

CURRICULUM VITAE

Name Diane MATHIS
Birthplace Atlanta, GA, USA
Citizenship United States / New Zealand

EDUCATION

1967 - 1971 Wake Forest University, Winston Salem, NC, USA; B.Sc. in Biology.
1971- 1977 University of Rochester, Rochester, NY, USA; M.Sc. in Biology (1975), Ph.D. in Biology (1977).

PROFESSIONAL EXPERIENCE

1973 - 1977 : Graduate student, Department of Biology, University of Rochester, Rochester, NY, USA.
1977 - 1980 : Postdoctoral fellow, Laboratoire de Génétique Moléculaire des Eukaryotes, Strasbourg, FR.
1981 - 1983 : Postdoctoral fellow, Department of Medical Microbiology, Stanford University Medical School, Stanford, CA, USA.
1983 - 1989 : Chargé de recherche, Institut National de la Santé et de la Recherche Médicale (INSERM), Laboratoire de Génétique Moléculaire des Eukaryotes (LGME), Strasbourg, FR.
1989 - 1999 : Directeur de recherche, INSERM, LGME and then Institut de Génétique et de Biologie Moléculaire et Cellulaire (IGBMC), Strasbourg, FR.
1997 - 1998 : Sabbatical Professor, Walter and Elisa Hall Institute of Medical Research, Melbourne, Australia (8 mths)
1999 - 2009 : Associate Research Director and Head, Section on Immunology and Immunogenetics, Joslin Diabetes Center; Professor of Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, MA USA; William T. Young Chair in Diabetes Research
2003-2012 : Head, JDRF Center on Immunological Tolerance in T1D at HMS, Boston, MA, USA
2005 - : Principal Faculty Member, Harvard Stem Cell Institute, Cambridge, MA, USA
2006 - : Associate Member, Broad Institute, Cambridge, MA, USA
2008 (3 mths) : Visiting Professor, Tokyo University, Tokyo, Japan
2009 - 2011 : Professor of Pathology, Harvard Medical School, Boston, MA, USA
2010 - 2013 : Founding Head, Division of Immunology, Department of Microbiology and Immunobiology, Harvard Medical School, Boston, USA (rotating)
2011- : Morton Grove-Rasmussen Professor of Immunohematology, Department of Immunology, Harvard Medical School, Boston, USA

PROFESSIONAL ACTIVITIES

Societies

European Molecular Biology Organization (from 1990)

Academia Europea (from 1992)

American Association of Immunologists (from 1999)

American Diabetes Association (from 1999)

Advisory bodies

EMBO Fellowship Committee (1994-1999; president 1996-1999).

INSERM Scientific Council (1994-95)

General Motors Cancer Research Foundation Prize Committee (1996-97, 2003-2005)

Scientific Advisory Board of the Deutsches Rheuma-Forschungszentrum, Berlin, Germany (1997-2003)

Scientific Advisory Board of the Max Planck Institute for Immunology, Freiburg, Germany (1997-2001)

Volkswagen Foundation Research Granting Board (1997-1999)

Scientific Advisory Board of the Walter and Eliza Hall Institute, Melbourne, Australia (from 1998)

Panel on International Benchmarking of U.S. Immunology Research, National Academy of Sciences, National Academy of Engineering, Institute of Medicine (1998-1999)

Program Committee of the American Association of Immunologists (2000-2003)

Scientific Advisory Board of Peptimmune (2000-2008)

Council of the Gordon Research Conferences (2001-2005)

Scientific Advisory Board of l'Institut Pasteur, Paris, France (2001-2003)

Board of Scientific Overseers of the Jackson Laboratory, Bar Harbor ME (2001-2007)

Scientific Advisory Board of the RIKEN Institute, Yokohama, Japan (2001-2010)

NIH Study Section: Allergy and Immunology (ALY) (2001-2005; chair: 2004-2005)

