



Christine Mayr, MD, PhD

Cancer Biology and Genetics Program
Memorial Sloan Kettering Cancer Center
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EDUCATIONAL BACKGROUND

PhD in Immunology, *magna cum laude* 2001
Humboldt University, Berlin, Germany

MD 2000
Free University, Berlin, Germany

RESEARCH EXPERIENCE & RESIDENCY

Postdoctoral Fellow 2005-2009
Whitehead Institute/Massachusetts Institute of Biology, Cambridge, MA
Laboratory of David P. Bartel

Residency 2004-2005
Technical University, Munich, Germany
Institute of Human Genetics
Director: Thomas Meitinger

Postdoctoral fellow 2002-2004
Ludwig-Maximilians University, Munich, Germany
Department of Hematology/Oncology
Laboratory of Michael Hallek

Residency 2000-2002
Ludwig-Maximilians University, Munich, Germany
Department of Hematology/Oncology
Director: Wolfgang Hiddemann

Graduate Student 1996-2000
Humboldt University, Berlin, Germany, Department of Internal Medicine, Charité
Free University, Berlin, Germany, Department of Molecular Biology and Biochemistry
Laboratories of Burkhardt F. Klapp and Werner Reutter

POSITIONS AND EMPLOYMENT

Member 2019-present
Cancer Biology and Genetics Program
Memorial Sloan Kettering Cancer Center, New York, NY

Professor 2019-present
Gerstner Sloan Kettering Graduate School of Biomedical Sciences, New York, NY
Professor of Biochemistry and Molecular Biology 2019-present
Professor of Computational Biology and Medicine 2019-present
Weill Cornell Medical College, New York, NY

Assistant Member 2009-2015
Associate Member 2015-2019
Cancer Biology and Genetics Program
Memorial Sloan Kettering Cancer Center, New York, NY

Assistant /Associate Professor 2009-2019
Gerstner Sloan Kettering Graduate School of Biomedical Sciences, New York, NY

Assistant / Associate Professor of Biochemistry and Molecular Biology 2009-2019
Associate Professor of Computational Biology and Medicine 2017-2019
Weill Cornell Medical College, New York, NY

HONORS & AWARDS

Louise and Allston Boyer Young Investigator Award for Basic Research	2019
Contributing member of F1000prime	2018
NIH Director's Pioneer Award	2016
Pershing Square Sohn Prize for Young Investigators in Cancer Research	2015
Science Signaling Breakthrough	2013
Damon Runyon-Rachleff Innovation Award	2013
Sidney Kimmel Scholar Award	2011
MSKCC Special Projects Award	2010

INVITED TALKS

KEYNOTE LECTURES

Keynote Lecture, VIII National RNA meeting, ptRNA2019, Porto, Portugal	2019
Keynote Lecture, Macromolecular complexes in mRNA localization, Dusseldorf, Germany	2018
Keynote Lecture, Gordon Research Seminar, Translation machinery in health and disease, Galveston	2017
Keynote Lecture, Computational RNA biology Conference, Hinxton, UK	2016
Keynote Lecture, Spring Meeting 2016, University of Heidelberg	2016

