

## *Minibiography*

### **Tomi P. Mäkelä, MD PhD**

### **Founding Director, Helsinki Institute of Life Science HiLIFE**

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Professor Tomi P. Mäkelä is Founding Director of Helsinki Institute of Life Science HiLIFE at the University of Helsinki. Initiated in 2017, HiLIFE integrates strengths in life science on university campuses to enhance high quality research and facilitate national and international partnerships in areas of research, infrastructures, and innovations. Mäkelä was the driver of the establishment since the original concept in summer 2014.



Mäkelä is a Professor of Biochemistry and Molecular Biology, and has served as Director of the Institute of Biotechnology, as Vice Dean for Research of the Faculty of Medicine, and as Director and Dean of the Helsinki Biomedical Graduate School at the University of Helsinki. He is Vice Director of the Center of Excellence in Translational Cancer Biology. Mäkelä acts as panel chair at ERC, and as board member of Biocenter Finland and Finnish Academy of Science and Letters.

Mäkelä is scientifically recognized for his work on cell growth signaling and its deregulation in cancer, and especially on the tumor suppressor kinase LKB1. He has 129 publications, 11 100 citations and an H-index of 51. He is an EMBO Member, and has been recognized by the Anders Jahre prize for young investigators.

Mäkelä has also been active in improving conditions for high quality research and developing careers at the University of Helsinki and in Finland:

- A key figure in establishing quality based funding on publications in Finland since 2012 as chair of the JURE working group. This changed the incentive from high quantity to high quality in publications and is changing attitudes rapidly.
- An early proponent of tenure tracks for research positions in Finland and at the University of Helsinki, where the majority of Principal Investigator level appointments (lecturers, professors) are to permanent positions without subsequent evaluations.
- A driver in developing the University of Helsinki as an international environment from recruitments to international Masters programs to introducing English as an administrative language

**NAME:** Tomi P. Mäkelä  
Born 1963

**Address:** Helsinki Institute of Life Science, University of Helsinki  
Biomedicum Helsinki, suite A403b & Viikki Biocenter 2, rm 4006

**Website:** helsinki.fi/hilife

**Tel.:** +358-9-191 25500

**Skype:** tomakela

**E-mail:** tomi.makela@helsinki.fi

## EDUCATION

- M.D., Faculty of Medicine, University of Helsinki 1989
- Doctor of Medical Sciences (equivalent to Ph.D.) , University of Helsinki 1992
- Docent in Molecular and Cancer Biology, University of Helsinki 1995

## PRESENT PROFESSIONAL AFFILIATIONS

- Founding Director, Helsinki Institute of Life Science 14.9.2015 - 31.7.2017
- Professor of Biochemistry and Molecular Biology, Univ Helsinki 2001-
- Vice Director, Center of Excellence in Translational Cancer Biology 2014-2019
- Executive Director, Biomedicum Helsinki Foundation 2015-

## PREVIOUS PROFESSIONAL APPOINTMENTS

- Postdoctoral research fellow,  
Robert A. Weinberg, Whitehead Institute, MIT, 1/93-12/95
- Academy Fellow, Academy of Finland, (Univ. of Helsinki) 1/96-1/98
- Research Professor of the Finnish Cancer Institute (University of Helsinki) 2/98-7/01
- Professor of Medical Cell Biology, University of Helsinki 8/01-3/03
- Director, Institute of Biotechnology, University of Helsinki 1.7.2009-30.4.2014
- Director, Research Program Unit, University of Helsinki (leave) 1.5.2015-14.9.2015

## SCIENTIFIC ACKNOWLEDGEMENTS AND AWARDS

- University of Helsinki Thesis Award 1992
- Finnish Medical Society "Young Investigator" Award 1993
- Tanner Foundation Award 1996
- Kaleva Insurance Company 125 Year Award 1999
- Anders Jahre Medical Prize for Young Investigators 2000
- Sigrid Juselius Foundation Young Investigator Award 2001
- Biomedicum Helsinki Medal 2009

