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PERSONAL: Born in Zhukovsky, Moscow region, Russia

CITIZENSHIP: USA, Russia

EDUCATION:

2009 Ph.D., Immunology, University of Colorado at Denver, CO, USA.
Ph.D. Thesis “CDR3 and Germline Rules: Role in TCR-pMHC Interactions and Alloresponse”, Advisor Dr. John W. Kappler

2004 M.S., Chair of Virology, School of Biology, Moscow State University, Moscow, Russia. Graduated with Honor, Top 5 student

RESEARCH EXPERIENCE:

8/2009 – present: Postdoctoral fellow, Laboratory of Philippa Marrack, Ph.D., Department of Immunology, National Jewish Medical Research Center and Howard Hughes Medical Institute, Denver, CO

9/2004 – 8/2009: Graduate student, Laboratory of John Kappler, Ph.D., Graduate Programm, Department of Immunology, University of Colorado, Denver, CO

1/2003 –1/2004: Master student, Laboratory of Molecular Immunology, supervisor Maria Lagarkova, Ph.D., Belozersky Institute of Physico-Chemical Biology, Moscow, Russia

TEACHING EXPERIENCE:

2013	Mentoring two undergraduate summer students
2014	Mentoring new technician

OTHER PROFESSIONAL EXPERIENCE:

Set up human studies in P. Marrack's lab. This experience included:

Writing an IRB protocol (was successfully approved)

Set up collaborations with physicians in order to obtain human samples

RESEARCH FELLOWSHIPS:

- IFRc-SIGN winter school on Advanced Immunology. Awaji Island, Japan. 2012

HONORS AND AWARDS:

- AAI Young Investigator Award for the best poster at Colorado Immunology Conference (the winner) 2014.
- AAI travel award for Immunology 2013 AAI annual meeting, Honolulu, Hawaii
- AAI young investigator award for the best poster (runner-up) at 13th annual Colorado immunology conference. 2012

PUBLICATIONS:

1. **Rubtsova K**, Rubtsov AV, Santiago M, Kappler JW, Marrack P. Memory T cells Directly Respond to TLR7/MyD88 Stimulation by IFN γ Production which is Necessary for TLR7-dependent Appearance of T-bet⁺ B cells and IgG2a isotype switch during viral infection. **Journal of Experimental Medicine**. *Under review*.

2. Rubtsov AV*, **Rubtsova K***, Kappler JW, Marrack P. ABC's potent antigen presenting abilities lead to robust T cell activation and proliferation. **Journal of Immunology**. *In press*. (* theses authors contributed equally)

3. **Rubtsova K**, Marrack P, Rubtsov AV. Sexual Dimorphism in Autoimmunity. **Journal of Clinical Investigations**. *In press*.

4. **Rubtsova K**, Marrack P, Rubtsov AV. TLR7, IFN γ , and T-bet: their roles in the development of ABCs in female-biased autoimmunity. **Cellular Immunology**. 2014 Dec 13, Epub ahead of print.

5. Lisa K. Peterson, Luke F. Pennington, Laura A. Shawn, Meredith Brown, Eric C. Treacy, Samantha F. Friend, Øyvind Hatlevik, **Kira Rubtsova**, Anatoly V. Rubtsov, Leonard L. Dragone. SLAP deficiency decreases dsDNA autoantibody production. **Clinical Immunology**. 2014, 150,201-209.

6. **Rubtsova K**, Rubtsov AV, van Dyk LF, Kappler JW, Marrack P. T-box transcription factor T-bet, a key player in a unique type of B-cell activation essential for effective viral clearance. **Proc Natl Acad Sci U S A**. 2013 Aug 20;110(34):E3216-24

7. Rubtsov AV, **Rubtsova K**, Kappler JW, Marrack P. TLR7 drives accumulation of ABCs and autoantibody production in autoimmune prone mice. **Immunologic Research**. 2013 Mar;55(1-3):210-6

8. **Rubtsova K**, Marrack P, Rubtsov AV. Age-associated B cells: are they the key to understanding why autoimmune diseases are more prevalent in women? **Expert Review of Clinical Immunology**. 2012, 8:5-7.

