

CURRICULUM VITAE

Name: Anna A Sablina

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Education:

1992-1997 BS, MS in Biochemistry, Moscow State University, Moscow, Russia
1997-2002 PhD in Molecular Oncology, Cancer Research Center, Moscow, Russia
2000 Visiting Graduate Student, Princeton University, Princeton, USA

Post Graduate Training:

2002-2004 Research Fellow, Department of Molecular Biology, Cleveland Clinic Foundation, Cleveland, USA
2004-2009 Research Fellow, Department of Medical Oncology, Dana-Farber Cancer Institute, Boston, USA
2007-2009 Instructor, Harvard Medical School, Boston, USA

Academic Appointments:

01/07/2009 - present *Group Leader, VIB Center for the Biology of Disease, VIB, Leuven, Belgium*
01/10/2009-01/06/2016 *Assistant Professor, Center for Human Genetics, KU Leuven, Belgium*
01/06/2016-present *Associate Professor, Department of Oncology, KU Leuven, Belgium*

Other Professional Positions and Major Visiting Appointments:

2001 Visiting Scientist, Department of Genetics, University of Illinois at Chicago, USA

Awards and Honors:

1999 *George Soros Honors Student – Moscow State University, Russia*
2000, 2001 *George Soros Honors Graduate Student – Cancer Research Center, Moscow, Russia*
2000 *Presidential Award for Graduate Students Moscow, Russia*
2001 *Honors Award from Russian Fund for Basic Research, Moscow, Russia*
2001 *Research Fellowship, International Union against Cancer, Switzerland*
2002 *European Academy of Science Award for Young Scientists*
2003 *Award for the best scientific work of young scientist from “Biotek” Corporation, Russia*
2004 *Lower Award, Cleveland Clinic Foundation, Cleveland, USA*
2004 *The Dekker Foundation Young Investigator Award, Oxygen Club California, USA*
2008 *NIH Pathway to Independence (PI) Award (K99/R00), National Institute of Health, USA*
2008 *Eleanor and Miles Shore 50th Anniversary Award, Harvard Medical School, USA*
2010 *Swiss Bridge Award, Swiss Bridge Foundation, Switzerland*
2014 *EMBO Young Investigator Award, Germany*

Teaching:

Advanced topic in Oncology (2nd Master Biomedical Sciences)
Hot Topics in Oncology (2nd Master Biomedical Sciences)

Doctoral School of Biomedical Sciences:
Guest lecturer in Cancer Program

Doctoral Dissertations Defended:

Yanyan Cai (2016) The role of chromosome 8p deletion in breast cancer development and progression.
Jonathan Crowther (2016) The role of large chromosomal deletions in cancer.
Abbasi Asbagh Layka (2016) The role of protein tyrosine phosphatase receptor type 0 (PTPRO) in colon cancer.
Dok Růveyda (2015). Unraveling and targeting radiotherapy response in HPV related head and neck cancers.
Simicek Michal (2014). The role of monoubiquitination in control of small GTPases.
Kalev Petar (2013). The role of Protein Phosphatase 2A in double-strand break repair.

Invited Lectures at international meetings and invited seminars: last 10 years

2019 RASopathies Symposium, Baltimore
2019 Center for Cancer Research, National Cancer Institute, Frederick
2019 Heart Failure Association Winter Research Meeting, Les Diablerets
2018 Fusion Conference "The Ubiquitin System: Function and its Role in Disease", the Bahamas
2018 Ce-M-M- Research Center for Molecular Medicine, Vienna, Austria
2017 Leiden University Medical Centre, Leiden, Netherlands
2017 VU University Medical Center, Amsterdam, Netherlands
2017 Johannes Gutenberg University, Mainz, Germany
2017 "Deubiquitinase meeting", Oxford, UK
2017 EMBO conference "Ubiquitin meeting", Croatia
2017 ENDO 2017, Endocrine Society, USA
2017 Institut Gustave Roussy, Paris, France
2016 Trinity College, Dublin, Ireland
2016 Roswell Park, Buffalo, USA
2016 EMBO conference "Cellular signaling and cancer therapy", Croatia
2016 FASEB Summer Research Conference "GTPases in Trafficking, Autophagy and Disease", USA
2015 EMBO Young Scientists Forum, Warsaw, Poland
2014 EMBO Young Scientists Forum, CEITEC, Brno, Czech Republic
2014 Centre de Recherche en Cancérologie de Marseille, France
2014 University Medical Center, Utrecht, Netherlands
2014 Université Libre de Bruxelles, Brussels
2013 Lawrence Berkeley National Laboratory, Berkeley, USA
2013 University of California, Irvine, USA
2013 Fox Chase Cancer Institute, Philadelphia, USA
2013 University of Richmond, Richmond, USA
2013 Harvard Medical School, Boston