## EDITORIAL BOARD MEMBERSHIPS

- Editorial Board Member, Scientific Reports, Nature Publishing Group 2011-15;
- Editorial Board Member, Duodecim 2001-9.
- Ad hoc referee for Nature, Science, Nature Cell Biology, Nature Genetics, Nature Reviews Cancer, Nature Structural and Molecular Biology, Molecular Cell; EMBO Journal; Molecular Biology of the Cell; Oncogene; Drug Discovery Today; FEBS Letters; EMBO Reports; Human Molecular Genetics; PNAS, Journal of Cell Science, PloS\_ONE, Current Biology, Drug Discovery Today, Gastroenterology, Molecular and Cellular Endocrinology, Neuroscience Letters

**TRUSTEE POSITIONS AND MEMBERSHIPS**

- Member & Chair (14-), ERC Panel LS1 2011-
- Member, EMBO 2003-
- Member, Finnish Academy of Science and Letter 2002-
- Member of the Board, Finnish Academy of Science and Letter 2014-
- Member of the Board, Biocenter Finland 2010-
- Deputy Member of the Board, Health Capital Helsinki 2016-
- Member of the Board, TRANSMED intl. masters program, UH 2017-
- Member, Ministry of Health and Welfare working group on national comprehensive cancer center FICAN 2017-
- Member, Univ Helsinki Innovation Council 2014-16
- Dean of Research, Faculty of Medicine, University of Helsinki 2007-2009
- Chairman of the Board, Finnish Medical Foundation 2010-2013
- Chair, Min Education, national publication registry working group JURE 2009-2011

**SCIENTIFIC ADVISORY BOARD MEMBER**

- Scientific Advisory Board Member & Chair (11-), Finnish Cancer Institute 2004-
- Scientific Advisory Board Member & Chair (13-), Wihuri Research Institute 2003-

**REVIEW AND COMMITTEE WORK**

- Grant and Prize Reviews: ERC LC1 Panel Member (2011-); National Science Foundation (NSF); Cancer Research UK; EMBO Long term and short term fellowships, AICR grants Italy, CNRS grants France, NWO grants, NKI grants, Dutch Digestive Foundation, Netherlands; Swedish Foundation for Strategic Research (SSF); . Jahre Foundation, Norway; In Finland: Academy of Finland, Instrumentarium Science Foundation, Finnish Medical Foundation, Univ. Helsinki funds. Biocenter Oulu
- Selected committee work: Irish Higher Education Authority Graduate School 1st stage Assessment; Ministry of Education and Culture committee on a national publication register, chair (09-11); Univ. Helsinki committee on promoting technology transfer (11-), Lund University Committee on Scientific Misconduct Investigation (11);

**Selected presentations from the lab 2011-17**

- Enabling Systems Biology, Univ College London, 11-14 April, 2011
- Biology of Cancer Microenvironment, Metastasis & Therapeutics, CSHL, NY, USA April 26-30, 2011
- Cancer & Control of Genomic Integrity COST meeting, Sept 30-Oct 2 2011, Zandvoort, Netherlands
- Cell Polarity in Health and Disease, 18 Nov 2012 Ludwig Inst Oxford,
- EMBO Meeting 22-25 Sept 2012 Nice France
- FASEB Biology of cilia and flagella; June 23-28 2013, Niagara Falls, N, USA
- AACR Frontiers in Basic Cancer Research, National Harbor, MD, Sept 18-22, 2013
- Finnish Comprehensive Cancer Center Inaugural symposium (main organizer), June 5-6, 2014
- Max-Planck / Univ Tokyo A subway Map of the City of Cancer, Sept 6, 2014
- Finnish Comprehensive Cancer Center 2nd symposium (organizer), June 16-17, 2016
- Sigrid Juselius Symposium on Cancer & Immunity (organizer), June 12-14, 2017