Immunology Board of the NIH US-Japan Cooperative Medical Sciences Program (2002-2005)

Scientific Advisory Board of Phenomix (2003-2007)

Scientific Review Board, Howard Hughes Medical Institute (from 2005)

Scientific Advisory Board of the Immunological Disease Institute (previously the CBR Institute for Biomedical Research (2006-2018)

Scientific Advisory Board of Fidelity Biosciences (now F-Prime Capital Partners) (from 2006)

Scientific Advisory Board of Genentech (from 2006)

Prize Committee of the American Association of Immunologists (2008-2010)

Scientific Advisory Board of the WPI Immunology Frontier Research Center, Osaka, Japan (2008-2014)

Scientific Advisory Board of Catabasis (2008-2013)

co-Founder and Scientific Advisory Board of Tempero (2009-2014)

Pew Scholars Selection Committee (2010-2016)

Lasker Award Selection Committee (2010-2015)

Scientific Advisory Board of Cellzome (2011-2012)

Scientific Advisory Committee of the Francis Crick Institute, London (2011, 2012)

Scientific Advisory Board, Institut d'Études Avancées de l'Université de Strasbourg (from 2012)

Inflammation Scientific Advisory Board of MedImmune (2013-2017)

Selection Committee of the Novartis Award in Immunology (from 2013)

Chair, Immunosciences Scientific Advisory Board of Pfizer (from 2013)

External Advisory Committee of the Colton Center for Autoimmunity, NYU, New York, NY (2014-2018)

Chair, Scientific Advisory Board of the Tsinghua Immunology Institute, Beijing, China (from 2014)

Advisory Committee of the Blavatnik Biomedical Accelerator at Harvard University (2015-2019)

Chair, Scientific Advisory Board of IFM Therapeutics (2016-2019)

Scientific Advisory Board of Amgen, Inc. (from 2016)

Scientific Advisory Board of KSQ Therapeutics (from 2016)

Scientific Advisory Board of Pandion Therapeutics (from 2018)

co-Founder and Scientific Advisory Board of TrexBio (from 2018)

Board of Trustees, Rockefeller University (from 2019)

External Advisory Committee of the Colton Center for Autoimmunity at Yale, New Haven, CT (from 2019)

co-Founder and Scientific Advisory Board of Velox, a Third Rock Ventures NewCo (from 2019)

Scientific Advisory Board of Scholar Rock, Inc. (from 2020)

Scientific Advisory Board of Janssen Immunosciences (from 2020)

Louis-Jeantet Prize selection committee (from 2020)

Scientific Advisory Board of Asyilia Therapeutics, Inc. (2020)

Editorial Boards

European Journal of Immunology (1988-2001; Executive Council 1992-2001)

EMBO Journal (1992-95; 1999-2002)

International Immunology (1992-96)

Immunology Today (1992-2000)

Comptes Rendus de l'Académie des Sciences de Paris (from 1993)

Science (1993-2003)

Cell (1994-2001)

Current Biology (1994-2003)

Journal of Experimental Medicine (from 1996)

Immunity (from 1997)

Diabetes (1999-2003)

Modern Rheumatology (from 2000; International Advisory Board)

EMBO Reports (2001-2002)

Current Science Faculty of 1000: Autoimmunity Section Head (2001-2011)

Proceedings of the National Academy of Sciences (2004-2005)

Annual Reviews of Immunology (2005-2009)

Journal of Clinical Investigation (2006-2009)

Molecular Medicine (from 2006)

Nature Communications (2010-2016)

Cell Metabolism (from 2011)

eLife (2012-2017)

Professional Honors

Prize of the Ligue Nationale Française contre le Cancer (1983)

Bernard Halpern Prize in Immunology (1989)

Romancon Prize of the Fondation pour la Recherche Médicale (1993)

Fondation Athena Prize in Research (1997)

Election to the US National Academy of Sciences (2003)

