Journal for ImmunoTherapy of Cancer

CORRECTION

Open Access

Correction to: Determinant roles of dendritic cell-expressed Notch Delta-like and Jagged ligands on anti-tumor T-cell immunity

Elena E. Tchekneva[1], Mounika U. L. Goruganthu[1†], Roman V. Uzhachenko[2†], Portia L. Thomas[2,3,4†], Anneliese Antonucci[1], Irina Chekneva[5], Michael Koenig[1], Longzhu Piao[1], Anwari Akhter[1], Maria Teresa P. de Aquino[2], Parvathi Ranganathan[6], Nicholas Long[7], Thomas Magliery[7], Anna Valujskikh[8], Jason V. Evans[9], Rajeswara R. Arasada[1], Pierre P. Massion[10], David P. Carbone[1], Anil Shanker[2,4,11,12*†] and Mikhail M. Dikov[1*†]

Correction to: J Immunother (2019) 7:95
https://doi.org/10.1186/s40425-019-0566-4

Following publication of the original article [1], the author reported the wrong version of Figs. 5 and 7 have been published. The correct version of the figures can be found below:

The original article has been corrected as well.

Author details
[1]Division of Medical Oncology, Department of Internal Medicine, The Ohio State University Wexner Medical Center and The James Comprehensive Cancer Center, 460 W 12th Ave, 484 BRT, Columbus, OH 43210, USA. [2]Department of Biochemistry, Cancer Biology, Neuroscience and Pharmacology, Meharry Medical College School of Medicine, 2005 Harold D. West Basic Sciences Building, 1023 21st Ave N, Nashville, TN 37208, USA. [3]Department of Microbiology, Immunology and Physiology, Meharry Medical College School of Medicine, Nashville, USA. [4]School of Graduate Studies and Research, Meharry Medical College, Nashville, TN, USA. [5]Sechenov First Moscow State Medical University, Moscow, Russia. [6]Division of Hematology, Department of Internal Medicine, The Ohio State University Wexner Medical Center, Columbus, OH, USA. [7]Department of Chemistry and Biochemistry, The Ohio State University, Columbus, OH, USA. [8]Department of Inflammation and Immunity, Cleveland Clinic, Cleveland, OH, USA. [9]Department of Pathology, West Virginia University, Morgantown, WV, USA. [10]Department of Medicine, Vanderbilt University, Nashville, TN, USA. [11]Host–Tumor Interactions Research Program, Vanderbilt-Ingram Comprehensive Cancer Center, Vanderbilt University, Nashville, TN, USA. [12]Vanderbilt Institute for Infection, Immunology and Inflammation, Vanderbilt University, Nashville, TN, USA.

Received: 9 April 2019 Accepted: 9 April 2019
Published online: 07 May 2019

Reference

1. Tchekneva, et al. J ImmunoTherapy Cancer. 2019;7:95. https://doi.org/10.1186/s40425-019-0566-4.

* Correspondence: ashanker@mmc.edu; Mikhail.Dikov@OSUMC.edu
†Mounika U. L. Goruganthu, Roman V. Uzhachenko, Portia L. Thomas, Anil Shanker and Mikhail M. Dikov contributed equally to this work.
[2]Department of Biochemistry, Cancer Biology, Neuroscience and Pharmacology, Meharry Medical College School of Medicine, 2005 Harold D. West Basic Sciences Building, 1023 21st Ave N, Nashville, TN 37208, USA
[1]Division of Medical Oncology, Department of Internal Medicine, The Ohio State University Wexner Medical Center and The James Comprehensive Cancer Center, 460 W 12th Ave, 484 BRT, Columbus, OH 43210, USA
Full list of author information is available at the end of the article