**MAJOR FUNDING**

- Academy of Finland Center of Excellence 2014-2019 ca. 200 000 €/ year
- Academy of Finland Center of Excellence 2006-2011 ca. 180 000 €/ year
- Finnish Cancer Organizations Grants Annually 1996-, ca. 60 000€/year
- Sigrid Juselius Foundation Grants annually 2000-; ca. 70 000€/year
- EU Network of Excellence "ENFIN" 2006-2011 ca. 70 000€/year
- multiple post doc fellowships to lab, currently two Academy of Finland grants

**INTELLECTUAL PROPERTIES**

PATENT: Alitalo K, Partanen J, Makela T, Korhonen J, Matikainen M-T. (1999) Antibodies recognizing tie receptor tyrosine kinase and uses thereof. US 5,955,291.

**PARTICIPATION IN DEVELOPMENT OF DOCTORAL/MASTERS TRAINING**

- Initiator & Board member of masters programs translational medicine 2010-
- Board member of masters programs in Bioinformatics (2007-2010);
- Coordinator of the Integrative Life Sciences (ILS) doctoral program initiative 2013
- Board Member of the Graduate Program in Biotech. and Mol.Biol (GPBM; BCH) 2011-14
- Initiator of the International LERU Biomedical Graduate Program 2006
- Initiator of a joint doctoral degree program between Karolinska Institutet & UH 2007
- Chairman of the Board, Helsinki Biomedical Graduate School (HBGS) 2007-2013
- Director, Helsinki Biomedical Graduate School 2002-2007
- Course organizer for doctoral and masters studies in molecular/cancer biology 1998-

**PARTICIPATION IN CORE FACILITIES**

- Development of national genomics services as chair of Biocenter Finland Genome-wide Methods network 2010-14; <http://www.biocenter.fi/index.php?page=genome-wide-methods>
- Management of the Genome Biology Unit; (2010-2011)
- Management of the BCH yeast two-hybrid core facility 1996-2006.; Meilahti Transgenic Facility 2001-2005.

**MENTORING**

- Mentored 13 PhDs, 4 MD PhDs, and 7 post-doctoral fellows including:
- **Damien Hermand**, FNRS fellow; University of Namur; **Derrick Rossi**, Assoc. Prof; Harvard Stem Cell Institute; Jianmin Wu, Group Leader, Garvan Inst Medical Res, Australia; **Päivi M. Ojala**, Finnish Cancer Inst Research Professor, Univ Helsinki; **Tea Vallenius**, Academy Fellow, Univ of Helsinki; **Pekka Katajisto**, Associate Professor (tenure-track), Univ Helsinki; **Kari Vaahtomeri**, post doc, Alitalo lab, U Helsinki; **Katja Helenius**, post-doc: Cantley lab, HMS/Sloan-Kettering; **Udd, Lina** MD PhD, UH, 2012, **Ying Yang**, PhD, UH, 2014; post doc USCF; **Saara Ollila**; Juselius Fellow, Columbia University;

**PROFESSIONAL DEVELOPMENT**

- DeepLead Leadership Development Course 2012
- Harvard Business School Authentic Leadership Development Course 2015

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**PUBLICATION PROFILE - Tomi P. Mäkelä**

*High impact publications in Nature (3); Science (2); Nature Genetics (2); Cell Metabolism (1); Nature Cell Biology (1); Nature Methods (1); Nature Communications (1); EMBO J (10); PNAS (6). 129 publications have been cited 11 400 times; Hirsch index 51 (Google Sch).*

**20 selected publications**

Georgiadou M, Lilja J, Jacquemet G, Guzmán C, Rafeeva M, Alibert C, Yan Y, Sahgal P, Lerche M, Manneville JB, Makela TP, Ivaska J. AMPK negatively regulates tensin-dependent integrin activity  
*J Cell Biol*, in press.

