January 2, 2024

CURRICULUM VITAE

Kevin P. Campbell, Ph.D.

Personal Data

Place of Birth:	Brooklyn, New York
Citizenship:	United States
Marital Status:	Married; Three Children

Home Address:	931 Evergreen Court Iowa City, IA 52245

Current Position

Investigator, Howard Hughes Medical Institute
Chair, Department of Molecular Physiology and Biophysics
Director, Wellstone Muscular Dystrophy Specialized Research Center
Roy J. Carver Biomedical Research Chair in Molecular Physiology and Biophysics
Professor of Neurology
University of Iowa Roy J. and Lucille A. Carver College of Medicine

Address:	4283 Carver Biomedical Research Building University of Iowa 285 Newton Road Iowa City, IA 52242-1101
Telephone:	(319) 335-7867
Cell phone:	(319) 594-3283
Fax:	(319) 335-6957
Email:	kevin-campbell@uiowa.edu
ORCID:	http://orcid.org/0000-0003-2066-5889
Web Addresses:	Lab: https://campbell.lab.uiowa.edu/ Department: https://medicine.uiowa.edu/physiology/ HHMI: http://www.hhmi.org/research/investigators/campbell_bio.html Wellstone Muscular Dystrophy Center: https://wellstone.medicine.uiowa.edu/

Education

1979	Ph.D.	Biophysics, University of Rochester, School of Medicine & Dentistry, Rochester, New York
1976	M.S.	Biophysics, University of Rochester, School of Medicine & Dentistry, Rochester, New York
1973	B.S.	Physics, Manhattan College, Bronx, New York

Post-Graduate Education

1978-1981	Postdoctoral Fellow	Banting and Best Department of Medical Research University of Toronto Toronto, Ontario, Canada Advisor: Dr. David MacLennan

Academic Appointments

2005-present	Chair, Department of Molecular Physiology and Biophysics, University of Iowa
2005-present	Director, Wellstone Muscular Dystrophy Specialized Research Center
1999-present	Carver Trust - Roy J. Carver Biomedical Research Chair in Physiology and Biophysics, University of Iowa
1997-present	Professor, Department of Neurology, University of Iowa
1989-present	Investigator, Howard Hughes Medical Institute
1988-present	Professor, Department of Molecular Physiology and Biophysics, University of Iowa
2002-2005	Interim Department Chair, Department of Physiology and Biophysics, University of Iowa
1989-1999	University of Iowa Foundation Distinguished Professor of Physiology and Biophysics
1985-1988	Associate Professor, Department of Physiology and Biophysics, University of Iowa
1981-1985	Assistant Professor, Department of Physiology and Biophysics, University of Iowa
1978-1981	Postdoctoral Fellow with Dr. David MacLennan, Banting and Best Department of Medical Research, University of Toronto, Toronto, Ontario, Canada
1976-1978	Teaching Assistant, Undergraduate and Graduate Biochemistry, University of Rochester
1973-1977	Graduate Fellow, Biophysics Training Grant, Department of Radiation Biology and Biophysics, University of Rochester

Honors and Awards

2020	Herbert Tabor Research Award, American Society for Biochemistry and Molecular Biology
2020	Tamio Yamakawa Award, The Japan Consortium for Glycobiology and Glycotechnology
2020	University of Iowa Carver College of Medicine Impact Scholar
2017	Society for Glycobiology President's Innovator Award
2017	UI Senior Student Recognition List
2016	Lifetime Achievement Fellow, American Society for Cell Biology
2016	Greg Marzolf, Jr. Foundation Symposium Visiting Lecture Award
2016	UI Senior Student Recognition List
2015	Inaugural Fellow, American Physiological Society
2014	UI Senior Student Recognition List
2010	A. Ross McIntyre Award
2009	March of Dimes Prize in Developmental Biology
2007	Presidential Lecturer, The University of Iowa
2006	American Academy of Arts and Sciences
2005	Carver College of Medicine Distinguished Mentor Award
2004	National Academy of Sciences
2004	American Academy of Microbiology
2004	American Academy of Neurology Lecturer Award
2004	Rochester Distinguished Scholar Award
2003	University of Manitoba Samuel Weiner Distinguished Visitor Award
2001	Elsevier Science Award at the World Muscle Society Meeting
2001	S. Mouchly Small, MDA Scientific Achievement Award
2001	Weil Award for Best Paper in Experimental Neuropathology
2000	G. Conte Prize 2000 for Basic Research
1999	National Academy of Medicine (formerly Institute of Medicine) of the National Academy of Sciences
1999	Carver Trust - Roy J. Carver Biomedical Research Chair in Molecular Physiology and Biophysics
1999	Fellow of the Biophysical Society
1997	Duchenne-Erb-Preis Award (German Muscular Dystrophy Association)
1996	Esther Benjamin Memorial Lecture Award
1996	Landacre Society Lecture Award
1996	American Academy of Neurology Decade of the Brain Award
1995	INSERM/Académie des Sciences Prix
1994	McGill University F.L. McNaughton Lecturer
1994	Vanderbilt University 1994 Lamson Memorial Lecturer
1994	ASBMB-AMGEN Award

1994	International Albrecht Fleckenstein Award
1993	Muscular Dystrophy Association Service Merchandise Leadership Award
1992	The Emilio Trabucchi Foundation Medal
1989	Howard Hughes Medical Institute Investigator
1989	University of Iowa Foundation Distinguished Professor of Physiology and Biophysics
1990	Regent's Award for Faculty Excellence
1984	Finalist for 1984 Louis N. Katz Research Prize for Young Investigators
1984-1989	American Heart Association Established Investigator
1978	National Science Foundation - NATO Postdoctoral Fellowship
1978-1981	Medical Research Council of Canada Postdoctoral Fellowship
1977-1978	Elon Huntington Hooker Fellowship
1974-1977	Graduate Fellowship - NIH Biophysics Training Grant
1973	Sigma Pi Sigma Bendix Award
1973	Phi Beta Kappa
1972	Sigma Xi

Professional Activities

Affiliations

American Academy of Arts and Sciences
American Academy of Neurology
American Association for Advancement of Science
American Chemical Society
American Society for Biology and Molecular Biology
American Society of Biological Chemistry
American Society for Cell Biology
American Society for Gene Therapy
American Society of Human Genetics
American Society for Matrix Biology
American Society for Microbiology
American Physiological Society
Biophysical Society
National Academy of Medicine, National Academy of Sciences
National Academy of Sciences
New York Academy of Sciences
Society for Developmental Biology
Society For Glycobiology
Society for Neuroscience
Society of General Physiologists
Sigma Xi
World Muscle Society

Editorial Boards

2010-present	*Skeletal Muscle*, Founding Co-Editor-in-Chief
2013-present	*Journal of Neuromuscular Diseases*
2012-present	*Experimental Neurology*
2011-present	*PLoS Currents: Muscular Dystrophy*
2004-present	*Neuromuscular Disorders*
2001-present	*Acta Myologica*
2004-2006	*Molecular and Cellular Biochemistry*
2003-2006	*Drug Discovery Today: Therapeutic Strategies*
2002-2006	*NeuroMolecular Medicine*
2001-2004	*American Society for Biochemistry and Molecular Biology*
1999-2004	*Journal of Cell Biology*
1996-2001	*Journal of Biological Chemistry*
1995-1997	*Physiological Reviews*
1988-1993	*Cell Calcium*
1988-1993	*Journal of Biological Chemistry*
1987-1993	*Circulation Research*

Reviewer (Journals)

Acta Neuropathologica
American Journal of Human Genetics
American Journal of Pathology
American Journal of Physiology
Annals of Neurology
Archives of Biochemistry and Biophysics
Biochimica et Biophysica Acta
BioMed Central
Biophysical Journal
Cardiovascular Research
Cell
Cell Metabolism
Circulation
Circulation Research
Current Biology
Development
Developmental Biology
Developmental Cell
eLife
EMBO Molecular Medicine
European Journal of Human Genetics
FASEB
FEBS
FEBS Letters
Genome Research
Glycobiology
Human Gene Therapy
Human Molecular Genetics
Journal of Biological Chemistry
Journal of Cell Biology
Journal of Cell Science
Journal of Clinical Investigation
Journal of Comparative Neurology
Journal of Molecular and Cellular Cardiology
Journal of Neurochemistry
Journal of Neuroscience
Journal of Neuropathology and Experimental Neurology
Journal of the Neurological Sciences
Journal of Physiology
Matrix Biology
Molecular and Cellular Biology
Molecular and Cellular Neuroscience
Molecular Biology of the Cell
Molecular Brain Research
Molecular Pharmaceutics
Molecular Pharmacology
Molecular Therapy
Nature
Nature Cell Biology
Nature Genetics
Nature Medicine
Nature Neuroscience
Nature Review Molecular Cell Biology
Neurobiology of Disease
Neurogenetics
Neurology
Neuromuscular Disorders
Neuron
Neuroscience
New England Journal of Medicine
PLoS Medicine
PLoS ONE
Proceedings of the National Academy of Science
Science
Science Translational Medicine
Stem Cell
Traffic
Trends in Neuroscience
Trends in Pharmacological Sciences
Virology

Reviewer (Grants)

2017-present	Coalition to Cure Calpain 3
2021	Reviewer, Chan Zuckerberg Biohub Investigator program
2020	NIH, Skeletal Muscle and Exercise Physiology Study Section
2016	Reviewer, Chan Zuckerberg Biohub Investigator program
2013-2019	Reviewer, HHMI Medical Fellows Program Group
2008	Inserm, Myology Lab Site Visit (Paris, France)
2005-2007	Council Member, National Arthritis and Musculoskeletal and Skin Disease Advisory Council
2003	March of Dimes Grant Reviews
2001-2005	NIH Skeletal Muscle Biology and Exercise Physiology Study Section
1999	NIH, Grant Reviews
1996-2009	Member, MDA Scientific Advisory Committee
1992	NIH, Site Visit (Indiana University)
1991-1995	NIH, Physiology Study Section
1989-1995	Member, MDA Fellowship Review Committee
1989-1992	Member, AHA's Cell Transport and Metabolism Research Study Committee

1988	NIH, Site Visit (University of Miami)
1987	NIH, Site Visit (University of Washington)
1986	NIH, NIADDK Conference Grant
1986	Member, NSF - Presidential Young Investigator Advisory Panel
1985-1988	Member, Research Peer Review Committee, AHA - Iowa Affiliate

External Thesis Examiner ("Opponent")

2021 "Molecular genetics of inclusion body myositis and late-onset rimmed-vacuolar distal myopathy" – Mridul Johari, University of Helsinki

2023 "Sugar, Ice, and Everything (Not So) Nice: Structural Interrogation of the Lassa Glycoprotein Complex and its Recognition by the Humoral Immune System" – Hailee Perrett, The Scripps Research Institute

National & International Committees

2019-present	Member, ASBMB Awards Committee
2015-present	Scientific Advisory Board, Spinal Muscular Atrophy Foundation
2013-present	Member, Committee on Honors, American Physiological Society
2011-present	Vanderbilt Prize in Biomedical Science External Review Committee
2010-present	T32 External Networking Committee, The Ohio State University
2010-present	Member, Biomedical Science Advisory Board, Vanderbilt University
2009-present	Scientific Advisor, Gavriel Meir Trust
2004-present	Scientific Advisory Board, Cure Duchenne
2006-2010	Scientific Advisory Board Committee, Duke NUS-Graduate Medical School, Singapore
2004-2005	President, Society of General Physiologists
2003-2006	Council Member, American Society of Matrix Biology
2001-2004	Pharmaceutical Research, MyoContract
2001-2003	NIH Skeletal Muscle Biology Study Section
2001-2006	Member, Executive Board of the World Muscle Society
1998-2004	Member, Muscular Dystrophy Association's Gene Therapy Task Force
1997	Steering Committee for Huntington's Disease Society of America
1993-1995	Council Member, Society of General Physiologists
1988-1991	Officer of the Biophysical Society Council

University Committees and Programs

2023-present	Member, Hawk - Intellectual and Developmental Disabilities Research Center
2021-present	Executive Steering Committee, Campus Facilities Master Planning
2021-present	Executive Committee, Strategic Investment Subcommittee
2021-present	Basic Science Work Group
2021-present	Carver College of Medicine Faculty Compensation Committee
2019-present	Steering Committee, UI Strategic Planning Process
2018-present	UI Health Care System Operations Committee
2018-present	Enterprise Committee
2018-present	Finance Subcommittee
2018-present	Funds Flow Working Group
2015-present	Chair, Carver College of Medicine Research Investment Fund Committee
2002-present	Medical Council
2001-present	University of Iowa Gene Therapy Center Program Member
2001-present	University of Iowa Cancer Center Program Member
2000-present	Member, Holden Comprehensive Cancer Center
1996-present	Diabetes Endocrinology Research Center Program Member
1993-present	Executive Committee of the Cardiovascular Center
1987-present	University of Iowa Medical Scientist Training Program Faculty Mentor

2018-2019	Micro/Immuno Chair Search Committee
2011-2012	Search Committee for the Dean of the Carver College of Medicine
2009-2011	Carver College of Medicine Research Advisory Council
2009-2010	Internal Advisory Committee on Genetics for the Carver College of Medicine
2008-2009	Animal Care Facilities Planning Task Force
2007	Intercollegiate Task Force on the Organization of Research and Education in the Life Sciences
2007-2012	Office of Animal Resources Advisory Committee
2006	Distinguished Mentor Nomination Committee
2003	Holden Comprehensive Cancer Center Space Committee
2003-2008	Molecular Biology Executive Committee
2003-2004	Steering Committee, Presidential Biological Scholar Program
2003-2004	Search Committee for Department Executive Officer, Department of Internal Medicine
2002-2009	Executive Committee, Neuroscience Program
2001-2005	Curriculum Committee, Neuroscience Program
2000-2004	College of Medicine Molecular Biology Building B Planning Committee
2000-2002	Task Force on Animal Imaging
1997-2006	Member, Neuromuscular Disease Conference
1997	Medical Scientist Training Program Review Committee
1996-2003	College of Medicine Capital Planning Liaison Committee
1995-2005	Howard Hughes Medical Institute, College of Medicine Seminar Series
1995-2003	College of Medicine Research Advisory Council
1995-2000	College of Medicine Research Week Committee
1995-2000	Hybridoma Facility Advisory Committee
1995-1996	Search Committee for Department Executive Officer, Department of Biochemistry
1994-1999	Committee for the Initiative in the Biosciences
1994-1995	Search Committee for Associate Dean for Research, College of Medicine
1993-1994	Review Committee for Vice President for Research
1991-1994	Search Committee for the Dean of the College of Medicine
1990-1991	Microbiology Review and Search Committee for Department Executive Officer
1990	Radiation Research Laboratory Review Committee
1989-1992	Medical Bio-Science Subcommittee of the University Radiation Protection Committee
1988-1992	AHA Medical Student Research Fellowship Program Selection Committee
1986-1989	College of Medicine Research Committee

Departmental Committees

1995	Co-Chairman, Physiology and Biophysics Computer Committee
1993	Chairman, Dr. Charles Wunder Review
1991	Physiology and Biophysics Faculty Search Committee
1990	Chairman, Neuroscience Workshop
1989-1990	Chairman, Physiology and Biophysics Faculty Search Committee
1989-2002	Chairman, Physiology Workshop
1987-2002	Departmental Executive Committee
1986-1987	Chairman, Physiology and Biophysics Seminar Committee
1984-1986	Physiology and Biophysics Computer Committee
1983-1986	Chairman, Physiology and Biophysics Graduate Admissions Committee
1982-1986	Chairman, Physiology and Biophysics Graduate Recruiting Poster Committee
1982-1986	Physiology and Biophysics Graduate Admissions Committee
1982-1984	Physiology and Biophysics Equipment User Committee
1981-1983	Physiology and Biophysics Faculty Search Committee

Reviews of Academic Departments and Centers

2010-present **Vanderbilt Biomedical Science Advisory Board**
Review of the Vanderbilt University School of Medicine

2013 **Vanderbilt Wellstone Scientific Advisory Committee**
Review of Vanderbilt University's Paul and Sheila Wellstone Muscular Dystrophy Center

2006-2011 **Duke-NUS Graduate Medical School, Singapore Scientific Advisory Board**
Review of the University of Duke University Graduate Medical School, Singapore

2005-2009 **Minnesota Wellstone Scientific Advisory Committee**
Review of the University of Minnesota's Paul and Sheila Wellstone Muscular Dystrophy Center

2005 **University of Pennsylvania School of Medicine**
Review of the University of Pennsylvania School of Medicine Department of Physiology

2004 **Duke University**
Review of the Duke University School of Medicine Department of Cell Biology

Organization of Scientific Meetings

2023 **Organizer, 7Th International Workshop for Glycosylation Defects in Muscular Dystrophies, McColl-Lockwood Laboratory for Muscular Dystrophy Research**
Qi Long Lu, Anthony Blaeser

2009-present **Organizer, Iowa Wellstone Face-to-Face Meeting, University of Iowa Wellstone MD Center**

2008 **Organizer and Session Chair, Iowa Congenital Muscular Dystrophy Meeting, University of Iowa Wellstone MD Center**

2007 **Organizer, Congenital Muscular Dystrophy and Dystroglycan Glycosylation Meeting, *World Muscle Society***

2006 **Organizer, Frontiers in Myogenesis Meeting, *Society for Muscle Biology***

2004 **Organizer, College of Medicine/HHMI Seminar Series**
Rosela Tupler, John Faulkner, Hannele Ruohola-Baker, Jeffrey Molkentin, James Ervasti, Gregory Cox

2003 **Organizer, College of Medicine/HHMI Seminar Series**
David J. Glass, Stuart Kornfeld, Ulrich Mueller, Guilio Cossu, Yukio Fukuyama, Francesco Muntoni, Peter Agre, Anton Bennett and Joshua Sanes

2002 **Organizer, College of Medicine/HHMI Seminar Series**
Luis Parada, Martin Chalfie, Sriram Subramaniam, Anthony Wynshaw-Boris and Yukiko Goda

2001 **Organizer, College of Medicine/HHMI Seminar Series**
Wolfhard Almers, Pietro DeCamilli, Brian Duling and Steven Burden

2000 **Organizer, College of Medicine/HHMI Seminar Series**
Morgan Sheng, Susan McConnell, Richard Scheller and Thomas Südhof

1999 **Organizer, College of Medicine/HHMI Symposium,** *Phenotypic Analysis of Genetically Engineered Mice: Insights to Biology and Human Disease*
Sally Camper, Mario Capecchi, William Dove, Reinhard Fassler and Joseph Takahashi

1998 **Organizer, Carver Symposium,** *The Molecular Basis of Neurogenetic Diseases*
Xandra Breakfield, Kay Davies, Kurt Fischbeck, Ulrike Heberlein, Erik Kandel, David MacLennan, Jeffrey Noebels, Mihael Polymeropoulous, Dennis Selkoe, Chris Walsh, Steve Warren and Huda Zoghbi

1997 **Organizer, College of Medicine Research Week,** *Cancer Biology: Molecular and Genetic Approaches*
Wen-Hwa Lee, Erkki I. Ruoslahti, Ayraham Raz, Mina J. Bissell and Carlo Croce

1996 **Organizer and Chair, College of Medicine/HHMI Symposium**, *Cell-Extracellular Matrix Interactions in Development and Disease*
Angela Christiano, David Cheresh, Brigid Hogan, James Kramer and Louis Reichardt

1996 **Organizer and Chair, College of Medicine Research Week,** *Neurobiology: Molecular, Genetic and Clinical Approaches*
Robert H. Brown, Antonio R. Damasio, Ted M. Dawson, Story C. Landis and Katherine Kalil

1992 **Chairperson and Organizer, FASEB Conference,** *Calcium and Cell Function*

1989 **Co-Chair, FASEB Conference**, *Calcium and Cell Function*

Scientific Advisory Boards & Consulting

2019-present **Vertex Pharmaceuticals, Inc.**
Scientific Advisory Board

2019-present **Amicus Therapeutics, Inc.**
Consultant and Scientific Advisory Board

2018-present **Satellos Bioscience**
Scientific Advisory Board

2010-present **Coalition to Cure Calpain 3**
Consultant and Scientific Advisory Board

2010-present **Vanderbilt University Medical Center**
Biomedical Science Advisory Board

2004-present **Cure Duchenne**
Scientific Advisory Board

2019 **Walking Fish Therapeutics Inc.**
Consultant

2018 **TREAT-NMD Advisory Committee for Therapeutics (TACT)**
Consultant

2017-2018 **Audentes Therapeutics, Inc.**
Consultant

2017-2019 **MNG Laboratories**
Scientific Advisory Board

2015-2018 **Spinal Muscular Atrophy Foundation**
Scientific Advisory Board

2013-2015 **Genzyme Corporation**
Scientific Advisory Board

2010-2011 **NGM Biopharmaceuticals, Inc.**
Consultant

2010-2011 **Five Prime Therapeutics, Inc.**
Consultant

2010-2011 **Eleven Biotherapeutics**
Consultant

2010-2018 **The Duchenne Research Fund**
Scientific Advisory Board

2008-2012 **ARMGO Pharmaceutical, Inc.**
Scientific Advisory Board

2006-2010 **Duke NUS Graduate Medical School Singapore**
Scientific Advisory Board Committee

2001-2004 **MyoContract**
Pharmaceutical Research (Basel, Switzerland)

Teaching Activities

University of Iowa

Course Title	Course No.	Year(s)	Registered	Effort
Neuromuscular Diseases: Case-Based Seminar		1997-current		
Human Organ Systems	140:250	1996-2012	200	15 %
Medical Cell Biology	60:116	1996-2012	200	5 %
Human Physiology for PA Students	72:164	2002-2008	40	5 %
Survival Skills for a Research Career	060:204	2000-2006	150	5 %
Mini Medical School Lecture, April 10, 2007	n/a	2007	200	5%
Neurobiology of Disease	132:235:001	2006	25	5%
Experimental Approaches to Human Disease	060:208	2001-04	20	5 %
Fundamental Neuroscience	132:180	2000	20	5 %
Principles of Molecular and Cell Biology (Facilitator)	156:201	2000-02	80	5 %
Medical Neuroscience	72:234	1992	200	5 %
Medical Neuroscience, Course Co-Director	72:234	1991	200	5 %
Neuroscience Seminar	132:265	1990-91	14	100 %
Cell Biology II	142:255	1990	15	30 %
Medical Physiology, Course Director	72:212	1988-90	190	30 %
Membrane Seminar	72:255	1984-89	10	100 %
Intermediate Physiology	72:150	1983-84	235	15 %
Graduate Physiology	72:214	1983-84	8	15 %
Medical Physiology	72:212	1982-95	190	20 %
Structure and Function of Biological Membranes	72:241	1982-92	10	100 %
Advanced Biomedical Studies	50:198	1982	10	10 %
Cell Biology	72:111	1981	10	10 %

National and International Teaching

January 2006 Masters Class in Molecular Mechanisms of Disease Glycogenetics and Neuromuscular Diseases
Nijmegen School of Molecular Life Sciences (NCMLS)
Nijmegen, The Netherlands

October 2020 Congenital Disorders of Glycosylation Course
XLV National Congress of the Mexican Association of Human Genetics
Guadalajara, Jalisco, México (virtual)

May 2021 Advances in Glycobiology Course
University of California San Diego
La Jolla, CA, USA

Personal Statement

My laboratory is focused on understanding the molecular, cellular and physiological basis of various forms of muscular dystrophy, and on developing therapeutic strategies to treat these diseases. My early studies at the University of Iowa focused on elucidating the structure and function of calcium channels and calcium release channels (ryanodine receptors) in skeletal muscle. For the past twenty years, however, my laboratory has actively investigated the molecular pathogenesis of muscular dystrophy. We have used biochemical, cell biological, genetic and physiological techniques to identify and define disease mechanisms that cause various forms of muscular dystrophy. We cloned and characterized dystroglycan and demonstrated that it links the cytoskeleton to the extracellular matrix in skeletal muscle. My studies on dystroglycan have since led to significant insights into its basic function as an extracellular matrix receptor in skeletal muscle, its role in the maintenance of muscle-cell membrane integrity and its role in the molecular pathogenesis of glycosylation-deficient muscular dystrophy. As head of the laboratory, I have been dedicated to maintaining the highest standards in research and providing outstanding research training and mentorship for many undergraduates, graduate students, and postdoctoral and clinical fellows at the University of Iowa. Many of my former trainees have embarked on promising research and clinical careers and are now leaders in the fields of physiology, neurology, molecular genetics, and cellular biology.