Publications:

Sewduth RN, Baietti MF, **Sablina AA**. Cracking the Monoubiquitin Code of Genetic Diseases.2020 *Int J Mol Sci*. 2020 Apr 25;21(9):E3036.

Nussinov R, Jang H, Zhang M, Tsai CJ, **Sablina AA**. The Mystery of Rap1 Suppression of Oncogenic Ras. 2020 *Trends in Cancer* pii: S2405-8033(20)30061-3.

Sewduth RN, Pandolfi S, Steklov M, Sheryazdanova A, Zhao P, Criem N, Baietti MF, Lechat B, Quarck R, Impens F, **Sablina A**. The Noonan Syndrome Gene Lztr1 Controls Cardiovascular Function by Regulating Vesicular Trafficking. 2020 *Circulation Research* epub.

Manziona MG, Rombouts J, Steklov M, Pasquali L, Sablina A, Gelens L, Qian J, Bollen M. Co-regulation of the antagonistic RepoMan: Aurora-B pair in proliferating cells. 2020 *Mol Biol Cell* 15;31(6):419-438.

De Troyer L, Zhao P, Pastor T, Baietti MF, Barra J, Vendramin R, Dok R, Lechat B, Najm P, Van Haver D, Impens F, Leucci E, **Sablina AA**. Stress-induced lncRNA LASTR fosters cancer cell fitness by regulating the activity of the U4/U6 recycling factor SART3. 2020 *Nucleic Acids Research* 48(5):2502-2517.

Gripp KW, Schill L, Schoyer L, Stronach B, Bennett AM, Blaser S, Brown A, Burdine R, Burkitt-Wright E, Castel P, Darilek S, Dias A, Dyer T, Ellis M, Erickson G, Gelb BD, Green T, Gross A, Ho A, Holder JL Jr, Inoue SI, Jelin AC, Kennedy A, Klein R, Kontaridis MI, Magoulas P, McConnell DB, McCormick F, Neel BG, Prada CE, Rauen KA, Roberts A, Rodriguez-Viciano P, Rosen N, Rumbaugh G, **Sablina A**, Solman M, Tartaglia M, Thomas A, Timmer WC, Venkatachalam K, Walsh KS, Wolters PL, Yi JS, Zenker M, Ratner N. The sixth international RASopathies symposium: Precision medicine-From promise to practice. 2020 *Am J Med Genet A*. 182(3):597-606.

Steklov M, Pandolfi S, Baietti MF, Batiuk A, Carai P, Najm P, Zhang M, Jang H, Renzi F, Cai Y, Abbasi Asbagh L, Pastor T, De Troyer M, Simicek M, Radaelli E, Brems H, Legius E, Tavernier J, Gevaert K, Impens F, Messiaen L, Nussinov R, Heymans S, Eyckerman S, Sablina AA. Mutations in LZTR1 drive human disease by dysregulating RAS ubiquitination. 2018 *Science* 362(6419):1177-1182

Dok R, Bamps M, Glorieux M, Zhao P, **Sablina A***, Nuyts S* [equal contribution]. 2019 Radiosensitization approaches for HPV-positive and HPV-negative head and neck squamous carcinomas. *Int J Cancer* 146(4):1075-1085.

Sents W, Meeusen B, Kalev P, Radaelli E, Sagaert X, Miermans E, Haesen D, Lambrecht C, Dewerchin M, Carmeliet P, Westermarck J, **Sablina AA**, Janssens V. PP2A Inactivation Mediated by PPP2R4 Haploinsufficiency Promotes Cancer Development. 2017 *Cancer Research* 77(24):6825-6837.