Yan Y, Ollila S, Wong IP, Vallenius T, Palvimo JJ, Vaahtomeri K, Makela TP. SUMOylation of AMPK $\alpha$ 1 by PIAS4 specifically regulates mTORC1 signalling.  
*Nature Commun*;6:8979. doi: 10.1038/ncomms9979.; 2015.

Kuuluvainen E, Hakala H, Havula E, Sahal Estimé M, Rämetsä M, Hietakangas V, Makela TP. Cyclin-dependent Kinase 8 Module Expression Profiling Reveals Requirement of Mediator Subunits 12 and 13 for Transcription of Serpent-dependent Innate Immunity Genes in Drosophila.  
*J Biol Chem*. 6;289(23):16252-61. doi: 10.1074/jbc.M113.541904. 2014.

Yang Y, Roine N, Makela TP. CCRK depletion inhibits glioblastoma cell proliferation in a cilium-dependent manner. *EMBO Reports*, 14: 741-7. 2013.

Partanen JI, Tervonen TA, Myllynen M, Lind E, Imai M, Katajisto P, Dijkgraaf GJP, Kovanen PE, Makela TP, Werb Z, Klefstrom J. Tumor suppressor function of Liver kinase B1 (Lkb1) is linked to regulation of epithelial integrity. *P Natl Acad Sci USA* 109: E388-E397; 2012

Vallenius T, Vaahtomeri K, Kovacs B, Osiceanu AM, Viljanen M, Mäkelä TP. An association between NUA2 and MRIP reveals a novel mechanism for regulation of actin stress fibers.  
*Journal of cell science* 124: 384-393; 2011

Udd L, Katajisto P, Kyyronen M, Ristimäki AP, Mäkelä TP. Impaired gastric gland differentiation in Peutz-Jeghers syndrome. *Am J Pathol* 176: 2467-2476; 2010

Djouder N, Tuerk RD, Suter M, Salvioni P, Thali RF, Scholz R, Vaahtomeri K, Auchli Y, Rechsteiner H, Brunisholz RA, Viollet B, Mäkelä TP, Wallimann T, Neumann D, Krek W. PKA phosphorylates and inactivates AMPK $\alpha$  to promote efficient lipolysis. *EMBO J* 29: 469-481; 2010

Wu J, Vallenius T, Ovaska K, Westermarck J, Mäkelä TP, Hautaniemi S. Integrated network analysis platform for protein-protein interactions. *Nat Methods* 6: 75-77; 2009

Vaahtomeri K, Ventela E, Laajanen K, Katajisto P, Wipff PJ, Hinz B, Vallenius T, Tiainen M, Mäkelä TP. Lkb1 is required for TGFbeta-mediated myofibroblast differentiation. *J Cell Sci* 121: 3531-3540; 2008

Londesborough A, Vaahtomeri K, Tiainen M, Katajisto P, Ekman N, Vallenius T, Mäkelä TP. LKB1 in endothelial cells is required for angiogenesis and TGFbeta-mediated vascular smooth muscle cell recruitment. *Development* 135: 2331-2338; 2008

Katajisto P, Vaahtomeri K, Ekman N, Ventela E, Ristimäki A, Bardeesy N, Feil R, DePinho RA, Mäkelä TP. LKB1 signaling in mesenchymal cells required for suppression of gastrointestinal polyposis. *Nat Genet* 40: 455-459; 2008

Udd L, Katajisto P, Rossi DJ, Lepistö A, Lahesmaa AM, Ylikorkala A, Jarvinen HJ, Ristimäki AP, Mäkelä TP. Suppression of Peutz-Jeghers polyposis by inhibition of cyclooxygenase-2. *Gastroenterology* 127: 1030-1037; 2004

Lizcano JM, Goransson O, Toth R, Deak M, Morrice NA, Boudeau J, Hawley SA, Udd L, Mäkelä TP, Hardie DG, Alessi DR. LKB1 is a master kinase that activates 13 kinases of the AMPK subfamily, including MARK/PAR-1. *EMBO J* 23: 833-843; 2004