Research and Training

1. Skeletal muscle excitation-contraction coupling and calcium channels

Muscle contraction is initiated by a depolarization of the transverse tubular membrane which in turn signals the release of Ca^{2+} from the junctional sarcoplasmic reticulum. One goal of my early research was to understand the structure and function of protein components of the junctional sarcoplasmic reticulum membrane. We purified the ryanodine receptor of rabbit muscle sarcoplasmic reticulum and showed that it can mediate single channel activity identical to that of the Ca^{2+} release channels of the sarcoplasmic reticulum. The morphology of the purified ryanodine receptor has revealed that the ryanodine receptor is identical to the "SR feet" and thus indicates that it plays a dual role in excitation-contraction coupling as the Ca^{2+} release channel and as the bridging structure in the junctional gap. A second goal of my research on excitation-contraction coupling concerned the dihydropyridine-sensitive Ca^{2+} channel of skeletal muscle and its dual role as a voltage sensor for excitation-contraction coupling and a Ca^{2+} channel. The dihydropyridine receptor was purified from rabbit skeletal muscle and shown to consist of four subunits (α1, α2δ, β and γ). We have determined the structure of the α2δ subunit and γ-subunit of the dihydropyridine receptor. We demonstrated that the β-subunit binds to a conserved domain within the α_1 subunit of the calcium channel. Mutations within conserved domain alter the characteristic current stimulation and kinetic changes induced by the β-subunit and hence identify the critical importance of this interaction site in calcium channel regulation.

- Jay, SD, Ellis, SB, McCue, AF, Williams, ME, Vedvick, TS, Harpold, MM and **Campbell, KP**. (1990) Primary Structure of the γ Subunit of the DHP-Sensitive Calcium Channel from Skeletal Muscle. *Science 248*:490-492. PMID: 2158672 (Cited 364 times)
- De Waard, M, Pragnell, M and **Campbell, KP**. (1994) Ca^{2+} Channel Regulation by a Conserved β Subunit Domain. *Neuron 13*:495-503. PMID: 8060623 (Cited 362 times)
- Pragnell, M, De Waard, M, Mori, Y, Tanabe, T, Snutch, TP and **Campbell, KP**. (1994) Calcium Channel β Subunit Binds to a Conserved Motif in the I-II Cytoplasmic Linker of the α1-Subunit. *Nature 368*:67-70. PMID: 7509046 (Cited 814 times)
- Gurnett, CA, De Waard, M and **Campbell, KP**. (1996) Dual Function of the Voltage-Dependent Ca^{2+} Channel α2δ Subunit in Current Stimulation and Subunit Interaction. *Neuron 16*:431-440. PMID: 8789958 (Cited 383 times)

2. Dystrophin-glycoprotein complex

In 1989 I began a series of experiments aimed at identifying membrane proteins that associate with dystrophin—the protein encoded by the Duchenne muscular dystrophy (*DMD*) gene—in order to understand its function in normal skeletal muscle. Using both biochemistry and molecular biology, I discovered the dystrophin-glycoprotein complex and established that it is essential for linking dystrophin (and thereby the cytoskeleton) to the extracellular matrix in skeletal muscle, and thereby protects the muscle-cell membrane from contraction-induced injury. Subsequent studies by my laboratory and others showed that mutations in genes encoding various components of the dystrophin-glycoprotein complex cause distinct forms of limb-girdle muscular dystrophy, as well as other congenital forms of muscular dystrophy.

- **Campbell, KP** and Kahl, SD. (1989) Association of Dystrophin and an Integral Membrane Glycoprotein. *Nature 338*:259-262. PMID: 2493582 (Cited 861 times)

- Ervasti, JM, Ohlendieck, K, Kahl, SD, Gaver, M and **Campbell, KP.** (1990) Deficiency of a Glycoprotein Component of the Dystrophin Complex in Dystrophic Muscle. *Nature 345*:315-319. PMID: 2188135 (Cited 1139 times)
- Ervasti, JM and **Campbell, KP.** (1991) Membrane Organization of the Dystrophin-Glycoprotein Complex. *Cell 66*:1121-1131. PMID: 1913804 (Cited 1486 times)
- Matsumura, K, Tomé, FMS, Collin, H, Azibi, K, Chaouch, M, Kaplan, J-C, Fardeau, M, and **Campbell, KP.** (1992) Deficiency of the 50K Dystrophin-Associated Glycoprotein in Severe Childhood Autosomal Recessive Muscular Dystrophy. *Nature 359*:320-2. PMID: 1406935 (Cited 327 times)

3. Dystroglycan: Novel extracellular matrix receptor.

In 1992, my laboratory cloned dystroglycan and elucidated its function as an extracellular matrix receptor in muscle. We established that dystroglycan serves as an essential structural link between the cytoskeleton and the basement membrane that surrounds the cell, and that disruption of its expression and/or ability to interact with these structures is responsible for the pathogenesis of Duchenne muscular dystrophy. Although dystroglycan has been studied extensively, as late as 2011 no patient mutation had been identified in the encoding gene (DAG1). At that point, my laboratory identified a dystroglycan missense mutation in a patient with mild muscular dystrophy accompanied by cognitive impairment. Interestingly, the missense mutation in DAG1 leads to selective impairment of LARGE-mediated functional modification of the phosphorylated *O*-mannosyl residues on dystroglycan (i.e., that required for high-affinity laminin binding). Overall, my laboratory's studies revealed that the T192M substitution in mouse recapitulates both the biochemical and pathological phenotypes of patients with dystroglycanopathies, even though all of the glycosyltransferases are normally expressed.

- Ibraghimov-Beskrovnaya, O, Ervasti, JM, Leveille, CJ, Slaughter, CA, Sernett, SW, and **Campbell, KP.** (1992) Primary Structure of Dystrophin-Associated Glycoproteins Linking Dystrophin to the Extracellular Matrix. *Nature 355*:696-702. PMID: 1741056 (Cited 1579 times)
- Ervasti, JM and **Campbell, KP.** (1993) A Role for the Dystrophin-Glycoprotein Complex as a Transmembrane Linker Between Laminin and Actin. *J. Cell Biol. 122*:809-23. PMID: 8349731 (Cited 1504 times)
- Henry, MD and **Campbell, KP.** (1998) A Role for Dystroglycan in Basement Membrane Assembly. *Cell. 95*:859-70. PMID: 9865703 (Cited 429 times)
- Hara, Y, Balci, B, Kanagawa, M, Beltran-Valero de Bernabe, D, Gundesli, H, Yoshida-Moriguchi, T, Willer, T, Satz, JS, Burden, SJ, Oldstone, MBA, Accardi, A, Talim, B, Muntoni, F, Topaloglu, H, Dincer, P and **Campbell, KP.** (2011) A Dystroglycan Mutation Associated with Limb-Girdle Muscular Dystrophy. *N. Eng. J. Med. 364:* 939-46. PMID: 21388311; PMC3071687 (Cited 247 times)

4. Disruption of the post-translational processing of dystroglycan and congenital muscular dystrophies

In 2002, we found that O-linked glycosylation of α-dystroglycan is required for its binding to extracellular matrix ligands and that abnormal post-translational processing of α-dystroglycan results in loss of its function as an extracellular matrix receptor in various congenital muscular dystrophies. We demonstrated that glycosylation defects in dystroglycan are central to the skeletal muscle pathology and the developmental brain abnormalities seen in congenital muscular dystrophies including Walker-Warburg syndrome, muscle-eye-brain disease and Fukuyama congenital muscular dystrophy. Overall, this research has revolutionized our understanding of the molecular basis of these devastating diseases and has profound clinical implications for the diagnosis and treatment of congenital muscular dystrophies with developmental brain abnormalities.

- Michele, DE, Barresi, R, Kanagawa, M, Saito, F, Cohn, RD, Satz, JS, Dollar, H, Nishino, I, Kelley, RI, Somer, H, Straub, V, Mathews, KD, Moore, SA and **Campbell, KP.** (2002) Post-translational Disruption of Dystroglycan-Ligand Interactions in Congenital Muscular Dystrophies. *Nature 418*:417-422. PMID: 12140558 (Cited 838 times)
- Moore, SA, Saito, F, Chen, J, Michele, DE, Henry, MD, Messing, A, Cohn, RD, Ross-Barta, SE, Westra, S, Williamson, RA, Hoshi, T, **Campbell, KP.** (2002) Deletion of Brain Dystroglycan Recapitulates Aspects of Congenital Muscular Dystrophy. *Nature 418*:422-5. PMID: 12140559 (Cited 563 times)
- Barresi, R, Michele, DE, Kanagawa, M, Harper, HA, Dovico, SA, Satz, JS, Moore, SA, Zhang, W, Schachter, H, Dumanski, JP, Cohn, RD, Nishino, I and **Campbell, KP.** (2004) LARGE Can Functionally Bypass α-Dystroglycan Glycosylation Defects in Distinct Congenital Muscular Dystrophies. *Nat. Med. 10*:696-703. PMID: 15184894 (Cited 284 times)
- Kanagawa, M, Saito, F, Kunz, S, Yoshida-Moriguchi, T, Barresi, R, Kobayashi, YM, Muschler, J, Dumanski, JP, Michele, DE, Oldstone, MB and **Campbell, KP.** (2004) Molecular Recognition by LARGE is Essential for Expression of Functional Dystroglycan. *Cell 117*:953-64. PMID: 15210115 (Cited 279 times)

5. LARGE modification of dystroglycan

Despite extensive efforts—by several groups and over the course of nearly twenty years—to identify the laminin-binding moiety on alpha-dystroglycan, its identity remained a mystery. At least 17 gene products, many of which are glycosyltransferases, are involved in biosynthesis of the functional alpha-dystroglycan modification. In 2010, we discovered that this modification is initiated by a unique *O*-linked trisaccharide, GalNAc-β1,3-GlcNAc-β1,4-Man-Ser/Thr, which is phosphorylated at position 6 of the mannose residue. This phosphorylated trisaccharide is required for laminin binding, via an unknown mechanism. In 2012, we showed that the bifunctional like-acetylglucosaminyltransferase (LARGE) synthesizes

a polysaccharide that is comprised of alternating glucuronic acid (GlcA) and xylose (Xyl) residues. The LARGE-synthesized [-GlcA-β1,3-Xyl-α1,3-]$_n$ heteropolysaccharide (termed matriglycan) was shown bind LG domain-containing proteins *in vitro*. We also demonstrated that LARGE glycans on dystroglycan function as a tunable matrix scaffold to prevent dystrophy. These findings led us to propose that the ultrastructural organization of the basement membrane can be modified by extension of the LARGE-glycan. Our findings both redefine the cellular significance of dystroglycan and support a new model for the underpinnings of dystroglycan-related disease. Most recently, Dr. Campbell used a multidisciplinary approach to determine the structural basis of the high-affinity binding of laminin to dystroglycan. Crystal structures of the laminin LG4-5 region in complex with a LARGE-synthesized oligosaccharide revealed an unprecedented mechanism of carbohydrate recognition among animal lectins: one GlcA-β1,3-Xyl disaccharide unit straddles a calcium ion in the LG4 domain, with oxygen atoms from both sugars replacing calcium-bound water molecules. This chelating binding mode accounts for the unusually high affinity of this protein-carbohydrate interaction.

- Yoshida-Moriguchi, T, Yu, L, Stalnaker, SH, Davis, S, Kunz, S, Oldstone, MBA, Schachter, H, Wells, L and **Campbell, KP**. (2010) *O*-Mannosyl Phosphorylation of Alpha-Dystroglycan is Required for Laminin Binding. *Science 327*:88-92. PMID: 20044576; PMC2978000 (Cited 328 times)
- Inamori, K, Yoshida-Moriguchi, T, Hara, Y, Anderson, ME, Yu, L and **Campbell, KP**. (2012) Dystroglycan Function Requires Xylosyl- and Glucuronyltransferase Activities of LARGE. *Science 335:* 93-96. PMID: 22223806; PMC3702376 (Cited 243 times)
- Yoshida-Moriguchi, T, Willer, T, Anderson, ME, Venzke, D, Whyte, T, Muntoni, F, Lee, H, Nelson, SF, Yu, L., **Campbell, KP.** (2013). SGK196 is a Glycosylation-Specific O-Mannose Kinase Required for Dystroglycan Function. *Science* 341: 896-9. PMID: 23929950; PMC3848040 (Cited 178 times)
- Goddeeris, MM, Wu, B, Venzke, D, Yoshida-Moriguchi, T, Saito, F, Matsumura, K, Moore, SA, **Campbell, KP.** (2013) Large Glycans on Dystroglycan Function as a Tunable Matrix Scaffold to Prevent Dystrophy. *Nature 503:* 136-40. PMID: 24132234; PMC3891507 (Cited 96 times)
- Briggs, D., Yoshida-Moriguchi, T., Zheng, T., Venzke, D., Anderson, M., Strazzulli, A., Moracci, M., Yu, L., Hohenester, E., **Campbell, KP**. Structural Basis of Laminin Binding to the LARGE Glycans on Dystroglycan. *Nat Chem Biol*. 2016 Oct; 12(10):810-814. PMID: 27526028; PMC5030134 (Cited 68 times)
- Walimbe, AS, Okuma, H, Joseph, S, Yang, T, Yonekawa, T, Hord, J M, Venzke, D, Anderson, M E, Torelli, S, Manzur, A, Devereaux, M, Cuellar, M, Prouty, S, Ocampo Landa, S, Yu, L, Xiao, J, Dixon, JE, Muntoni, F, **Campbell, KP**. (2020) POMK regulates dystroglycan function via LARGE1-mediated elongation of matriglycan. *eLife*, (9:e61388). PMID: 32975514 PMCID: PMC7556876 (Cited 4 times)

Graduate Students

Name and Degree	Current Employment Organization	Current Title
Jyothi Arikkath, Ph.D. (1997-2002)	Division of Neuroscience, Development and Aging, Center for Scientific Review, National Institutes of Health, Bethesda, MD	Scientific Review Officer
Dimple Bansal, Ph.D. (1998-2003)	Drug Discovery Oncology & DMD, Pre-clinical drug development Oncology, Marketing & Business Development, McLean, Virginia	Independent Entrepreneur
Wei Guo, Ph.D. (1992-1995)	University of Pennsylvania, Department of Biology, Philadelphia, PA	Professor
Christina Gurnett, M.D./Ph.D. (1992-1997)	Washington University School of Medicine, Department of Neurology, Division of Pediatric and Developmental Neurology, St. Louis, MO	Professor, Director, Division of Pediatric and Developmental Neurology
Scott Jay, M.D./Ph.D. (1984-1991)	Traverse City, MI	Cardiologist
Myoung-Goo Kang, Ph.D. (1998-2003)	Baylor College of Medicine, Houston, TX	Staff Scientist
Michael Knudson, M.D./Ph.D. (1985-1992)	University of Iowa, Department of Pathology, Iowa City, IA	Clinical Professor
Albert T. Leung, M.D./Ph.D. (1986-1989)	New York, NY	Independent Clinical Science Consultant
Leland Lim, M.D./Ph.D. (1993-1999)	Stanford University School of Medicine and Veterans Affairs Palo Alto Healthcare System, Department of Neurology, Palo Alto, CA	Staff Physician and Clinical Assistant Professor
David R. Pepper, M.S./M.D. (1984-1986)	Contra Costa Regional Medical Center, Martinez, CA; UCSD, Department of Family and Community Medicine, San Francisco, CA	Family Medicine Physician and Assistant Clinical Professor
Peter McPherson, Ph.D. (1988-1993)	McGill University, Department of Neurology, Neurosurgery, and Anatomy and Cell Biology; Montreal Neurological Institute; Montreal Neurological Institute, Montreal, Canada	James McGill Chair and Director, Neurodegenerative Disease Research Group
Marlon Pragnell, Ph.D. (1990-1994)	American Diabetes Association New York, NY	Vice President, Research & Science
Jakob Satz, Ph.D. (1999-2007)	Jackson Laboratories, Bar Harbor, ME	Postdoctoral Fellow
Alan H. Sharp, Ph.D. (1983-1988)	Developmental Neuro-Biochemistry, Case Western Reserve University, Cleveland, OH	Research Scientist
Bin Yang, Ph.D. (1991-1995)	Genentech, Inc./Roche San Francisco, CA	Scientist/Group Leader

Ameya Walimbe, M.D./Ph.D. (2012-2020)	Baylor College of Medicine, Child Neurology Houston, TX	Resident Physician, Basic Neuroscience Research Pathway

Co-Op Exchange Students

Name	Dates in Laboratory	Post-Graduate Education	Current Position
Emma Hiscutt (University of Bath)	June 1997-August 1997	M.D., University of Oxford, UK	Dermatologist, Private Practice, Victoria, Australia
Sarah Trewick (University of Bath)	June 1997-September 1997	Ph.D. Cancer Research UK – Clare Hall Laboratories, London, UK	Business Development Manager, Wellcome Trust Translational Project Manager, Edinburgh Innovations, Edinburgh, Scotland, UK
Anne Mullen Grey (McMaster University)	May 2002-August 2002	Ph.D. Pharmacology and Toxicology, University of Toronto, Toronto, Ontario, Canada	Family Physician, Magenta Health, Family Medicine Clinic, Toronto, Ontario, Canada
Chris McLaughlin (McMaster University)	May 2002-December 2002	Ph.D., Cellular and Molecular Medicine, University of Ottawa, Ontario, Canada M.D., McMaster University, Ontario, Canada	Ophthalmologist, Cornea and Anterior Segment Surgeon, Niagara Health, Hamilton, Ontario, Canada
Robert Svensson (University of Bath)	August 2002-August 2003	Ph.D., Molecular Physiology and Biophysics, University of Iowa, Iowa City, IA	Director of Biology, Nimbus Therapeutics, Cambridge, MA
Daniel Nicholson (University of Bath)	August 2003-July 2004	M.S., Molecular and Cellular Biology, University of Bath, Bath, UK M.S., History and Philosophy of Science, University of Leeds, Leeds, UK Ph.D., Philosophy, University of Exeter, Exeter, UK	Assistant Professor of Philosophy at George Mason University, Fairfax, VA
Jeeyoung Oh (Ewha Woman's University Mokdong Hospital)	September 2003-August 2004		Professor, Department of Neurology, Konkuk University School of Medicine, Seoul, South Korea
Stéphane Vassilopoulos (Joseph Fourier University)	February 2005-August 2005	Ph.D., Biochemistry and Cell Biology, University Joseph Fourier, Grenoble, France	Research Project leader, Therapie des maladies du muscle strie, Institut de Myologie, INSERM, Paris, France
Viviane Muniz (Universidad de Santo Amaro)	March 2006-February 2007	Ph.D. Dept. of Molecular and Cellular Biology, University of Iowa, Iowa City, IA	English Teacher, Molecular and Cell Biology, UNS Idiomas, São Paulo, Brazil

Kathryn 'Conley' Flynn (University of Iowa)	September 2011-January 2013	M.Ed. Dept. of Teaching and Learning, Vanderbilt University, Nashville, TN (in progress)	Science Teacher, Cherry Creek High School, Green Village, CO

Post-Baccalaureate Students

Name	Dates in Laboratory	Education	Current Position
Nicolette Johnson	August 2014-May 2015	B.S. Biomedical Engineering	University of Pennsylvania, M.D./Ph.D. program
Raul Ocampo Landa	May 2015- May 2016	B.S. Human Physiology	Resident, University of Wisconsin-Madison
Adam Mackey	January 2016-May 2017	B.S. Biology	Columbia University, Lab Manager and Research Assistant, Dr. Adolfo Ferrando's Laboratory
Megan Devereaux	December 2016-June 2017	B.S. Human Physiology	Clinical Research Coordinator I, Pulmonary & Critical Care Staff, University of Wisconsin-Madison

Wellstone Education Programs (2005 – present)

The Wellstone Muscular Dystrophy Cooperative Research Center (MDCRC) has major research training and education missions. It supports two Medical Student Fellowships, a Postdoctoral Fellowship, a Post-Baccalaureate Research Internship, an Undergraduate Research Fellowship, and a two-day conference at which patients and their advocates are educated about muscular dystrophy research. The medical and postdoctoral fellows and the intern are mentored by both Drs. Campbell and Mathews (Pediatric Neurology), and the undergraduate fellow is mentored by one or the other. The educational efforts of the Center are vital because there is an urgent need for basic scientists and clinicians who can partner to develop and test muscular dystrophy therapies.

