

Curriculum Vitae

David V. Serreze, Ph.D.

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Education

University of Maine, Orono, Maine	B.S.	1979	Biology
University of Maine, Orono, Maine	M.S.	1982	Microbiology
University of Maine, Orono, Maine	Ph.D.	1990	Microbiology

Research Positions

3/05-present-Professor, The Jackson Laboratory, Bar Harbor, Maine

2/00-3/05- Associate Professor, The Jackson Laboratory, Bar Harbor, Maine

7/94-2/00-Assistant Professor, The Jackson Laboratory, Bar Harbor, Maine

5/98-12/17 - Adjunct Research Professor of Medicine, University of Massachusetts Medical Center, Worcester, Massachusetts

12/17-present - Adjunct Associate Professor of Medicine, University of Massachusetts Medical Center, Worcester, Massachusetts

6/93 -6/94 - Research Scientist, The Jackson Laboratory, Bar Harbor, Maine

6/91-6/93- American Diabetes Association Post-Doctoral Fellow, The Jackson Laboratory, Bar Harbor, Maine

5/85-6/91 - Sr. Research Asst., The Jackson Laboratory, Bar Harbor, Maine

8/84-2/85 - Manufacturing Reagents Technician, Ventrex Laboratories, Portland, Maine

12/82-4/84 - Research Technician, Dept. of Microbiology, Univ. of Maine

2/82-10/82 - Laboratory Technician, Dept. of Food Science, Univ. of Maine

1/80-12/1981 - Graduate Assistant, Dept. of Microbiology, Univ. of Maine

Research Interests

Genetic mechanisms for induction and maintenance of immunological tolerance.
Development of mouse gene models for understanding autoimmune diseases.
Genetics of susceptibility to insulin dependent diabetes in mice.

Academic Honors

B.S. in Biology with Distinction, Univ. of Maine, 1979

Alpha Zeta (life science honor society) Univ. of Maine Chapter, 1978

American Diabetes Association Travel Award-Top 5 Abstracts, International Research Symposium on Immunology of Diabetes, 1987.

American Diabetes Association Mentor Based Post-Doctoral Fellowship, 1991

Merck Scholar in Immunology, 1995-1996

Invited Lecture: Immunology of Diabetes Society Meeting, Orvieto, Italy, October 1995

Invited Plenary Session Lecture: 58th Annual Scientific Sessions of the American Diabetes Association, Chicago, Illinois, June 1998

Applebaum Visiting Distinguished Professor of Medicine, Univ. of Florida College of Medicine, 1998

Invited Lecture: Autoimmunity Session, American Association of Immunologists Meeting, Washington DC, April 1999

Invited Plenary Session Lecture: Annual Meeting of the Canadian Diabetes Association, Halifax, Nova Scotia, October 2000

Invited Lecture: Genetics Session, Immunology of Diabetes Society Meeting, Copper Mountain, Colorado, October 2002

Juvenile Diabetes Research Foundation, Mary Jane Kugal Research Award, 2003, 2006, 2009

Invited lecture: Immunology of Diabetes Society Meeting, Cambridge, U.K., March/April 2004.

Australasian Society of Immunology Invited International Speaker Tour, May 2004.

Invited Lecture: New England Immunology Conference, November 2004.

Invited Keynote Address: The BB rat turns 30, Ottawa, Ontario, Canada, December 2004

Invited Lecture: European Association for the Study of Diabetes/Juvenile Diabetes Research Foundation Joint Workshop, Oxford, England, August 2005.

Invited Overview lecture: Integrated European Union workshop on "The side of the victim: beta cell destruction in T1DM" and "The side of the aggressor: immunology of T1DM". Leiden, The Netherlands, March 2006.

Invited Keynote Address: National Institutes of Health Autoimmune Retinitis Workshop, Bethesda, Maryland, April, 2006.