Rossi DJ, Ylikorkala A, Korsisaari N, Salovaara R, Luukko K, Launonen V, Henkemeyer M, Ristimäki A, Aaltonen LA, Mäkelä TP. Induction of cyclooxygenase-2 in a mouse model of Peutz-Jeghers polyposis. *Proc Natl Acad Sci U S A* 99: 12327-12332; 2002

Ylikorkala A, Rossi DJ, Korsisaari N, Luukko K, Alitalo K, Henkemeyer M, Mäkelä TP. Vascular abnormalities and deregulation of VEGF in Lkb1-deficient mice. *Science* 293: 1323-1326; 2001

Rossi DJ, Londesborough A, Korsisaari N, Pihlak A, Lehtonen E, Henkemeyer M, Mäkelä TP. Inability to enter S phase and defective RNA polymerase II CTD phosphorylation in mice lacking Mat1. *EMBO J* 20: 2844-2856; 2001

Tiainen M, Ylikorkala A, Mäkelä TP. Growth suppression by Lkb1 is mediated by a G(1) cell cycle arrest. *Proc Natl Acad Sci U S A* 96: 9248-9251; 1999

Mäkelä TP, Parvin JD, Kim J, Huber LJ, Sharp PA, Weinberg RA. A kinase-deficient transcription factor TFIIH is functional in basal and activated transcription. *Proc Natl Acad Sci U S A* 92: 5174-5178; 1995

Mäkelä TP, Tassan JP, Nigg EA, Frutiger S, Hughes GJ, Weinberg RA. A cyclin associated with the CDK-activating kinase MO15. *Nature* 371: 254-257; 1994

Mäkelä TP, Koskinen PJ, Vastrik I, Alitalo K. Alternative forms of Max as enhancers or suppressors of Myc-ras cotransformation. *Science* 256: 373-377; 1992