SEMINARS

Seminar, University of Portland, Portland, OR	2020
Gordon Research Conference, Post-transcriptional gene regulation, Sunday River, ME	2020
Seminar, National Cancer Institute, Frederick, VA	2020
6 th Annual RNA medicine symposium, Harvard Medical School, Boston, MA	2020
Seminar, University Texas Galveston, Galveston, TX	2020
Seminar, University Texas Southwestern, Dallas, TX	2020
Quantitative Biology of the Cancer Cell Symposium, San Francisco, CA	2020
Seminar, Yale University, New Haven, CT	2020
Seminar, Stanford University, Palo Alto, CA	2020
Keystone Symposia, Non-coding RNAs: Mechanism, Function and Therapies, Whistler, Canada	2020
Seminar, Harvard University, Cambridge, MA	2020
Seminar, Mount Sinai School of Medicine, New York, NY	2019
Seminar, Molecular Biology Institute, University of California Los Angeles, Los Angeles, CA	2019
Connell Seminar, University of Toronto, Toronto, CA	2019
Seminar, New York University, New York, NY	2019
Seminar, University of Bern, Switzerland	2019
Seminar, ETH Zurich, Switzerland	2019
FASEB meeting, From unfolded proteins in the ER to disease, Snowmass, CO	2019
3 rd International Conference "The long and the short of non-coding RNAs", Heraklion, Crete	2019
CSHL Symposium, Quantitative Biology addressing RNA Control & Regulation, Cold Spring Harbor, NY	2019
Workshop on Splicing Factor Mutations and RNA Biology in Cancer, Yale University, New Haven, CT	2019
Cell Symposia, Regulatory RNAs, Berlin, Germany	2019
Seminar, MRC Laboratory of Molecular Biology, Cambridge, UK	2019
Keystone Symposia, Biomolecular Condensates, Snowbird, UT	2019
Seminar, Duke University, Durham, NC	2019
Seminar, BMSB, Max-Delbruck Center, Berlin, Germany	2019
Seminar, University of Colorado Denver, Denver, CO	2019
Bermuda principles, mRNA processing and disease, Bermuda	2019
Seminar, Hunter College, New York, NY	2019
Seminar, Max Planck Institute of Immunobiology and Epigenetics, Freiburg, Germany	2019
Banbury meeting on Phase Separated Assemblies in Cell Biology, Lloyd Harbor, NY	2018
Seminar, Moderna Therapeutics, Cambridge, MA	2018
Biology Colloquium, Massachusetts Institute of Technology, Cambridge, MA	2018
Seminar, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY	2018
EMBL/EMBO symposium, Complex Life of mRNA, Heidelberg, Germany	2018
Symposium, Alternative polyadenylation of mRNAs, Beijing, China	2018
Plenary Lecture, Annual meeting of the Society for Developmental Biology, Portland, OR	2018
Microsymposium on small RNAs, Vienna, Austria	2018
Seminar, University of Wisconsin, Madison, WI	2018
Seminar, Fred Hutchinson Cancer Center, Seattle, WA	2018

Seminar, University of California Santa Cruz, Santa Cruz, CA	2018
Seminar, Salk Institute, San Diego, CA	2018
Barcelona Biomed Plenary Seminar, IRB Barcelona, Barcelona, Spain	2018
Royal Society meeting on translation, Newport Pagnell, UK	2018
Seminar, University of Massachusetts Amherst, Amherst, MA	2018
EMBO workshop, mRNA 3' end formation, Oxford, UK	2017
Seminar, The Crick Institute, London, UK	2017
Symposium, New Horizons in Membrane Transport and Communication, Frankfurt, Germany	2017
EMBO meeting on RNA localization and local translation, Barga, Italy	2017
ASBMB symposium, Evolution and Core Processes in Gene Regulation, Kansas City, MO	2017
2 nd International Conference "The long and the short of non-coding RNAs", Heraklion, Crete	2017
Symposium, Center for Genomics and Systems Biology, NYU, New York, NY	2017
EMBL/EMBO conference, From Functional Genomics to Systems Biology, Heidelberg	2017
Keystone Symposia, Protein-RNA Interactions, Banff, Alberta, Canada	2017
Keystone Symposia, Strategies to Study the Proteome, Breckenridge, CO	2017

PUBLICATIONS

PUBLISHED PAPERS

Lee SH, **Mayr C**. Gain of additional BIRC3 protein functions through 3'UTR-mediated protein complex formation. *Mol Cell* 74, 701-712 (2019).

Ma W, **Mayr C**. A membraneless organelle associated with the endoplasmic reticulum enables 3'UTR-mediated protein-protein interactions. *Cell* 175, 1492-1506 (2018).