Invited lecture: Merck sponsored conference "The Thyroid and Autoimmunity". Noordwijk, The Netherlands, June 2006

Invited lecture: New York Academy of Sciences Conference, Animal Models for Type 1 Diabetes and Multiple Sclerosis, San Francisco, CA, November 2006

Juvenile Diabetes Research Foundation, Gerold and Kayla Grodsky Award for outstanding contributions to diabetes research, May 2007

Invited lecture: 3rd Aegean Conference on "Autoimmunity: Mechanisms and Novel Treatments", Rhodes, Greece, October 2007

Invited lecture: Immunology of Diabetes Society meeting, Miami, Florida, November 2007

The Jackson Laboratory National Council Award for Scientific Achievement, August 2009

Invited lecture: 4th Aegean Conference on "Autoimmunity: Mechanisms and Novel Treatments", Crete, Greece, October 2009

Invited lecture: 70th Annual Scientific Sessions of the American Diabetes Association, Orlando, Florida, June 2010

Invited Lecture: New England Immunology Conference, November 2010

Invited speaker/round table discussant: *Nature Medicine* symposium on autoimmunity. Seeon, Germany, June 2011

Invited lecture: 5th Aegean Conference on "Autoimmunity: Mechanisms and Novel Treatments", Crete, Greece, September 2011

Invited lecture: Keystone Symposium on Immunopathology of Type 1 Diabetes, Whistler, British Columbia, April 2013

Invited lecture: German Medical Council meeting on autoimmune diseases, Munster, Germany, November 2013

Invited lecture: 74th annual American Diabetes Association meeting, San Francisco, California, June 2014

Invited lecture: Immunology of Diabetes Society meeting, Munich, Germany, April 2015

Invited lecture: Symposium for the 60th Anniversary of Tongji Hospital Relocation from Shanghai to Wuhan China, October 2015

Invited lecture: Immunology of Diabetes Society meeting, San Francisco, California, January 2017

Faculty of 1000 Member (Immunology) 2002-present

Extramural Research Support

Current Support

Principal Investigator - NIH Grant DK46266. Diabetogenic role of MHC class I alleles in NOD mice.

Funding period 6/93 - 6/19

Principal Investigator - NIH Grant DK095735. B-lymphocyte targeting therapies for autoimmune diabetes.

Funding period 4/13-3/23

NIH grant U54 OD020351 The Jackson Laboratory Center for Precision Genetics: From New Models to Novel Therapeutics - DMU Project 2: New strains for modeling and for hosting human autoimmune diseases

Role: Project Leader

Funding period 8/15-6/20

Principal Investigator – JDRF Type 1 Diabetes Humanized Mouse Initiative.

Funding period 2/18-1/20

Past Support

Principal Investigator - American Cancer Society Grant IRG-155G: Oncogenic role of *emv-30* in NOD-*scid* mice: development of an *emv-30* negative congenic stock.

Funding period: 7/92 - 6/93

Principal Investigator - Juvenile Diabetes Foundation Research Grant 195134.

Testing human autoimmune diabetes susceptibility in mice.

Funding period 9/95-8/97

Principal Investigator - NIH Grant AI41469. Virus encoded mimitope processing in autoimmune diabetes.

Funding period: 6/97 - 5/00

Principal Investigator - Juvenile Diabetes Foundation Research Grant 1998-95.

Role of MHC class I in autoimmune diabetes.

Funding period 7/98-6/00

Principal Investigator - Juvenile Diabetes Foundation Research Grant 1999-580.

B lymphocyte antigen presentation in autoimmune diabetes.

Funding period 8/97-7/01

Principal Investigator - Juvenile Diabetes Foundation Research Grant 2001-535.

Modeling human MHC class I diabetes functions in mice.

Funding period 8/01-7/04

Principal Investigator - Juvenile Diabetes Foundation Research Grant 2003-517.

Role of B cells in T cell mediated autoimmune diabetes.

