papilloma viruses, matrix metalloproteinases and HIV protease inhibitors on the onset and progression of uterine cervix epithelial tumors: a review of preclinical and clinical studies. *International Journal of Molecular Sciences* 2018; 19: 1418-1442, doi: 10.3390/ijms19051418 (review, ISSN 14220067, publisher: MDPI).
19. Bacigalupo I, Palladino C, Leone P, Toschi E, Sgadari C, Ensoli B, Barillari G. Inhibition of MMP-9 expression by ritonavir or saquinavir is associated with inactivation of the AKT/Fra-1 pathway in cervical intraepithelial neoplasia cells. *Oncology Letters* 13: 2903-2908, 2017. doi: 10.3892/ol.2017.5835 (article, ISSN 1792-1074, publisher: Spandidos Publications).
20. Barillari G, Palladino C, Bacigalupo I, Leone P, Falchi M, Ensoli B. Entrance of the Tat protein of HIV-1 into human uterine cervical carcinoma cells causes up-regulation of HPV-E6 expression and a decrease in p53 protein levels. *Oncology Letters*, 12: 2389-2394, 2016 (article, ISSN 1792-1074, publisher Spandidos Publications).
21. Barillari G, Iovane A, Bacigalupo I, Labbaye C, Chiozzini C, Sernicola L, Quaranta MT, Falchi M, Sgadari C, Ensoli B. The HIV protease inhibitor indinavir down-regulates the expression of the pro-angiogenic MT1-MMP by human endothelial cells. *Angiogenesis*, 7 (4): 831-8, 2014. doi: 10.1007/s10456-014-9430-9 (article, ISSN 0969 0969-6970, publisher: Springer).
22. Bucci L, Cortecchia S, Galanti G, Sgadari C, Costa S, De Lillo M, Caparra L, Barillari G, Monini P, Nannini R, and Ensoli B. Follow-up study of patients with cervical intraepithelial neoplasia grade 1 overexpressing p16ink4a. *International Journal of Gynecological Cancer* 23 (9):1663-9, 2013 (article, ISSN 1048-891X, publisher: Lippincott, Williams & Wilkins).
23. Barillari G, Iovane A, Bacigalupo I, Palladino C, Bellino S, Leone P, Monini P, and Ensoli B. Ritonavir or saquinavir impairs the invasion of cervical intraepithelial neoplasia cells via a reduction of MMP expression and activity. *AIDS* 26 (8): 909-919, 2012. doi: 10.1097/QAD.0b013e328351f7 a5 (article, ISSN 0269-9370, publisher: Lippincott, Williams & Wilkins).

24. Sgadari C, Bacigalupo I, Barillari G, Ensoli B. Pharmacological management of Kaposi's sarcoma. *Expert Opinion on Pharmacotherapy* 12 (11): 1669-1690, 2011 (review, ISSN 1465-6566, publisher: Informa Healthcare).
25. Sgadari C, Barillari G, Palladino C, Bellino S, Taddeo B, Toschi E, Ensoli B. Fibroblast growth factor-2 and the HIV-1 Tat protein synergize in promoting Bcl-2 expression and preventing endothelial cell apoptosis: implications for the pathogenesis of AIDS-associated Kaposi's sarcoma. *International Journal of Vascular Medicine e-PUB DOI* 10.1155/2011/452729, 2011 (article, ISSN 2090-2824, publisher: Hindawi Publication Corporation).
26. Toschi E, Sgadari C, Malavasi L, Bacigalupo I, Chiozzini C, Carlei D, Compagnoni D, Bellino S, Bugarini R, Falchi M, Palladino C, Leone P, Barillari G, Monini P, Ensoli B. Human immunodeficiency virus protease inhibitors reduce the growth of human tumors via proteasome-independent block of angiogenesis and matrix metalloproteinases. *International Journal of Cancer*, 128: 82-93, 2011 (article, ISSN 0020-7136, publisher: Wiley-Liss).
27. Barillari G, Franzese O, Comandini A, Bonmassar E, Ensoli B. Spindle cells from AIDS-associated Kaposi's sarcoma (KS) lesions express telomerase activity that is enhanced by KS progression factors. *Oncology Reports*, 24 (1): 219-223, 2010 (article, ISSN 1021-335X, publisher: Spandidos Publications).
28. Albonici L, Sorge RP, Santeusano G, Garofano P, Manzari V, Barillari G. Correlation between pathological data and the RNA expression of p53 or p53-targeted genes in primary invasive ductal breast carcinomas: a preliminary study. *Oncology Reports*, 23: 1119-1123, 2010 (article, ISSN 1021-335X, publisher: Spandidos Publications).
29. Barillari G, Franzese O, Iovane A and Ensoli B. Spindle cells from Acquired Immune Deficiency Syndrome (AIDS)-associated Kaposi's sarcoma (KS) lesions express telomerase activity directly relating to the RNA levels of fibroblast growth factor (FGF)-2. *International Journal of Cancer*, 127: 2487-2489, 2010 (letter, ISSN 0020-7136, publisher: Wiley-Liss).
30. Barillari G, Iovane A, Bonuglia M, Albonici L, Garofano P, Di Campi E, Falchi M, Condò I, Manzari V, Ensoli B. Fibroblast growth factor-2 transiently activates the p53 oncosuppressor protein in human primary vascular smooth muscle cells: implications for atherogenesis. *Atherosclerosis*, 210 (2): 400-406, 2010 (article, ISSN 0021-9150, publisher: Elsevier).
31. Nappi F, Chiozzini C, Bordignon V, Borsetti A, Bellino S, Cippitelli M, Barillari G, Caputo A, Tyagi M, Giacca M, Ensoli B. Immobilized HIV-1 Tat protein promotes gene transfer via a transactivation independent mechanism which requires binding of Tat to viral particles. *Journal of Gene Medicine*, 11 (11): 955-965, 2009 (article, ISSN 1099-498X, publisher: John Wiley & Sons).
32. Fanales-Belasio E, Moretti S, Fiorelli V, Tripiciano A, Pavone-Cossut MR, Scoglio A, Colacchi B, Nappi F, Macchia I, Bellino S, Francavilla V, Caputo A, Barillari G, Magnani M, Laguardia ME, Cafaro A, Titti F, Monini P, Ensoli F, Ensoli B. HIV-1 Tat addresses dendritic cells to induce a predominant Th1-type adaptive immune response that appears prevalent in the asymptomatic stage of infection. *Journal of Immunology* 182 (5): 2888-2897, 2009 (article, ISSN 0022-1767, publisher: American Association of Immunologists).
33. Barillari G, Toschi E, Sgadari C, Monini P, Ensoli B. The formation of new blood vessels in Kaposi's sarcoma. In *The Research Signpost (Kaposi's sarcoma: a model of oncogenesis)*; Stebbing J, Pantanowitz L, and Dezube BJ editors, Tufts Medical School, Boston (MA, USA), chapter 6, pp 101-122, 2009 (book chapter, ISBN 978-81-308-0380-7, publisher: Research Signpost, USA).
34. Monini P, Sgadari C, Grosso MG, Bellino S, Di Biagio A, Toschi E, Bacigalupo I, Sabbatucci M, Cencioni G, Salvi E, Leone P, Ensoli B, Barillari G, Moracci G, Carratelli L, Gatti G, Brambilla L, Brambati M, Ferrucci S, De Pità O, Pilla MA, Di Carlo A, Giuliani M, Cottoni F, Cuccuru MA, Calvieri S, Clerico R, Potenza C, Tirelli U, Simonelli C,

- Martellotta F, Strumia R, Borghi A, Del Giacco S, Moi L, Piludu G, Sirianni MC, Campagna M, Sarmati L, Andreoni M, Bianchini G, Sheldon J, Milzer J, Schulz T. Clinical course of classic Kaposi's sarcoma in HIV-negative patients treated with the HIV protease inhibitor indinavir. *AIDS* 23 (4): 534-538, 2009 (article, ISSN 0269-9370, publisher: Lippincott, Williams & Wilkins).
35. Monini P, Toschi E, Sgadari C, Bacigalupo I, Palladino C, Carlei D, Barillari G, and Ensoli B. The use of HAART for biological tumour therapy. *Journal of HIV Therapy*, 11 (3): 53-56, 2006 (review, ISSN 1462-0308, publisher: Mediscript).