Cai Y, Crowther J, Pastor T, Abbasi Asbagh L, Baietti MF, De Troyer M, Vazquez I, Talebi A, Renzi F, Dehairs J, Swinnen JV, **Sablina AA**. Loss of Chromosome 8p Governs Tumor Progression and Drug Response by Altering Lipid Metabolism. 2016 *Cancer Cell* 29(5):751-766.

Lambrecht C, Libbrecht L, Sagaert X, Pauwels P, Hoorne Y, Crowther J, Louis JV, Sents W, **Sablina A**, Janssens V. Loss of protein phosphatase 2A regulatory subunit B56δ promotes spontaneous tumorigenesis in vivo. 2018 *Oncogene* 37(4):544-552.

Baietti MF, Simicek M, Abbasi Asbagh L, Radaelli E, Lievens S, Crowther J, Steklov M, Aushev VN, García DM, Tavernier J, **Sablina AA**. OTUB1 triggers lung cancer development by inhibiting RAS monoubiquitination. 2016 *EMBO Molecular Medicine* 8(3):288-303.

Adriaens C, Standaert L, Barra J, Latil M, Verfaillie A, Kalev P, Boeckx B, Wijnhoven PW, Radaelli E, Vermi W, Leucci E, Lapouge G, Beck B, van den Oord J, Nakagawa S, Hirose T, **Sablina AA**, Lambrechts D, Aerts S, Blanpain C, Marine JC. p53 induces formation of NEAT1 lncRNA-containing paraspeckles that modulate replication stress response and chemosensitivity. 2016 *Nature Medicine* 22(8):861-868.

Naetar N, Soundarapandian V, Litovchick L, Goguen KL, Sablina AA, Bowman-Colin C, Sicinski P, Hahn WC, DeCaprio JA, Livingston DM. PP2A-Mediated Regulation of Ras Signaling in G2 Is Essential for Stable Quiescence and Normal G1 Length. 2014 *Molecular Cell* 54(6):932-945.

Dok R, Kalev P, Van Limbergen EJ, Asbagh LA, Vázquez I, Hauben E, **Sablina A**, Nuyts S. p16INK4a Impairs Homologous Recombination-Mediated DNA Repair in Human Papillomavirus-Positive Head and Neck Tumors. 2014 *Cancer Research* 74(6):1739-1751.

Simicek M, Lievens S, Laga M, Guzenko D, Aushev VN, Kalev P, Baietti MF, Strelkov SV, Gevaert K, Tavernier J, **Sablina AA**. The deubiquitinase USP33 discriminates between RalB functions in autophagy and innate immune response. 2013 *Nature Cell Biology* 15(10):1220-1230.

Kalev P, Simicek M, Vazquez I, Munck S, Chen L, Soin T, Danda N, Chen W, **Sablina A**. Loss of PPP2R2A inhibits homologous recombination DNA repair and predicts tumor sensitivity to PARP inhibition. 2012 *Cancer Research* 72(24):6414-24.

Sablina AA [correspondent author], Hector M, Colpaert N, Hahn WC. Identification of PP2A complexes and pathways involved in cell transformation. 2010 *Cancer Research* 70(24):10474-84.

Kalev P, Sablina AA. Protein Phosphatase 2A as a Potential Target for Anticancer Therapy. 2011 *Anticancer Agents Med Chem*. 11(1):38-46.

Puustinen P, Junttila MR, Vanhatupa S, Sablina AA, Hector ME, Teittinen K, Raheem O, Ketola K, Lin S, Kast J, Haapasalo H, Hahn WC, Westermarck J. PME-1 protects extracellular signal-regulated kinase pathway activity from protein phosphatase 2A-mediated inactivation in human malignant glioma. 2009 *Cancer Research* 69(7); 2870-2877.

Sablina AA, Hahn WC. SV40 small T antigen and PP2A phosphatase in cell transformation. 2008 *Cancer and Metastasis Reviews* 27(2):137-46.