A. Clifford Barger Award for Excellence in Mentoring (from HMS) (2004)

Election to Leopoldina, the German Academy of Sciences (2007)

Election to the American Academy of Arts & Sciences (2012)

Naomi Berrie Award for Outstanding Achievement in Diabetes Research, Columbia University (2012)

Excellence in Science Award by the Federation of American Societies for Experimental Biology (2017)

Rabbi Shai Shacknai Memorial Award in Immunology and Cancer Research, Hebrew University (2018)

Barcroft Medal, University of Belfast (2019)

Honorary Lectureships

Académie des Sciences Lecture, Institut de France, Paris, France (1990)

College de France Lecture, Paris, France (1990)

Australasian Society of Immunology Visiting Lecturer (1994):

Centenary Institute of Cancer Medicine and Cell Biology, University of Sydney, Sydney

School of Biomedical Sciences, Curtin University of Technology, Perth

Department of Microbiology and Immunology, University of Adelaide, Adelaide

Genesis R&D, Auckland Hospital, Auckland

Queensland Institute of Medical Research, Brisbane

Princess Alexandra Hospital, Brisbane

John Curtin School of Medical Research, the Australian National University, Canberra

The Walter and Elisa Hall Institute of Medical Research, Melbourne.

Dan Campbell Memorial Lecture, Midwinter Conference of Immunologists, Asilomar, CA, USA (1995)

Collège de France Lecture, Paris, France (1996)

Karolinska Research Lectures at the Nobel Forum, Stockholm, Sweden (1996)

Edmund Goidl Memorial Lecture, U. of Maryland School of Medicine, Baltimore, MD, USA (1996)

The NIH Director's Lecture Series, National Institutes of Health, Bethesda, MD, USA (1998)

Distinguished Lectureship, Annual Meeting of the American Association of Immunologists, Washington, DC, USA (1999)

FEBS/PABMB Lecture, Annual Meeting of The American Society for Biochemistry and Molecular Biology, San Francisco, CA, USA (1999)

Phillip Levine Memorial Lecture, Rockefeller University, New York, NY, USA (2000)

Millennial Lectures in Immunology, La Jolla Institute of Immunology, La Jolla, CA, USA (2000)

CMB Distinguished Scholar Seminar Speaker, University of Alabama, Birmingham, AL, USA (2001)

Harvey and Judy Poll Visiting Professor, Department of Medicine, U. of Washington School of Medicine, Seattle, WA, USA (2001)

Distinguished Lecturer in Immunology, Children's Hospital Medical Center, Cincinnati, OH, USA (2001)

President's Research Seminar, Memorial Sloan-Kettering Cancer Center, New York, NY, USA (2002)

Keynote Speaker, Autoimmunity Day, Johns Hopkins Autoimmune Disease Research Center, Baltimore, MD, USA (2002)

Boehringer-Ingelheim Distinguished Visiting Lectureship, Dept of Microbiology and Immunology, Vanderbilt University, Nashville, TN, USA (2002)

Distinguished Visiting Professor, Immunology Program, Washington University, Saint Louis, MO, USA (2003)

Robert Blizzard Lecture, Pediatric Endocrine Society Annual Meeting, Seattle, WA, USA (2003)

Pixie Campbell Memorial Keynote Address, National Jewish Medical and Research Center, Denver, CO, USA (2003)

Georges Köhler Lecture, Max Planck Institute for Immunologie, Freiburg, Germany (2003)

Albrecht Hasinger Lecture, Humboldt University of Berlin, Berlin, Germany (2003)

4th Annual Weiser Endowed Lecture, U. of Washington, Seattle, WA, USA (2004)

Harvey Lecture, The Rockefeller University, New York, NY, USA (2004)

Henry Kunkel Lecture, Rockefeller University, New York, NY, USA (2004)

43rd Annual Blumenthal Lectureship in Allergy and Immunology, U. of Minnesota, Minneapolis, MN, USA (2005)