9. Yin L, Huseby E, Scott-Browne J, **Rubtsova K**, Pinilla C, Crawford F, Marrack P, Dai S, Kappler JW. A Single T Cell Receptor Bound to Major Histocompatibility Complex Class I and Class II Glycoproteins Reveals Switchable TCR Conformers. **Immunity**. 2011 Jun 15. [Epub ahead of print]

10. Rubtsov AV, **Rubtsova K**, Fischer A, Meehan RT, Gillis JZ, Kappler JW, Marrack P. TLR7-driven accumulation of a novel CD11c+ B-cell population is important for the development of autoimmunity. **Blood**. 2011 May 4. [Epub ahead of print]

11. Rubtsov AV, **Rubtsova K**, Kappler JW, Marrack P. Genetic and hormonal factors in female-biased autoimmunity. **Autoimmun Rev.** 2010. May;9(7):494-8.
12. **Rubtsova K**, Scott-Browne J, Crawford F, Dai S, Marrack P, Kappler JW. Many different V β CDR3s can reveal the inherent MHC reactivity of germline-encoded TCR V regions. **Proc Natl Acad Sci U S A.** 2009 May 12;106(19):7951-6.
13. Marrack P, **Rubtsova K**, Scott-Browne J, Kappler JW. T cell receptor specificity for major histocompatibility complex proteins. **Curr Opin Immunol.** 2008, 20:203-7.
14. Dai S, Huseby ES, **Rubtsova K**, Scott-Browne J, Crawford F, Macdonald WA, Marrack P, Kappler JW. Crossreactive T Cells spotlight the germline rules for alphabeta T cell-receptor interactions with MHC molecules. **Immunity.** 2008, 28:324-34.
15. Goody R, Beckham J, **Rubtsova K**, Tyler K. JAK-STAT Signaling Pathways are Activated in the Brain Following Reovirus Infection. **J Neurovirol.** 2007, 13:373-83.
16. Lagar'kova MA, Lyakisheva AV, Filonenko ES, Volchkov PY, **Rubtsova KV**, Gerasimov YV, Chailakhyan RK, Kiselev SL. Characteristics of human bone marrow mesenchymal stem cells isolated by immunomagnetic selection. **Bull Exp Biol Med.** 2006, 141:112-6.

ABSTRACTS ON CONFERENCES

1. **K. Rubtsova**, AV Rubtsov, J Kappler, P. Marrack. T-bet expressing B cells are required for the development of autoimmunity **(selected for short talk)**. *Abstract for keystone symposia "Autoimmunity and Tolerance" Keystone, Colorado. February 3-8, 2015.*
2. **K. Rubtsova**, AV Rubtsov, L van Dyk, J Kappler, P. Marrack. T-bet: the key player in a novel type of B cell activation essential for effective viral clearance. *Abstract for keystone symposia "Biology of B Cell Responses" Keystone, Colorado.*

February 9-14, 2014.

3. **K. Rubtsova**, AV Rubtsov, L van Dyk, J Kappler, P. Marrack. T-bet: the key player in a novel type of B cell activation essential for effective viral clearance (**selected for oral presentation**). *Abstract for Immunology 2013 AAI annual meeting, Honolulu, Hawaii. May 3-7, 2013.*
4. **K Rubtsova**, AV Rubtsov, L van Dyk, J. Kappler, P. Marrack. Innate and adaptive receptors synergize in driving lineage commitment of ABCs via T-bet expression (**selected for oral presentation**). *Abstract for 8th international Congress on autoimmunity, Granada, Spain. May 9-13, 2012.*
5. **K Rubtsova**, S Dai, J Scott-Browne, E. Huseby, P. Marrack, J. Kappler. CDR3beta modulates conservative interactions between TCR and MHC. *Abstract for keystone symposia "Tolerance in transplantation and Autoimmunity". January 29 - February 3, 2008*
6. **K Rubtsova**, P. Marrack, J. Kappler. The role of CDR3 in T cell selection and TCR promiscuity (**Selected for oral presentation**). *13th International Congress of Immunology, Rio de Janeiro, Brazil, August 21-25, 2007.*

REFERENCES:

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