Funding period 8/03-7/06

Principal Investigator - *Juvenile Diabetes Foundation Research Grant 2005-916*. Agents for reversing diabetogenic dendritic cell defects.
Funding period 8/05-7/08

Principal Investigator - *NIH Grant DK51090*. Antigen presenting cell defects in autoimmune diabetes.
Funding period: 6/96 - 5/10

Co-Principal Investigator - *Juvenile Diabetes Foundation Research Grant 192015*. Defective macrophage differentiation and function in NOD/Lt mice.
Funding period: 9/92 - 8/94

Co-Principal Investigator - *Juvenile Diabetes Foundation Research Grant 193822*. Development of a gene therapy model for IDDM prevention in NOD mice.
Funding period: 9/94 - 8/96

Co-Principal Investigator - *NIH Grant DK27722*. Pathogenesis of autoimmune diabetes in mice.
Funding period: 4/94 - 6/05

Principal Investigator - *Juvenile Diabetes Foundation Research Grant 180536*. Dendritic cell conditioning for type 1 diabetes prevention.
Funding period 9/07-8/10

Principal Investigator - (Project 3) *Juvenile Diabetes Foundation Research Program Project Grant 2005-1155*. Identification of diabetogenic T cells in humanized mice.
Funding period 8/05-7/11

Principal Investigator - *Juvenile Diabetes Foundation Research Grant 2007-538*. Optimizing B-lymphocyte targeted type-1 diabetes therapies.
Funding period 9/10-8/11

Project Leader – *NIH Beta Cell Biology Consortium TCPA award DK072473*. Establishing immunological tolerance to transplanted pancreatic β cells.
Funding period 9/11-8/13

Principal Investigator - *Juvenile Diabetes Foundation Research Grant 17-2011-651*. Antigen specific tolerance in models of human T1D.
Funding period 9/11-8/13

Principal Investigator - *Juvenile Diabetes Foundation Research Grant 17-2011-659*. Optimization of B-lymphocyte directed type-1 diabetes interventions.
Funding period 8/11-7/14

Principal Investigator – *American Diabetes Assoc. Research Grant 17-2011-659*. Dendritic cell therapies for autoimmune diabetes.
Funding period 8/11-7/14

*Principal Investigator - Harry and Leona Helmsley Foundation. A Microparticle Based Approach for Preserving Beta Cell Mass.
Funding period 4/14-3/15*

*Principal Investigator - NIH Grant DK097610. Type 1 diabetes mouse resource.
Funding period 9/12-8/17*

External Peer Review Duties

External Grant Review Panels

Standing member, National Institutes of Health

-Hypersensitivity, Allergy, and Immunological Diseases Study Section
(2006-2010)

Ad hoc reviewer, National Institutes of Health:

-Hypersensitivity, Allergy, and Immunological Diseases Study Section
(2006-2010)

-Immunological Sciences Study Section

-Transplantation, Tolerance, and Tumor Immunology Study Section

-Metabolism Study Section

-Mammalian Genetics Study Section

-Genes in Health and Disease Study Section

-Special Emphasis Study Section: Immunopathogenesis of Type I
Diabetes Mellitus

-Special Emphasis Study Section: Biology of the pancreatic β cell

-Special Emphasis Study Section: Model systems towards development of
human gene therapy

-Special Emphasis Study Section: New therapies for type I diabetes and
its complications

-Special Emphasis Study Section: Diabetes centers of excellence

-Special Emphasis Study Section: Innovative grants on immune tolerance

-Special Emphasis Study Section: Gene transfer approaches to enhance
islet transplantation

-Special Emphasis Study Section: Innovative partnerships in type 1
diabetes research

-Special Emphasis Study Section: Type 1 diabetes program project
grants

-Special Emphasis Study Section: High-end instrumentation grant
program: flow cytometry

-Special Emphasis Study Section: Bio samples from diabetes clinical
studies

-Special Emphasis Study Section: Innovative approaches for type 1
diabetes interventions

-Special Emphasis Study Section: Cooperative study group for
autoimmune disease prevention

-Special Emphasis Study Section: Research using subjects from the
TrialNet Biobank (DP3)