-Previewed in *Developmental Cell*

-Highlighted in *Nature Reviews Molecular Cell Biology*

McMaster ML*, Berndt SI*, Zhang J*, Slager SL*, , Fansler MM, **Mayr C**, ... , Chanock SL*, Rothman N*, V Joseph*, Goldin LR*, Skibola CF*, Caporaso ME*. Two high-risk susceptibility loci at 6p25.3 and 14q32.13 for Waldenström macroglobulinemia/lymphoplasmacytic lymphoma. *Nat Commun* 9:4182 (2018).

Lee SH*, Singh I*, Tisdale S, Abdel-Wahab O, Leslie CS, **Mayr C**. Widespread intronic polyadenylation inactivates tumor suppressor genes in leukemia. *Nature* 561, 127-131 (2018).

-Highlighted in *Nature Reviews Cancer*

-Highlighted in *Cancer Discovery*

-Highlighted in *Trends in Cancer*

Singh I, Lee SH, Sperling AS, Samur MK, Tai YT, Fulciniti M, Munshi NC, **Mayr C***, Leslie CS*. Widespread intronic polyadenylation diversifies immune cell transcriptomes. *Nat Commun* 9:17169:1716 (2018).

Berkovits BD, **Mayr C**. Alternative 3'UTRs act as scaffolds to regulate membrane protein localization. *Nature* 522, 363-367 (2015).

-Highlighted in *Nature Reviews Molecular Cell Biology*

Lianoglou S, Garg V, Yang JL, Leslie CS, **Mayr C**. Ubiquitously transcribed genes use alternative polyadenylation to achieve tissue-specific expression. *Genes Dev* 27, 2380-2396 (2013).

-Selected by *Science Signaling* as one of the Breakthroughs of 2013

-Recommended by the Faculty of 1000

Mayr C, Bartel DP. Widespread shortening of 3'UTRs by alternative cleavage and polyadenylation activates oncogenes in cancer cells. *Cell* 138, 673-684 (2009).

-Highlighted in *Nature*

-Highlighted in *Nature Reviews Genetics*

-Designated as "Exceptional" by the Faculty of 1000

Pallasch CP, Patz M, Park YJ, Hagist S, Eggle D, Claus R, Debey-Pascher S, Schulz A, Frenzel L, Claassen J, Kutsch N, Krause G, **Mayr C**, Rosenwald A, Plass C, Schultze JL, Hallek M, Wendtner CM. miRNA deregulation by epigenetic silencing disrupts suppression of the oncogene PLAG1 in chronic lymphocytic leukemia. *Blood* 114, 3255-3264 (2009).

Wang ET, Sandberg R, Luo S, Khrebtkova I, Zhang L, **Mayr C**, Kingsmore SF, Schroth GP, Burge CB. Alternative isoform regulation in human tissue transcriptomes. *Nature* 456,470-476 (2008).

-Designated as "Exceptional" by the Faculty of 1000

Wiesner M, Zentz C, **Mayr C**, Wimmer R, Hammerschmidt W, Zeidler R, Moosmann A. Conditional immortalization of human B cells by CD40 ligation. *PLoS ONE* 3, e1464 (2008).

Bund D, **Mayr C**, Kofler DM, Hallek M, Wendtner CM. CD23 is recognized as tumor-associated antigen (TAA) in B-CLL by CD8+ autologous T lymphocytes. *Exp Hematol* 35, 920-930 (2007).

Zhou B, Wang S, **Mayr C**, Bartel DP, Lodish HF. miR-150, a microRNA expressed in mature B and T cells, blocks early B cell development when expressed prematurely. *Proc Natl Acad Sci U S A* 104, 7080-7085 (2007).

Mayr C, Hemann MT, Bartel DP. Disrupting the pairing between let-7 and Hmga2 enhances oncogenic transformation. *Science* 315, 1576-1579 (2007).