NIH Director's Lecture, National Institutes of Health, Bethesda, MD, USA (2005)

Pfizer Visiting Professor in Diabetes, U. of Pittsburgh, Pittsburgh, PA, USA (2005)

Grabar Lecture, Societe, Francaise d'Immunologie, Toulouse, France (2005)

Keynote Lecturer, Keystone Symposium: Tolerance, Autoimmunity and Immune Regulation, Breckenridge, CO, USA (2006)

Leonardo Lecture, DIBIT, Milano, Italy (2006)

Dean's Lecture, Mt. Sinai School of Medicine, NY, NY, USA (2006)

Carter Lecture, U. of Virginia, Charlottesville, VA, USA (2006)

Janeway Lecture, Yale U., New Haven, CT, USA (2007)

Keynote Speaker, American Autoimmune-Related Diseases Association, Inc., Baltimore, MD, USA (2007)

Plenary Speaker, ENDO 07, Toronto, Canada (2007)

Keynote Speaker, 33rd Annual La Jolla Immunology Conference, La Jolla, CA, USA (2007)

Distinguished Immunologist Lecture, University of Alberta, Edmonton, Canada (2008)

Keynote Speaker, EMBO Conference Series: Visualizing Immune System Complexity, Marseille, France (2009)

Keynote Speaker, EMBO Conference Series: Signaling in the immune system, Sienna, Italy (2009)

Bernard Amos Lecture, Duke University, Durham, NC, USA (2010)

Koshland Lecture, University of Chicago, Chicago, IL, USA (2010)

Keynote Speaker, Keystone Symposia on "Immunoregulatory Networks", Breckenridge, CO, USA (2011)

Keynote Speaker, ANR Symposium, Lyon, FR (2011)

Enrique E. Ecker Memorial Lecture, Case Western Reserve University School of Medicine, Cleveland, OH, USA (2011)

Keynote Speaker, Keystone Symposium on "The Biology of Cytokines/Th17 Cells in Health and Disease", Keystone, Colorado, USA (2012)

Lacy Lecture, Washington University, St Louis, MO, USA (2012)

Keynote Speaker, ENII Spring School in Immunology, Sardinia, Italy (2012)

President's Research Seminar, Memorial Sloan Kettering Center, New York, NY, USA (2012)

Keynote Speaker, Canadian Society for Immunology, Nova Scotia, Canada (2012)

Keynote Speaker, Third International Conference on Regulatory T cells and Th subsets, Shanghai, China (2012)

Keynote Speaker, Keystone Symposium on “Immunopathology of Type 1 Diabetes, Whistler, BC, Canada (2013)

Plenary Speaker, 15th International Congress of Immunology, Milan, Italy (2013)

Eberly Distinguished Lecturer, U. of Pittsburgh, Pittsburgh, USA (2013)

McNair Medical Institute Symposium: Distinguished Lecture, Houston, TX, USA (2014)

Columbia University Heidelberger-Kabat Lecture, New York, NY (2014)

Keynote Speaker, Third Annual Broad-ISF Cell Circuits Symposium, Jerusalem, Israel (2015)

Gruber Science Fellowship Lecturer, New Haven, CT (2015)

Keynote Speaker, 12th World Congress on Inflammation, Boston, MA (2015)

Keynote Speaker, CSHL Metabolic Signaling & Disease: From Cell to Organism conference, Cold Spring Harbor, NY (2015)

Keynote Speaker, Australasian Society of Immunology, Canberra, Australia (2015)

German Cancer Research Center (DKFZ) - Distinguished Lecture, Heidelberg, Germany (2016)

U. of Chicago Joy Faith Knapp Memorial Lecture in Autoimmunity, Chicago, IL (2016)

Keynote Speaker, ThymUS, Maui, HI (2016)

Barbara Deeb Lecturer in Comparative Medicine, U. of Washington, Seattle, WA (2016)

iBiology Lecture (2016)

Keynote Speaker, 50th Annual Miami Winter Symposium, Diabetes: Today’s Research – Tomorrow’s Therapies, Miami, FL (2017)

The Willison Lectureship, University of Michigan Medical School, Ann Arbor, MI (2017)

Keynote Speaker, Keystone: Integrating Metabolism and Immunity, Dublin, Ireland (2017)

The Distinguished Ludwig Lecturer in Cancer Research at the U. of Lausanne (2017)

Keynote Lecture, 5th Annual Meeting of the International Cytokine and Interferon Society, Kanazawa, Japan (2017)

Keynote Address, 43rd New England Immunology Conference, Woods Hole, MA (2017)

U. of Strasbourg Institute for Advanced Study Distinguished Lectureship, Strasbourg, France (2017)

President’s Lecture, Sanford Burnham Prebys Medical Discovery Institute, La Jolla, CA (2018)

Keynote Speaker, ThymOz International Workshop on T Lymphocytes, Heron Island, Australia (2018)

Australian Society for Immunology Visiting Lecturer, Melbourne, Australia and Wellington, NZ (2018)

Keynote Speaker, IMMUNOCON 2018, 45th Annual Conference of the Indian Immunology Society, Faridabad, India (2018)

SELECTED REFEREED PUBLICATIONS (of 295 total refereed)

- D. Mathis** and P. Chambon. The SV40 early region TATA box, but not the upstream sequences, is required for in vitro initiation of transcription. *Nature* (1981) 290, 310-316.
- C. Benoist, **D. Mathis**, M. Kanter, V. Williams and H. McDevitt. Regions of allelic hypervariability in the murine A α immune response gene. *Cell* (1983) 34, 169-177.
- D. Mathis**, C. Benoist, V. Williams, M. Kanter and H. McDevitt. The murine E α immune response gene. *Cell* (1983) 32, 745-754.
- M. Le Meur, P. Gerlinger, C. Benoist and **D. Mathis**. Correcting an immune-response deficiency by creating E α gene transgenic mice. *Nature* (1985) 316, 38-42.
- D. Landais, C. Waltzinger, B.N. Beck, A. Staub, D.J. McKean, C. Benoist and **D. Mathis**. Functional sites on Ia molecules: a molecular dissection of A α immunogenicity. *Cell* (1986) 47, 173-181.
- A. Dorn, J. Bollekens, A. Staub, C. Benoist and **D. Mathis**. A multiplicity of CCAAT box-binding proteins. *Cell* (1987) 50, 863-872.
- W. van Ewijk, Y. Ron, J. Monaco, J. Kappler, P. Murrack, M. LeMeur, P. Gerlinger, B. Durand, C. Benoist and **D. Mathis**. Compartmentalization of MHC class II gene expression in transgenic mice. *Cell* (1988) 53, 357-370.
- J. Böhme, K. Haskins, P. Stecha, W. van Ewijk, M. Lemeur, P. Gerlinger, C. Benoist and **D. Mathis**. Transgenic mice with I-A on islet cells are normoglycemic but immunologically intolerant. *Science* (1989) 244, 1179-1183.
- L.J. Berg, A.M. Pullen, B. Fazekas de St. Groth, **D. Mathis**, C. Benoist and M.M. Davis. Antigen/ MHC specific T cells are preferentially exported from the thymus in the presence of their MHC ligand. *Cell* (1989) 58, 1035-1046.
- C. Benoist and **D. Mathis**. Positive selection of the T cell repertoire: where and when does it occur? *Cell* (1989) 58, 1027-1033.
- P. Dellabona, J. Peccoud, J. Kappler, P. Murrack, C. Benoist, **D. Mathis**. Superantigens interact with MHC class II molecules outside the antigen groove. *Cell* (1990) 62, 1115-1121.
- J. Böhme, B. Schuhbaur, O. Kanagawa, C. Benoist, **D. Mathis**. MHC-linked protection from diabetes is not due to clonal deletion of T cells. *Science* (1990) 249, 293-295.

- D. Cosgrove, D. Gray, A. Dierich, J. Kaufman, M. Lemeur, C. Benoist, **D. Mathis**. Mice lacking MHC class II molecules. *Cell* (1991) 66, 1051-1066.
- S. Viville, J. Neefjes, V. Lotteau, A. Dierich, M. Lemeur, H. Ploegh, C. Benoist, **D. Mathis**. Mice lacking the MHC class II-associated invariant chain. *Cell* (1993) 72, 635-648.
- S.H. Chan, D. Cosgrove, C. Waltzinger, C. Benoist, **D. Mathis**. Another view of the selective model of thymocyte selection. *Cell* (1993) 73, 225-236.
- S. Gilfillan, A. Dierich, M. Lemeur, C. Benoist, **D. Mathis**. Mice lacking TdT: mature animals with an immature lymphocyte repertoire. *Science* (1993) 261, 1175-1178.
- J.D. Katz, B. Wang, K. Haskins, C. Benoist and **D. Mathis**. Following a diabetogenic T cell from genesis through pathogenesis. *Cell* (1993) 74, 1089-1100.
- H. Bodmer, S. Viville, C. Benoist, **D. Mathis**. Invariant chain limits the diversity of endogenously synthesized protein epitopes presented by MHC class II molecules. *Science* (1994) 263, 1284-1286.
- J. Katz, C. Benoist, **D. Mathis**. T helper cell subsets in insulin-dependent diabetes. *Science* (1995) 268, 1185-1188.
- T. Miyazaki, P. Wolf, S. Tourne, C. Waltzinger, A. Dierich, N. Barois, H. Ploegh, C. Benoist, **D. Mathis**. Mice lacking H-2M complexes, enigmatic elements of the MHC class II peptide-loading pathway. *Cell* (1996) 84, 531-541.
- T. Miyazaki, A. Dierich, C. Benoist, **D. Mathis**. Independent modes of natural killing distinguished in mice lacking LAG-3. *Science* (1996) 272, 405-408.
- V. Kouskoff, A-S. Korganow, V. Duchatelle, C. Degott, C. Benoist, **D. Mathis**. Organ-specific disease provoked by systemic autoreactivity. *Cell* (1996) 87, 811-822.
- N. Nakano, R. Rooke, C. Benoist, **D. Mathis**. Positive selection of T cells induced by viral delivery of neopeptides to the thymus. *Science* (1997) 275, 678-683.
- R. Rooke, C. Waltzinger, C. Benoist, **D. Mathis**. Targeted complementation of MHC class II deficiency by intrathymic delivery of recombinant adenovirus. *Immunity* (1997) 7, 123-134.
- S. Tourne, T. Miyazaki, A. Oxenius, L. Klein, T. Fehr, B. Kyewski, C. Benoist, **D. Mathis**. Selection of a broad repertoire of CD4⁺ T cells in H-2Ma^{o/o} mice. *Immunity* (1997) 7, 187-195.
- A. Gonzalez, J.D. Katz, M-G. Mattei, H. Kikutani, C. Benoist, **D. Mathis**. Genetic control of diabetes progression. *Immunity* (1997) 7, 873-883.
- A.S. Korganow, J. Hong, S. Mangialaio, V. Duchatelle, R. Pelanda, T. Martin, C. Degott, H. Kikutani, K. Rajewsky, J-L. Pasquali, C. Benoist, **D. Mathis**. From systemic T cell self-reactivity to organ-specific autoimmune disease via immunoglobulins. *Immunity* (1999) 10, 451-461.
- I. Matsumoto, A. Staub, C. Benoist, **D. Mathis**. Arthritis provoked by linked T and B cell recognition a glycolytic enzyme. *Science* (1999) 286, 1732-35.
- M. Correia-Neves, C. Waltzinger, **D. Mathis**, C. Benoist. The shaping of the T cell repertoire. *Immunity* (2001) 14, 21-32.