Wellstone Medical Student Fellowship

The goal of the Medical Student Fellowship is to train the next generation of neurologists in translational medicine related to muscular dystrophy. This full-time fellowship enables two medical students per year to participate in all aspects of the Center, including: care of muscular dystrophy patients in the neuromuscular disease clinics; clinical evaluation of patients participating in Project 2, under the supervision of Dr. Mathews; evaluation of muscle biopsies with Dr. Steven Moore (Neuropathology); and study of patient cells in Dr. Campbell's laboratory. In addition, these students present their findings from interesting cases at the Neuromuscular Disease Conference once a month.

Wellstone Postdoctoral Research Fellowships

The Postdoctoral Research Fellowship trains scientists in the basic research of muscular dystrophy, by providing a PhD, MD, or MD/PhD graduate with an intensive research experience in Dr. Campbell's laboratory. This experience is complemented by observation of patient care in a clinical setting, enhancing the fellow's understanding and appreciation of the clinical side of translational medicine.

Wellstone Post-Baccalaureate Research Internship and Undergraduate Research Fellowship

The Post-Baccalaureate Research Internship is designed to encourage recent college graduates interested in pursuing graduate degrees to move into translational science by providing a one-year intensive research experience in the Center before s/he enters graduate school. The Undergraduate Research Fellowship has a similar purpose but is awarded to students who are still enrolled at the University of Iowa; these individuals work closely with a postdoctoral fellow in the Center.

Wellstone Family Conference

The Center has a strong tradition of involving patients and patient advocates by hosting a two-day conference and tours of its laboratories for patients and their families. The goal of the conference is to educate the patients about ongoing translational medicine in the MDCRC, and to provide a forum where they can ask questions concerning muscular dystrophy research. The current fellows and intern all participate in this conference. Through these activities, the Center is accelerating the education mission of the MDCRC and providing a vibrant training environment for clinician scientists.

Departmental Chair Activities (2002 – present)

Overview

The Department of Molecular Physiology and Biophysics of the Roy J. and Lucille A. Carver College of Medicine is an outstanding basic science department that makes major contributions to the college's three-part mission of teaching, research and service. The department is nationally and internationally recognized for its strength and accomplishments in research and is renowned for its exceptional contributions to medical school teaching. The Department of Molecular Physiology and Biophysics is comprised of a highly interactive, intellectually stimulating and productive faculty of scientists and educators. At present, the department has 18 research faculty and one full-time teaching faculty member. Faculty are recruited to the department for their independent basic science research programs; however, most faculty have a component of translational medicine and participate in strong clinical collaborations. The department has a strong commitment to diversity, which is evidenced by its two female faculty members, one African American faculty member and three members of Asian and Pacific Islander descent. All faculty members lead active and productive research programs that are supported by external funding. We currently have 11 faculty that average over 63% salary support from grants and/or teaching.

Faculty Recruitment as Departmental Chair

Name and Degree	Year Recruited	Previous Institution (Postdoc Advisor)
Sandipan Chowdhury, Ph.D.	2020	Vollum Institute at Oregon Health and Science University/University of Wisconsin, Madison (Eric Gouaux/Baron Chanda)
Stephanie Gantz, Ph.D.	2020	Harvard Medical School/National Institute on Drug Abuse (Bruce Bean/Antonello Bonci and Carl Lupica)
Rainbo Hultman, Ph.D.	2019	Duke University (Patrick Casey)
Ted (Edwin) Abel, Ph.D.	2017	University of Pennsylvania (Eric Kandel)
Julien Sebag, Ph.D.	2013	Vanderbilt University (Roger Cone)
Janice Robertson, Ph.D.	2013	Brandeis University (Christopher Miller)
Christopher Ahern, Ph.D.	2012	University of British Columbia (Richard Horn)
Amy Lee, Ph.D.	2008	Emory University (William Catterall)
Mike Wright, Ph.D.	2008	University of California, Davis (Ruedi Aebersold)
Charles Harata, Ph.D.	2007	Stanford University (Richard Tsien)
Alessio Accardi, Ph.D.	2007	Brandeis University (Christopher Miller)
Michael Henry, Ph.D.	2003	Millenium Pharmaceuticals, Inc. (Kevin Campbell)
Michael Anderson, Ph.D.	2003	The Jackson Laboratory (Simon John)

Faculty Recruitment as Search Committee Chair

Name and Degree	Year Recruited	Current Position
Jeffrey Pessin, Ph.D.	1983	Diabetes Center Director, Albert Einstein
Bruce Bean, Ph.D.	1983	Professor, Harvard Medical School, Boston, MA
Hollis Cline, Ph.D.	1990	Professor, The Scripps Research Institute
Roberto Malinow, Ph.D.	1990	Professor, Section of Neurobiology, UCSD
Toshinori Hoshi, Ph.D.	1992	Professor, Department of Physiology, Univ. Penn
Sarah England, Ph.D.	1997	Professor, Washington University, St. Louis, MO

Graduate Student Education

- Established the Molecular Physiology and Biophysics Graduate Student Symposium
- Established the Ramon D. Buckley Graduate Student Scholarship
- Established Paper of the Year award for a departmental graduate student with an outstanding publication

Postdoctoral Fellow Education

- Established the Departmental Postdoc Career Enhancement group
- Developed a postdoctoral seminar mentoring program by faculty members
- Established the Peter A. Getting Postdoctoral Scholar Award

Undergraduate Education

- Developed and implemented a training program for undergraduate students (Coop Exchange Program).
- Developed and implemented an internship program for recent graduates (Post-Baccalaureate Program).

Departmental Chair Talks

DEO Department Review/SWOT Meeting with Dean Schwinn and administration of the Carver College of Medicine, "Department Review" University of Iowa, Iowa City, Iowa, 2015.

Presentation at "DEO Metrics, Spring 2010" University of Iowa Department of Molecular Physiology & Biophysics Faculty Meeting, Iowa City, Iowa, May 11, 2010.

DEO Department Review/SWOT Meeting with Dean Rothman & CCOM Administration, "SWOT Analysis and Department Review" University of Iowa, Iowa City, Iowa, February 16, 2009.

"The Interview" presentation to University of Iowa Department of Molecular Physiology & Biophysics Postdoc Career Enhancement Group, Iowa City, Iowa, November 10, 2008.

"Applying and Preparing for Faculty Positions" presentation at the University of Iowa Department of Molecular Physiology & Biophysics Postdoc Professional Development Series, Iowa City, Iowa, November 13, 2006.

"CV and Resume Preparation" presentation at the University of Iowa Department of Molecular Physiology & Biophysics Postdoc Professional Development Series, Iowa City, Iowa, August 14, 2006.

"Physiology and Biophysics" presentation at the University of Iowa Carver College of Medicine (CCOM) Executive Committee Meeting, Iowa City, Iowa, September 12, 2005.

"Physiology and Biophysics" orientation presentation to University of Iowa Biosciences Program Students as Professor and Interim Head, Iowa City, Iowa August 19, 2004.

Financial Resource Support (Grants and Contracts)

Current Grants

Title	Period	Amount
Investigator, Howard Hughes Medical Institute (Renewed 10/19)	10/01/89-11/30/24	
NIH/NINDS 2 P50 NS053672-16 Senator Paul D. Wellstone Muscular Dystrophy Specialized Research Centers "Extramural Research Programs in the Neurosciences and Neurological Disorders" (PI: KP Campbell)	06/08/05-06/30/25	$1,534,100

Recent Past Grants

Title	Period	Amount
Pacific Northwest Center for Cryo-EM (PNCC) "Cryo-EM Structure of the Bifunctional Glycosyltransferase LARGE in Complex with its Substrate, Dystroglycan, Will Reveal the Mechanism of Matriglycan Polymerization" 51823 (PI: KP Campbell)	03/14/21-03/13/23	
Muscular Dystrophy Association 238219 "Protein O-mannosylation: Classification of New Players in Muscular Dystrophy" (PI: KP Campbell)	08/01/12-07/31/15	$113,637/year
Muscular Dystrophy Association "Pathways and Consequences of Non-dysferlin Mediated Membrane Repair" (PI: Jennifer Levy-Keiser)	8/01/11-07/31/14	$60,000/year
Muscular Dystrophy Associate "Pathophysiology of Muscle Weakness and Wasting in Myotonic Dystrophy" (PI: John Lueck)	02/01/11-01/31/14	$60,000/year
5 T32 HL 7121-37 Iowa Cardiovascular Center Institutional Training Grant "Dystroglycan-dependent anchoring of dystrophin prevents muscular dystrophy" (PI: Rolf Turk)	08/15/12-08/14/13	$58,000/year
Muscular Dystrophy Association "Molecular Basis of Glycosylation-Deficient Muscular Dystrophy" (PI: KP Campbell)	01/01/10-12/31/12	$144,203/year
Ruth L. Krischstein NRSA Fellowship "Mechanisms Required for Dystroglycan Posttranslational Modification" (PI: M Goddeeris, Co-PI: KP Campbell)	01/15/09-01/14/12	$57,094/year
NIH/NINDS 1 RC2 NS069521-01 (GO Grant) "High-Throughput Genetic & Small-Molecule Screening for Therapeutic Modifiers" (PI: KP Campbell)	09/30/09-08/31/11	$1,233,893
Myotonic Dystrophy Fellowship "The Role of Sarcolemmal Membrane Fidelity in DM Muscle Pathogenesis" (PI: J Lueck, Co-PI: KP Campbell)	04/01/09-03/31/11	$50,000/year
Cardiovascular Center Institutional Research Fellowship "Roles of Dynamin 2 in Myofiber Organization and Centronuclear Myopathy" (PI: J Levy, Co-PI: KP Campbell)	01/01/09-12/31/10	$47,429/year

Muscular Dystrophy Association Research Development Grant "Role of Muscle Development/Regeneration in the Pathology of Dystroglycanopathy" (PI: A Beedle, Co-PI: KP Campbell)	01/01/09-12/31/10	$60,000/year
Muscular Dystrophy Association Research Development Grant "Efficacy of LARGE as a Therapeutic Strategy for Limb-Girdle Muscular Dystrophy" (PI: EP Rader; Co-PI: KP Campbell)	01/01/08-12/31/10	$45,000/year
NIH/NIAMS 3 R01 AR051199-05S1 (R01 Supplement) "Therapeutic potential of α-sarcoglycan in the treatment of limb-girdle muscular dystrophy type 2D (LGMD-2D)" (PI: KP Campbell)	09/23/09-09/22/10	$325,990
NIH/NIAMS 5 R01 AR051199 "Therapeutic Potential of ε-sarcoglycan in the Treatment of LGMD Type 2D" (PI: KP Campbell)	04/01/04-03/31/10	$218,366

Physical Facilities

Office and Laboratory – Carver Biomedical Research Building, 4283 CBRB, 2500 sq. ft.

Current Personnel Supervised

Postdoctoral Fellows	Previous University	Start Date	Degree
Ishita Chandel	Texas A&M University	2021	Ph.D.
Miguel Gonzales	Texas A&M University	2022	Ph.D.
Jeffrey Hord	Texas A&M University	2016	Ph.D.
Soumya Joseph	Australian National University	2016	Ph.D.
Divya Rathi	National Institute of Plant Genome Research	2022	Ph.D.

Research Assistants
Keith Garringer
Sally Prouty
David Venzke

Post-Baccalaureate Research Interns

Administrative Support
Jaeda Harmon
Amber Mower
Rachel Poe

Undergraduate Lab Assistants
Noah Breitenback-Dirks
Zeita Gastel
Bailey Wollesen

Graduate Students
Emma Luhmann

Clinical and Translational Activities

1997-present **Wellstone Muscular Dystrophy Cooperative Research Center**
Director: Kevin Campbell
Exploration of therapeutic strategies for the treatment of various muscular dystrophies by enabling translational research on muscular dystrophies and providing advanced diagnostic services.

1997-present **Neuropathology Meeting**
Organizers: Kevin Campbell (Molecular Physiology & Biophysics), Katherine Mathews (Pediatrics and Neurology), Steven Moore (Pathology)

Review and discussion of recent neuromuscular disease patients seen at University of Iowa Hospitals and Clinics or muscle biopsies sent to neuropathology at the University of Iowa for analysis.
** for a more detailed description of the Neuromuscular Disease Group, please see appendix XI*

2000-2007 **Limb-Girdle Muscular Dystrophy Study**
Coordinating Center: Ohio State University
PI: Jerry R. Mendell (*Ohio State University)*
Co-PIs: Steven Moore, Kevin P. Campbell *(University of Iowa)*
Members: Katherine Mathews *(University of Iowa),* Robert C. Griggs *(University of Rochester)*, Alan Pestronk *(Washington University)*, Gerald Fenichel *(Vanderbilt University)*, Hansel Stedmann *(University of Pennsylvania)*
Aims:
1. Establish a registry of LGMD patients in North America with defined gene mutations, for purposes of determining the incidence and natural history of specific disorders in this outbred population.
2. Establish a cohort of LGMD patients with defined gene mutations to participate in clinical trial involving gene transfer.
3. Define appropriate end points for clinical efficacy for clinical trials including gene transfer in LGMD**.**

Invited Seminars (2004 – Present)

2004 New Directions in Biology and Disease of Skeletal Muscle, San Diego, California
University of Pennsylvania Children's Hospital, Philadelphia, Pennsylvania
Keystone Symposium on Molecular Biology and Cardiac Disease, Keystone, Colorado
Cincinnati Children's Hospital Medical Center Rachford Lecture, Cincinnati, Ohio
Ohio State University Research Day, Columbus, Ohio
University of Washington Department of Biochemistry, Seattle, Washington
University of California, San Diego, California
American Academy of Neurology Plenary Session, Frontiers in Clinical Neuroscience-Beyond the Decade of the Brain, San Francisco, California
University of Rochester, Rochester, New York
George H. Bishop Lecture Series, Washington University, St. Louis, Missouri
Howard Hughes Medical Institute Scientific Meeting, Chevy Chase, Maryland
Gordon Research Conference on Basement Membranes, Bristol, Rhode Island
Muscular Dystrophy Scientific Workshop Toward Therapeutics, Foundation to Eradicate Duchenne, Inc., La Jolla, California
43rd Annual Iowa Branch American Association for Laboratory Animal Science, Iowa City, Iowa
American Society for Matrix Biology, San Diego, California
University of Iowa Neurology Grand Rounds, Iowa City, Iowa

2005 European Neuro Muscular Centre International Workshop on Congenital Muscular Dystrophy, Naarden, The Netherlands
Third Annual Neuromuscular Conference and EMG Workshop, London Health Sciences Centre, London, Ontario, Canada
University of Iowa Internal Medicine Grand Rounds, Iowa City, Iowa
University of Connecticut Health Center Cardiovascular Grand Rounds, Farmington, Connecticut
International Congress of Physiological Sciences, San Diego, California
University of Columbia Colleen Giblin Lecture, New York, New York
Duke CMB Symposium, Duke University, Durham, North Carolina
Mini Medical School Program, University of Iowa, Iowa City, Iowa
AFM Scientific Congress on Myology, Nantes, France
Johns Hopkins Neurology Grand Rounds, Johns Hopkins University, Baltimore, Maryland
Yale Pharmacology Lecture, Yale University, New Haven, Connecticut
Harvard Children's Hospital Orthopedic Research Seminar, Boston, Massachusetts
FASEB Summer Research Conference "Skeletal Muscle Satellite and Stem Cells," Tucson, Arizona
26th Annual David W. Smith Workshop on Malformations and Morphogenesis, The University of Iowa
World Muscle Society Meeting, Iguassu Falls, Brazil
Society for Glycobiology, Boston, Massachusetts
Scripps Research Institute, San Diego, California

2006 Masters Class in Molecular Mechanisms of Disease Glycogenetics and Neuromuscular Diseases, Nijmegen School of Molecular Life Sciences (NCMLS), Nijmegen, The Netherlands

Harvard Cell Biology Seminar, Boston, Massachusetts
Neuroscience Program Seminar, The University of Iowa, Iowa City, Iowa
79th Annual Japanese Pharmacological Society, Yokohama, Japan
Osaka University Seminar, Osaka, Japan
Department of Molecular Biology and Genetics Seminar, Johns Hopkins University, Baltimore, Maryland
New Directions in Biology and Disease of Skeletal Muscle Meeting, Dallas, Texas
Frontiers in Myogenesis Meeting, Callaway Gardens, Pine Mountain, Georgia
Department of Defense Military Health Research Forum, San Juan, Puerto Rico
Genetics In-Service Special Presentation, The University of Iowa, Iowa City, Iowa
Neurosurgery Research Conference, The University of Iowa, Iowa City, Iowa
XVI International Congress of Neuropathology, San Francisco, California
HHMI Science Meeting. Janelia Farm Research Campus, Ashburn, Virginia
UT Southwestern Grand Rounds, UT Southwestern, Dallas, Texas
Neuromuscular Plasticity Symposium, University of Florida, Gainesville, Florida

2007 Keystone Symposium: Molecular Pathways in Cardiac Development and Disease, Breckenridge, Colorado
Neurosciences Seminar Series, Stanford University, Stanford, California
Presidential Lecture, The University of Iowa, Iowa City, Iowa
Mini Medical School, The University of Iowa, Iowa City, Iowa
Medical College of Wisconsin Student Choice Lecture, Milwaukee, Wisconsin
The 20th Anniversary of the DMD Gene Discovery: Impact on Muscle Biology, Disease and Therapy, Ottawa
Neurology Grand Rounds, The University of Iowa, Iowa City, Iowa
Cornell Biomedical Sciences, Neuroscience Program, and Institute of Cell and Molecular Biology Distinguished Lecture, Cornell University, Ithaca, New York
Genzyme Seminar, Boston, Massachusetts
Jain Foundation First Annual Dysferlin Conference, Bermuda
HHMI Scientific Meeting-Molecular Transport and Trafficking, Ashburn, Virginia
Faculty of Medicine: Perceptions of the Cell, Vancouver, British Columbia, Canada
Brain Research Centre, Vancouver, British Columbia, Canada
University of Michigan Symposium, Ann Arbor, Michigan
World Muscle Society, Giardini Naxos, Italy

2008 ENMC Workshop on CMD, Naarden, The Netherlands
Neuromuscular Disease Seminar, Leiden, The Netherlands
Banbury Center Meeting, Cold Spring Harbor, New York
Loyola University White Lecture, Maywood, Illinois
SGH 17th Annual Scientific Meeting, Singapore
New Directions in Biology and Disease of Skeletal Muscle, New Orleans, Louisiana
International Workshop for Glycosylation Defects in Muscular Dystrophy, Charlotte, North Carolina
Sloan-Kettering Cancer Center Seminar, New York, New York
Harvard Medical School Grand Rounds, Boston, Massachusetts
Gordon Research Conference on Basement Membranes, Biddeford, Maine
Iowa Congenital Muscular Dystrophy Meeting, Iowa City, Iowa
Society for General Physiologists, Woods Hole, Massachusetts
University of Kentucky Distinguished Speaker Series, Lexington, Kentucky
4th Banbury Conference on SMA: Taking on New Complexities in SMA Biology, Cold Spring Harbor
CFA Symposium, Philadelphia, Pennsylvania

2009 HHMI Science Meeting, Chevy Chase, Maryland
The Scripps Research Institute Bernard Field Lecture, La Jolla, California
Vanderbilt Discovery Lecture, Nashville, Tennessee
Columbia University Making Muscle in the Embryo and Adult joint meeting with Frontiers in Myogenesis, New York, New York
March of Dimes Prize in Developmental Biology Acceptance Lecture, Baltimore, Maryland
Novartis Institutes for BioMedical Research, Inc., Cambridge, Massachusetts
Boston Biomedical Research Institute (BBRI), Watertown, Massachusetts
CMD Therapeutic Target Conference, Atlanta, Georgia
Keynote Speaker, Society of General Physiologists, Woods Hole, Massachusetts
Society of Glycobiology, San Diego, California
49th American Society for Cell Biology Annual Meeting, San Diego, California

2010 ENMC Workshop on Dysferlinopathy, Naarden, The Netherlands
UC Santa Barbara, Santa Barbara, California
Loyola University Chicago, Chicago, Illinois

Genzyme Corp., Framingham, Massachusetts
University of Georgia, Athens, Georgia
The Ottawa Conference on New Directions in Biology & Disease in Skeletal Muscle, Ottawa, Ontario, Canada
University of Nebraska Medical Center, Omaha, Nebraska
University of Minnesota, Lillehei Heart Institute, Minneapolis, Minnesota
University of Texas Health Science Center – Houston, Institute of Molecular Medicine, Houston, Texas
XII International Congress on Neuromuscular Diseases, Naples, Italy
University of Wisconsin, Cardiovascular Research Conference, Madison, Wisconsin
American Society of Matrix Biology meeting, Charleston, South Carolina
University of Texas Southwestern, Dallas, Texas
Muscular Dystrophy Workshop, Charlotte, North Carolina
Children's National Medical Center, Washington, District of Columbia

2011 NGM Biopharmceuticals, Inc., San Francisco, California
UC San Diego, San Diego, California
Glycobiology Symposium, San Diego, California
2nd Annual SBMRI Rare Disease Symposium, San Diego, California
UC Davis, Davis, California
UC San Francisco, Gladstone Institute, San Francisco, California
1st Chinese conference on translational research in Duchenne muscular dystrophy, Guangzhou, China
The Sanford-Burnham Medical Research Institute, La Jolla, California
Nationwide Children's Hospital, The Ohio State University, Columbus, Ohio
AANP Annual Meeting, Presidential Symposium, Seattle, Washington
Gordon Research Conference on Collagen, New London, New Hampshire
Consortium for Functional Glycomics PI Meeting, Bethesda, Maryland
International Conference on Muscle Wasting 2011, Ascona, Switzerland
Coalition to Cure Calpain3 LGMD2A Workshop, Santa Monica, California
Kurt Ebner Discovery Lecture, University of Kansas Medical Center, Kansas City, Kansas
ENMC Dystroglycan and Dystroglycanopathies Workshop, Naarden, The Netherlands

2012 Iowa State University, Ames, Iowa
CMD: Exploring the Role of Myomatrix, Reno, Nevada
University of Nebraska-Lincoln, Lincoln, Nebraska
Yeshiva University, Einstein College of Medicine, Bronx, New York
Frontiers in Myogenesis Meeting, New York, New York
New Directions in Biology and Disease of Skeletal Muscle Conference, New Orleans, Louisiana
Institut Pasteur, Paris, France
Duke University, Durham, North Carolina
World Muscle Society Meeting, Perth, Australia
Panel Discussion: Disease Pathogenesis, Wellstone Centers Meeting, Watertown, Massachusetts
College of Medicine Dean's Distinguished Lecture, University of Kentucky, Lexington, Kentucky
Center for Muscle Biology Fall Retreat, University of Kentucky, Lexington, Kentucky

2013 Glycobiology Research Conference, Ventura, California
Glycosylation Workshop, Charlotte, North Carolina
ASBMB Annual Meeting, Boston, Massachusetts
HHMI Scientific Meeting, Ashburn, Virginia
Johnson-Sokatch Lectureship, University of Oklahoma, Oklahoma City, Oklahoma
Dept. of Biological Chemistry Seminar Program, Johns Hopkins University, Baltimore, Maryland
55th Annual Meeting of the Japanese Society of Child Neurology, Oita, Japan
Segawa Neurological Clinic for Children Symposium, Tokyo, Japan
John and Margaret Faulkner Lectureship, University of Michigan, Ann Arbor, Michigan
EMBO Workshop on Muscle Wasting, Ascona, Switzerland
Cornell University Physiology Biophysics and Systems Biology Seminar Series, New York, New York
University of Georgia, Athens, Georgia

2014 Cincinnati Children's Heart Institute Seminar Series, Cincinnati, Ohio
Pediatrics Frontiers in Research seminar, University of Iowa, Iowa City, Iowa
Neurology Grand Rounds, University of California Los Angeles, Los Angeles, California
Baylor College of Medicine Seminar, Baylor University, Houston, Texas
Presentation to the Carver Trust, University of Iowa, Iowa City, Iowa
Neurogenetics Symposium, University of Iowa, Iowa City, Iowa
Texas A&M University Neuroscience Seminar, Texas A&M University, College Station, Texas
Duke University Biochemistry Seminar, Duke University, Durham, North Carolina

2015 Frontiers in Biomedical Research Symposium, Scripps Research Institute, Indian Wells, California
Muscular Dystrophy Association Scientific Conference, Washington, DC
Biochemistry, Biophysics and Molecular Biology Seminar, Iowa State University, Ames, Iowa
Alexion Muscular Dystrophy Symposium, Cheshire, Connecticut
Physics Education Group Meeting, Washington, DC
Workshop for Glycosylation Defects in Muscular Dystrophy, Charlotte, North Carolina
National Academy of Sciences Meeting, Washington, DC
Pfizer Frontiers in Human Disease Symposium, New York, New York
University of Minnesota Biochemistry Seminar, Minneapolis, Minnesota
Translational Biology and Molecular Medicine Bench to Bedside Seminar, Baylor University, Houston, Texas
ENMC Workshop on Animal Models for Congenital Muscular Dystrophies, Naarden, The Netherlands
Parent Project Muscular Dystrophy Meeting, Washington, DC
UPS Workshop on Glycosylation Analysis for Biopharmaceuticals, Rockville, Maryland
Society of General Physiologists Symposium, Woods Hole, Massachusetts
Muscle Wasting Meeting, Ascona, Switzerland
Ottawa Conference on Neuromuscular Biology, Disease, and Therapy, Ottawa, Canada
Wellstone Centers Network Meeting, Seattle, Washington
University of Virginia Seminar, Charlottesville, Virginia
Howard Hughes Medical Scientific Meeting, Chevy Chase, Maryland
Society for Glycobiology Meeting, San Francisco, California
Vanderbilt Biomedical Science Advisory Board Meeting, Nashville, Tennessee
ARMGO Meeting, New York City, New York

2016 ENMC Workshop on Fukutin Related Protein – Related Myopathies, Naarden, The Netherlands
University of California, San Diego Seminar, San Diego, California
Oregon State University Seminar, Corvallis, Oregon
Howard Hughes Medical Institute Scientific Meeting, Chevy Chase, Maryland
National Academy of Sciences Meeting, Washington, DC
Spinal Muscular Atrophy Foundation, Muscle Advisory Board Meeting, New York City, New York
Vanderbilt University Seminar, Nashville, Tennessee
ENMC Workshop on Dystroglycan and the Dystroglycanopathies, Naarden, The Netherlands
Society for Muscle Biology Meeting, Asilomar, California
Genzyme Scientific Advisory Board Meeting, Framingham, Massachusetts
10th International Symposium on Glycosyltransferases, Toronto, Canada
Parent Project Muscular Dystrophy Annual Connect Conference, Orlando, Florida
New Directions in Biology and Disease of Skeletal Muscle Conference, Orlando, Florida
Salk Meeting on Post-translational Regulation of Cell Signaling, La Jolla, California
BioMed Central Editors' Conference, New York, New York
University of Maine GSBSE Seminar, Orono, Maine
University of Iowa Neuromuscular-Neurogenetics Symposium, Iowa City, Iowa
International Congress of The World Muscle Society, Granada, Spain
American Society for Matrix Biology Meeting, St. Petersburg, Florida
Muscular Dystrophy Coordinating Committee Meeting (NIH), Bethesda, Maryland
Vanderbilt University Biomedical Science Advisory Board Meeting, Nashville, Tennessee
University of Minnesota, Marzolf Symposium, Minneapolis, Minnesota

2017 Advances in Skeletal Muscle Biology in Health & Disease Conference, Gainesville, Florida

UCLA Clinical and Translational Science Institute Seminar Series, Los Angeles, California
International Workshop for Glycosylation Defects in Muscular Dystrophy, Charlotte, North Carolina
George Karpati Lecture, McGill University, Montreal Canada
FASEB Meeting - From Unfolded Proteins in the ER to Disease Conference, Saxton's River, Vermont
CMD Science & Family Conference, Washington, DC
University of Georgia Center for Molecular Medicine Symposium, Athens, Georgia
University of Iowa Neuromuscular-Neurogenetics Symposium, Iowa City, Iowa
Society of Glycobiology Innovators Award Lecture, Portland, Oregon
Howard Hughes Medical Institute Scientific Meeting, Chevy Chase, Maryland
UT Southwestern, Fouad A. and Val Imm Bashour Distinguished Lectureship in Physiology, Dallas, Texas
American Society for Cell Biology/European Molecular Biology Organization Meeting, Philadelphia, Pennsylvania
Vanderbilt University Biomedical Science Advisory Board Meeting, Nashville, Tennessee
Tufts University, Sakler School of Graduate Biomedical Sciences Seminar, Medford, Massachusetts

2018 Sanford Burnham Prebys Rare Disease Day Symposium & Congenital Disorders of Glycosylation Family Conference, San Diego, California
University of Vermont Pharmacology Seminar, Burlington, Vermont
Kyoto University, Katsura Campus Seminar, Kyoto Japan
Graduate School of Medicine Kobe University Seminar, Kobe, Japan
Japan Muscle Society Meeting, Kurashiki, Japan
University of Iowa Neuromuscular-Neurogenetics Symposium, Iowa City, Iowa
Muscle Wasting Meeting, Ascona, Switzerland
Harvard Glycoscience Symposium, Boston, Massachusetts

2019 International Workshop for Glycosylation Defects in Muscular Dystrophies, Charlotte, North Carolina
100 Years of Neurology at the University of Iowa Centennial Symposium, Iowa City, Iowa
University of Iowa Neuromuscular-Neurogenetics Symposium, Iowa City, Iowa
5th Ottawa International Conference on Neuromuscular Disease & Biology, Ottawa Canada
University of Iowa First-Generation Student Awards and Recognition Ceremony, Iowa City, Iowa
Wellstone Centers Network Meeting, Rochester, New York

2020 12th International GlycoT Conference, San Diego, California, Virtual
University of Iowa Neuromuscular-Neurogenetics Symposium, Iowa City, Iowa, Virtual
Congenital Disorders of Glycosylation Pre-Meeting Course, Guadalajara Jalisco, Mexico, Virtual

2021 Regeneron Seminar Series, Tarrytown, New York, Virtual
Albert Einstein College of Medicine, Cell Biology Outside Speaker Seminar Series, Bronx, New York, Virtual
San Diego Glycobiology Symposium, San Diego, California, Virtual
ASBMB Herbert Tabor Award Lecture, San Diego, California, Virtual (Voted one of the "Most Favorited" sessions and presentations, Experimental Biology 2021 conference)
Joint Glycobiology Meeting, Heidelberg, Germany, Virtual
Tamio Yamakawa Award Lecture, Osaka, Japan, Virtual

2022 The 3rd ENMC Workshop on Dystroglycan and the Dystroglycanopathies, Hoofddorp, The Netherlands
Scripps Molecular Medicine Seminar, San Diego, California
International Conference on Muscle Wasting, Ascona, Switzerland
University of Iowa Neuromuscular-Neurogenetics Symposium, Iowa City, Iowa
University of Rochester Inaugural Paul LaCelle Lecture, Rochester, New York

2023 Glycobiology Gordon Research Conference, Ventura, California
Baylor College of Medicine Child Neurology Grand Rounds, Houston, Texas
7th International Workshop for Glycosylation Defects in Muscular Dystrophy, Charlotte, North Carolina
Wash U Compass Fireside Chat, St. Louis, Missouri, Virtual
Presidents Lecture Series at Sanford Burnham Prebys Medical Discovery Institute, La Jolla, California
Augusta University Lombard Kelly Lecture, Augusta, Georgia

Society of Glycobiology Annual Meeting, Big Island, Hawaii
University of Iowa Neurology Grand Rounds, Iowa City, Iowa

Patents

1. Title: Immunogen Conjugates and the Use Thereof in a Dihydropyridine Assay
   Inventor: Kevin P. Campbell
   Patent No: 4,784,955 Patent Issue: November 15, 1988

2. Title: Dihydropyridine Receptor and Antibodies Thereto
   Inventors: Kevin P. Campbell, Toshiaki Imagawa and Albert T. Leung
   Patent No: 4,912,202 Patent Issue: March 27, 1990

3. Title: Measuring Non-Dystrophin Proteins and Diagnosing Muscular Dystrophy
   Inventors: Kevin P. Campbell, James M. Ervasti, Kay Ohlendieck, Mitchell G. Gaver and Steven D. Kahl
   Patent No: 5,187,063 Patent Issue: February 16, 1993

4. Title: Diagnosing Malignant Hyperthermia Susceptibility by Detection of Abnormal Proteolytic Enzyme Digestion Fragments of the Ryanodine Receptor
   Inventors: Kevin P. Campbell, C. Michael Knudson, Steven D. Kahl, Charles F. Louis and James R. Mickelson
   Patent No: 5,242,801 Patent Issue: September 7, 1993

5. Title: Nucleic Acids Encoding Dystrophin-Associated Proteins
   Inventors: Kevin P. Campbell, Oxana Ibraghimov-Beskrovnaya, James M. Ervasti and Cynthia J. Leveille
   Patent No: 5,260,209 Patent Issue: November 9, 1993

6. Title: Diagnosis of Autosomal Muscular Dystrophy
   Inventors: Kevin P. Campbell and Kiichiro Matsumura
   Patent No: 5,308,752 Patent Issue: May 3, 1994

7. Title: Calcium Channel Compositions and Methods
   Inventors: Scott Jay, Steven B. Ellis, Michael M. Harpold and Kevin P. Campbell
   Patent No: 5,386,025 Patent Issue: January 31, 1995

8. Title: Measuring Non-Dystrophin Proteins and Diagnosing Muscular Dystrophy
   Inventors: Kevin P. Campbell, James M. Ervasti, Kay Ohlendieck, Mitchell G. Gaver and Steven D. Kahl
   Patent No: 5,413,910 Patent Issue: May 9, 1995

9. Title: Method for Screening for Cardiomyopathy
   Inventors: Kevin P. Campbell
   Patent No: 5,418,139 Patent Issue: May 23, 1995

10. Title: Purified, Native Dystrophin
    Inventors: Kevin P. Campbell, Steven D. Kahl and James M. Ervasti
    Patent No: 5,430,129 Patent Issue: July 4, 1995

11. Title: Nucleic Acid Encoding Dystrophin-Associated Protein
    Inventors: Kevin P. Campbell, Steven L. Roberds and Richard D. Anderson
    Patent No: 5,449,616 Patent Issue: September 12, 1995

12. Title: Diagnosing Malignant Hyperthermia Susceptibility by Detection of Abnormal Proteolytic Enzyme Digestion Fragments of the Ryanodine Receptor
    Inventors: Kevin P. Campbell, C. Michael Knudson, Steven D. Kahl, Charles F. Louis and James R. Mickelson
    Patent No: 5,462,857 Patent Issue: October 31, 1995

13. Title: Immunogenic Ryanodine Derivative and Related Uses
Inventors: Kevin P. Campbell, Derrick R. Witcher, Peter McPherson, Steven D. Kahl, John D. Windass, Terence Lewis and Philip Bentley
Patent No: 5,492,839 Patent Issue: February 20, 1996

14. Title: β-Sarcoglycan Nucleic Acid Sequence, Deleterious Mutations and Applications
Inventors: Kevin P. Campbell, Leland Lim, Franck Duclos, Yoshihide Sunada, Jacques Beckmann, Odile Broux, Fernando M. S. Tomé, Michel Fardeau and Charles E. Jackson
Patent No: 5,672,694 Patent Issue: September 30, 1997

15. Title: Polyclonal and Monoclonal Antibodies Against a 43 kDa Dystrophin Associated Protein
Inventors: Kevin P. Campbell, Oxana B. Ibraghimov, James M. Ervasti and Cynthia J. Leveille
Patent No: 5,686,073 Patent Issue: November 11, 1997

16. Title: Recombinant Production of Mammalian Calcium Channel Gamma Subunits
Inventors: Scott D. Jay, Steven B. Ellis, Michael M. Harpold and Kevin P. Campbell
Patent No: 5,726,035 Patent Issue: March 10, 1998

17. Title: Methods for Detecting Primary Adhalinopathy
Inventors: Kevin P. Campbell, Steven Roberds, Yoshihide Sunada, Federica Piccolo, Marc Jeanpierre and Jean-Claude Kaplan
Patent No: 5,733,732 Patent Issue: March 31, 1998

18. Title: δ-Sarcoglycan Nucleic Acid Sequences
Inventor: Kevin P. Campbell, Daniel Jung, Franck Duclos, Volker Straub and John McPherson
Patent No: 5,837,537 Patent Issue: November 17, 1998

19. Title: Merosin Deficiency-Type Congenital Muscular Dystrophy
Inventors: Kevin P. Campbell, Yoshihide Sunada, Fernando M.S. Tomé, Michel Fardeau
Patent No: 5,863,743 Patent Issue: January 26, 1999

20. Title: Arenavirus Receptor and Methods of Use.
Inventors: Kevin P. Campbell, Michael Henry, Hiroki Yamada, Roger Williamson, Wei Cao, Michael Oldstone
Patent No: 6,083,911 Patent Issue: July 4, 2000

21. Title: Method for Aiding the Diagnosis of In-Frame Deletion Type Congenital Muscular Dystrophy
Inventors: Kevin P. Campbell, Valérie Allamand, Yoshihide Sunada, Voker Straub, Mustafa Salih
Patent No: 6,136,546 Patent Issue: October 24, 2000

22. Title: Pathogenesis of Cardiomyopathy
Inventors: Kevin P. Campbell, Ramon Coral, Ronald Cohn, Roger Williamson and Madeleine Durbeej
Patent No: 6,201,168 B1 Patent Issue: March 13, 2001

23. Title: Sarcospan-Deficient Mouse as a Model for Clinical Disorders Associated with Sarcospan Mutations
Inventors: Kevin P. Campbell, Connie Lebakken, Rachelle Crosbie, Roger Williamson
Patent No: 6,207,878 B1 Patent Issue: March 27, 2001

24. Title: δ-Sarcoglycan Nucleic Acid Sequences, Amino Acid Sequences and Applications
Inventors: Kevin P. Campbell, Daniel Jung, Franck Duclos, Volker Straub and John McPherson
Patent No: 6,211,340 B1 Patent Issue: April 3, 2001

25. Title: Gene Replacement Therapy for Muscular Dystrophy
Inventors: Kathleen H. Holt, Franck Duclos, Leland E. Lim, Volker Straub, Beverly Davidson, Roger Williamson and Kevin P. Campbell
Patent No: 6,262,035 B1 Patent Issue: July 17, 2001

26. Title: Receptor for Mycobacterium Leprae and Methods of Use Thereof
Inventors: Anura Rambukkana, Vincent A. Fischetti and Kevin P. Campbell
Patent No: 6,331,405 B1 Patent Issue: December 18, 2001

27. Title: Genes Encoding Neuronal Voltage-Gated Calcium Channel γ Subunits
Inventors: Verity A. Letts, Wayne N. Frankel, Kevin P. Campbell, Ricardo Felix, Gloria Biddlecome
Patent No: 6,365,337 B1 Patent Issue: April 2, 2002

28. Title: Evaluation of Adenocarcinoma of the Prostate and Breast Using Anti-Dystroglycan Antibodies
Inventors: Kevin P. Campbell, Michael Henry, Michael B. Cohen
Patent No: 6,379,893 B1 Patent Issue: April 30, 2002

29. Title: Disruption of the Sarcoglycan-Sarcospan Complex in Vascular Smooth Muscle: A Novel Mechanism in the Pathogenesis of Cardiomyopathy and Muscular Dystrophy.
Inventors: Kevin P. Campbell, Roger Williamson, Ramon Coral, Ronald D. Cohn
Patent Application: August 20, 1999

30. Title: Increasing Functional Glycosylation of α-Dystroglycan in the Treatment of Muscle Degeneration.
Inventors: Kevin P. Campbell and Rita Barresi
Patent No: 8,119,766 B2 Patent Issue: February 21, 2012

31. Title: Inhibitors of Phosphodiesterase Type 5A for Treating or Preventing Muscle Disease or the Symptoms Thereof in a Patient.
Inventors: Kevin P. Campbell, Yvonne Kobayashi, and Robert Crawford
Patent No: 9,387,210 B2 Patent Issue: July 12, 2016

32. Title: Inhibitors of Phosphodiesterase Type 5A for Reducing Skeletal Muscle Fatigue, Edema, and Damage in a Patient Having Muscle Fatigue due to Increased Age of Exercise.
Inventors: Kevin P. Campbell, Yvonne Kobayashi, and Robert Crawford
Patent No: 9,943,518 B2 Patent Issue: April 17, 2018

Bibliography

Reviews, Book Chapters, and Editorials

Campbell, K.P. and Tortorelli, P. A Study of Ferritin Using the Mossbauer Effect. *The Manhattan Scientist.* 26, 50-53, 1973.

Campbell, K.P. and Tortorelli, P. Application of Mossbauer Spectroscopy to the Study of Ferritin. *The Manhattan Scientist.* 27, 4-10, 1974.

Campbell, K.P. and Shamoo, A.E. Identification of Two Intrinsic Proteins Uniquely Associated with the Terminal Cisternae of the Sarcoplasmic Reticulum. In: Calcium Binding Proteins and Calcium Function. (R.H. Wasserman, R.A. Corradino, E. Carafoli, R.H. Kretsinger, D.H. MacLennan, F.L. Siegel, eds.) North Holland Press, New York, pp. 185-187, 1977.

MacLennan, D.H. and Campbell, K.P. Structure, Function and Biosynthesis of Sarcoplasmic Reticulum Proteins. *Trends Biochem. 4,*148-151, 1979.

MacLennan, D.H., Klip, A., Reithmeier, R.A.F., Michalak, M. and Campbell, K.P. Possible Sites of Ion Flow in the Sarcoplasmic Reticulum Membrane. In: Membrane Bioenergetics (Lee, C.P., Schatz, G. and Ernster, L., eds.). Addison-Wesley Reading, Mass., pp. 255-266, 1979.

MacLennan, D.H., Reithmeier, R.A.F., Shoshan, V., Campbell, K.P., LeBel, D., Herrmann, T.R. and Shamoo, A.E. Ion Pathways in Proteins of the Sarcoplasmic Reticulum. *Ann. N.Y. Acad. Sci. 358*, 138-148, 1980.

MacLennan, D.H., Campbell, K.P. and Reithmeier, R.A.F. Calsequestrin. In: Calcium and Cell Function (W. Cheung, ed.) Academic Press, New York, Vol. IV, pp. 151-173, 1983.

MacLennan, D.H., Campbell, K.P., Takisawa, H. and Tuana, B.S. A Calmodulin-Dependent Protein Kinase System from Skeletal Muscle Sarcoplasmic Reticulum. In: Advances in Cyclic Nucleotide and Protein Phosphorylation Research. (P. Greengard, G.A. Robison, R. Paoletti and S. Nicosia, eds.) Raven Press, New York, Vol. XVII, pp. 393-401, 1984.

Campbell, K.P. Protein Components and Their Roles in Sarcoplasmic Reticulum Function. In: Sarcoplasmic Reticulum in Muscle Physiology. (M.L. Entman and W.B. Van Winkle, eds.) CRC Press, Boca Raton, Florida, Vol. I, pp. 65-99, 1986.

Campbell, K.P., Leung, A.T. and Sharp, A.H. The Biochemistry and Molecular Biology of the Dihydropyridine-Sensitive Calcium Channel. *Trends Neurosci. 11*, 425-430, 1988.

Campbell, K.P., Leung, A.T. and Imagawa, T. Structural Characterization of the Nitrendipine Receptor of the Voltage-Dependent Ca^{2+} Channel: Evidence for a 52,000 Dalton Subunit. *J Cardiovasc Pharmacol. 12*(Suppl.4), S86-S90, 1988.

Campbell, K.P., Leung, A.T., Sharp, A.H., Imagawa, T. and Kahl, S.D. Ca^{2+} Channel Antibodies: Subunit-Specific Antibodies as Probes for Structure and Function. Proceedings from the Bayer Centenary Symposium. In: The Calcium Channel: Structure, Function and Implications. (M. Morad, W. Nayler, S. Kazda, M. Schramm, eds.) Springer-Verlag Berlin Heidelberg, Germany, pp. 586-600, 1988.

Fill, M.J., Ma, J., Knudson, C.M., Imagawa, T., Campbell, K.P. and Coronado, R. Role of the Ryanodine Receptor of Skeletal Muscle in Excitation-Contraction Coupling. *Ann NY Acad Sci. 560*, 155-162, 1989.

Campbell, K.P., Sharp, A.H. and Leung, A.T. 32,000-Dalton Subunit of the 1,4-Dihydropyridine Receptor. *Ann NY Acad Sci. 560*, 251-257, 1989.

Krause, K.-H., Campbell, K.P., Welsh, M.J. and Lew, D.P. The Calcium Signal and Neutrophil Activation. *Clin Biochem. 23*, 159-166, 1990.

Campbell, K.P., Ervasti, J.M., Ohlendieck, K. and Kahl, S.D. The Dystrophin-Glycoprotein Complex: Identification and Biochemical Characterization. In: Frontiers in Muscle Research. (E. Ozawa, T. Masaki and Y. Nabeshima, eds.). Proceedings of the Uehara Memorial Foundation Symposium on Frontiers of Muscle Research, Elsevier Science Publishers International Congress Series, pp. 321-340, 1991.

McPherson, P.S. and Campbell, K.P. The Ryanodine Receptor/ Ca^{2+} Release Channel. *J Biol Chem. 268*, 13765-13768, 1993.

Ervasti, J.M. and Campbell, K.P. Dystrophin and the Membrane Skeleton. *Curr Opin Cell Biol. 5*, 82-87, 1993.

Ervasti, J.M. and Campbell, K.P. Dystrophin-Associated Glycoproteins: Their Possible Roles in the Pathogenesis of Duchenne Muscular Dystrophy. In: Molecular and Cell Biology of Muscular Dystrophy (T. Partridge, ed.) Chapman and Hall, London, United Kingdom, pp. 139-166, 1993.

Matsumura, K. and Campbell, K.P. Deficiency of Dystrophin-Associated Proteins: A Common Mechanism Leading to Muscle Cell Necrosis in Severe Childhood Muscular Dystrophies. *Neuromusc. Disord. 3*, 109-118, 1993.

Matsumura, K., Ohlendieck, K., Ionasescu, V.V., Tome, F.M.S., Ikuya, N., Burghes, A.H.M., Mora, M., Kaplan, J.-C., Fardeau, M. and Campbell, K.P. The Role of the Dystrophin-Glycoprotein Complex in the Molecular Pathogenesis of Muscular Dystrophies. *Neuromusc. Disord. 3*, 533-535, 1993.

Matsumura, K. and Campbell, K.P. Dystrophin-Glycoprotein Complex: Its Role in the Molecular Pathogenesis of Muscular Dystrophies. *Muscle Nerve 17*, 2-15, 1994.

Witcher, D.R., De Waard, M., Kahl, S. D. and Campbell, K.P. Purification and Reconstitution of N-Type Calcium Channel Complex from Rabbit Brain. *Methods in Enzymology*, Chapter 28 *238*, 335-348, 1994.

Campbell, K.P. Three Muscular Dystrophies: Loss of Cytoskeleton-Extracellular Matrix Linkage. *Cell 80*, 675-679, 1995.
Campbell, K.P. Adhalin Gene Mutations and Autosomal Recessive Limb-Girdle Muscular Dystrophy. *Ann. Neurol*. *38*:353-354, 1995.

Sunada, Y. and Campbell, K.P. Dystrophin-Glycoprotein Complex: Molecular Organization and Critical Roles in Skeletal Muscle. *Curr. Opin. Neurol*. *8*:379-384, 1995.

Duclos, F., Lim, L.E., Sunada, Y., Meyer, J., Campbell, K.P., Broux, O., Bourg, N., Allamand, V., Richard, I., Beckmann, J.S., Moomaw, C., Slaughter, C., Tomé, F.M.S., Fardeau, M. and Jackson, C.E. β-sarcoglycane: Une Protéine Du Complexe Dystrophine-Glycoprotéines Est Responsable D'Une Forme Récessive De Dystrophie Musculaire. Médecine Sciences *11*, 1732-1738, 1995.

Gurnett, C.A. and Campbell, K.P. Transmembrane Auxiliary Subunits of Voltage-dependent Ion Channels. *J. Biol. Chem. 271*, 27975-27978, 1996.

De Waard, M., Gurnett, C.A. and Campbell, K.P. Structural and Functional Diversity of Voltage-Activated Calcium Channels. In: Ion Channels *4*, 41-87, 1996.

Sunada, Y. and Campbell, K.P. Dystroglycan: A Novel Laminin Receptor and Its Involvement in the Pathogenesis of Muscular Dystrophy. In The Laminins. (P. Ekblom, ed.) Harwood Academic Publishers GMBH *13*, 291-316, 1996.

Guo, W., Jorgensen, A.O. and Campbell, K.P. Triadin, A Linker for Calsequestrin and the Ryanodine Receptor. *J Gen Physiol*. Series: Organellar Ion Channels and Transporters *51*, 19-28, 1996.

Campbell, K.P. and Crosbie, R.H. Utrophin to the Rescue. *Nature 384*, 308-309, 1996.

Henry, M.D. and Campbell, K.P. Dystroglycan: An Extracellular Matrix Receptor Linked to the Cytoskeleton. *Curr. Opin. Cell Biol. 8*, 625-631, 1996.

Beckmann, J.S., Richard, I., Broux, O., Fougerousse, F., Allamand, V., Chiannilkulchai, N., Lim, L.E., Duclos, F., Bourg, N., Brenguier, L., Roudaut, C., Sunada, Y., Meyer, J., Tomé, F.M.S., Cohen, D., Jackson, C.E., Campbell, K.P. and Fardeau, M. Identification of Muscle-Specific Calpain and β-Sarcoglycan Genes in Progressive Muscular Dystrophies. *Cell Pharmacol. 3*, 189-194, 1996.

Beckmann, J.S., Richard, I., Broux, O., Fougerousse, F., Allamand, V., Chiannilkulchai, N., Lim, L.E., Duclos, F., Bourg, N., Brenguier, L., Pasturaud, P., Quétier, F., Roudaut, C., Sunada, Y., Meyer, J., Dinçer, P., Lefranc, G., Merlini, L., Topaloglu, H., Tomé, F.M.S., Cohen, D., Jackson, C.E., Campbell, K.P. and Fardeau, M. Identification of Muscle-Specific Calpain and β-Sarcoglycan Genes in Progressive Autosomal Recessive Muscular Dystrophies. *Neuromusc. Disord. 6*, 455-462, 1996.

Jeanpierre, M., Carrié, A., Piccolo, F., Leturcq, F., Azibi, K., De Toma, C., Beldjord, C., Merlini, L., Voit, T., Romero, N., Sunada, Y., Tomé, F.M.S., Fardeau, M., Campbell, K.P. and Kaplan, J.-C. From Adhalinopathies to Alpha-Sarcoglycanopathies: An Overview. *Neuromuscular Disord. 6*, 463-465, 1996.

Straub, V. and Campbell, K.P. Muscular Dystrophies and the Dystrophin-Glycoprotein Complex. *Curr. Opin. Neurol. 10*, 168-175, 1997.

Matsumura, K., Yamada, H., Fujita, S., Fukuta-Ohi, H., Tanaka, T., Campbell, K.P. and Shimizu, T. Peripheral Nerve Dystroglycan: Its Function and Potential Role in the Molecular Pathogenesis of Neuromuscular Diseases. In: Congenital Muscular Dystrophies. (Y. Fukuyama, M. Osawa and K. Saito, eds.). Elsevier Science B.V., Chapter 22, pp. 267-273, 1997.

Scott, V.E.S., Gurnett, C.A. and Campbell, K.P. Overlay and Bead Assay: Determination of Calcium Channel Subunit Interaction Domains. Methods in Molecular Biology Protein Targeting Protocols, Chapter 7, *88*, 71-86, 1998.

Liu, H. and Campbell, K.P. Structural Determinants of Ca^{2+} Channel β Subunit Function. In: Low-Voltage-Activated T-type Calcium Channels, Proceedings from the International Electrophysiology Meeting. (R.W. Tsien, J.-P. Clozel and J. Nargeot, eds.). *Montpellier Proceedings*, Section 3, pp. 229-243, 1998.

Henry, M.D., Williamson, R.A. and Campbell, K.P. Analysis of the Role of Dystroglycan in Early Post-Implantation Mouse Development. *Ann. N.Y. Acad. Sci. 857*, 256-260, 1998.

Durbeej, M., Henry, M.D. and Campbell, K.P. Dystroglycan in Development and Disease. *Curr. Opin. Cell Biol. 10*, 594-601, 1998.

Lim, L.E. and Campbell, K.P. The Sarcoglycan Complex in Limb-Girdle Muscular Dystrophy. *Curr. Opin. Neurol. 11*, 443-452, 1998.

Henry, M.D. and Campbell, K.P. Dag1. In: The Gene Knockout Factsbook, (Mak, Penninger, Roder, Rossant and Saunders, eds.) Academic Press, November 15, 1998.

Cao, W., M.D. Henry, P. Borrow, H. Yamada, J.H. Elder, K.P. Campbell and M.B.A. Oldstone. Isolation of a Cellular Receptor for Lymphocytic Choriomeningitis Virus and Lassa Fever Virus. In: Factors in the Emergence and Control of Rodent-borne Viral Diseases (Hantaviruses and Arenal Diseases), J.F. Saluzzo, B. Dodet, eds., Elsevier Publications, France, pp. 225-231, 1999.

Henry, M.D. and Campbell, K.P. Dystroglycan Inside and Out. *Curr. Opin. Cell Biol*. *11*, 602-607, 1999.

Henry, M.D. and Campbell, K.P. Dystroglycan. In: Guidebook to the Extracellular Matrix, Anchor and Adhesion Proteins, Oxford University Press. July 8, 1999.

Wei, C., Henry, M.D., Borrow, P., Yamada, H., Campbell, K.P., Ravkov, E.V., Nichol, S.T., Compans, R.W. and Oldstone, M.B.A. Isolation of a Cellular Receptor for Lymphocytic Choriomeningitis Virus and Lassa Fever Virus. Emergence and Control of Rodent-Borne Viral Diseases (Hantaviruses and Arenaviruses) Foundation Marcel Merieux, Annecy, France, Elsevier. pp. 225-231, 1999.

Ertel, E.A., Campbell, K.P., Harpold, M.M., Hofmann, F., Mori, Y., Perez-Reyes, E., Schwartz, A., Snutch, T.P., Tanabe, T., Birnbaumer, L., Tsien, R.W. and Catterall, W.A. Nomenclature of Voltage-Gated Calcium Channels. *Neuron 25*, 533-535, 2000.

Cohn, R.D. and Campbell, K.P. The Molecular Pathogenesis of Muscular Dystrophies. *Muscle Nerve 23*, 1456-1471, 2000.
Allamand,V. and Campbell, K.P. Animal Models for Muscular Dystrophy: Valuable Tools for the Development of Therapies. *Hum Mol Gen. 9*, 2459-2467, 2000.

Cohn, R.D. and Campbell, K.P. Pathogenetic Role of the Sarcoglycan-Sarcospan Complex in Cardiomyopathies. *Acta Myologica* 19, 171-180, 2000.

Piccolo, F., Moore, S.A., Mathews, K.D., Campbell, K.P. Limb Girdle Muscular Dystrophies. In Advances in Neurology, *Neuromuscular Disorders*, Vol 88, 2002.

Durbeej, M. and Campbell, K.P. Muscular Dystrophies Involving the Dystrophin-Glycoprotein Complex: An Overview of Current Mouse Models. *Curr. Opin. Genet. 12*:*3*:349-361, 2002.

Saito, F. and Campbell, K.P. Molecular Mechanism Underlying Congenital Muscular Dystrophy Caused by Aberrant Glycosylation of Dystroglycan. *Zikkenigaku 20(18)*: 2648-2650, 2002.

Inamori, K.I. and Campbell, K.P. Like-glycosyltransferase; glycosyltransferase-like 1B (LARGE, GYLTL1B). In: Handbook of Glycosyltransferases and Related Genes, Naoyuki Taniguchi, Koichi Honke, Minoru Fukuda, Hisashi Narimatsu, Yoshiki Yamaguchi and Takashi Angata, ed., Springer, 2002.

Campbell, K.P. and Stull, J.T. Skeletal Muscle Basement Membrane-Sarcolemma-Cytoskeleton. Interaction Minireview Series. *J. Biol. Chem. 278(15)* 12599-12600, 2003.

Michele, D.E. and Campbell, K.P. Dystrophin-Glycoprotein Complex: Post-Translational Processing and Dystroglycan Function. *J. Biol. Chem. 278(18)* 15457-15460, 2003.

Barresi, R and Campbell, K.P. Limb-Girdle Muscular Dystrophies. In: The Molecular and Genetic Basis of Neurologic and Psychiatric Disease, 3rd ed. (R. N. Rosenberg, et. al., Eds.). Butterworth Heinemann, 479-486, 2003.

Arikkath, J. and Campbell, K.P. Auxiliary Subunits: Essential Components of the Voltage-Gated Calcium Channel Complex. *Curr. Opin. Neurobiol.* 13: 298-307, 2003.

Kang, M. and Campbell, K.P. The Gamma Subunit of Voltage-activated Calcium Channels. *J Biol Chem.* 78(24): 21315-21318, 2003.

Muntoni, F., Valero de Bernabe, B., Bittner, R., Blake, D., van Bokhoven, H., Brrockington, M., Brown, S., Bushby, K., Campbell, K.P., Fiszman, M., Grunewald, S., Merlini, L., Quijano-Roy, S., Romero, N., Sabatelli, P., Sewry, C.A., Straub, V., Talim, H., Topaloglu, H., Voit, T., Yurchenco, P.D., Urtizeberea, A., Wewer, U. and Guicheney, P. Report of the 114th ENMC International Workshop on Congenital Muscular Dystrophy. *Neuromusc. Disord.* 13(7-8): 579-588, 2003.

Bansal, D. and Campbell, K.P. Dysferlin and Plasma Membrane Repair in Muscular Dystrophy. *Trends Cell Biol. 14(4):* 206-213, 2004.

Cohn, R.D. and Campbell, K.P. Molecular Pathways for Dilated Cardiomyopathy. In: Molecular Basis of Cardiovascular Disease: A Companion to Braunwald's Heart Disease (2nd ed.) (Kenneth Chien, ed). Saunders, Philadelphia, pp. 306-310, 2004.

Michele, D. and Campbell, K.P. Cardiomyopathy in Muscular Dystrophies. In: Molecular Mechanisms of Cardiac Hypertrophy and Failure (Richard A Walsh, ed). Taylor and Francis, London, pp. 541-567, 2005.

Kanagawa, M., Toda, T. and Campbell, K.P. Glycosylation of Dystroglycan and Congenital Muscular Dystrophies. *The Lung Perspectives 14(3)*: 75-81, 2006.

Barresi, R. and Campbell, K.P. Dystroglycan: From Biosynthesis to Pathogenesis of Human Disease. *J. Cell Sci. 119:*199-207, 2006.

Han, R. and Campbell, K.P. Dysferlin and Muscle Membrane Repair. *Curr Opin Cell Bio. 19:* 409-416, 2007.

Satz, J.S. and Campbell, K.P. Unraveling the Ribbon Synapse. *Nat. Neurosci. 11(8)*:857-59, 2008.

Glass, D.J., Campbell, K.P. and Rudnicki, M.A. Welcome to *Skeletal Muscle*. *Skelet. Muscle 1:*1, 2011.

Oldstone, M.B.A. and Campbell, K.P. Decoding Arenavirus Pathogenesis: Essential Roles for Alpha-Dystroglycan-Virus Interactions and the Immune Response. *Virology 411:* 170-79, 2011.

Glass, D.J., Campbell, K.P. and Rudnicki, M.A. *Skeletal Muscle* – one year on. *Skelet. Muscle 2:*1, 2012.

Kobayashi, Y.M. and Campbell, K.P. Skeletal Muscle Dystrophin-Glycoprotein Complex and Muscular Dystrophy. In: Muscle Fundamental Biology and Mechanisms of Disease, Joseph A. Hill and Eric N. Olson, ed., Academic Press, pp. 935-942, 2012.

Inamori, K., Yoshida-Moriguchi, T., Campbell, K.P. LARGE is a bifunctional glycosyltransferase that confers ligand-binding ability on alpha-dystroglycan. *THE LUNG Perspectives 21*: 188-93, 2013.

Levy, J.R. and Campbell, K.P. Illuminating regeneration: noninvasive imaging of disease progression in muscular dystrophy. *J Clin Invest. 123*: 1931-4, 2013.

Levy, JR, Campbell, KP, Glass, DJ. MG53's New Identity. *Skelet. Muscle 3*: 28, 2013.

Inamori, K. and Campbell, K.P. Like-Glycosyltransferase; Glycosyltransferase-Like 1B (LARGE, GYLTL1B). In: Handbook of Glycosyltransferases and Related Genes, Naoyuki Taniguchi, et al., eds., Springer, pp. 1167-1179, 2014.

Glass, D.J., Campbell, K.P. and Rudnicki, M.A. *Skeletal Muscle's* 3rd Year Anniversary. *Skelet. Muscle 4*:3, 2014.

Hara, Y. and Campbell, K.P. Dystroglycan: an Extracellular Matrix Receptor that Links to the Cytoskeleton. In: Glycoscience: Biology and Medicine, Tamao Endo, et al., eds., Springer, pp. 1-7, 2014.

Yoshida-Moriguchi, T., Campbell, K.P. Matriglycan: a novel polysaccharide that links dystroglycan to the basement membrane. *Glycobiology* 25(7): 702-13, 2015.

Papers Published or in Press

Campbell, K.P. Biochemical and Morphological Characterization of Light and Heavy Sarcoplasmic Reticulum Vesicles. Ph.D. Thesis, 1978.

Shamoo, A.E., Thompson, T.R., Campbell, K.P., Scott, T.L. and Goldstein, D.A. Mechanism of Action of “Ruthenium Red” Compounds on Ca^{2+} Ionophore from Sarcoplasmic Reticulum (Ca^{2+} Mg^{2+})-Adenosine Triphosphatase and Lipid Bilayer. *J. Biol. Chem*. *250*:8289-8291, 1975.

Campbell, K.P. and Shamoo, A.E. Chloride-Induced Release of Actively Loaded Calcium from Light and Heavy Sarcoplasmic Reticulum Vesicles. *J. Memb. Biol*. *54*:73-80, 1980.

Campbell, K.P., Franzini-Armstrong, C. and Shamoo, A.E. Further Characterization of Light and Heavy Sarcoplasmic Reticulum Vesicles. Identification of the "Sarcoplasmic Reticulum Feet" Associated with Heavy Sarcoplasmic Reticulum Vesicles. *Biochem. Biophys. Acta*. *602*:97-116, 1980.

Campbell, K.P. and Shamoo, A.E. Phosphorylation of Heavy Sarcoplasmic Reticulum Vesicles: Identification and Characterization of Three Phosphorylated Proteins. *J. Memb. Biol*. *56*:241-248, 1980.

Campbell, K.P. and MacLennan, D.H. DIDS Inhibition of Sarcoplasmic Reticulum Anion Efflux and Calcium Transport. *Ann. N.Y. Acad. Sci. 358*:328-331, 1980.

Michalak, M., Campbell, K.P. and MacLennan, D.H. Localization of the High Affinity Calcium Binding Protein and an Intrinsic Glycoprotein in Sarcoplasmic Reticulum Membranes. *J. Biol. Chem*. *255*:1317-1326, 1980.

Shoshan, V., Campbell, K.P., MacLennan, D.H., Frodis, W. and Britt, B.A. Quercetin Inhibits Ca^{2+} Uptake But Not Ca^{2+} Release by Sarcoplasmic Reticulum in Skinned Muscle Fibers. *Proc. Natl. Acad. Sci. 77*:4435-4438, 1980.

Campbell, K.P. and MacLennan, D.H. Purification and Characterization of the 53,000-dalton Glycoprotein from the Sarcoplasmic Reticulum. *J. Biol. Chem*. *256*:4626-4632, 1981.

Campbell, K.P. and MacLennan, D.H. A Calmodulin-dependent Protein Kinase System from Skeletal Muscle Sarcoplasmic Reticulum: Phosphorylation of a 60,000-dalton Protein. *J. Biol. Chem. 257*:1238-1246, 1982.

Campbell, K.P., MacLennan, D.H., Jorgensen, A.O. and Mintzer, M.C. Purification and Characterization of Calsequestrin from Canine Cardiac Sarcoplasmic Reticulum and Identification of the 53,000 Dalton Glycoprotein. *J. Biol. Chem. 258*:1197-1204, 1983.

Campbell, K.P. and MacLennan, D.H. Labeling of High Affinity ATP Binding Sites on the 53,000- and 160,000-dalton Glycoproteins of the Sarcoplasmic Reticulum with the Photoaffinity Probe 8-N3-(α-32P)-ATP. *J. Biol. Chem. 258*:1391-1394, 1983.

Zubrzycka-Gaarn, E., Campbell, K.P., Jorgensen, A.O. and MacLennan, D.H. Biosynthesis of Intrinsic Sarcoplasmic Reticulum Proteins during Differentiation of the Myogenic Cell Line, L6. *J. Biol. Chem. 258*:4576-4581, 1983.

Campbell, K.P., MacLennan, D.H. and Jorgensen, A.O. Staining of the Ca^{2+} Binding Proteins, Calsequestrin, Calmodulin, Troponin C and S-100, with the Cationic Carbocyanine Dye "Stains-all". *J. Biol. Chem. 258*:11267-11273, 1983.

Jorgensen, A.O., Shen, A.C.-Y., Campbell, K.P. and MacLennan, D.H. Ultrastructural Localization of Calsequestrin in Rat Skeletal Muscle by Immunoferritin Labeling of Ultrathin Frozen Sections. *J. Cell Biol. 97*:1573-1581, 1983.

Jorgensen, A.O. and Campbell, K.P. Evidence for the Presence of Calsequestrin in Two Structurally Different Regions of Myocardial Sarcoplasmic Reticulum. *J. Cell Biol. 98*:1597-1602, 1984.

Campbell, K.P., Lipshutz, G.M. and Denney, G.H. Direct Photoaffinity Labeling of the High Affinity Nitrendipine-binding Site in Subcellular Membrane Fractions Isolated from Canine Myocardium. *J. Biol. Chem. 259*:5384-5387, 1984.

Jorgensen, A.O., McLeod, A.G., Campbell, K.P. and Denney, G.H. Evidence for the Presence of Calsequestrin in Both Peripheral and Interior Regions of Sheep Purkinje Fibers. *Circ. Res. 55*:267-270, 1984.

Jorgensen, A.O., Shen, A.C.-Y. and Campbell, K.P. Ultrastructural Localization of Calsequestrin in Adult Rat Atrial and Ventricular Muscle Cells. *J. Cell Biol. 101*:257-268, 1985.

Fischer, T.H., Campbell, K.P. and White II, G.C. Evidence That Platelet and Skeletal Sarcoplasmic Reticulum Ca^{2+}-ATPase Are Structurally Distinct. *J. Biol. Chem. 260*:8996-9001, 1985.

Campbell, K.P., Sharp, A., Strom M. and Kahl, S.D. High-affinity Antibodies to the 1,4-Dihydropyridine Ca^{2+}-Channel Blockers. *Proc. Natl. Acad. Sci. 83*:2792-2796, 1986.

Lattanzio, F.A., Schlatterer, R.G., Nicar, M., Campbell, K.P. and Sutko, J.L. The Effects of Ryanodine on Passive Calcium Fluxes Across Sarcoplasmic Reticulum Membranes. *J. Biol. Chem. 262*:2711-2718, 1987.

Campbell, K.P., Knudson, C.M., Imagawa, T., Leung, A.T., Sutko, J.L., Kahl, S.D., Raab, C.R. and Madson, L. Identification and Characterization of the High Affinity [3H]Ryanodine Receptor of the Junctional Sarcoplasmic Reticulum Ca^{2+} Release Channel. *J. Biol. Chem. 262*:6460-6463, 1987.

Leung, A.T., Imagawa, T. and Campbell, K.P. Structural Characterization of the 1,4-Dihydropyridine Receptor of the Voltage-dependent Ca^{2+} Channel from Rabbit Skeletal Muscle: Evidence for Two Distinct High Molecular Weight Subunits. *J. Biol. Chem. 262*:7943-7946, 1987.

Imagawa, T., Leung, A.T. and Campbell, K.P. Phosphorylation of the 1,4-Dihydropyridine Receptor of the Voltage-Dependent Ca^{2+} Channel by an Intrinsic Protein Kinase in Isolated Triads from Rabbit Skeletal Muscle. *J. Biol. Chem. 262*:8333-8339, 1987.

Campbell, K.P., Sharp, A.H,. and Kahl, S.D. Anti-dihydropyridine Antibodies Exhibit [3H]Nitrendipine Binding Properties Similar to the Membrane Receptor for the 1,4-Dihydropyridine Ca^{2+} Channel Antagonists. *J. Card. Pharm. 9(*Suppl. 4):S113-S121, 1987.

Sharp, A.H., Imagawa, T., Leung, A.T. and Campbell, K.P. Identification and Characterization of the Dihydropyridine-binding Subunit of the Skeletal Muscle Dihydropyridine Receptor. *J. Biol. Chem. 262*:12309-12315, 1987.

Sharp, A.H. and Campbell, K.P. Affinity Purification of Antibodies Specific for 1,4-Dihydropyridine Ca^{2+} Channel Blockers. *Circ. Res. 61*(Suppl. I):I-37- I-45, 1987.

Fischer, T.H., Campbell, K.P. and White II., G.C. An Investigation of Functional Similarities between the Sarcoplasmic Reticulum and Platelet Calcium-Dependent Adenosinetriphosphatases with the Inhibitors Quercetin and Calmidazolium. *Biochemistry 26:* 8024-8030, 1987.

Imagawa, T., Smith, J.S., Coronado, R. and Campbell, K.P. Purified Ryanodine Receptor from Skeletal Muscle Sarcoplasmic Reticulum is the Ca^{2+}-permeable Pore of the Calcium Release Channel. *J. Biol. Chem. 262*:16636-16643, 1987.

Hoffman, E.P., Knudson, C.M., Campbell, K.P. and Kunkel, L.M. Subcellular Fractionation of Dystrophin to the Triads of Skeletal Muscle. *Nature 330*:754-758, 1987.

Leung, A.T., Imagawa, T., Block, B., Franzini-Armstrong, C. and Campbell, K.P. Biochemical and Ultrastructural Characterization of the 1,4-Dihydropyridine Receptor from Rabbit Skeletal Muscle: Evidence for a 52,000-Da Subunit. *J. Biol. Chem. 263*:994-1001, 1988.

Jorgensen, A.O., Arnold, W., Pepper, D.R., Kahl, S.D., Mandel, F. and Campbell, K.P. A Monoclonal Antibody to the Ca^{2+}-ATPase of Cardiac Sarcoplasmic Reticulum Cross-Reacts with Slow Type I but Not with Fast Type II Canine Skeletal Muscle Fibers: An Immunocytochemical and Immunochemical Study. *Cell Motil. Cytoskeleton 9*:164-174, 1988.

Leung, A.T., Imagawa, T. and Campbell, K.P. Monoclonal Antibody Characterization of the 1,4-Dihydropyridine Receptor of Rabbit Skeletal Muscle. *Ann. N.Y. Acad. Sci. 552*:43-46, 1988.

Knudson, C.M., Hoffman, E.P., Kahl, S.D., Kunkel, L.M. and Campbell, K.P. Evidence for the Association of Dystrophin with the Transverse Tubular System in Skeletal Muscle. *J. Biol. Chem. 263*:8480-8484, 1988.

Grover, A.K., Boonstra, I., Garfield, R.E. and Campbell, K.P. Ca Pumps in Rabbit Stomach Smooth Muscle Plasma Membrane and Endoplasmic Reticulum. *Biochemical Archives 4*:169-179, 1988.

Smith, J.S., Imagawa, T., Ma, J., Fill, M., Campbell, K.P. and Coronado, R. Purified Ryanodine Receptor from Rabbit Skeletal Muscle Is the Calcium-Release Channel of Sarcoplasmic Reticulum. *J. Gen. Physiol. 92*:1-26, 1988.

Ellis, S.B., Williams, M.E., Ways, N.R., Brenner, R., Sharp, A.H., Leung, A.T., Campbell, K.P., McKenna, E., Koch, W.J., Hui, A., Schwartz, A. and Harpold, M.M. Sequence and Expression of mRNAs Encoding the α_1 and α_2 Subunits of a DHP-Sensitive Calcium Channel. *Science 241*:1661-1664, 1988.

Ma, J., Fill, M., Knudson, C.M., Campbell, K.P. and Coronado, R. Ryanodine Receptor of Skeletal Muscle Is a Gap Junction-Type Channel. *Science 242*:99-102, 1988.

Block, B.A., Imagawa, T., Campbell, K.P. and Franzini-Armstrong, C. Structural Evidence for Direct Interaction between the Molecular Components of the Transverse Tubule/Sarcoplasmic Reticulum Junction in Skeletal Muscle. *J. Cell Biol.* 107:2587-2600, 1988.

Knudson, C.M., Chaudhari, N., Sharp, A.H., Powell, J.A., Beam, K.G. and Campbell, K.P. Specific Absence of the α_1 Subunit of the Dihydropyridine Receptor in Mice with Muscular Dysgenesis. *J. Biol. Chem. 264*:1345-1348, 1989.

Sharp, A.H. and Campbell, K.P. Characterization of the 1,4-Dihydropyridine Receptor Using Subunit-specific Polyclonal Antibodies: Evidence for a 32,000-Da Subunit. *J. Biol. Chem. 264*:2816-2825, 1989.

Thomas, K., Navarro, J., Benson, R.J.J., Campbell, K.P., Rotundo, R.L. and Fine, R.E. Newly Synthesized Calsequestrin, Destined for the Sarcoplasmic Reticulum, Is Contained in Early/Intermediate Golgi-derived Clathrin-coated Vesicles. *J. Biol. Chem. 264*:3140-3145, 1989.

Krause, K.H., Chou, M., Thomas, M.A., Sjolund, R.D. and Campbell, K.P. Plant Cells Contain Calsequestrin. *J. Biol. Chem. 264*:4269-4272, 1989.

Campbell, K.P. and Kahl, S.D. Association of Dystrophin and an Integral Membrane Glycoprotein. *Nature 338*:259-262, 1989.

Knudson, C.M. and Campbell, K.P. Albumin Is a Major Protein Component of Transverse Tubule Vesicles Isolated from Skeletal Muscle. *J. Biol. Chem. 264*:10795-10798, 1989.

Kutchai, H. and Campbell, K.P. Calcium Transport by Sarcoplasmic Reticulum of Skeletal Muscle Is Inhibited by Antibodies against the 53-Kilodalton Glycoprotein of the Sarcoplasmic Reticulum Membrane. *Biochemistry 28*:4830-4839, 1989.

Jorgensen, A.O., Shen, A.C.Y., Arnold, W., Leung, A.T. and Campbell, K.P. Subcellular Distribution of the 1,4-Dihydropyridine Receptor in Rabbit Skeletal Muscle In Situ: An Immunofluorescence and Immunocolloidal Gold-labeling Study. *J. Cell Biol. 109*:135-147, 1989.

Perez-Reyes, E., Kim, H.S., Lacerda, A.E., Horne, W., Wei, X., Rampe, D., Campbell, K.P., Brown, A.M. and Birnbaumer, L. Induction of Calcium Currents by the Expression of the α1-subunit of the Dihydropyridine Receptor from Skeletal Muscle. *Nature 340*:233-236, 1989.

Fischer, T.H., Barton, D.W., Krause, K.H., White, T.E., Campbell, K.P. and White II, G.C. The Identification of Sarcoplasmic Reticulum Terminal Cisternae Proteins in Platelets. *Biochem. J. 263*:605-608, 1989.

Chou, M., Krause, K.-H., Campbell, K.P., Jensen, K.G. and Sjolund, R.D. Antibodies Against the Calcium-binding Protein, Calsequestrin from *Streptanthus tortuosus* (Brassicaceae). *Plant Physiol. 91*:1259-1261, 1989.

Briggs, F.N., Lee, K.F., Feher, J.J., Wechsler, A.S., Ohlendieck, K. and Campbell, K.P. Ca-ATPase Isozyme Expression in Sarcoplasmic Reticulum is Altered by Chronic Stimulation of Skeletal Muscle. *FEBS Lett. 259*:269-272, 1990.

Knudson, C.M., Mickelson, J.R., Louis, C.F. and Campbell, K.P. Distinct Immunopeptide Maps of the Sarcoplasmic Reticulum Ca^{2+} Release Channel in Malignant Hyperthermia. *J. Biol. Chem. 265*:2421-2424, 1990.

Jorgensen, A.O., Arnold, W., Shen, A.C.-Y., Yuan, S., Gaver, M. and Campbell, K.P. Identification of Novel Proteins Unique to Either Transverse Tubules (TS28) or the Sarcolemma (SL50) in Rabbit Skeletal Muscle. *J. Cell Biol. 110*:1173-1185, 1990.

Ervasti, J.M., Ohlendieck, K., Kahl, S.D., Gaver, M. and Campbell, K.P. Deficiency of a Glycoprotein Component of the Dystrophin Complex in Dystrophic Muscle. *Nature 345*:315-319, 1990.

Jay, S.D., Ellis, S.B., McCue, A.F., Williams, M.E., Vedvick, T.S., Harpold, M.M. and Campbell, K.P. Primary Structure of the γ Subunit of the DHP-Sensitive Calcium Channel from Skeletal Muscle. *Science 248*:490-492, 1990.

Leberer, E., Timms, B.G., Campbell, K.P. and MacLennan, D.H. Purification, Calcium Binding Properties and Ultrastructural Localization of the 53,000- and 160,000 (Sarcalumenin)-Dalton Glycoproteins of Sarcoplasmic Reticulum. *J. Biol. Chem. 265*:10118-10124, 1990.

Krause, K.-H., Simmerman, H.K.B., Jones, L.R. and Campbell, K.P. Sequence Similarity of Calreticulin with a Ca^{2+}-Binding Protein that Co-purifies with an Ins(1,4,5)P3-Sensitive Ca^{2+} Store in HL-60 Cells. *Biochem. J. 270*:545-548 1990.

Chu, A., Sumbilla, C. Inesi, G., Jay, S.D. and Campbell, K.P. Specific Association of Calmodulin-Dependent Protein Kinase and Related Substrates with the Junctional Sarcoplasmic Reticulum of Skeletal Muscle. *Biochemistry 29*:5899-5905, 1990.

McPherson, P.S. and Campbell, K.P. Solubilization and Biochemical Characterization of the High Affinity [^{3}H]Ryanodine Receptor from Rabbit Brain Membranes. *J. Biol. Chem. 265*:18454-18460, 1990.

Movsesian, M.A., Leveille, C., Krall, J., Colyer, J., Wang, J.H,. and Campbell, K.P. Identification and Characterization of Proteins in Sarcoplasmic Reticulum from Normal and Failing Human Left Ventricles. *J. Molec. Cell. Cardiol. 22*:1477-1485, 1990.

Jay, S.D., Sharp, A.H., Kahl, S.D., Vedvick, T.S., Harpold, M.M. and Campbell, K.P. Structural Characterization of the Dihydropyridine-sensitive Calcium Channel α2-Subunit and the Associated δ Peptides. *J. Biol. Chem. 266*:3287-3293, 1991.

Ohlendieck, K., Ervasti, J.M., Snook, J.B. and Campbell, K.P. Dystrophin-Glycoprotein Complex Is Highly Enriched in Isolated Skeletal Muscle Sarcolemma. *J. Cell Biol. 112*:135-148, 1991.

Ervasti, J.M., Kahl, S.D. and Campbell, K.P. Purification of Dystrophin from Skeletal Muscle. *J. Biol. Chem. 266*:9161-9165, 1991.

McPherson, P.S., Kim, Y-K, Valdivia, H., Knudson, C.M., Takekura, H., Franzini-Armstrong, C., Coronado, R. and Campbell, K.P. The Brain Ryanodine Receptor: A Caffeine-Sensitive Calcium Release Channel. *Neuron 7*:17-25, 1991.

McLeod, A.G., Shen, A.C.-Y., Campbell, K.P., Michalak, M. and Jorgensen, A.O. Frog Cardiac Calsequestrin. Identification, Characterization and Subcellular Distribution in Two Structurally Distinct Regions of Peripheral Sarcoplasmic Reticulum in Frog Ventricular Myocardium. *Circ. Res. 69*:344-359, 1991.

Ohlendieck, K. and Campbell, K.P. Dystrophin Constitutes 5% of Membrane Cytoskeleton in Skeletal Muscle. *FEBS Lett. 283*:230-234, 1991.

Ohlendieck, K., Ervasti, J.M., Matsumura, K., Kahl, S.D., Leveille, C.J. and Campbell, K.P. Dystrophin-Related Protein is Localized to Neuromuscular Junctions of Adult Skeletal Muscle. *Neuron 7*:499-508, 1991.

Sakamoto, J. and Campbell, K.P. A Monoclonal Antibody to the β Subunit of the Skeletal Muscle Dihydropyridine Receptor Immunoprecipitates the Brain ω-Conotoxin GVIA Receptor. *J. Biol. Chem. 266*:18914-18919, 1991.

Ervasti, J.M. and Campbell, K.P. Membrane Organization of the Dystrophin-Glycoprotein Complex. *Cell 66*:1121-1131, 1991.

Pragnell, M., Sakamoto, J., Jay, S.D. and Campbell, K.P. Cloning and Tissue-Specific Expression of the Brain Calcium Channel β-Subunit. *FEBS Lett. 291*:253-258, 1991.

Ohlendieck, K., Briggs, F. N., Lee, K.F., Wechsler, A.W. and Campbell, K.P. Analysis of Excitation-Contraction-Coupling Components in Chronically Stimulated Canine Skeletal Muscle. *Eur. J. Biochem. 202*: 739-747, 1991.

Ohlendieck, K. and Campbell, K.P. Dystrophin-Associated Proteins are Greatly Reduced in Skeletal Muscle from *mdx* Mice. *J. Cell Biol. 115*:1685-1694, 1991.

McPherson, S.M., McPherson, P.S., Mathews, L., Campbell, K.P. and Longo, F.J. Cortical Localization of a Calcium Release Channel in Sea Urchin Eggs. *J. Cell Biol. 116*:1111-1121, 1992.

Ibraghimov-Beskrovnaya, O., Ervasti, J.M., Leveille, C.J., Slaughter, C.A., Sernett S.W. and Campbell, K.P. Primary Structure of Dystrophin-Associated Glycoproteins Linking Dystrophin to the Extracellular Matrix. *Nature 355*:696-702, 1992.

Mickelson, J.R., Knudson, C.M., Kennedy, C.F.H., Yang, D.-I., Litterer, L.A., Rempel, W.E., Campbell, K.P. and Louis, C.F. Structural and Functional Correlates of a Mutation in the Malignant Hyperthermia Susceptible Pig Ryanodine Receptor. *FEBS Lett. 301*:49-52, 1992.

Matsumura, K., Tomé, F.M.S., Collin, H., Azibi, K., Chaouch, M., Kaplan, J.-C., Fardeau, M. and Campbell, K.P. Deficiency of the 50K Dystrophin-Associated Glycoprotein in Severe Childhood Autosomal Recessive Muscular Dystrophy. *Nature 359*:320-322, 1992.

Parys, J.B., Sernett, S.W., DeLisle, S., Snyder, P.M., Welsh, M.J. and Campbell, K.P. Isolation, Characterization and Localization of the Inositol 1,4,5-Trisphosphate Receptor Protein in *Xenopus laevis* Oocytes. *J. Biol. Chem. 267*:18776-18782, 1992.

Matsumura, K., Ervasti, J.M., Ohlendieck, K., Kahl, S.D. and Campbell, K.P. Association of Dystrophin-Related Protein With Dystrophin-Associated Proteins in *mdx* Mouse Muscle. *Nature 360*:588-591, 1992.

Klietsch, R., Ervasti, J.M., Arnold, W., Campbell, K.P. and Jorgensen, A.O. Dystrophin-Glycoprotein Complex and Laminin Colocalize to the Sarcolemma and Transverse Tubules of Cardiac Muscle. *Circ. Res. 72:*349-360, 1993.

Matsumura, K., Nonaka, I. and Campbell, K.P. Abnormal Expression of Dystrophin-Associated Proteins in Fukuyama-type Congenital Muscular Dystrophy. *Lancet 341*:521-522, 1993.

Jorgensen, A.O., Shen, A.C.Y., Arnold, W., McPherson, P.S. and Campbell, K.P. The Ca^{2+} Release Channel/Ryanodine Receptor is Localized in Junctional and Corbular Sarcoplasmic Reticulum in Cardiac Muscle. *J. Cell Biol. 120*:969-980, 1993.

Ohlendieck, K., Matsumura, K., Ionasescu, V.V., Towbin, J.A., Bosch, E.P., Weinstein, S.L., Northrup, S.W. and Campbell, K.P. Duchenne Muscular Dystrophy: Deficiency of Dystrophin-Associated Proteins in the Sarcolemma. *Neurol. 43*:795-800, 1993.

Matsumura, K., Lee, C.C., Caskey, C.T. and Campbell, K.P. Restoration of Dystrophin-Associated Proteins in Skeletal Muscle of *mdx* Mice Transgenic for Dystrophin Gene. *FEBS Lett*. *320*:276-280, 1993.

Roberds, S.L., Ervasti, J.M., Anderson, R.D., Ohlendieck, K., Kahl, S.D., Zoloto, D. and Campbell, K.P. Disruption of the Dystrophin-Glycoprotein Complex in the Cardiomyopathic Hamster. *J. Biol. Chem*. *268*:11496-11499, 1993.

Matsumura, K., Nonaka, I., Arahata, K. and Campbell, K.P. Partial Deficiency of Dystrophin-Associated Proteins in a Young Girl with Sporadic Myopathy and Normal Karyotype. *Neurol. 43*:1267-1268, 1993.

Sharp, A.H., McPherson, P.S., Dawson, T.M., Aoki, C. Campbell, K.P. and Snyder, S.H. Differential Immunohistochemical Localization of Inositol 1,4,5-Trisphosphate- and Ryanodine-Sensitive Ca^{2+} Release Channels in Rat Brain. *J. Neurosci. 13*:3051-3063, 1993.

Knudson, C.M., Stang, K.K., Moomaw, C.R., Slaughter, C.A. and Campbell, K.P. Primary Structure and Topological Analysis of a Skeletal Muscle Specific Junctional Sarcoplasmic Reticulum Glycoprotein (Triadin). *J. Biol. Chem*. *268*:12646-12654, 1993.

Witcher, D.R., De Waard, M., Sakamoto, J., Franzini-Armstrong, C., Pragnell, M., Kahl, S.D. and Campbell, K.P. Subunit Identification and Reconstitution of the N-Type Ca^{2+} Channel Complex Purified from Brain. *Science 261*:486-489, 1993.

Matsumura, K., Nonaka, I., Tomé, F.M.S., Arahata, K., Collin, H., Leturcq, F., Recan, D., Kaplan, J.-C., Fardeau, M. and Campbell, K.P. Mild Deficiency of Dystrophin-Associated Proteins in Becker Muscular Dystrophy Patients Having In-Frame Deletions in the Rod Domain of Dystrophin. *Am. J. Hum. Genet*. *53*:409-416, 1993.

Ervasti, J. M. and Campbell, K.P. A Role for the Dystrophin-Glycoprotein Complex as a Transmembrane Linker Between Laminin and Actin. *J. Cell Biol*. *122*:809-823, 1993.

Matsumura, K., Shasby, M. and Campbell, K.P. Purification of Dystrophin-Related Protein (Utrophin) From Lung and Its Identification in Pulmonary Artery Endothelial Cells. *FEBS Lett*. *326*:289-293, 1993.

Cox, G.A., Cole, N.M. Matsumura, K., Phelps, S.F., Hauschka, S.D., Campbell, K.P., Faulkner, J.A. and Chamberlain, J.S. Overexpression of Dystrophin in Transgenic *mdx* Mice Eliminates Dystrophic Symptoms Without Toxicity. *Nature 364*:725-729, 1993.

Matsumura, K., Tomé, F.M.S., Ionasescu, V., Ervasti, J.M., Anderson, R.D., Romero, N.B., Simon, D., Récan, D., Kaplan, J-C., Fardeau, M. and Campbell, K.P. Deficiency of Dystrophin-Associated Proteins in Duchenne Muscular Dystrophy Patients Lacking COOH-Terminal Domains of Dystrophin. *J. Clin. Invest. 92*:866-871, 1993.

McPherson, P.S. and Campbell, K.P. Characterization of the Major Brain Form of the Ryanodine Receptor/ Ca^{2+} Release Channel. *J. Biol. Chem*. *268*:19785-19790, 1993.

Azibi, K., Bachner, L., Beckmann, J.S., Matsumura, K., Hamouda, E., Chaouch, M., Chaouch, A., Ait-Ouarab, R., Vignal, A., Weissenbach, J., Vinet, M.-C., Leturcq, F., Collin, H., Tomé, F.M.S., Reghis, A., Fardeau, M., Campbell, K.P. and Kaplan, J.-C. Severe Childhood Autosomal Recessive Muscular Dystrophy with the Deficiency of the 50 kDa Dystrophin-Associated Glycoprotein Maps to Chromosome 13q12. *Hum. Mol. Gen*. *2*:1423-1428, 1993.

Fardeau, M., Matsumura, K., Tomé, F.M.S., Collin, H., Leturcq, F., Kaplan, J.-C. and Campbell K.P. Deficiency of the 50 kDa Dystrophin Associated Glycoprotein (Adhalin) in Severe Autosomal Recessive Muscular Dystrophies in Children Native from European Countries. *C.R. Acad. Sci. Paris 316*:799-804, 1993.

Ibraghimov-Beskrovnaya, O., Milatovich, A., Ozcelik, T., Yang, B., Koepnick, K., Francke, U. and Campbell, K.P. Human Dystroglycan: Skeletal Muscle cDNA, Genomic Structure, Origin of Tissue Specific Isoforms and Chromosomal Localization. *Hum. Mol. Gen*. *2*:1651-1657, 1993.

Roberds, S.L., Anderson, R.D., Ibraghimov-Beskrovnaya, O. and Campbell, K.P. Primary Structure and Muscle-Specific Expression of the 50-kDa Dystrophin-Associated Glycoprotein (α-sarcoglycan). *J. Biol. Chem*. *268*:23739-23742, 1993.

Stea, A., Dubel, S.J., Pragnell, M., John P. Leonard, J.P., Campbell, K.P. and Snutch, T.P. A β-Subunit Normalizes the Electrophysiological Properties of a Cloned N-Type Ca^{2+} Channel α1-Subunit. *Neuropharm. 32*:1103-1116,1993.

Witcher, D.R., De Waard, M. and Campbell, K.P. Characterization of the Purified N-Type Ca^{2+} Channel and the Cation Sensitivity of ω-Conotoxin GVIA Binding. *Neuropharm*. *32*:1127-1139, 1993.

Passos-Bueno, M.R., Oliveira, J.R., Bakker, E., Anderson, R.D., Marie, S.K., Vainzof, M., Roberds, S., Campbell, K.P. and Zatz, M. Genetic Heterogeneity for Duchenne-like Muscular Dystrophy (DLMD) Based on Linkage and 50 DAG Analysis. *Hum. Mol. Gen*. *2*:1945-1947, 1993.

Ibraghimov-Beskrovnaya, O., Sheffield, V.C. and Campbell, K.P. Single Base Polymorphism in the DAG1 Gene Detected by DGGE and Mismatch PCR. *Hum. Mol. Gen*. *2*, 1983, 1993.

Phillips, W.D., Noakes, P.G., Roberds, S.L., Campbell, K.P. and Merlie, J.P. Clustering and Immobilization of Acetylcholine Receptors by the 43-kD Protein: A Role for Dystrophin-Related Protein (DRP). *J. Cell Biol*. *123*:729-740, 1993.

Matsumura, K., Yamada, H., Shimizu, T. and Campbell, K.P. Differential Expression of Dystrophin, Utrophin and Dystrophin-Associated Proteins in Peripheral Nerve. *FEBS Lett. 334*:281-285, 1993.

Matsumura, K., Burghes, A.H.M., Mora, M., Tomé, F.M.S., Morandi, L., Cornello, F., Leturcq, F., Jeanpierre, M., Kaplan, J.-C., Reinert, P., Fardeau, M., Mendell, J.R. and Campbell, K.P. Immunohistochemical Analysis of Dystrophin-Associated Proteins in Becker/Duchenne Muscular Dystrophy with Huge In-Frame Deletions in the NH2-Terminal and Rod Domains of Dystrophin. *J. Clin. Invest. 93*:99-105, 1994.

De Waard, M., Witcher, D.R. and Campbell, K.P. Functional Properties of the Purified N-type Ca^{2+} Channel from Rabbit Brain. J. *Biol. Chem*. *269*:6716-6724, 1994.

Romero, N.B., Tomé, F.M.S., Leturcq, F., El Kerch, F., Kemal, A., Bachner, L., Anderson, R.D., Roberds, S.L., Campbell, K.P., Fardeau, M.M. and Kaplan, J.-C. Genetic Heterogeneity of Severe Autosomal Recessive Muscular Dystrophy with Adhalin (50 kDa Dystrophin-Associated Glycoprotein) Deficiency. *C.R. Acad. Sci. Paris, Sciences de la vie/Life Sciences 317* :70-76, 1994.

Matsumura, K., Tomé, F.M.S., Collin, H., Leturcq, F., Jeanpierre, M., Kaplan, J.-C., Fardeau, M. and Campbell, K.P. Expression of Dystrophin-associated Proteins in Dystrophin-Positive Muscle Fibers (Revertants) in Duchenne Muscular Dystrophy. *Neuromusc. Disord*. *4*:115-120, 1994.

Pragnell, M., De Waard, M., Mori, Y., Tanabe, T., Snutch, T.P. and Campbell, K.P. Calcium Channel β Subunit Binds to a Conserved Motif in the I-II Cytoplasmic Linker of the α1-Subunit. *Nature 368*:67-70, 1994.

Yang, B., Ibraghimov-Beskrovnaya, O., Moomaw, C.R., Slaughter, C.A. and Campbell, K.P. Heterogeneity of the 59-kDa Dystrophin-Associated Protein Revealed by cDNA Cloning and Expression. *J. Biol. Chem*. *269*:6040-6044, 1994.

Parys, J.B., McPherson, S.M., Mathews, L., Campbell, K.P. and Longo, F.J. Presence of Inositol 1,4,5-Trisphosphate Receptor, Calreticulin and Calsequestrin in Eggs of Sea Urchins and *Xenopus Laevis*. *Develop. Biol*. *161*:466-476, 1994.

Kahl, S.D., McPherson, P.S., Lewis, T., Bentley, P., Mullinnix, M.J., Windass, J.D. and Campbell, K.P. Radioimmunoassay for the Calcium Release Channel Agonist Ryanodine. *Analytical Biochem*. *218*:55-62, 1994.

Witcher, D.R., McPherson, P.S., Kahl, S.D., Lewis, T., Bentley, P., Mullinnix, M.J., Windass, J.D. and Campbell, K.P. Photoaffinity Labeling of the Ryanodine Receptor Ca^{2+}/Release Channel with an Azido Derivative of Ryanodine. *J. Biol. Chem*. *269*:13076-13079, 1994.

Sunada, Y., Bernier, S.M., Kozak, C.A., Yamada, Y. and Campbell, K.P. Deficiency of Merosin in Dystrophic *dy* Mice and Genetic Linkage of the Laminin M Chain Gene to the *dy* Locus. J. *Biol. Chem*. *269*:13729-13732, 1994.

Tomé, F.M.S., Evangelista, T., Leclerc, A., Sunada, Y., Manole, E., Estournet, B., Barois, A., Campbell, K.P. and Fardeau, M. Congenital Muscular Dystrophy with Merosin Deficiency. *C.R. Acad. Sci., Sciences de la Vie/Life Sciences 317*:351-357, 1994.

Sewry, C.A., Sansome, A., Matsumura, K., Campbell, K.P. and Dubowitz, V. Deficiency of the 50 kDa Dystrophin-Associated Glycoprotein and Abnormal Expression of Utrophin in Two South Asian Cousins with Variable Expression of Severe Childhood Autosomal Recessive Muscular Dystrophy. *Neuromusc. Disord*. *4*:121-129, 1994.

El Kerch, F., Sefiani, A., Azibi, K., Boutaleb, N., Yahyaoui, M., Bentahila, A., Vinet, M.-C., Leturcq, F., Bachner, L., Beckmann, J., Campbell, K.P., Tomé, F.M.S., Fardeau, M. and Kaplan, J.-C. Linkage Analysis of Families with Severe Childhood Autosomal Recessive Muscular Dystrophy in Morocco Indicates Genetic Homogeneity of the Disease in North-Africa. *J. Med. Genet*. *31*:342-343, 1994.

Zatz, M., Matsumura, K., Vainzof, M., Passos-Bueno, M.R., Pavanello, R.C.M., Marie, S.K. and Campbell, K.P. Assessment of the 50-kDa Dystrophin-Associated Glycoprotein in Brazilian Patients with Severe Childhood Autosomal Recessive Muscular Dystrophy. *J. Neurol. Sci. 123*:122-128, 1994.

Campanelli, J.T., Roberds, S.L., Campbell, K.P. and Scheller, R.H. A Role for Dystrophin-Associated Glycoproteins and Utrophin in Agrin-Induced AChR Clustering. *Cell 77*:663-674, 1994.

Mickelson, J.R., Ervasti, J.M., Litterer, L.A., Campbell, K.P. and Louis, C.F. Skeletal Muscle Junctional Membrane Protein Content in Pigs with Different Ryanodine Receptor Genotypes. *Am. J. Physiol. Cell Physiol. 267*:C282-C292, 1994.

Roberds, S.L., Leturcq, F., Allamand, V., Piccolo, F., Jeanpierre, M., Anderson, R.D., Lim, L.E., Lee, J.C., Tomé, F.M.S., Romero, N.B., Fardeau, M., Beckmann, J.S., Kaplan, J.-C. and Campbell K.P. Missense Mutations in the Adhalin (α-sarcoglycan) Gene Linked to Autosomal Recessive Muscular Dystrophy. *Cell 78*:625-633, 1994.

De Waard, M., Pragnell, M. and Campbell, K.P. Ca^{2+} Channel Regulation by a Conserved β Subunit Domain. *Neuron 13*:495-503, 1994.

Higuchi, I., Yamada, H., Fukunaga, H., Iwaki, H., Okubo, R., Nakagawa, M., Osame, M., Roberds, S.L., Shimizu, T., Campbell, K.P. and Matusumura, K. Abnormal Expression of Laminin Suggests Disturbance of Sarcolemma-Extracellular Matrix Interaction in Japanese Patients with Autosomal Recessive Muscular Dystrophy Deficient in Adhalin. *J. Clin. Invest*. *94*:601-606, 1994.

Tomé, F.M.S., Matsumura, K., Chevallay, M., Campbell, K.P. and Fardeau, M. Expression of Dystrophin-Associated Glycoproteins During Human Fetal Muscle Development: A Preliminary Immunocytochemical Study. *Neuromusc. Disord*. *4*:343-348, 1994.

Ervasti, J.M., Roberds, S.L., Anderson, R.D., Sharp, N.J.H., R.K., Kornegay, J.N. and Campbell, K.P. α-Dystroglycan Deficiency Correlates with Elevated Serum Creatine Kinase and Decreased Muscle Contraction Tension in Golden Retriever Muscular Dystrophy. *FEBS Lett*. *350*:173-176. 1994.

Rafeal, J.A., Sunada, Y., Cole, N.M., Campbell, K.P., Faulkner, J.A. and Chamberlain, J.S. Prevention of Dystrophic Pathology in *mdx* Mice by a Truncated Dystrophin Isoform. *Hum. Mol. Gen*. *3*:1725-1733, 1994.

Sewry, C.A., Matsumura, K., Campbell, K.P. and Dubowitz, V. Expression of Dystrophin-Associated Glycoproteins and Utrophin in Carriers of Duchenne Muscular Dystrophy. *Neuromusc. Disord*. *4*:401-409, 1994.

Guo, W., Jorgensen, A.O. and Campbell, K.P. Characterization and Ultrastructural Localization of a Novel 90 kDa Protein Unique to Skeletal Muscle Junctional Sarcoplasmic Reticulum. *J. Biol. Chem. 269*:28359-28365, 1994.

Yamada, H., Shimizu, T., Tanaka, T., Campbell, K.P. and Matsumura, K. Dystroglycan is a Binding Protein of Laminin and Merosin in Peripheral Nerve. *FEBS Lett. 352*:49-53, 1994.

Cox, G.A., Sunada, Y., Campbell, K.P. and Chamberlain, J.S. Dp71 Can Restore the Dystrophin-Associated Glycoprotein Complex in Muscle but Fails to Prevent Dystrophy. *Nature Genet. 8*:333-339, 1994.

Greenberg, D.S., Sunada, Y., Campbell, K.P., Yaffe, D. and Nudel, U. Exogenous Dp71 Restores the Levels of Dystrophin Associated Proteins but Does Not Alleviate Muscle Damage in *mdx* Mice. *Nature Genet. 8*:340-344, 1994.

Allamand, V., Leturcq, F., Piccolo, F., Jeanpierre, M., Azibi, K., Roberds, S.L., Lim, L.E., Campbell, K.P., Beckmann, J.S. and Kaplan, J.-C. Adhalin Gene Polymorphism. *Hum. Mol. Genet. 3*:2269, 1994.

Yang, B., Jung, D., Rafael, J.A., Chamberlain, J.S. and Campbell, K.P. Identification of α-Syntrophin Binding to Syntrophin Triplet, Dystrophin and Utrophin. *J. Biol. Chem. 270*:4975-4978, 1995.

Guo, W. and Campbell, K.P. Association of Triadin with the Ryanodine Receptor and Calsequestrin in the Lumen of Sarcoplasmic Reticulum. *J. Biol. Chem. 270*:9027-9030, 1995.

Gurnett, C.A., Kahl, S.D., Anderson, R.D. and Campbell, K.P. Absence of the Skeletal Muscle Sarcolemma Chloride Channel ClC-1 in Myotonic Mice. J. *Biol. Chem. 270*:9035-9038, 1995.

Yang, B., Jung, D., Motto, D., Meyer, J., Koretzky, G. and Campbell, K.P. SH3 Domain-mediated Interaction of Dystroglycan and Grb2. *J. Biol. Chem. 270*:11711-11714, 1995.

De Waard, M., Witcher, D.R., Pragnell, M., Liu, H. and Campbell, K.P. Properties of the α1-β Anchoring Site in Voltage-dependent Ca^{2+} Channels. *J. Biol. Chem. 270*:12056-12064, 1995.

De Waard, M. and Campbell, K.P. Subunit Regulation of the Neuronal α1A Ca^{2+} Channel Expressed in *Xenopus* Oocytes. *J. Physiol. 485.3*:619-634, 1995.

Piccolo, F., Roberds, S.L., Jeanpierre, M., Leturcq, F., Azibi, K., Beldjord, C., Carrié, A., Récan, D., Chaouch, M., Reghis, A., El Kerch, F., Sefiani, A., Voit, T., Merlini, L., Collin, H., Eymard, B., Beckmann, J.S., Romero, N., Tomé, F.M.S., Fardeau, M., Campbell, K.P. and Kaplan, J.-C. Primary Adhalinopathy: A Common Cause of Autosomal Recessive Muscular Dystrophy of Variable Severity. *Nature Genet. 10*:243-345, 1995.

Sunada, Y., Bernier, S.M., Utani, A., Yamada, Y. and Campbell, K.P. Identification of a Novel Mutant Transcript of Laminin α2 Chain Gene Responsible for Muscular Dystrophy and Dysmyelination in *dy2J* mice. *Hum. Mol. Genet. 4*:1055-1061, 1995.

Roberds, S.L. and Campbell, K.P. Adhalin mRNA and cDNA Sequence Are Normal in the Cardiomyopathic Hamster. *FEBS Lett. 364*:245-249, 1995.

Kawai, H., Inui, T., Mitsui, T., Campbell, K.P., Shimizu, M. and Matsumura, K. Complete Deficiency of Adhalin (50kDa DAG) in Skeletal Muscle of Malignant Limb-girdle Muscular Dystrophy. *Clin. Neurol. 35*:184-189, 1995.

Cohen, M. W., Jacobson, C., Godfrey, E.W., Campbell, K.P. and Carbonetto, S. Distribution of α-Dystroglycan During Embryonic Nerve-Muscle Synaptogenesis. *J. Cell Biol. 129*:1093-1101, 1995.

Fritz, J.D., Danko, I., Roberds, S.L., Campbell, K.P., Latendresse, J.S. and Wolff, J.A. Expression of Deletion-Containing Dystrophins in *mdx* Muscle: Implications for Gene Therapy and Dystrophin Function. *Pediatr. Res. 37*:693-700, 1995.

Yamada, H., Tomé, F.M.S., Higuchi, I., Kawai, H., Azibi, K., Chaouch, M., Roberds, S.L., Tanaka, T., Fugita, S., Mitsui, T., Fukunaga, H., Miyoshi, K., Osame, M., Fardeau, M., Kaplan, J.-C., Shimizu, T., Campbell, K.P. and Matsumura, K. Laminin Abnormality in Severe Childhood Autosomal Recessive Muscular Dystrophy. *Lab. Invest. 72*:715-722, 1995.

Passos-Bueno, M.R., Moreira, E.S., Vainzof, M., Chamberlain, J., Marie, S.K., Pereira, L., Akiyama, J., Roberds, S.L., Campbell, K.P. and Zatz, M. A Common Missense Mutation in the Adhalin Gene in Three Unrelated Brazilian Families with a Relatively Mild Form of Autosomal Recessive Limb-Girdle Muscular Dystrophy. *Hum. Mol. Genet*. *4*:1163-1168, 1995.

Wells, D.J., Wells, K.E., Asante, E.A., Turner, G., Sunada, Y., Campbell, K.P., Walsh, F.S. and Dickson, G. Expression of Human Full-Length and Minidystrophin in Transgenic *mdx* Mice: Implications for Gene Therapy of Duchenne Muscular Dystrophy. *Hum. Mol. Genet*. *4*:1245-1250, 1995.

Durbeej, M., Larsson, E., Ibraghimov-Beskrovnaya, O., Roberds, S.L., Campbell, K.P. and Ekblom, P. Non-Muscle α-Dystroglycan Is Involved in Epithelial Development. *J. Cell Biol*. *130*:79-91, 1995.

Vater, R., Harris, J.B., Anderson, L.V.B., Roberds, S.L., Campbell, K.P. and Cullen, M.J. The Expression of Dystrophin-Associated Glycoproteins During Skeletal Muscle Degeneration and Regeneration. An Immunofluorescence Study. *J. Neuropathol. and Exp. Neurol*. *54*:557-569, 1995.

Witcher, D.R., De Waard, M., Liu, H., Pragnell, M. and Campbell, K.P. Association of Native Ca^{2+} Channel β Subunits with the α1 Subunit Interaction Domain. *J. Biol. Chem*. *270*:18088-18093, 1995.

Apel, E.D., Roberds, S.L., Campbell, K.P. and Merlie, J.P. Rapsyn May Function as a Link Between the Acetylcholine Receptor and the Agrin-binding Dystrophin-Associated Glycoprotein Complex. *Neuron 15*, 115-126, 1995.

Mills, K.A., Sunada, Y., Campbell, K.P. and Mathews, K.D. A Syntrophin Gene Maps to Mouse Chromosome 8 and Is Not the Myodystrophy Gene. *Mamm. Genome 6*: 664-665, 1995.

Kawai, H., Akaike, M., Endo, T., Adachi, K., Inui, T., Mitsui, T., Kashiwagi, S., Fujiwara, T., Okuno, S., Shin, S., Miyoshi, K., Campbell, K.P., Yamada, K., Shimizu, T., Matsumura, K. and Saito, S. Adhalin Gene Mutations in Patients with Autosomal Recessive Childhood Onset Muscular Dystrophy with Adhalin Deficiency. *J. Clin. Invest*. *96*:1202-1207, 1995.

Lim, L.E., Duclos, F., Broux, O., Bourg, N., Sunada, Y., Allamand, V., Meyer, J., Richard, I., Moomaw, C., Slaughter, C., Tomé, F.M.S., Fardeau, M., Jackson, C.E., Beckmann, J.S. and Campbell, K.P. β-Sarcoglycan: Characterization and Role in Limb-Girdle Muscular Dystrophy Linked to 4q12. *Nature Genet*. *11*:257-265, 1995.