- Special Emphasis Study Section: Early stage pharmacological validation of novel targets and accompanying pre-therapeutic leads for diseases of interest to NIDDK
- Special Emphasis Study Section: Small Business: Endocrinology, Metabolism, Nutrition, and Reproductive Sciences
- Ad Hoc Reviewer, National Institutes of Health, Special Emphasis Study Section: Model Systems Towards Development of Human Gene Therapy
- Special Emphasis Study Section: NIH Immunology Fellowships
- Special Emphasis Study Section: Immune mechanisms in autoimmunity and allergy
- Special Emphasis Study Section: NIDDK Central Repositories Sample access
- Ad Hoc Reviewer: NIDDK K award review study section
- Ad Hoc Reviewer: NIDDK F award review study section
- Ad Hoc Reviewer: NIDDK HIRN program study section
- Ad Hoc Reviewer: NIDDK Immune engineering for type 1 diabetes interventions study section

Standing member, Juvenile Diabetes Foundation International, Medical Sciences Review Committee (2001-2009)

Juvenile Diabetes Foundation International, Innovative Grant Review Committee (2010-present)

Ad hoc grant reviewer, United States Veterans Administration

Ad hoc grant reviewer, Canadian Diabetes Association

Manuscript Reviews for Research Journals

Section Editor 2004-2008, *Journal of Immunology*
 Associate Editor 2002-2004, *Journal of Immunology*
 Editorial Board Member 2005-2007, *Clinical Immunology*

Ad hoc reviewer: *Diabetes, Diabetologia, Journal of Immunology, Nature Medicine, Nature Genetics, Nature Reviews, Immunity, Proc. Natl. Acad. Sci. USA, Journal of Clinical Investigation, Journal of Experimental Medicine, Genomics, FASEB Journal, Laboratory Animal Science, Journal of Cancer, Mammalian Genome, Journal of Autoimmunity, Diabetes / Metabolism Reviews, Autoimmunity, International Immunology, Clinical Immunology, Trends in Immunology, American Journal of Human Genetics, PLoS One, PLoS Genetics, American Journal of Transplantation, Immunology, American Journal of Pathology, Genes and Immunity*

Post Doctoral Fellows/Students

- Jennifer Dwyer, PhD, post-doctoral fellow 2017-present
- Jeremy Racine, PhD, post-doctoral fellow 2014-present
- Maximiliano Presa, PhD, post-doctoral fellow 2012-2017
- Caroline McPhee, DVM, PhD, post-doctoral fellow 2011-2014
- John Driver, PhD, post doctoral fellow 2005-2011
- Marijke Niens, PhD, post doctoral fellow 2008-2011
- Felix Scheuplein, PhD, post doctoral fellow 2006-2009

- Yi-Guang Chen, PhD, post doctoral fellow, 2002-2007
- Michele P Marron, PhD, post doctoral fellow, 2000-2004
- Caroline Choisy-Rossi, PhD post doctoral fellow, 2002-2004
- Pablo A Silveira, PhD, post doctoral fellow, 2000-2003
- Robert T Graser, PhD, post doctoral fellow, 1997-2000
- Qiming Wang, PhD graduate student, Tufts Medical School, 2014-present
- Todd Pearson, PhD graduate student, University Massachusetts Medical Center, 1999-2003
- Anna Quinlan, Atherton High School, Atherton CA, 2018 Jackson Laboratory Summer Student
- Isabel Stewart, University of Vermont, 2017 Jackson Laboratory Summer Student
- Jennifer Allocco, University of Connecticut, 2016 Jackson Laboratory Summer Student
- Rebecca O'Donnell, MDI High School, 2010 Jackson Laboratory Summer Student
- Shannon Bean, Rochester Institute of Technology, 2009 Jackson Laboratory Summer Student
- Alexandra Grier, Williams College, 2005, 2006 Jackson Laboratory Summer Student
- Ashley Bamman, Boston University, 2003 Jackson Laboratory Summer Student
- Joseph Dombrowski, Florida State University, 2002 Jackson Laboratory Summer Student
- Brian Stadinski, Bucknell University, 2001 Jackson Laboratory Summer Student
- Amanda Leinbaugh, Maine School of Science and Mathematics, 1999 academic year student
- Scott Richard, Albany College of Medicine, 1998 medical student summer intern
- Erin Nelli, State University of New York, Geneseo, 1998 Jackson Laboratory Summer Student
- Laurie Snow, Ellsworth High School, 1997 academic year student
- Sara Anne Fleming, Cornell University, 1996 Jackson Laboratory Summer Student
- Erik Cattelle, Ellsworth High School, 1996 academic year student
- Emmie Chen, Harvard University, 1995 Jackson Laboratory Summer Student
- Amy Patterson, Ellsworth High School, 1995 academic year student

Institutional Service

- Research Grants Committee 1995-present (Chairman since 1997)
- Research Animal Facilities Committee 2000-2017
- Genetics Resources Committee 2012-present
- Scientific Advisory Committee 1999, 2011-2014
- Post-Doctoral Training Committee 2010-2014
- Promotions Committee 2012-present
- Faculty Recruiting Committee 2006-2009
- Organizer, Immunology/Hematology Interest Group 1995-2007
- Seminars Committee 1997-2001
- Education Committee, 2000

- C57BL/6J Task Force 1996-1998
- Assistants Review Committee 1994-1998
- Recombinant DNA Committee 1994

Publications

Refereed Journal Articles

A. A. Bushway and D. V. Serreze. Differences in the pH and iron content of chicken white and dark meat that effect the action of nitrite against aerobes. *Canadian Institute of Food Science and Technology Journal* 17:214, 1984.

P. W. Reno, D. V. Serreze, S. K. Hellyer, and B. L. Nicholson. Hematological and physiological effects of Viral Erythrocytic Necrosis (VEN) in Atlantic Cod (*Gadus morhua*) and herring (*Clupea harengus*). *Fish Pathology* 20:353, 1985.

A. A. Bushway, D. V. Serreze, D. F. McGann, R. H. True, T. M. Work, and R. J. Bushway. Effect of processing method and storage time on the nutrient composition of fiddlehead greens. *J. Food Science* 50:1491, 1985.

C. E. Moody, D. V. Serreze, and P. W. Reno. Non-specific cytotoxic activity of teleost leukocytes. *Develop. and Comp. Immunol.* 9:51, 1985.

M. Prochazka, E. H. Leiter, D. V. Serreze, and D. L. Coleman. Three recessive loci required for insulin dependent diabetes in Non-Obese Diabetic mice. *Science* 237:286, 1987.

D. V. Serreze, E. H. Leiter, S. M. Worthen, and L. D. Shultz. NOD marrow stem cells adoptively transfer diabetes to resistant (NODxNON)F1 mice. *Diabetes* 37:252, 1988.

D. V. Serreze, E. H. Leiter, E. L. Kuff, P. Jardieu, and K. Ishizaka. Molecular mimicry between insulin and retroviral antigen p73; development of cross reactive autoantibodies in sera of NOD and C57BL/KsJ-*db/db* mice. *Diabetes* 37:351, 1988.

D. V. Serreze and E. H. Leiter. Defective activation of T suppressor cell function in Non-Obese Diabetic mice: potential relation to cytokine deficiencies. *J. Immunol.* 140:3801, 1988.

M. Prochazka, D. V. Serreze, S. M. Worthen, and E. H. Leiter. Genetic control of diabetogenesis in NOD/Lt mice: development and analysis of cogenic stocks. *Diabetes* 38:1446, 1989.

E. H. Leiter, G. J. Christianson, D. V. Serreze, A. T. Ting, and S. M. Worthen. MHC antigen induction by Interferon- γ on cultured mouse pancreatic β cells and macrophages: genetic analysis of strain differences and discovery of an "occult" class I-like antigen in NOD/Lt mice. *J. Exp. Med.* 170:1243, 1989.

D. V. Serreze, K. Hamaguchi, and E. H. Leiter. Immunostimulation circumvents diabetes in NOD/Lt mice. *J. Autoimmunity* 2:759 1989.

D. V. Serreze, E. H. Leiter, and L. D. Shultz. Transplantation analysis of beta cell destruction in (NODxCBA)F1 bone marrow chimeras. *Diabetologia* 33:84, 1990.

D. V. Serreze and E. H. Leiter. Development of diabetogenic T cells from NOD/Lt marrow is blocked when an allo-H-2 haplotype is expressed on cells of hematopoietic origin, but not on thymic epithelium. *J. Immunol.* 147:1222, 1991.

M. Prochazka, D. V. Serreze, W. N. Frankel, and E. H. Leiter. NOR/Lt: H-2 matched, diabetes resistant control strain for NOD. *Diabetes* 41:98, 1992.

I. C. Gerling, D. V. Serreze, S. W. Christianson, and E. H. Leiter. Intrathymic islet cell transplantation reduces beta-cell autoimmunity and prevents diabetes in NOD/Lt mice. *Diabetes* 41:1672, 1992.

H. R. Gaskins, M. Prochazka, K. Hamaguchi, D. V. Serreze, and E. H. Leiter. Genetic and molecular association of endogenous xenotropic retroviruses with diabetogenesis in NOD/Lt mice. *J. Clin. Invest.*, 90:2220, 1992.

D. V. Serreze, H. R. Gaskins, and E. H. Leiter. Defects in the differentiation and function of antigen presenting cells in NOD/Lt mice. *J. Immunol.*, 150:2534, 1993.

M. J. Rapaport, D. Zipris, A. H. Lazarus, A. Jaramillo, D. V. Serreze, E. H. Leiter, P. Cyopick, and T. L. Delovitch. Thymic T cell proliferative unresponsiveness in autoimmune NOD mice. II. IL-4 reverses NOD thymic T cell anergy and prevents the onset of diabetes. *J. Exp. Med.*, 178:87, 1993.

D. V. Serreze, J. W. Gaedeke, and E. H. Leiter. Hematopoietic stem cell defects underlying abnormal macrophage development and maturation in NOD/Lt mice: defective regulation of cytokine receptors and protein kinase C. *Proc. Natl. Acad. Sci. USA*, 90:9625, 1993.

W. Hao, D. V. Serreze, D. K. McCulloch, J. L. Neifing, and J. P. Palmer. Insulin (auto)antibodies from human IDDM cross-react with retroviral antigen p73. *J. Autoimmunity*, 6:787, 1993.

D. V. Serreze, E. H. Leiter, G. J. Christianson, D. Greiner, and D. C. Roopenian. MHC class I deficient NOD-*B2m*^{null} mice are diabetes and insulinitis resistant. *Diabetes*, 43:505, 1994.

D. V. Serreze, M. Prochazka, P. C. Reifsnyder, M. Bridgett, and E. H. Leiter. Use of recombinant congenic and congenic strains of NOD mice to identify a new insulin dependent diabetes resistance gene. *J. Exp. Med.*, 180:1553, 1994.

T. N. M. Schumacher, D. V. Kantesaria, D. V. Serreze, D. C. Roopenian, and H. L. Ploegh. Transporters from *H-2^b*, *H-2^d*, *H-2^s*, *H-2^k*, and *H-2g^r* (NOD/Lt) haplotype translocate similar sets of peptides. *Proc. Natl. Acad. Sci. USA*, 91:13004, 1994.

M. A. McAleer, P. Reifsnyder, S. M. Palmer, M. Prochazka, J. M. Love, J. B. Copeman, E. E. Powell, N. R. Rodrigues, Jan-Bas Prins, D. V. Serreze, N. H. DeLarto, L. S. Wicker, L. B. Peterson, N. J. Schork, J. A. Todd, and E. H. Leiter. Crosses of NOD Mice with the Related NON Strain: A Polygenic Treshold Model for Type I Diabetes. *Diabetes*, 44:1186, 1995.

D. V. Serreze, E. H. Leiter, M. S. Hanson, S. W. Christianson, L. D. Shultz, R. M. Hesselton and D. L. Greiner. *Emv30^{null}* NOD-*scid* mice: an improved host for adoptive transfer of autoimmune diabetes and growth of human lymphohematopoietic cells. *Diabetes*, 44:1392, 1995.