Sablina AA, Hahn WC. The Role of PP2A A Subunits in Tumor Suppression. 2007 *Cell Adhesion and Migration* 1(3): 140-1.

Cho U, Morrone S, Sablina AA, Arroyo JD, Hahn WC, Xu W. Structural basis of PP2A inhibition by small-t antigen. 2007 *PLoS Biology* 5; e202.

Sablina AA, Chen W, Arroyo JD, Corral L, Hector M, Sara E, Bulmer, DeCaprio JA, Hahn WC. The tumor suppressor PP2A A β regulates the RalA GTPase. *Cell* 2007; 129(5): 969-982.

Gur'ianova OA, Sablina AA, Chumakov PM, Frolova EI. Down-regulation of TRIP6 expression induces actin cytoskeleton rearrangements in human carcinoma cell lines. 2005 *Mol Biol (Mosk)*. 39(5): 905-909.

Sablina AA, Budanov AV, Ilyinskaya GV, Agapova LS, Kravchenko JE, Chumakov PM. The antioxidants function of the p53 tumor suppressor. 2005 *Nature Medicine* 11: 1306-1313.

Budanov* AV, Sablina* AA [equal contribution], Feinstein E, Koonin EV, Chumakov PM. Peroxiredoxin function is controlled by p53-modulated sestrins, homologs to bacterial AhpD. 2004 *Science* 304(5670): 596-600.

Sablina AA, Chumakov PM, Kopnin BP. Tumor-Suppressor p53 and its homologue p73 α affect cell migration. 2003 *J. Biol. Chem*. 278(30): 27362-27371.

Kopnin PB, Ivanov AV, Il'inskaia GV, Sablina AA, Kopnin BP, Chumakov PM. The protective role of p53 in Ras-induced transformation of REF52 cells. 2003 *Mol Biol (Mosk)*. 37(3): 458-471.

Zamyatnin AA, Solovyev AG, Sablina AA, Agranovsky AA, Katul L, Vetten HJ, Schiemann J, Hinkkanen AE, Lehto K, Morozov Syu. Dual-color imaging of membrane protein targeting directed by poa semilient virus movement protein TGBp3 in plant and mammalian cells. 2002 *J. Gen. Virol*. 83: 651-662.

Sablina AA, Chumakov PM, Levine AJ, Kopnin BP. p53 activation in response to microtubule disruption is mediated by integrin-Erk signaling. 2001 *Oncogene* 20(8): 899-909.

Prokhorchuk AV, Aitkhozhina DS, Sablina AA, Ruzov AS, Prokhorchuk EB. KAISO-a new member of the BTB/POZ family specifically binds to methylated DNA sequences. 2001 *Genetika* 37: 737-744.

Sablina AA, Agapova LS, Chumakov PM, Kopnin BP. 53 does not control the spindle assembly checkpoint but mediates G1 arrest in response to disruption of microtubule system. 1999 *Cell Biol. Internatl*. 23: 323-334.

Agapova LS, Ivanov AV, Sablina AA, Kopnin PB, Sokova OI, Chumakov PM, Kopnin BP. 53-dependent effects of RAS oncogene on chromosome stability and cell cycle checkpoints. 1999 **Oncogene** 18: 3135-3142.

Sablina AA, Ilyinskay, GV, Rubtsova SN, Agapova LS, Chumakov PM, Kopnin BP. Activation of p53-mediated cell cycle checkpoint in response to formation of micronuclei. 1998 **J. Cell Science** 111: 977-984.

Patents

Phosphorylated Ra1A

Patent Number: US 08637260

Patent Assignee: Dana Farber Cancer Institute Inc

Inventor(s): Hahn, William C.; Corral, Laura; Sablina, Anna A.

Official Gazette of the United States Patent and Trademark Office Patents Published: JAN 28 2014

PP2A subunits in DNA repair and implications for cancer

Patent Number: US 61/599811

Funded Research

C2 KULeuven 2015-2020

Role: Co-PI

ERC Consolidator grant 2018-2023

The role of role of the ubiquitin system in RAS driven disease”

Role: PI

Stichting tegen Kanker 2019-2022

Role: PI

Anna Sablina

Date: 04/05/2020

Signature:

