

Curriculum Vitae

Personal information Sari Tiitinen

Work experience

1. Senior Researcher, Finnish Medicines Agency (FIMEA)
 - 02/2023 - present
 - Quality assessor for biological medicinal products
 - Finland
2. Research and Development Director, Medix Biochemica
 - 03/2019 - 01/2023
 - Responsible for development of antibodies and antigens for in vitro diagnostic (IVD) field
 - Finland
3. Technology Manager in RD, Medix Biochemica
 - 02/2013 - 03/2019
 - Responsible for immunochemical characterization of IVD antibodies
 - Finland
4. Researcher/Project Manager in RD, Finnish Red Cross Blood Service
 - 03/2004 - 01/2013
 - Laboratory researcher and project manager in stem cell glycomics RD projects. Coordinator for biobanking activities.
 - Finland

Education and training

1. Faculty of Medicine, University of Turku
 - 1999 - 2004
 - PhD
 - Bone biology and biomarkers
 - Finland
2. Faculty of Science, University of Oulu
 - 1993 - 1998
 - MSc, biochemistry
 - Biochemistry, molecular biology, monoclonal antibodies
 - Finland

Additional information

Publications

PhD THESIS Alatalo S. Tartrate-resistant acid phosphatase 5b: a serum marker of bone resorption. Turku 2004. ISBN 951-29-2731-4 SCIENTIFIC PUBLICATIONS, Sari Tiitinen (nee Alatalo)

1. Gao J, Ohlmeier S, Nieminen P, Toljamo T, Tiitinen S, et al. Elevated sputum BPIFB1 levels in smokers with chronic obstructive pulmonary disease: a longitudinal study. *Am J Physiol Lung Cell Mol Physiol*. 2015 Jul 1;309(1):L17_26. doi: 10.1152/ajplung.00082.2015.
2. Hirvonen T, Suila H, Tiitinen S, et al. Production of a recombinant antibody specific for i blood group antigen, a mesenchymal stem cell marker. *Biores Open Access*. 2013 Oct;2(5):336_45. doi: 10.1089/biores.2013.0026.
3. Hirvonen T, Suila H, Kotovuori A, Ritamo I, Heiskanen A, Sistonen P, Anderson H, Satomaa T, Saarinen J, Tiitinen S, et al. The i blood group antigen as a marker for umbilical cord blood derived mesenchymal stem cells. *Stem Cells Dev*. 2012 Feb 10;21(3):455_64. doi: 10.1089/scd.2011.0405.
4. Heiskanen A, Hirvonen T, Salo H, Impola U, Olonen A, Laitinen A, Tiitinen S, et al. Glycomics of bone marrow derived mesenchymal stem cells can be used to evaluate their cellular differentiation stage. *Glycoconj J*. 2009 Apr;26(3):367_84. doi: 10.1007/s10719_008_9217_6.
5. Fagerlund KM, Janckila AJ, Ylipahkala H, Tiitinen SL, et al. Clinical performance of six different serum tartrate_resistant acid phosphatase assays for monitoring alendronate treatment. *Clin Lab*. 2008;54(9_10):347_54.
6. Karhumäki P, Tiitinen SL, Turpeinen H, Parkkinen J. Inhibition of ERK1/2 activation by phenolic antioxidants protects kidney tubular cells during cold storage. *Transplantation*. 2007 Apr 15;83(7):948_53. doi: 10.1097/01.tp.0000259249.24268.34.
7. Heiskanen A, Satomaa T, Tiitinen S, et al. N_glycolylneuraminic acid xenoantigen contamination of human embryonic and mesenchymal stem cells is substantially reversible. *Stem Cells*. 2007 Jan;25(1):197_202. doi: 10.1634/stemcells.2006_0444.
8. Salminen EK, Kallioinen MJ, Ala_Houhala MA, Vihinen PP, Tiitinen SL, et al. Survival markers related to bone metastases in prostate cancer. *Anticancer Res*. 2006 Nov_Dec;26(6C):4879_84.
9. Korpela J, Tiitinen SL, et al. Serum TRACP 5b and ICTP as markers of bone metastases in breast cancer. *Anticancer Res*. 2006 Jul_Aug;26(4B):3127_32.
10. Fagerlund KM, Ylipahkala H, Tiitinen SL, et al. Effects of proteolysis and reduction on phosphatase and ROS_generating activity of human tartrate_resistant acid phosphatase. *Arch Biochem Biophys*. 2006 May 15;449(1_2):1_7. doi: 10.1016/j.abb.2006.03.010.
11. Halleen JM, Tiitinen SL, Ylipahkala H, Fagerlund KM, Väänänen HK. Tartrate_resistant acid phosphatase 5b (TRACP 5b) as a marker of bone resorption. *Clin Lab*. 2006;52(9_10):499_509.
12. Wang Q, Alén M, Nicholson PH, Halleen JM, Alatalo SL, et al. Differential effects of sex hormones on peri_and endocortical bone surfaces in pubertal girls. *J Clin Endocrinol Metab*. 2006 Jan;91(1):277_82. doi: 10.1210/jc.2005_1608.
13. Nenonen A, Cheng S, Ivaska KK, Alatalo SL, et al. Serum TRACP 5b is a useful marker for monitoring

- alendronate treatment: comparison with other markers of bone turnover. *J Bone Miner Res.* 2005 Oct;20(10):1804_12. doi: 10.1359/JBMR.050403.
14. Perez_Amodio S, Vogels IM, Schoenmaker T, Jansen DC, Alatalo SL, et al. Endogenous expression and endocytosis of tartrate_resistant acid phosphatase (TRACP) by osteoblast_like cells. *Bone.* 2005 Jun;36(6):1065_77. doi: 10.1016/j.bone.2005.03.005.
 15. Räisänen SR, Alatalo SL, et al. Macrophages overexpressing tartrate_resistant acid phosphatase show altered profile of free radical production and enhanced capacity of bacterial killing. *Biochem Biophys Res Commun.* 2005 May 27;331(1):120_6. doi: 10.1016/j.bbrc.2005.03.133.
 16. Obrant KJ, Ivaska KK, Gerdhem P, Alatalo SL, et al. Biochemical markers of bone turnover are influenced by recently sustained fracture. *Bone.* 2005 May;36(5):786_92. doi: 10.1016/j.bone.2005.02.009.
 17. Jancikla AJ, Parthasarathy RN, Parthasarathy LK, Seelan RS, Hsueh YC, Rissanen J, Alatalo SL, Halleen JM, Yam LT. Properties and expression of human tartrate_resistant acid phosphatase isoform 5a by monocyte_derived cells. *J Leukoc Biol.* 2005 Feb;77(2):209_18. doi: 10.1189/jlb.0504287.
 18. Salminen E, Ala_Houhala M, Korpela J, Varpula M, Tiitinen SL, Halleen JM, Väänänen HK. Serum tartrate_resistant acid phosphatase 5b (TRACP 5b) as a marker of skeletal changes in prostate cancer. *Acta Oncol.* 2005;44(7):742_7. doi: 10.1080/02841860500327586.
 19. Kiviranta R, Morko J, Alatalo SL, et al. Impaired bone resorption in cathepsin K_deficient mice is partially compensated for by enhanced osteoclastogenesis and increased expression of other proteases via an increased RANKL/OPG ratio. *Bone.* 2005 Jan;36(1):159_72. doi: 10.1016/j.bone.2004.09.020.
 20. Vääräniemi J, Halleen JM, Kaarlionen K, Ylipahkala H, Alatalo SL, et al. Intracellular machinery for matrix degradation in bone_resorbing osteoclasts. *J Bone Miner Res.* 2004 Sep;19(9):1432_40. doi: 10.1359/JBMR.040603.
 21. Alatalo SL, Ivaska KK, et al. Osteoclast_derived serum tartrate_resistant acid phosphatase 5b in Albers_Schonberg disease (type II autosomal dominant osteopetrosis). *Clin Chem.* 2004 May;50(5):883_90. doi: 10.1373/clinchem.2003.029355.
 22. Gerdhem P, Ivaska KK, Alatalo SL, et al. Biochemical markers of bone metabolism and prediction of fracture in elderly women. *J Bone Miner Res.* 2004 Mar;19(3):386_93. doi: 10.1359/JBMR.0301244.
 23. Halleen JM, Räisänen SR, Alatalo SL, Väänänen HK. Potential function for the ROS_generating activity of TRACP. *J Bone Miner Res.* 2003 Oct;18(10):1908_11. doi: 10.1359/jbmr.2003.18.10.1908.
 24. Alatalo SL, Peng Z, et al. A novel immunoassay for the determination of tartrate_resistant acid phosphatase 5b from rat serum. *J Bone Miner Res.* 2003 Jan;18(1):134_9. doi: 10.1359/jbmr.2003.18.1.134.
 25. Halleen JM, Ylipahkala H, Alatalo SL, et al. Serum tartrate_resistant acid phosphatase 5b, but not 5a, correlates with other markers of bone turnover and bone mineral density. *Calcif Tissue Int.* 2002 Jul;71(1):20_5. doi: 10.1007/s00223_001_2122_7.
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 27. Kaija H, Alatalo SL, et al. Phosphatase and oxygen radical_generating activities of mammalian purple acid phosphatase are functionally independent. *Biochem Biophys Res Commun.* 2002 Mar 22;292(1):128_32. doi: 10.1006/bbrc.2002.6615.
 28. Lindberg MK, Erlandsson M, Alatalo SL, et al. Estrogen receptor alpha, but not estrogen receptor beta, is involved in the regulation of the OPG/RANKL (osteoprotegerin/receptor activator of NF_kappa B ligand) ratio and serum interleukin_6 in male mice. *J Endocrinol.* 2001 Dec;171(3):425_33. doi: 10.1677/joe.0.1710425.
 29. Surve VV, Andersson N, Alatalo S, et al. Does combined gastrectomy and ovariectomy induce greater osteopenia in young female rats than gastrectomy alone? *Calcif Tissue Int.* 2001 Nov;69(5):274_80. doi: 10.1007/s002230020044.
 30. Lindberg MK, Alatalo SL, et al. Estrogen receptor specificity in the regulation of the skeleton in female mice. *J Endocrinol.* 2001 Nov;171(2):229_36. doi: 10.1677/joe.0.1710229.
 31. Halleen JM, Alatalo SL, et al. Serum tartrate_resistant acid phosphatase 5b is a specific and sensitive marker of bone resorption. *Clin Chem.* 2001 Mar;47(3):597_600.
 32. Alatalo SL, Halleen JM, et al. Rapid screening method for osteoclast differentiation in vitro that measures tartrate_resistant acid phosphatase 5b activity secreted into the culture medium. *Clin Chem.* 2000 Nov;46(11):1751_4.
 33. Halleen JM, Alatalo SL, et al. Tartrate_resistant acid phosphatase 5b: a novel serum marker of bone resorption. *J Bone Miner Res.* 2000 Jul;15(7):1337_45. doi: 10.1359/jbmr.2000.15.7.1337.

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