

EDITORIAL

JEM 125TH ANNIVERSARY

- e20202668 **Over a century of novel conceptual insights: The beginning of JEM's 125th anniversary year**
JEM Editorial Team

INSIGHTS

- e20202071 **Gatekeepers of the fetus: Characterization of placental macrophages**
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- e20201738 **Placental inflammasome signaling: Protection for mother and baby**
Sabrina Sofia Burgener and Kate Schroder
- e20201746 **A new chapter in the CD8 T reg story**
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- e20201574 **The current landscape of single-cell transcriptomics for cancer immunotherapy**
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- e20200264 **Tumor-infiltrating dendritic cell states are conserved across solid human cancers**
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- e20201606 **Lipid metabolism and cancer**
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- e20190218 **Emerging paradigms in metastasis research**
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- e20200851 **B cells and cancer: To B or not to B?**
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- e20192179 **Understanding adverse events of immunotherapy: A mechanistic perspective**
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- e20200065 **Nociceptors protect sickle cell disease mice from vaso-occlusive episodes and chronic organ damage**
Chunliang Xu, Maria Gulinello, and Paul S. Frenette

TECHNICAL ADVANCES AND RESOURCES

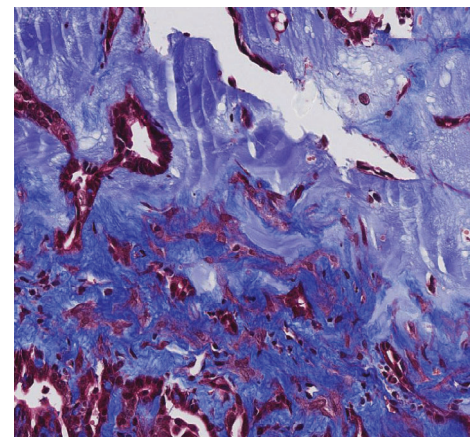
- e20200606 **Gut microbiome stability and dynamics in healthy donors and patients with non-gastrointestinal cancers**
Allyson L. Byrd, Menghan Liu, Kei E. Fujimura, Svetlana Lyalina, Deepti R. Nagarkar, Bruno Charbit, Jacob Bergstedt, Etienne Patin, Oliver J. Harrison, Lluís Quintana-Murci, Ira Mellman, Darragh Duffy, Matthew L. Albert, and the Milieu Intérieur Consortium



ON THE COVER

Since its inception in 1896, *Journal of Experimental Medicine (JEM)* has been a leader in publishing outstanding and enduring studies in medical biology and has greatly contributed to the fields of immunology, cancer biology, vascular biology, microbial pathogenesis, neuroscience, and stem cell biology. The cover celebrates the start of JEM's 125th anniversary year and represents the areas covered in JEM. The logo, which will also be used throughout the year in celebration, is an adaptation by Yuko Tono-hira of the cover of the 2017: Year in Experimental Medicine special collection by Emilie Clark. Read more on our anniversary home page: <https://rupress.org/jem/pages/jem-125th-anniversary>.

- e20200321 **Lineage-specific regulation of inducible and constitutive mast cells in allergic airway inflammation**
Tahereh Derakhshan, Sachin K. Samuchiwal, Nils Hallen, Lora G. Bankova, Joshua A. Boyce, Nora A. Barrett, K. Frank Austen, and Daniel F. Dwyer
- ARTICLES**
- e20200891 **Phenotypic and functional characterization of first-trimester human placental macrophages, Hofbauer cells**
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- e20200649 **Inflammasome signaling in human placental trophoblasts regulates immune defense against *Listeria monocytogenes* infection**
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- e20200030 **TGF- β and Eomes control the homeostasis of CD8⁺ regulatory T cells**
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- e20182232 **PD-1 restraint of regulatory T cell suppressive activity is critical for immune tolerance**
Catherine L. Tan, Juhi R. Kuchroo, Peter T. Sage, Dan Liang, Loise M. Francisco, Jessica Buck, Youg Raj Thaker, Qianxia Zhang, Shannon L. McArdel, Vikram R. Juneja, Sun Jung Lee, Scott B. Lovitch, Christine Lian, George F. Murphy, Bruce R. Blazar, Dario A.A. Vignali, Gordon J. Freeman, and Arlene H. Sharpe
- e20201214 **Immunotherapy during the acute SHIV infection of macaques confers long-term suppression of viremia**
Yoshiaki Nishimura, Olivia K. Donau, Joana Dias, Sara Ferrando-Martinez, Eric Jesteadt, Reza Sadjadpour, Rajeev Gautam, Alicia Buckler-White, Romas Gelezionas, Richard A. Koup, Michel C. Nussenzweig, and Malcolm A. Martin
- e20200218 **Influenza infection fortifies local lymph nodes to promote lung-resident heterosubtypic immunity**
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- e20200815 ***Helicobacter pylori* metabolites exacerbate gastritis through C-type lectin receptors**
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- e20181853 **Lack of NFATc1 SUMOylation prevents autoimmunity and alloreactivity**
Yin Xiao, Musga Qureischi, Lena Dietz, Martin Vaeth, Subrahmanya D. Vallabhapurapu, Stefan Klein-Hessling, Matthias Klein, Chunguang Liang, Anika König, Edgar Serfling, Anja Mottok, Tobias Bopp, Andreas Rosenwald, Mathias Buttman, Ingolf Berberich, Andreas Beilhack, and Friederike Berberich-Siebelt
- e20200559 **A crucial role for Jagunal homolog 1 in humoral immunity and antibody glycosylation in mice and humans**
Astrid Hagelkruys, Gerald Wirnsberger, Johannes Stadlmann, Miriam Wöhner, Marion Horrer, Bojan Vilagos, Gustav Jonsson, Melanie Kogler, Luigi Tortola, Maria Novatchkova, Peter Bönelt, David Hoffmann, Rubina Koggruber, Ulrike Steffen, Georg Schett, Meinrad Busslinger, Andreas Bergthaler, Christoph Klein, and Josef M. Penninger
- e20192378 **Spatiotemporal restriction of endothelial cell calcium signaling is required during leukocyte transmigration**
Prarthana J. Dalal, David P. Sullivan, Evan W. Weber, David B. Sacks, Matthias Gunzer, Isabella M. Grumbach, Joan Heller Brown, and William A. Muller