**All original publications (reverse chronology)**

- Georgiadou M, Lilja J, Jacquemet G, Guzmán C, Rafeeva M, Alibert C, Yan Y, Sahgal P, Lerche M, Manneville JB, Mäkelä TP, Ivaska J. AMPK negatively regulates tensin-dependent integrin activity. **J Cell Biol.** 2017 Apr 3;216(4):1107-11doi: 10.1083/jcb.201609066.
- Yan Y, Ollila S, Wong IP, Vallenius T, Palvimo JJ, Vaahtomeri K, Mäkelä TP. SUMOylation of AMPK $\alpha$ 1 by PIAS4 specifically regulates mTORC1 signalling. **Nat Commun.** 2015 Nov 30;6:8979. doi: 10.1038/ncomms9979.
- Kuuluvainen E, Hakala H, Havula E, Sahal Estimé M, Rämetsä M, Hietakangas V, Mäkelä TP. Cyclin-dependent kinase 8 module expression profiling reveals requirement of mediator subunits 12 and 13 for transcription of Serpin-dependent innate immunity genes in *Drosophila*. **J Biol Chem.** 2014 Jun 6;289(23):16252-61. doi: 10.1074/jbc.M113.541904.
- Yang Y, Roine N, Mäkelä TP. CCRK depletion inhibits glioblastoma cell proliferation in a cilium-dependent manner. **EMBO Rep.** 2013 Aug;14(8):741-7. doi: 10.1038/embor.2013.80.
- Udd L, Gao Y, Ristimäki AP, Mäkelä TP. N-methylnitrosourea aggravates gastrointestinal polyposis in Lkb1 $^{+/-}$  mice. **Carcinogenesis.** 2013 Oct;34(10):2409-14. doi: 10.1093/carcin/bgt188.
- Kovac B, Teo JL, Mäkelä TP, Vallenius T. Assembly of non-contractile dorsal stress fibers requires  $\alpha$ -actinin-1 and Rac1 in migrating and spreading cells. **J Cell Sci.** 2013 Jan 1;126(Pt 1):263-73. doi: 10.1242/jcs.115063.
- Partanen JI, Tervonen TA, Myllynen M, Lind E, Imai M, Katajisto P, Dijkgraaf GJ, Kovanen PE, Mäkelä TP, Werb Z, Klefström J. Tumor suppressor function of Liver kinase B1 (Lkb1) is linked to regulation of epithelial integrity. **Proc Natl Acad Sci U S A.** 2012 Feb 14;109(7):E388-97. doi: 10.1073/pnas.1120421109.
- Thiel A, Narko K, Heinonen M, Hemmes A, Tomasetto C, Rio MC, Haglund C, Mäkelä TP, Ristimäki A. Inhibition of cyclooxygenase-2 causes regression of gastric adenomas in trefoil factor 1 deficient mice. **Int J Cancer.** 2012 Sep 1;131(5):1032-41. doi: 10.1002/ijc.27331.
- Chilov D, Sinjushina N, Rita H, Taketo MM, Mäkelä TP, Partanen J. Phosphorylated  $\beta$ -catenin localizes to centrosomes of neuronal progenitors and is required for cell polarity and neurogenesis in developing midbrain. *Dev Biol.* 2011 Sep 1;357(1):259-68. doi: 10.1016/j.ydbio.2011.06.029.
- Helenius K, Yang Y, Tselykh TV, Pessa HK, Frilander MJ, Mäkelä TP. Requirement of TFIIH kinase subunit Mat1 for RNA Pol II C-terminal domain Ser5 phosphorylation, transcription and mRNA turnover. *Nucleic Acids Res.* 2011 Jul;39(12):5025-35. doi: 10.1093/nar/gkr107.
- Vallenius T, Vaahtomeri K, Kovac B, Osiceanu AM, Viljanen M, Mäkelä TP. An association between NUA2 and MRIP reveals a novel mechanism for regulation of actin stress fibers. *J Cell Sci.* 2011 Feb 1;124(Pt 3):384-93. doi: 10.1242/jcs.072660.
- Udd L, Katajisto P, Kyyrönen M, Ristimäki AP, Mäkelä TP. Impaired gastric gland differentiation in Peutz-Jeghers syndrome. *Am J Pathol.* 2010 May;176(5):2467-76. doi: 10.2353/ajpath.2010.090519.
- Tanenbaum ME, Vallenius T, Geers EF, Greene L, Mäkelä TP, Medema RH. Cyclin G-associated kinase promotes microtubule outgrowth from chromosomes during spindle assembly. *Chromosoma.* 2010 Aug;119(4):415-doi: 10.1007/s00412-010-0267-8.
- Björklund MA, Vaahtomeri K, Peltonen K, Viollet B, Mäkelä TP, Band AM, Laiho M. Non-CDK-bound p27 (p27<sup>NCDK</sup>) is a marker for cell stress and is regulated through the Akt/PKB and AMPK-kinase pathways. *Exp Cell Res.* 2010 Mar 10;316(5):762-74. doi: 10.1016/j.yexcr.2009.12.014.
- Djouder N, Tuerk RD, Suter M, Salvioni P, Thali RF, Scholz R, Vaahtomeri K, Auchli Y, Rechsteiner H, Brunisholz RA, Viollet B, Mäkelä TP, Wallimann T, Neumann D, Krek W. PKA phosphorylates and inactivates AMPK $\alpha$  to promote efficient lipolysis. *EMBO J.* 2010