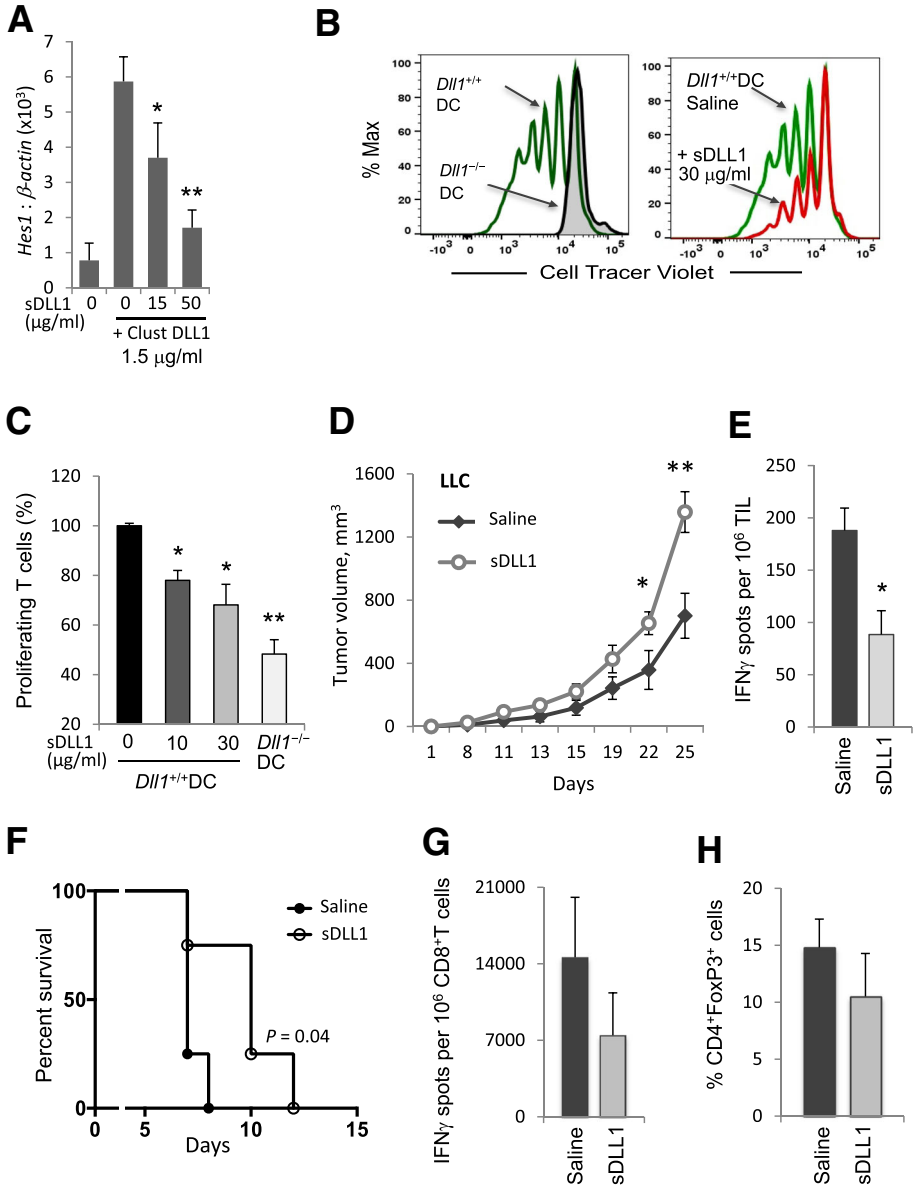

Fig. 5 Monomeric soluble DLL1 or *Dll1*-ablated dendritic cells restrict Notch signaling and impair T-cell cytotoxic responses. **a** Expression of Notch downstream target *Hes1* mRNA was assessed by qRT-PCR in 3 T3 cells treated with clustered DLL1 in the presence of soluble DLL1 (sDLL1) construct at indicated concentrations for 16 h. **b**, **c** T-cell proliferation was measured after co-incubating allogeneic T-cells labeled with Cell Tracer Violet fluorescent dye with bone marrow-derived $Dll1^{-/-}$ or wild-type DC in the presence of soluble anti-CD3 for 5 days. In some T-cell cultures with wild-type DC, soluble DLL1 construct was added at the indicated concentrations. Representative Cell Tracer Violet dye dilution profile is shown (**b**). **d** Tumor volume was measured in LLC tumor-bearing mice treated with sDLL1 construct 1 mg/kg body weight, i.p. every 2 days for 20 days. **e** IFN-γ producing tumor-infiltrating cells from these mice were enumerated by ELISPOT assay on day 18 after LLC tumor initiation. Mean ± SEM, 8 mice per group; *, $p < 0.05$; **, $p < 0.005$. **f**, **g** C57BL/6 mice were transplanted with BALB/c heart allografts on day 0 and treated with sDLL1 construct (1 mg/kg) i.p. on days − 3, − 1, 1, 3, 5 and 7. **f** Heart allografted C57BL/6 mice log-rank survival. **g** IFN-γ ELISPOT assay on recipient $CD8^+$T cells isolated after heart allograft and re-stimulated with mitomycin C-treated donor spleen cells in the presence of recipient C57BL/6 splenocytes. **h** Percentage of $FoxP3^+$ cells among $CD4^+$ splenocytes after heart allograft. Mean ± SEM, 4–8 mice per group; *, $p < 0.05$