- N. Labrecque, L.S. Whitfield, R. Obst, C. Waltzinger, C. Benoist and **D. Mathis**. How much TCR does a T cell need? *Immunity* (2001) 15, 71-82.
- A. Gonzalez, I. Andre-Schmutz, C. Carnaud, **D. Mathis**, C. Benoist. Damage control, rather than unresponsiveness, effected by protective DX5⁺ T cells in autoimmune diabetes. *Nature Immunol.* (2001) 7, 1117-1125.
- H. Ji, K. Ohmura, U. Mahmood, D. M. Lee, F. M. A. Hofhuis, S. A. Boackle, V. M. Holers, M. Walport, C. Gerard, A. Ezekowitz, M. C. Carroll, M. Brenner, R. Weissleder, J. S. Verbeek, V. Duchatelle, C. Degott, C. Benoist, **D. Mathis**. Arthritis critically dependent on innate immune system players. *Immunity* (2002) 16, 157-168.
- I. Matsumoto, M. Maccioni, D. M. Lee, M. Maurice, B. Simmons, M. Brenner, **D. Mathis** and C. Benoist. How antibodies to a ubiquitous cytoplasmic enzyme may provoke joint-specific autoimmune disease. *Nature Immunol.* (2002) 3, 360-365.
- D.M. Lee, D.S. Friend, M.F. Gurish, C. Benoist, **D. Mathis** and M.B. Brenner. Mast cells: a cellular link between autoantibodies and inflammatory arthritis. *Science* (2002) 297, 1689-1692.
- M.S. Anderson, E.S. Venanzi, L. Klein, Z. Chen, S. Berzins, S.J. Turley, H. von Boehmer, R. Bronson, A. Dierich, C. Benoist and **D. Mathis**. Projection of an immunological self shadow within the thymus by the aire protein. *Science* (2002), 298, 1395-1401.
- T. Yamagata, **D. Mathis** and C. Benoist. Self-reactivity in thymic double-positives commits cells to a CD8 α lineage with characteristics of innate immune cells. *Nature Immunol.* (2004) 5, 597-605.
- S. Zucchelli, P Holler, T. Yamagata, M. Roy, C. Benoist and **D. Mathis**. Defective central tolerance in NOD mice: genomics and genetics. *Immunity* (2005) 22, 385-396.
- M. Anderson, E. Venanzi, W. Jiang, Z. Chen, R. Bronson, C. Benoist and **D. Mathis**. The cellular mechanism of aire control of T cell tolerance. *Immunity* (2005) 23, 227-239.
- B. Binstadt, P. Pate, H. Alencar, P. Nigrovic, DM Lee, U. Mahmood, R. Weissleder, **D. Mathis** and C. Benoist. Particularities of the vasculature can promote the organ specificity of autoimmune attack. *Nature Immunol.* (2006) 7, 284-92.
- J. Nishio, J. Gaglia, S. Turvey, C. Benoist and **D. Mathis**. Islet recovery and reversal of murine type-1 diabetes, in the absence of infused spleen cell contribution. *Science.* (2006) 311, 1775-1778.
- G. Hyatt, R. Melamed, R. Park, R. Seguritan, C. Laplace, L. Poirot, S. Zucchelli, R. Obst, M. Matos, E. Venanzi, A. Goldrath, L. Nguyen, J. Luckey, T. Yamagata, A. Herman, J. Jacobs, **D. Mathis**, and C. Benoist. Gene-expression microarrays: glimpses at the immunological genome. *Nature Immunol.* (2006) 7, 686-691.
- Y. Wu, M. Borde, V. Heissmeyer, M. Feuerer, A.D. Lapan, J.C. Stroud, D.L. Bates, L. Guo, A. Han, S.F. Zeigler, **D. Mathis**, C. Benoist, L. Chen, and A. Rao FOXP3 controls regulatory T cell function through cooperation with NFAT. *Cell* (2006) 126, 375-87.
- J. Hill, M. Feuerer, K. Tash, S. Haxhinasto, J. Perez, R. Melamed, **D. Mathis** and C. Benoist. Foxp3-dependent and independent regulation of the Treg transcriptional signature. *Immunity* (2007) 27, 786-800.