- Jan 20;29(2):469-81. doi: 10.1038/emboj.2009.339.
- Wu J, Vallenius T, Ovaska K, Westermarck J, Mäkelä TP, Hautaniemi S. Integrated network analysis platform for protein-protein interactions. *Nat Methods*. 2009 Jan;6(1):75-7. doi: 10.1038/nmeth.1282.
- Helenius K, Yang Y, Alasaari J, Mäkelä TP. Mat1 inhibits peroxisome proliferator-activated receptor gamma-mediated adipocyte differentiation. *Mol Cell Biol*. 2009 Jan;29(2):315-23. doi: 10.1128/MCB.00347-08.
- Vahtomeri, K., Ventelä, E., Laajanen, K., Katajisto, P., Wipf, P.-J., Hinz, B., Vallenius, T., Tiainen, M. and Mäkelä, T.P. (2008) Lkb1 is required for TGFbeta-mediated myofibroblast differentiation. *J Cell Sci*, in press.
- Londesborough, A., Vahtomeri, K., Tiainen, M., Katajisto, P., Ekman, N., Vallenius, T. and Makela, T.P. (2008) LKB1 in endothelial cells is required for angiogenesis and TGF{beta}-mediated vascular smooth muscle cell recruitment. *Development*, 135, 2331-2338.
- Katajisto, P., Vahtomeri, K., Ekman, N., Ventela, E., Ristimaki, A., Bardeesy, N., Feil, R., DePinho, R.A. and Makela, T.P. (2008) LKB1 signaling in mesenchymal cells required for suppression of gastrointestinal polyposis. *Nat Genet*, 40, 455-459.
- Partanen, J.I., Nieminen, A.I., Mäkelä, T.P. and Klefstrom, J. (2007b) Suppression of oncogenic properties of c-Myc by LKB1-controlled epithelial organization. *Proc Natl Acad Sci U S A*, 104, 14694-14699.
- Westerling, T., Kuuluvainen, E. and Mäkelä, T.P. (2007) Cdk8 is essential for preimplantation mouse development. *Mol Cell Biol*, 27, 6177-6182.
- Sano, M., Izumi, Y., Helenius, K., Asakura, M., Rossi, D.J., Xie, M., Taffet, G., Hu, L., Pautler, R.G., Wilson, C.R., Boudina, S., Abel, E.D., Taegtmeier, H., Scaglia, F., Graham, B.H., Kralli, A., Shimizu, N., Tanaka, H., Mäkelä, T.P. and Schneider, M.D. (2007) Menage-a-trois 1 is critical for the transcriptional function of PPARgamma coactivator 1. *Cell Metab*, 5, 129-142.
- Alhopuro, P., Katajisto, P., Lehtonen, R., Ylisaukko-Oja, S.K., Naatsaari, L., Karhu, A., Westerman, A.M., Wilson, J.H., de Rooij, F.W., Vogel, T., Moeslein, G., Tomlinson, I.P., Aaltonen, L.A., Mäkelä, T.P. and Launonen, V. (2005) Mutation analysis of three genes encoding novel LKB1-interacting proteins, BRG1, STRADalpha, and MO25alpha, in Peutz-Jeghers syndrome. *Br J Cancer*, 92, 1126-1129.
- Vallenius, T., Scharm, B., Vesikansa, A., Luukko, K., Schafer, R. and Mäkelä, T.P. (2004) The PDZ-LIM protein RIL modulates actin stress fiber turnover and enhances the association of alpha-actinin with F-actin. *Exp Cell Res*, 293, 117-128.
- Udd, L., Katajisto, P., Rossi, D.J., Lepisto, A., Lahesmaa, A.M., Ylikorkala, A., Jarvinen, H.J., Ristimaki, A.P. and Mäkelä, T.P. (2004) Suppression of Peutz-Jeghers polyposis by inhibition of cyclooxygenase-2. *Gastroenterology*, 127, 1030-1037.
- Lizcano, J.M., Goransson, O., Toth, R., Deak, M., Morrice, N.A., Boudeau, J., Hawley, S.A., Udd, L., Mäkelä, T.P., Hardie, D.G. and Alessi, D.R. (2004) LKB1 is a master kinase that activates 13 kinases of the AMPK subfamily, including MARK/PAR-1. *Embo J*, 23, 833-843.
- Jarviluoma, A., Koopal, S., Rasanen, S., Mäkelä, T.P. and Ojala, P.M. (2004) KSHV viral cyclin binds to p27KIP1 in primary effusion lymphomas. *Blood*, 104, 3349-3354.
- Bamps, S., Westerling, T., Pihlak, A., Tafforeau, L., Vandenhoute, J., Mäkelä, T.P. and Hermand, D. (2004) Mcs2 and a novel CAK subunit Pmh1 associate with Skp1 in fission yeast. *Biochem Biophys Res Commun*, 325, 1424-1432.
- Spahr, H., Khorosjutina, O., Baraznenok, V., Linder, T., Samuelson, C.O., Hermand, D., Mäkelä, T.P., Holmberg, S. and Gustafsson, C.M. (2003) Mediator influences Schizosaccharomyces pombe RNA polymerase II-dependent transcription in vitro. *J Biol Chem*, 278, 51301-51306.
- Korsisaari, N., Rossi, D.J., Luukko, K., Huebner, K., Henkemeyer, M. and Mäkelä, T.P. (2003) The