Impact of SHP2/KRAS inhibition on KRAS^{G12C} tumors

Image © Fedele et al., 2020.
<https://doi.org/10.1084/jem.20201414>

e20200866 **Exit from germinal center to become quiescent memory B cells depends on metabolic reprogramming and provision of a survival signal**
Takeshi Inoue, Ryo Shinnakasu, Chie Kawai, Wataru Ise, Eiryu Kawakami, Nicolas Sax, Toshihiko Oki, Toshio Kitamura, Kazuo Yamashita, Hidehiro Fukuyama, and Tomohiro Kurosaki

e20200913 **Activation of 4-1BBL⁺ B cells with CD40 agonism and IFN γ elicits potent immunity against glioblastoma**
Catalina Lee-Chang, Jason Miska, David Hou, Aida Rashidi, Peng Zhang, Rachel A. Burga, Ignacio Jusué-Torres, Ting Xiao, Victor A. Arrieta, Daniel Y. Zhang, Aurora Lopez-Rosas, Yu Han, Adam M. Sonabend, Craig M. Horbinski, Roger Stupp, Irina V. Balyasnikova, and Maciej S. Lesniak

e20201414 **SHP2 inhibition diminishes KRAS^{G12C} cycling and promotes tumor microenvironment remodeling**
Carmine Fedele, Shuai Li, Kai Wen Teng, Connor J.R. Foster, David Peng, Hao Ran, Paolo Mita, Mitchell J. Geer, Takamitsu Hattori, Akiko Koide, Yubao Wang, Kwan Ho Tang, Joshua Leinwand, Wei Wang, Brian Diskin, Jiehui Deng, Ting Chen, Igor Dolgalev, Ugur Ozerdem, George Miller, Shohei Koide, Kwok-Kin Wong, and Benjamin G. Neel

e20190348 **Qki is an essential regulator of microglial phagocytosis in demyelination**
Jiangong Ren, Congxin Dai, Xin Zhou, Joseph A. Barnes, Xi Chen, Yunfei Wang, Liang Yuan, Takashi Shingu, Amy B. Heimberger, Yiwu Chen, and Jian Hu

e20192386 **Transcription cofactor GRIP1 differentially affects myeloid cell-driven neuroinflammation and response to IFN- β therapy**
Sanda Mimouna, David A. Rollins, Gayathri Shibu, Bowranigan Tharmalingam, Dinesh K. Deochand, Xi Chen, David Oliver, Yurii Chinenov, and Inez Rogatsky

e20192193 **α -Synuclein modulates tau spreading in mouse brains**
Fares Bassil, Emily S. Meymand, Hannah J. Brown, Hong Xu, Timothy O. Cox, Shankar Pattabhiraman, Chantal M. Maghames, Qihui Wu, Bin Zhang, John Q. Trojanowski, and Virginia M.-Y. Lee

e20191365 **Histamine H₂ receptor negatively regulates oligodendrocyte differentiation in neonatal hypoxic-ischemic white matter injury**
Lei Jiang, Li Cheng, Han Chen, Haibin Dai, Dadao An, Qianyi Ma, Yanrong Zheng, Xiangnan Zhang, Weiwei Hu, and Zhong Chen

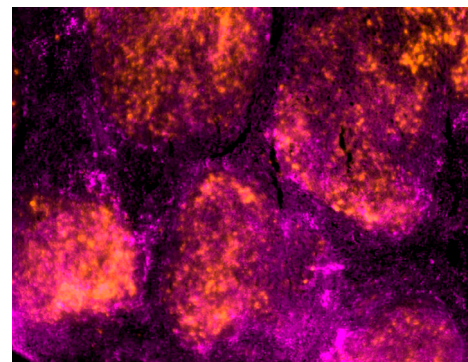
CORRECTIONS

Correction: Transcription cofactor GRIP1 differentially affects myeloid cell-driven neuroinflammation and response to IFN- β therapy

Sanda Mimouna, David A. Rollins, Gayathri Shibu, Bowranigan Tharmalingam, Dinesh K. Deochand, Xi Chen, David Oliver, Yurii Chinenov, and Inez Rogatsky

Correction: Dietary restriction improves repopulation but impairs lymphoid differentiation capacity of hematopoietic stem cells in early aging

Duozhuang Tang, Si Tao, Zhiyang Chen, Ievgen Oleksandrovich Koliesnik, Philip Gerald Calmes, Verena Hoerr, Bing Han, Nadja Gebert, Martin Zörnig, Bettina Löffler, Yohei Morita, and K. Lenhard Rudolph



CD8⁺ T reg cell-defective mouse model

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<https://doi.org/10.1084/jem.20200030>