- J. Hill, J. Hall, C. Sun, N. Ghyselinck, P. Chambon, Y. Belkaid, **D. Mathis** and C. Benoist. Retinoic Acid Enhances Foxp3 Induction Indirectly by Relieving Inhibition from CD4⁺CD44^{hi} Cells. *Immunity* (2008) 29, 758-70.
- M. Feuerer, L. Herrero, D. Cipolletta, A. Naaz, J. Wong, A. Nayer, J. Lee, A. Goldfine, C. Benoist, S.E. Shoelson and **D. Mathis**. Lean, but not obese, fat is enriched for a unique population of regulatory T cells that affect metabolic parameters. *Nature Med.* (2009) 15, 930-939.
- M. Feuerer, Y. Shen, D. Littman, C. Benoist and **D. Mathis**. How punctual ablation of Foxp3⁺ T cells unleashes an autoimmune lesion within the pancreatic islets. *Immunity* (2009) 31, 654-656.
- J. Abramson, M. Giraud, C. Benoist and **D. Mathis**. Aire's partners in the molecular control of immunological tolerance. *Cell* (2010) 140, 123-135.
- H-J Wu, I.I. Ivanov, K. Hattori, T. Shima, Y. Umesaki, D.R. Littman, C. Benoist and **D. Mathis**. Gut-residing segmented filamentous bacteria can drive autoimmune arthritis via T helper 17 cells. *Immunity* (2010) 32, 815-827.
- Y.P. Rubtsov, R. Niec, S. Josefowicz, L. Li, J Darce, **D. Mathis**, C. Benoist and A.Y. Rudensky. Stability of the regulatory T cell lineage in vivo. *Science* (2010) 329, 1667-1671.
- H.S. Bandukwala, Y. W, M. Feuerer, Y. Chen, B. Barbosa, S. Ghosh, J.C. Stroud, C. Benoist, **D. Mathis**, A. Rao, L. Chen. Structure of a Domain-Swapped FOXP3 Dimer on DNA and Its Function in Regulatory T Cells. *Immunity*. (2011) 34, 479-491.
- T.B. Feyerabend, A. Weiser, A. Tietz, M. Stassen, N. Harris, M. Kopf, P. Radermacher, P. Möller, C. Benoist, **D. Mathis**, H.J. Fehling, H.R. Rodewald. Cre-mediated cell ablation contests mast cell contribution in models of antibody- and T cell-mediated autoimmunity. *Immunity*. (2011) 35, 832-44.
- W. Fu, G. Wojtkiewicz, R. Weissleder, C. Benoist and **D. Mathis**. Early window of diabetes determinism in NOD mice, dependent on the complement receptor CR1g, identified by noninvasive imaging. *Nature Immunol.* (2012) 13, 361–368.
- J. Darce, D. Rudra, L. Li, J. Nishio, D. Cipolletta, A.Y. Rudensky, **D. Mathis** and C. Benoist. An N-terminal mutation of the Foxp3 transcription factor alleviates arthritis but exacerbates diabetes. *Immunity* (2012) 36, 731-41.
- H. Chung, S.J. Pamp, J.A. Hill, N.K. Surana, S.M. Edelman, E.B. Troy, N.C. Reading, E.J. Villablanca, S. Wang, J.R. Mora, Y. Umesaki, **D. Mathis**, C. Benoist, D.A. Relman, D.L. Kasper. Gut immune maturation depends on colonization with a host-specific microbiota. *Cell* (2012) 149, 1578-93.
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