- histidine triad protein Hint is not required for murine development or Cdk7 function. **Mol Cell Biol**, 23, 3929-3935.
- Hernand, D., Bamps, S., Tafforeau, L., Vandenhoute, J. and Mäkelä, T.P. (2003) Skp1 and the F-box protein Pof6 are essential for cell separation in fission yeast. **J Biol Chem**, 278, 9671-9677.
- Hawley, S.A., Boudeau, J., Reid, J.L., Mustard, K.J., Udd, L., Mäkelä, T.P., Alessi, D.R. and Hardie, D.G. (2003) Complexes between the LKB1 tumor suppressor, STRAD alpha/beta and MO25 alpha/beta are upstream kinases in the AMP-activated protein kinase cascade. **J Biol**, 2, 28.
- Vallenius, T. and Mäkelä, T.P. (2002) Clik1: a novel kinase targeted to actin stress fibers by the CLP-36 PDZ-LIM protein. **J Cell Sci**, 115, 2067-2073.
- Tiainen, M., Vaahromeri, K., Ylikorkala, A. and Mäkelä, T.P. (2002) Growth arrest by the LKB1 tumor suppressor: induction of p21(WAF1/CIP1). **Hum Mol Genet**, 11, 1497-1504.
- Rossi, D.J., Ylikorkala, A., Korsisaari, N., Salovaara, R., Luukko, K., Launonen, V., Henkemeyer, M., Ristimäki, A., Aaltonen, L.A. and Mäkelä, T.P. (2002) Induction of cyclooxygenase-2 in a mouse model of Peutz-Jeghers polyposis. **Proc Natl Acad Sci U S A**, 99, 12327-12332.
- Petrova, T.V., Makinen, T., Mäkelä, T.P., Saarela, J., Virtanen, I., Ferrell, R.E., Finegold, D.N., Kerjaschki, D., Ylä-Herttuala, S. and Alitalo, K. (2002) Lymphatic endothelial reprogramming of vascular endothelial cells by the Prox-1 homeobox transcription factor. **Embo J**, 21, 4593-4599.
- Li, X.D., Mäkelä, T.P., Guo, D., Soliymani, R., Koistinen, V., Vapalahti, O., Vaheri, A. and Lankinen, H. (2002) Hantavirus nucleocapsid protein interacts with the Fas-mediated apoptosis enhancer Daxx. **J Gen Virol**, 83, 759-766.
- Korsisaari, N., Rossi, D.J., Paetau, A., Charnay, P., Henkemeyer, M. and Mäkelä, T.P. (2002) Conditional ablation of the Mat1 subunit of TFIIH in Schwann cells provides evidence that Mat1 is not required for general transcription. **J Cell Sci**, 115, 4275-4284.
- Ylikorkala, A., Rossi, D.J., Korsisaari, N., Luukko, K., Alitalo, K., Henkemeyer, M. and Mäkelä, T.P. (2001) Vascular abnormalities and deregulation of VEGF in Lkb1-deficient mice. **Science**, 293, 1323-1326.
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