

mRNA therapy

The game-changing potential of *in vitro*-transcribed RNA therapies in research and therapeutic development

Bench to Bedside

Messenger RNA vaccines against SARS-CoV-2

Eric J. Topol

Reviews

Delivering the messenger: Advances in technologies for therapeutic mRNA delivery

Piotr S. Kowalski, Arnab Rudra, Lei Miao, and Daniel G. Anderson

mRNA as a transformative technology for vaccine development to control infectious diseases

Giulietta Maruggi, Cuiling Zhang, Junwei Li, Jeffrey B. Ulmer, and Dong Yu

Genome editing with mRNA encoding ZFN, TALEN, and Cas9

Hong-Xia Zhang, Ying Zhang, and Hao Yin

Articles

Improving mRNA-based therapeutic gene delivery by expression-augmenting 30 UTRs identified by cellular library screening

Alexandra G. Orlandini von Niessen, Marco A. Poleganov, Corina Rechner, Arianne Plaschke, Lena M. Kranz, Stephanie Fesser, Mustafa Diken, Martin Löwer, Britta Vallazza, Tim Beissert, Valesca Bukur, Andreas N. Kuhn, Özlem Türeci, and Ugur Sahin

A single dose of self-transcribing and replicating RNA-based SARS-CoV-2 vaccine produces protective adaptive immunity in mice

Ruklanthi de Alwis, Esther S. Gan, Shiwei Chen, Yan Shan Leong, Hwee Cheng Tan, Summer L. Zhang, Clement Yau, Jenny G.H. Low, Shirin Kalimuddin, Daiki Matsuda, Elizabeth C. Allen, Paula Hartman, Kyoung-Joo Jenny Park, Maher Alayyoubi, Hari Bhaskaran, Adrian Dukanovic, Yanjie Bao, Brenda Clemente, Jerel Vega, Scott Roberts, Jose A. Gonzalez, Marciano Sablad, Rodrigo Yelin, Wendy Taylor, Kiyoshi Tachikawa, Suezanne Parker, Priya Karmali, Jared Davis, Brian M. Sullivan, Sean M. Sullivan, Steve G. Hughes, Pad Chivukula, and Eng Eong Ooi

Highly efficient CD4⁺ T cell targeting and genetic recombination using engineered CD4⁺ cell-homing mRNA-LNP

István Tombácz, Dorottya Laczkó, Hamna Shahnawaz, Hiromi Muramatsu, Ambika Natesan, Amir Yadegari, Tyler E. Papp, Mohamad-Gabriel Alameh, Vladimir Shuvaev, Barbara L. Mui, Ying K. Tam, Vladimir Muzykantov, Norbert Pardi, Drew Weissman, and Hamideh Parhiz

Lipid-nanoparticle-encapsulated mRNA vaccines induce protective memory CD8 T cells against a lethal viral infection

Cory J. Knudson, Pedro Alves-Peixoto, Hiromi Muramatsu, Colby Stotesbury, Lingjuan Tang, Paulo J.C. Lin, Ying K. Tam, Drew Weissman, Norbert Pardi, and Luis J. Sigal

MiR-690, an exosomal-derived miRNA from M2-polarized macrophages, improves insulin sensitivity in obese mice

Wei Ying, Hong Gao, Felipe Castellani Gomes Dos Reis, Gautam Bandyopadhyay, Jachelle M. Ofrecio, Zhenlong Luo, Yudong Ji, Zhongmou Jin, Crystal Ly, and Jerrold M. Olefsky

Surface antigen-guided CRISPR screens identify regulators of myeloid leukemia differentiation

Eric Wang, Hua Zhou, Bettina Nadorp, Geraldine Cayanan, Xufeng Chen, Anna H. Yeaton, Sofia Nomikou, Matthew T. Witkowski, Sonali Narang, Andreas Kloetgen, Palaniraja Thandapani, Niklas Ravn-Boess, Aristotelis Tsirigos, and Iannis Aifantis