D. V. Serreze, S. Gallichin, D. P. Snider, K. Croitoru, K. L. Rosenthal, E. H. Leiter, G. J. Christianson, M. E. Dudley, and D. C. Roopenian. MHC class I mediated antigen presentation and induction of CD8⁺ cytotoxic T lymphocyte responses in autoimmune diabetes prone NOD mice. *Diabetes*, 45:902, 1996.

M. S. Hanson, M. Cetkovic-Cvrlje, V. K. Ramiya, M. A. Atkinson, N. K. MacLaren, B. Singh, J. F. Elliott, D. V. Serreze, and E. H. Leiter. Quantitative thresholds of MHC class II I-E expressed on hematopoietically derived APC in transgenic NOD/Lt mice determine level of diabetes resistance and indicate mechanism of protection. *J. Immunol.*, 157:1279, 1996.

D. V. Serreze, H. D. Chapman, D. S. Varnum, M. S. Hanson, P. C. Reifsnyder, S. D. Richard, S. A. Fleming, E.H. Leiter, and L. D. Shultz. B lymphocytes are essential for the initiation of T cell mediated autoimmune diabetes: analysis of a new "speed congenic" stock of NOD.*Igμ^{null}* mice. *J. Exp. Med.*, 184:2049, 1996.

D. V. Serreze, H. D. Chapman, I. Gerling, E. H. Leiter, and L. D. Shultz. Initiation of autoimmune diabetes in NOD/Lt mice is MHC class I-dependent. *J. Immunol.*, 158:3978, 1997.

E.H. Leiter, H. Tsumura, D. V. Serreze, H. D. Chapman, D. U. Rabin, M. S. Lan, and A. L. Notkins. Mapping to Chromosomes 1 and 12 of mouse homologs of human protein tyrosine phosphatase, receptor-type, related genes encoding pancreatic beta cell autoantigens. *Mammalian Genome*, 8:949, 1997.

D. V. Serreze, M. Bridgett, H. D. Chapman, E. Chen, S. D. Richard, and E. H. Leiter. Subcongenic analysis of the *Idd13* locus in NOD/Lt mice: evidence for several susceptibility genes including a possible diabetogenic role for β2-microglobulin. *J. Immunol.*, 160:1472, 1998.

R. Jiang, Y. Lan, H. D. Chapman, C. Shawber, C. R. Norton, D. V. Serreze, G. Weinmaster, and T. Gridley. Defects in limb, craniofacial and thymic development in *Jagged2* mutant mice. *Genes and Development*, 12:1046, 1998.

D. V. Serreze, S. A. Fleming, H. D. Chapman, S. D. Richard, E. H. Leiter, and R. M. Tisch. B-lymphocytes are critical antigen presenting cells for the initiation of T cell mediated autoimmune diabetes in NOD mice. *J. Immunol.*, 161:3912, 1998.

T. P. DiLorenzo, R. T. Graser, T. Ono, G. J. Christianson, H. D. Chapman, D. C. Roopenian, S. G. Nathenson, and D. V. Serreze. MHC class I-restricted T cells are required for all but the end stages of diabetes development in NOD mice and utilize a prevalent T cell receptor α chain gene rearrangement. *Proc. Natl. Acad. Sci. USA*, 95:12538, 1998.

T. G. Markees, D. V. Serreze, N. E. Phillips, C. H. Sorli, E. J. Gordon, L. D. Shultz, R. J. Noelle, B. A. Woda, D. L. Greiner, J. P. Mordes, and A. A. Rossini.

NOD mice have a generalized defect in their response to transplantation tolerance induction. *Diabetes*, 48:967, 1999.

R. T. Graser, C. E. Mathews, E. H. Leiter, and D. V. Serreze. MHC characterization of ALR and ALS mice: respective similarities to the NOD and NON strains. *Immunogenetics*, 49:722, 1999.