  36. Toschi E, Bacigalupo I, Strippoli R, Cereseto A, Falchi M, Chiozzini C, Nappi F, Sgadari C, Barillari G, Maniero F, and Ensoli B. HIV-1 Tat regulates endothelial cell cycle progression via activation of the Ras/ERK MAPK signaling pathway. *Molecular Biology of the Cell*, 17 (4): 1985-1994, 2006 (article, ISSN 1059-1524, publisher: American Society for Cell Biology).
  37. Monini P, Sgadari C, Toschi E, Barillari G and Ensoli B. Antitumour effects of antiretroviral therapy. *Nature Reviews. Cancer*, 4: 861-875, 2004 (review, ISSN 1474-175X, publisher: Nature Publishing Group).
  38. Sgadari C, Monini P, Barillari G and Ensoli B. Use of HIV protease inhibitors to block Kaposi's sarcoma and tumor growth. *Lancet Oncology*, 4: 537-547, 2003 (review, ISSN 1470-2045, publisher: Lancet Publishing Group).
  39. Barillari G, Sgadari C, Toschi E, Monini P and Ensoli B. HIV protease inhibitors as new treatment options for Kaposi's sarcoma. *Drug Resistance Updates*, 6 (4): 173-181, 2003 (review, ISSN 1368-7646, publisher: Churchill Livingstone).
  40. Grosso G, Sgadari C, Barillari G, Toschi E, Bacigalupo I, Carlei D, Palladino C, Baccarini S, Malavasi L, Moracci G, Leone P, Chiozzini C, Monini P, Ensoli B. HIV protease inhibitors for the treatment of Kaposi's sarcoma. *Recenti Progressi in Medicina* 94: 69-74, 2003 (review, ISSN 0034-1193, publisher: Il Pensiero Scientifico editore).
  41. Monini P, Sgadari C, Barillari G, and Ensoli B. The HIV protease inhibitors: anti-retroviral agents with anti-inflammatory, anti-angiogenic and anti-tumor activity. *The Journal of Antimicrobial Chemotherapy* 51 (2): 207-211, 2003 (review, ISSN 0305-7453, publisher: Oxford University Press).
  42. Ensoli B, Sgadari C, Barillari G and Monini P. The fibroblast growth factors. *The Cytokine Handbook (IV Edition)*: 747-781. Thomson AW & Lotze MT editors, Elsevier Science Ltd. Publisher, London 2003 (book chapter, ISBN 0-12-689663-1, publisher: Elsevier Science).
  43. Toschi E, Monini P, Barillari G, Bacigalupo I, Palladino C, Baccarini S, Carlei D, Grosso G, Sirianni MC and Ensoli B. Treatment of Kaposi's sarcoma: an update. *Anticancer Drugs*, 13: 977-987, 2002 (review, ISSN 0959-4973, publisher: Lippincott, Williams & Wilkins).
  44. Barillari G and Ensoli B. Angiogenic effects of extracellular HIV-1 Tat protein and its role in the pathogenesis of AIDS-associated Kaposi's sarcoma. *Clinical Microbiology Reviews*, 15 (2): 310-326, 2002 (review, ISSN 0893-8512, publisher: American Society of Microbiology).
  45. Ciafrè SA, Barillari G, Bongiorno Borbone L, Wannenes F, Izquierdo M and Farace MG. A tricistronic retroviral vector expressing natural antiangiogenic factors inhibits angiogenesis in vitro. *Gene Therapy*, 9: 297-302, 2002 (article, ISSN 0969-7128, publisher: Nature Publishing Group).
  46. Fanales-Belasio E, Moretti S, Nappi F, Barillari G, Micheletti F, Cafaro A and Ensoli B. Native HIV-1 Tat protein is selectively taken up by monocyte-derived dendritic cells and induces their maturation, Th-1 cytokine production and antigen presenting function. *Journal of Immunology*, 168: 197-206, 2002 (article, ISSN 0022-1767, publisher: American Society of Immunologists).