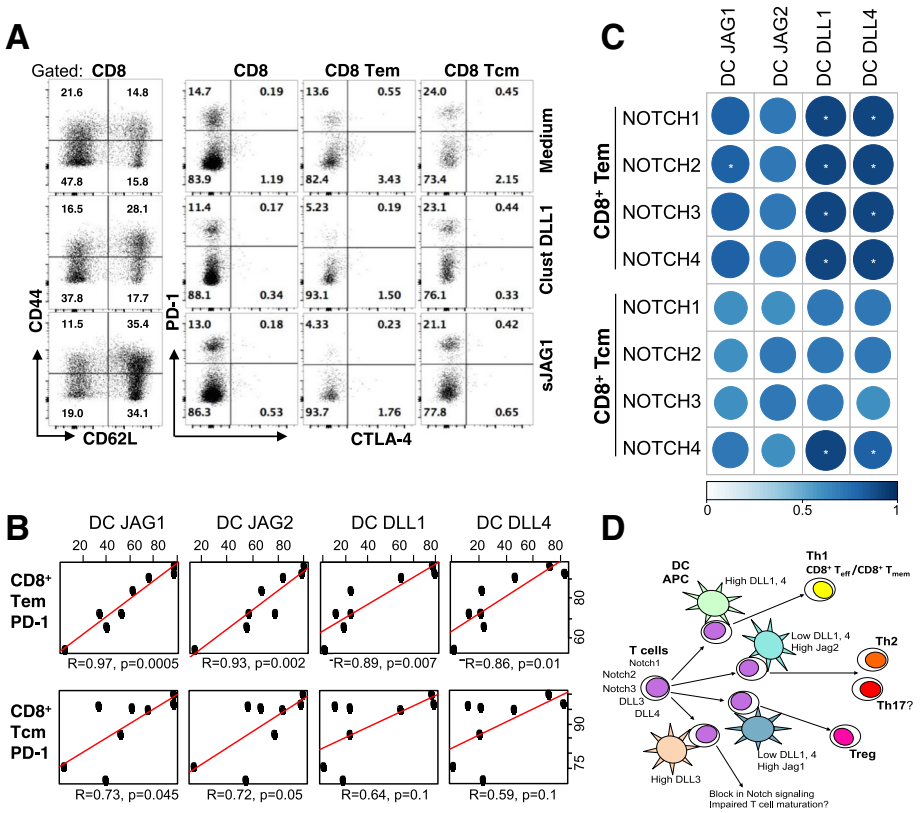

Fig. 7 Dendritic cell Jagged expression correlates with PD-1 expression on T-effector-memory cells. **a** Purified T cells were stimulated in vitro in a T:DC (3:1) stimulation co-culture with allogeneic bone marrow-derived dendritic cells in the presence of CD3/CD28 beads (1 μg/mL) for four days with or without treatment with clustered DLL1 (1.5 μg/mL) or monovalent soluble JAG1 (20 μg/mL) constructs. Expression of CD62L, CD44, CTLA-4 and PD-1 was assessed on gated populations as indicated by flow cytometry. Dot plots from a representative experiment out of two independent experiments with duplicates are shown. **b**-**c** Lung tumor single cell suspensions from 10 patients were evaluated for the expression of NOTCH ligands on tissue-resident $CD11b^{+}CD11c^{high}$ dendritic cells and PD-1 and NOTCH receptors in populations of T cells by flow cytometry. NOTCH ligands in $CD11b^{+}CD11c^{high}$ cells were compared to PD-1 positivity of Tem and Tcm cells (**b**) or to NOTCH receptor positive T cell subsets by Pearson's correlation (**c**). All *p*-values were corrected using the Benjamani- Hochberg procedure; $n = 8$; * $p < 0.05$. Color code indicates the strength of correlation. **d** Scheme summarizing available data on the regulation of T cell responses by Notch ligands