R. Tisch, B. Wang, and D. V. Serreze. Induction of GAD65-specific Th2 cells and suppression of autoimmune diabetes at late stages of disease is epitope-dependent. *J. Immunol.*, 163:1178, 1999.

S. Trembleau, G. Penna, S. Gregori, H. Chapman, D. Serreze, J. Magram, and L. Adorini. Pancreas-infiltrating Th1 cells and diabetes develop in IL-12-deficient nonobese diabetic mice. *J. Immunol.*, 163:2960, 1999.

C. E. Mathews, R. T. Graser, D. V. Serreze, and E. H. Leiter. Re-evaluation of the major histocompatibility complex genes of the NOD-progenitor CTS/Shi strain. *Diabetes*, 49:131, 2000.

R. T. Graser, T. P. DiLorenzo, F. Wang, G. J. Christianson, H. D. Chapman, D. C. Roopenian, S. G. Nathanson, and D. V. Serreze. Identification of a CD8 T cell that can independently mediate autoimmune diabetes development in the complete absence of CD4 T cell helper functions. *J. Immunol.*, 164:3913, 2000.

D. V. Serreze, E. W. Ottendorfer, T. M. Ellis, C. J. Gauntt, and M. A. Atkinson. Acceleration of type I diabetes by a coxsackievirus infection requires a preexisting critical mass of autoreactive T cells in pancreatic islets. *Diabetes*, 49:708, 2000.

D. V. Serreze, C. M. Post, H. D. Chapman, E. A. Johnson, B. Lu, and P. B. Rothman. Interferon- γ receptor signaling is dispensable in the development of autoimmune type 1 diabetes in NOD mice. *Diabetes*, 49:2007, 2000.

C. E. Mathews, R. T. Graser, A. Savinov, D. V. Serreze and Edward H. Leiter. Unusual resistance of ALR/Lt beta cells to autoimmune destruction: role for beta cell expressed resistance determinants. *Proc. Natl. Acad. Sci. USA*, 98:235, 2001.

D. V. Serreze, H. D. Chapman, C. M. Post, E. A. Johnson, W. L. Suarez-Pinzon, and A. Rabinovitch. Th1 to Th2 cytokine shifts in NOD mice: sometimes an outcome, rather than the cause of diabetes resistance elicited by immunostimulation. *J. Immunol.*, 166:1352, 2001.

R. Tisch, B. Wang, D. J. Weaver, B. Liu, T. Bui, J. Arthos, and D. V. Serreze. Antigen-specific mediated suppression of β cell autoimmunity by plasmid DNA vaccination. *J. Immunol.* 166:2122, 2001.

P. P. L. Chiu, D. V. Serreze, and J. S. Danska. Development and function of diabetogenic T cells in B cell deficient non-obese diabetic mice. *Diabetes* 50:763, 2001.

S. Efrat, D. Serreze, A. Svetlanov, C. M. Post, E. A. Johnson, K. Herold, and M. Horwitz. Adenovirus early region 3 (E3) immunomodulatory genes prevent

autoimmune diabetes in nonobese diabetic (NOD) mice. *Diabetes*, 50:980, 2001.

R. Tisch, B. Wang, M. A. Atkinson, D. V. Serreze, and R. Friedline. A glutamic acid decarboxylase 65-specific Th2 T cell clone immunoregulates autoimmune diabetes in nonobese diabetic mice. *J. Immunol.* 166:6925, 2001.

E. A. Johnson, P. Silveira, H. D. Chapman, E. H. Leiter, and D. V. Serreze. Inhibition of autoimmune diabetes in NOD mice by transgenic restoration of H2-E MHC class II expression: additive, but unequal involvement of multiple APC subtypes. *J. Immunol.* 167:2404, 2001.

D. V. Serreze, E. A. Johnson, H. D. Chapman, R. T. Graser, M. P. Marron, T. P. DiLorenzo, Y. Yoshimura, S. G. Nathenson, and S. Joyce. Autoreactive diabetogenic T cells in NOD mice can efficiently expand from a greatly reduced precursor pool. *Diabetes*, 50:1992, 2001.

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