  47. Sgadari C, Carlei D, Barillari G et al. HIV protease inhibitors block angiogenesis and promote regression of Kaposi's sarcoma in the nude mouse model. *Clinical and*

- Experimental Pharmacology and Physiology 29 (8): 94-95, 2002 (abstract, ISSN: 0305-1870, publisher: Wiley-Blackwell).
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  49. Toschi E, Barillari G, Sgadari S, Bacigalupo I, Cereseto A, Carlei D, Palladino C, Zietz C, Leone P, Sturzl M, Buttò S, Cafaro A, Monini P and Ensoli B. Activation of MMP-2 and MT1-MMP in endothelial cells and induction of vascular permeability in vivo by the HIV-1 Tat protein and basic fibroblast growth factor. *Molecular Biology of the Cell*, 12: 2934-2946, 2001 (article, ISSN 1059-1524, publisher: American Society for Cell Biology).
  50. Guenzi E, Cornali E, Topolt K, Martellato C, Zietz C, Kremmer E, Nappi F, Schwemmle M, Hohenadl C, Jorg A, Matzen K, Barillari G, Tschachler E, Monini P, Ensoli B and Sturzl M. The helical domain of GBP-1 mediates the inhibition of endothelial cell proliferation by inflammatory cytokines. *The EMBO Journal*, 20: 5568-5577, 2001 (article, ISSN 0261-4189, publisher: Wiley Blackwell).
  51. Ensoli B, Sgadari C, Barillari G, Sirianni MC, Sturzl M, Monini P. Biology of Kaposi's sarcoma. *European Journal of Cancer*, 37: 1251-1269, 2001 (review, ISSN 0959-8049, publisher: Elsevier Science).
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  53. Barillari G, Albonici L, Incerpi S, Bogetto L, Pistrutto G, Volpi A, Ensoli B and Manzari V. Inflammatory cytokines stimulate vascular smooth muscle cells locomotion and growth by enhancing  $\alpha 5\beta 1$  integrin expression and function. *Atherosclerosis*, 154: 377-385, 2001 (article, ISSN 0021-9150, publisher: Elsevier).
  54. Sgadari C, Toschi E, Palladino C, Barillari G, Carlei D, Cereseto A, Ciccolella C, Yarchoan R, Monini P, Sturzl M, Ensoli B. Mechanism of paclitaxel activity in Kaposi's sarcoma. *Journal of Immunology*, 165: 509-517, 2000 (article, ISSN 0022-1767, publisher: American Association of Immunologists).
  55. Ciafrè SA, Barillari G, Wannenes F, Bongiorno Borbone L, and Farace MG. Multicistronic antiangiogenic retroviral vectors for the gene therapy of malignant brain tumors. *Cancer Gene Therapy*, 7 (10): 1395-1396, 2000 (abstract, ISSN: 0929-1903, publisher: Nature Publishing Group).
  56. Barillari G, Sgadari C, Palladino C, Gendelman R, Caputo A, Bohan-Morris C, Nair BC, Markham P, Sturzl M and Ensoli B. Inflammatory cytokines synergize with the HIV-1 Tat protein to promote angiogenesis and Kaposi's sarcoma via induction of bFGF and the  $\alpha 5\beta 3$  integrin that are required for Tat activity. *Journal of Immunology* 163: 1929-1935, 1999 (article, ISSN 0022-1767, publisher: American Association of Immunologists).
  57. Barillari G, Sgadari C, Fiorelli V, Samaniego F, Colombini S, Manzari V, Modesti A, Nair BC, Cafaro A, Sturzl M and Ensoli B. The Tat protein of human immunodeficiency virus type-1 promotes vascular cell growth and locomotion by engaging the  $\alpha 5\beta 1$  and  $\alpha 5\beta 3$  integrins and by mobilizing sequestered basic fibroblast growth factor. *BLOOD* 94: 663-672, 1999 (article, ISSN 0006-4971, publisher: American Society for Haematology).
  58. Fiorelli V, Barillari G, Sgadari C, Toschi E, Monini P, Sturzl M and Ensoli B. IFN-gamma induces endothelial cells to proliferate and to invade the extracellular matrix in response to HIV-1 Tat. *Journal of Immunology* 162: 1165-1170, 1999 (article, ISSN 0022-1767, publisher: American Association of Immunologists).

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