-Highlighted in Science as Editor's Choice

-Highlighted in Nature Reviews Cancer

-Highlighted in Journal of the American Chemical Society

Bund D, **Mayr C**, Kofler DM, Hallek M, Wendtner CM. Human Ly9 (CD229) as novel tumor-associated antigen (TAA) in chronic lymphocytic leukemia recognized by autologous CD8+ T cells. *Exp Hematol* 34, 860-869 (2006).

Mayr C, Bund D, Schlee M, Bamberger M, Kofler DM, Hallek M, Wendtner CM. MDM2 is recognized as a tumor-associated antigen in CLL by CD8+ autologous T lymphocytes. *Exp Hematol* 34, 44-53 (2006).

Mayr C, Speicher MR, Kofler DM, Buhmann R, Busch R, Strehl J, Hallek M, Wendtner CM. Chromosomal translocations are associated with poor prognosis in chronic lymphocytic leukemia. *Blood* 107, 742-751 (2006).

Mayr C, Kofler DM, Büning H, Bund D, Hallek M, Wendtner C-M. Transduction of CLL cells by CD40 ligand (CD40L) enhances an antigen specific immune recognition by autologous T cells. *Blood* 106, 3223-3226 (2005).

Mayr C, Bund D, Schlee M, Moosmann A, Kofler DM, Hallek M, Wendtner C-M. Fibromodulin as a novel tumor-associated antigen (TAA) in chronic lymphocytic leukemia (CLL) which allows expansion of specific CD8+ autologous T lymphocytes. *Blood* 105, 1566-1573 (2005).

Kofler DM, Büning H, **Mayr C**, Bund D, Baumert J, Hallek M, Wendtner CM. Engagement of the B-cell antigen receptor (BCR) allows efficient transduction of ZAP-70 positive B-CLL cells by recombinant adeno-associated virus (rAAV) vectors. *Gene Ther* 11, 1416-1424 (2004).

Strehl J, Mey U, Glasmacher A, Djulbegovic B, **Mayr C**, Gorschluter M, Ziske C, Schmidt-Wolf IG. High-dose chemotherapy followed by autologous stem cell transplantation as first-line therapy in aggressive non-Hodgkin's lymphoma is superior to conventional chemotherapy in selected patients: a meta-analysis. *Haematologica* 88, 1304-1315 (2003).

Hildebrandt M, Rose M, **Mayr C**, Arck P, Schüler C, Reutter W, Salama A, Klapp BF. Dipeptidyl peptidase IV (DPP IV, CD 26) in patients with mental eating disorders. *Adv Exp Med Biol* 477, 197-204 (2000).

Hildebrandt M, Rose M, **Mayr C**, Schüler C, Reutter W, Salama A, Klapp BF. Alterations in expression and in serum activity of dipeptidyl peptidase IV (DPP IV, CD 26) in patients with hyporectic eating disorders. *Scand J Immunol* 50, 536-541 (1999).

REVIEWS AND COMMENTARIES

Mayr C. Protein complexes assemble as they are being made. *Nature* 561, 186-187 (2018).

Mayr C. What are 3'UTRs doing? *Cold Spring Harb Perspect Biol*, Sept 4 (2018).

Printed as book chapter in *RNA Worlds: New Tools for Deep Exploration* (2018). Edited by Thomas R. Cech, Joan A. Steitz, John F. Atkins.

Mayr C. Regulation by 3'-Untranslated Regions. *Annu Rev Genet* 51:171-194 (2017).

Mayr C. Evolution and biological roles of alternative 3'UTRs. *Trends Cell Biol* (2016).

Kofler DM, **Mayr C**, Wendtner CM. Current status of immunotherapy in B cell malignancies. *Curr Drug Targets* 7, 1371-1374 (2006).

Wendtner CM, Kofler DM, **Mayr C**, Bund D, Hallek M. The potential of gene transfer into primary B-CLL cells using recombinant virus vectors. *Leuk Lymphoma* 45, 897-904 (2004).

Mayr C, Radzom S, Dreyling M. Neurotoxicity under chemotherapy with high doses of cytarabine. *Arzneimitteltherapie* 19, 296-298 (2001).