Jung, D., Yang, B., Meyer, J., Chamberlain, J.S. and Campbell, K.P. Identification and Characterization of the Dystrophin Anchoring Site on β-dystroglycan. *J. Biol. Chem*. *270*:27305-27310, 1995.

Sunada, Y., Edgar, T.S., Lotz, B.P., Rust, R.S. and Cambpell, K.P. Merosin-Negative Congenital Muscular Dystrophy Associated with Extensive Brain Abnormalities. *Neurol. 45*:2084-2089, 1995.

Montanaro, F., Carbonetto, S., Campbell, K.P. and Lindenbaum, M. Dystroglycan Expression in the Wild Type and Mdx Mouse Neural Retina: Synaptic Colocalization With Dystrophin, Dystrophin-Related Protein but Not Laminin. *J. Neurosci. Res*. *45*:528-538, 1995.

Oexle, K., Herrmann, R., Dodé, C., Leturcq, F., Hübner, Ch., Kaplan, J.-C., Mizuno, Y., Ozawa, E., Campbell, K.P. and Voit, T. Neurosensory Hearing Loss in Secondary Adhalinopathy. *Neuropediatrics 27*:32-36, 1996.

Guo, W., Jorgensen, A.O., Jones, L.R. and Campbell, K.P. Biochemical Characterization and Molecular Cloning of Cardiac Triadin. *J. Biol. Chem*. *271*:458-465, 1996.

Fadic, R., Sunada, Y., Waclawik, A.J., Buck, S., Lewandoski, P.J., Campbell, K.P. and Lotz, B.P. Brief Report: Deficiency of a Dystrophin-Associated Glycoprotein (Adhalin) in a Patient with Muscular Dystrophy and Cardiomyopathy. *N. Engl. J. Med*. *334*:362-366, 1996.

Scott, V.E.S., De Waard, M., Liu, H., Gurnett, C.A., Venzke, D.P., Lennon, V.A. and Campbell, K.P. β Subunit Heterogeneity in N-Type Ca^{2+} Channels. *J. Biol. Chem*. *271*:3207-3212, 1996.

Gurnett, C.A., De Waard, M. and Campbell, K.P. Dual Function of the Voltage-Dependent Ca^{2+} Channel α2δ Subunit in Current Stimulation and Subunit Interaction. *Neuron 16*:431-440, 1996.

Cullen, M.J., Walsh, J., Roberds, S.L. and Campbell, K.P. Ultrastructural Localization of Adhalin, α-Dystroglycan and Merosin in Normal and Dystrophic Muscle. *Neuropathol. Appl. Neurobiol*. *22*:30-37, 1996.

De Waard, M., Scott, V.E.S., Pragnell, M. and Campbell, K.P. Identification of Critical Amino Acids Involved in α1-β Interaction in Voltage-Dependent Ca^{2+} Channels. *FEBS Lett*. *380*:272-276, 1996.

Jung, D., Leturcq, F., Sunada, Y., Duclos, F., Tomé, F.M.S., Moomaw, C., Merlini, L., Azibi, K., Chaouch, M., Slaughter, C., Fardeau, M., Kaplan, J.C. and Campbell, K.P. Absence of γ-Sarcoglycan (35 DAG) in Autosomal Recessive Muscular Dystrophy Linked to Chromosome 13q12. *FEBS Lett*. *381*, 15-20, 1996.

Morandi, L., Barresi, R., Di Blasi, C., Jung, D., Sunada, Y., Confalonieri, V., Dworzak, F., Mantegazza, R., Antozzi, C., Jarre, L.A., Pini, A., Gobbi, G., Bianchi, C., Cornelio, F., Campbell, K.P. and Mora, M. Clinical Heterogeneity of Adhalin Deficiency. *Ann. Neurol*. *39*:196-202, 1996.

Yamada, H., Chiba, A., Endo, T., Kobata, A., Anderson, L.V.B., Hori, H., Fukuta-Ohi, H., Kanazawa, I., Campbell, K.P., Shimizu, T. and Matsumura, K. Characterization of Dystroglycan-Laminin Interaction in Peripheral Nerve. *J. Neurochem*. *66*:1518-1524, 1996.

Salih, M.A.M., Mahdi, A.H., Al-Rikabi, A.C., Al-Bunyan, M., Roberds, S.L., Anderson, R.D. and Campbell, K.P. Clinical and Molecular Pathological Features of Severe Childhood Autosomal Recessive Muscular Dystrophy in Saudi Arabia. *Dev. Med. Child Neurol*. *38*:262-271, 1996.

Liu, H., De Waard, M., Scott, V.E.S., Gurnett, C.A., Lennon, V.A. and Campbell, K.P. Identification of Three Subunits of the High Affinity ω-Conotoxin MVIIC-Sensitive Ca^{2+} Channel. *J. Biol. Chem. 271*:13804-13810, 1996.

Rafael, J.A., Cox, G.A., Corrado, K., Jung, D., Campbell, K.P. and Chamberlain, J.S. Forced Expression of Dystrophin Deletion Constructs Reveals Structure-Function Correlations. *J. Cell Biol*. *134*:93-102, 1996.

Jung, D., Duclos, F., Apostol, B., Straub, V., Lee, J.C., Allamand, V., Venzke, D.P., Sunada, Y., Moomaw, C.R., Leveille, C.J., Slaughter, C.A., Crawford, T.O., McPherson, J.D. and Campbell, K.P. Characterization of δ-Sarcoglycan, a Novel Component of the Oligomeric Sarcoglycan Complex Involved in Limb-Girdle Muscular Dystrophy. *J. Biol. Chem*. *271*:32321-32329, 1996.

Liu, H., Felix, R., Gurnett, C.A., De Waard, M., Witcher, D.R. and Campbell, K.P. Expression and Subunit Interaction of Voltage-Dependent Ca^{2+} Channels in PC12 Cells. *J. Neurosci. 23*:7557-7565, 1996.

Tian, M., Jacobson, C., Gee, S.H., Campbell, K.P., Carbonetto, S. and Jucker, M. Dystroglycan in the Cerebellum is a Laminin-α2-chain Binding Protein at the Glial-Vascular Interface and is Expressed in Purkinje Cells. *Eur. J. Neurosci*. *8*:2739-2747, 1996.

Cartaud, A., Ludosky, M.A., Haasemann, M., Jung, D., Campbell, K. and Cartaud, J. Non-Neural Agrin Codistributes with Acetylcholine Receptors During Early Differentiation of *Torpedo* Electrocytes. *J. Cell Sci*. *109*:1837-1846, 1996.

Clemens, P.R., Kochanek, S., Sunada, Y., Chan, S., Chen, H.-H., Campbell, K.P. and Caskey, C.T. In Vivo Muscle Gene Transfer of Full-Length Dystrophin with an Adenoviral Vector that Lacks All Viral Genes. *Gene Ther*. *3*:965-972, 1996.

Piccolo, F., Jeanpierre, M., Leturcq, F., Dodé, C., Azibi, K., Toutain, A., Merlini, L., Jarre, L., Navarro, C., Krishnamoorthy, R., Tomé, F.M.S., Urtizberea, J.A., Beckmann, J.S., Campbell, K.P. and Kaplan, J.-C. A Founder Mutation in the γ-Sarcoglycan Gene of Gypsies Possibly Predating Their Migration out of India. *Hum. Mol. Gen*. *5*: 2019-2022, 1996.

Salih, M.A.M., Sunada, Y., Al-Nasser, M., Ozo, C.O., Al-Turaiki, M.H.S., Akbar, M. and Campbell, K.P. Muscular Dystrophy Associated with β-Dystroglycan Deficiency. *Ann. Neurol*. *40*:925-928, 1996.

Seidahmed, M.Z., Sunada, Y., Ozo, C.O., Hamid, F., Campbell, K.P. and Salih, M.A.M. Lethal Congenital Muscular Dystrophy in Two Sibs with Arthrogryposis Multiplex: New Entity or Variant of Cobblestone Lissencephaly Syndrome? *Neuropediatrics 27*:305-310, 1996.

Fahlke, C., Knittle, T., Gurnett, C.A., Campbell, K.P. and George, A.L., Jr. Subunit Stoichiometry of Human Muscle Chloride Channels. *J. Gen. Physiol*. *109*:93-104, 1997.

De Waard, M., Liu, H., Walker, D., Scott, V.E.S., Gurnett, C.A. and Campbell, K.P. Direct Binding of G-Protein βγ Complex to Voltage-Dependent Calcium Channels. *Nature 385*:446-450, 1997.

Durbeej, M., Jung, D., Hjalt, T., Campbell, K.P. and Ekblom, P. Transient Expression of Dp140, a Product of the Duchenne Muscular Dystrophy Locus, During Kidney Tubulogenesis. *Dev. Biol*. *181*:156-167, 1997.

Allamand, V., Sunada, Y., Salih, M.A.M., Straub, V., Ozo, C.O., Al-Turaiki, M.H.S., Akbar, M., Kolo, T., Colognato, H., Zhang, X., Sorokin, L.M., Yurchenco, P.D., Tryggvason, K. and Campbell, K.P. Mild Congenital Muscular Dystrophy in Two Patients with an Internally Deleted Laminin α2-Chain. *Hum. Mol. Genet. 6*:747-752, 1997.

Carrié, A., Piccolo, F., Leturcq, F., de Toma, C., Azibi, K., Beldjord, C., Vallat, J-M, Merlini, L., Voit, T., Sewry, C., Urtizberea, J.A., Romero, N., Tomé, F.M.S., Fardeau, M., Sunada, Y., Campbell, K.P., Kaplan, J-C and Jeanpierre, M. Mutational Diversity and Hot Spots in the α-Sarcoglycan Gene in Autosomal Recessive Muscular Dystrophy (LGMD2D). *J. Med. Genet. 34*:470-475, 1997.

Matsumura, K., Chiba, A., Yamada, H., Fukuta-Ohi, H., Fujita, S., Endo, T., Kobata, A., Anderson, L.V.B., Kanazawa, I., Campbell, K.P. and Shimizu, T. A Role of Dystroglycan in Schwannoma Cell Adhesion to Laminin. *J. Biol. Chem. 272*:13904-13910, 1997.

Williamson, R.A., Henry, M.D., Daniels, K.J., Hrstka, R.F., Lee, J.C., Sunada, Y., Ibraghimov-Beskrovnaya, O. and Campbell, K.P. Dystroglycan is Essential for Early Embryonic Development: Disruption of Reichert's Membrane in *Dag1*-Null Mice. *Hum. Mol. Genet*. *6*:831-841, 1997.

Eymard, B., Romero, N.B., Leturcq, F., Piccolo, F., Carrié, A., Jeanpierre, M., Collin, H., Deburgrave, N., Azibi, K., Chaouch, M., Merlini, L., Thémar-Noël, C., Penisson, I., Mayer, M., Tanguy, O., Campbell, K.P., Kaplan, J.-C., Tomé, F.M.S. and Fardeau, M. Primary Adhalinopathy (α-Sarcolgycanopathy): Clinical, Pathologic and Genetic Correlation in 20 Patients with Autosomal Recessive Muscular Dystrophy. *Neurology 48*:1227-1234, 1997.

Gurnett, C.A., Felix, R. and Campbell, K.P. Extracellular Interaction of the Voltage-dependent Ca^{2+} Channel α2δ and α1 Subunits. *J. Biol. Chem*. *272*:18508-18512, 1997.

Felix, R., Gurnett, C.A., De Waard, M. and Campbell, K.P. Dissection of Functional Domains of the Voltage-Dependent Ca^{2+} Channel α2δ Subunit. *J. Neurosci*. *17*:6884-6891, 1997.

Straub, V., Rafael, J.A., Chamberlain, J.S. and Campbell, K.P. Animal Models for Muscular Dystrophy Show Different Patterns of Sarcolemmal Disruption. *J. Cell Biol. 139*:375-385, 1997.

Dinçer, P., Leturcq, F., Richard, I., Piccolo, F., Yalnizoglu, D., de Toma, C., Akçören, Z., Broux, O., Deburgrave, N., Brenguier, L, Roudant, C., Urtizberea, J.A., Jung, D., Tan, E., Jeanpierre, M., Campbell, K.P., Kaplan, J.-C., Beckmann, J.S. and Topaloglu, H. A Biochemical, Genetic and Clinical Survey of Autosomal Recessive Limb Girdle Muscular Dystrophies in Turkey. *Ann. Neurol*. *42*:222-229, 1997.

Bies, R.D., Maeda, M., Roberds, S.L., Holder, E., Bohlmeyer, T., Young, J.B. and Campbell, K.P. A 5' Dystrophin Duplication Mutation Causes Membrane Deficiency of α-Dystroglycan in a Family with X-linked Cardiomyopathy. *J. Mol. Cell Cardiol. 29*:3175-3188, 1997.

Crosbie, R.H., Heighway, J., Venzke, D.P., Lee, J.C. and Campbell, K.P. Sarcospan, the 25-kDa Transmembrane Component of the Dystrophin-Glycoprotein Complex. *J. Biol. Chem*. *272*:31221-31224, 1997.

Walker, D., Bichet, D., Campbell, K.P. and De Waard, M. A β4 Isoform-specific Interaction Site in the Carboxyl-terminal Region of the Voltage-dependent Ca^{2+} α1 Subunit. *J. Biol. Chem. 273*:2361-2367, 1998.

Scott, V.E.S., Felix, R., Arikkath, J. and Campbell, K.P. Evidence for a 95 kDa Short Form of the α1A Subunit Associated with the ω-Conotoxin MVIIC Receptor of the P/Q-type Ca^{2+} Channels. *J. Neurosci*. *18*:641-647, 1998.

Bahls, F.H., Lartius, R., Trudeau, L.-E., Doyle, R.T., Fang, Y., Witcher, D., Campbell, K.P. and Haydon, P.G. Contact-Dependent Regulation of N-type Calcium Channel Subunits During Synaptogenesis. *J. Neurobiol. 35*:198-208, 1998.

Duclos, F., Broux, O., Bourg, N., Straub, V., Feldman, G., Sunada, Y., Lim. L.E., Piccolo, F., Cutshall, S., Gary, F., Quetier, F., Kaplan, J.-C., Jackson, C.E., Beckmann, J.S. and Campbell, K.P β-Sarcoglycan: Genomic Analysis and Identification of a Novel Missense Mutation in the LGMD2E Amish Isolate. *Neuromusc. Disord*. *8*:30-38, 1998.

Crosbie, R.H., Straub, V., Yun, H.Y., Lee, J.C., Rafael, J.A., Chamberlain, J.S., Dawson, V.L., Dawson, T.M. and Campbell, K.P. *mdx* Muscle Pathogenesis is Independent of nNOS Perturbation. *Hum. Mol. Genet.* *7*:823-829, 1998.

Crosbie, R.H., Yamada, H., Venzke, D.P., Lisanti, M.P. and Campbell, K.P. Caveolin-3 is Not an Integral Component of the Dystrophin-Glycoprotein Complex. *FEBS Lett. 427*:279-282, 1998.

Holt, K.H., Lim, L.E., Straub, V., Venzke, D.P., Duclos, F., Anderson, R.D., Davidson, B.L. and Campbell, K.P. Functional Rescue of the Sarcoglycan Complex in the BIO 14.6 Hamster Using δ-Sarcoglycan Gene Transfer. *Mol. Cell 1*:841-848, 1998.

Durbeej, M., Henry, M.D., Ferletta, M., Campbell, K.P. and Ekblom, P. Distribution of Dystroglycan in Normal Adult Mouse Tissues. *J. Histochem. Cytochem. 46*:449-457, 1998.

Ding, J.M., Buchanan, G.F., Faiman, L., Tischkau, S.A., McPherson, P., Campbell, K.P. and Gillette, M.U. A Neuronal Ryanodine Receptor Mediates Light-Induced Phase Delays of the Circadian Clock. *Nature 394*:381-384, 1998.

Letts, V.A., Felix, R., Biddlecome, G.H., Arikkath, J., Mahaffey, C.L., Valenzuela, A., Bartlett II, F.S., Mori, Y., Campbell, K.P. and Frankel, W.N. The Mouse Stargazer Gene Encodes a Neuronal Ca^{2+} Channel γ Subunit. *Nature Genet. 19*:340-347, 1998.

Duclos, F., Straub, V., Moore, S.A., Venzke, D.P., Hrstka, R.F., Crosbie, R.H., Durbeej, M., Lebakken, C. S., Ettinger, A. J., Meulen, J.V.D., Holt, K. H., Lim, L. E, Sanes, J. R. Davidson, B. L., Faulkner, J. A., Williamson, R. and Campbell, K. P. Progressive Muscular Dystrophy in α-Sarcoglycan Deficient Mice. *J. Cell Biol. 142*:1461-1471, 1998.

Straub, V., Duclos, F., Venzke, D.P., Lee, J.C., Cutshall, S., Leveille, C.J. and Campbell, K.P. Molecular Pathogenesis of Muscle Degeneration in the δ–Sarcoglycan-Deficient Hamster. *Am. J. of Pathol*. *153*:623-1630, 1998.

Rambukkana, A., Yamada, H., Salzer, J.L., Zanazi, G., Yurchenco, P.D., Campbell, K.P. and Fischetti, V.A. Role of α-dystroglycan as a Schwann Cell Receptor for Mycobacterium Leprae. *Science 282*:2076-2079, 1998.

Cao, W., Henry, M.D., Borrow, P., Yamada, H., Elder, J.H., Ravkov, E.V., Nichol, S.T., Compans, R.W., Campbell, K.P. and Oldstone, M.B.A. Identification of α–dystroglycan as a Receptor for Lymphocytic Choriomeningitis Virus and Lassa Fever Virus. *Science 282*: 2079-2081, 1999.

Henry, M.D. and Campbell, K.P. A Role for Dystroglycan in Basement Membrane Assembly. *Cell 95*:859-870, 1998.

Holt, K.H. and Campbell, K.P. Assembly of the Sarcoglycan Complex: Insights for Muscular Dystrophy. *J. Biol. Chem. 273*:34667-34670, 1998.

Salih, M.A.M., Al Rayess, M., Cutshall, S., Urtizberea, J.A., Al-Turaiki, M.H.S., Ozo, C.O., Straub, V., Akbar, M., Abid, M., Andeejani, A. and Campbell, K.P. A Novel Form of Late Onset Familial Congenital Muscular Dystrophy. *Neuropediatrics 29*:289-93, 1998.

Dinsmore, A.J., Rees-Blanchard, W., Bentley, P., Lewis, T., Kahl, S.D., Mullinnix, M.J., Campbell, K.P. and Earley, F.G.P. Characterization of Antibody Models of the Ryanodine Receptor for Use in High Throughput Screening and Ligand Design. *Pestic. Sci. 54*:345-52, 1998.

Brown, S.C., Fassati, A., Popplewell, L., Page, A.M., Henry, M.D., Campbell, K.P. and Dickson, G. Dystrophic Phenotype Induced in Vitro by Antibody Blockade of Muscle α-dystroglycan-laminin Interaction. *J. Cell Sci*. *112*:209-216, 1999.

Crosbie, R.H., Lebakken, C.S., Holt, K.H., Venzke, D.P., Straub, V., Lee, J.C., Grady, R.M., Chamberlain, J.S., Sanes, J.R., and Campbell, K.P. Membrane Targeting and Stabilization of Sarcospan is Mediated by the Sarcoglycan Subcomplex. *J. Cell Biol*. *145*:153-165, 1999.

Badorff, C., Lee, G-H., Lamphear, B.J., Martone, M.E., Campbell, K.P., Rhoads, R.E., Knowlton, K.U. Enteroviral Protease 2A Cleaves Dystrophin: Evidence of Cytoskeletal Disruption in an Acquired Cardiomyopathy. *Nat. Med. 5*:320-326, 1999.

Burgess, D.L., Biddlecome, G.H., McDonough, S.I., Diaz, M.E., Zilinski, C.A., Bean, B.P., Campbell, K.P., and Noebels, J.L. β Subunit Reshuffling Modifies N- and P/Q-type Ca^{2+} Channel Subunit Compositions in Lethargic Mouse Brain. *Mol. Cell Neurosci. 13*:293-311, 1999.

Johnston, J.C., Gasmi, M., Lim, L.E., Elder, J.H., Yee, J.K., Jolly, D.J., Campbell, K.P., Davidson, B.L. and Sauter, S.L. Minimum Requirements for Efficient Transduction of Dividing and Nondividing Cells by Feline Immunodeficiency Virus Vectors. *J. Virol. 73*:2491-2498, 1999.

Coral-Vazquez, R., Cohn, R.D., Moore, S.A., Hill, J.A., Weiss, R.M., Davisson, R.L., Straub, V., Barresi, R., Bansal, D., Hrstka, R.F., Williamson, R. and Campbell, K.P. Disruption of the Sarcoglycan-Sarcospan Complex in Vascular Smooth Muscle: A Novel Mechanism for Cardiomyopathy and Muscular Dystrophy. *Cell 98*: 465-474, 1999.

Durbeej, M. and Campbell, K.P. Biochemical Characterization of the Epithelial Dystroglycan Complex. *J. Biol. Chem*. *274*:26609-26616, 1999.

Straub, V., Ettinger, A. J., Durbeej, M., Venzke, D.P., Cutshall, S., Sanes, J. and Campbell, K.P. ε-Sarcoglycan Replaces α-Sarcoglycan in Smooth Muscle to Form a Unique Dystrophin-Glycoprotein Complex. *J. Biol. Chem. 274*:27989-28002, 1999.

Leschiziner, A., Moukhles, H., Lindenbaum, M., Gee, S.H., Butterworth, J., Campbell, K.P. and Carbonetto, S. Neural Regulation of α-Dystroglycan Biosynthesis and Glycosylation in Skeletal Muscle. *J Neurochem*. *74*:70-80, 2000.

Durbeej, M., Cohn, R.D., Hrstka, R.F., Moore, S.A., Allamand, V., Davidson, B.L. Williamson, R.A. and Campbell, K.P. Disruption of the β-Sarcoglycan Gene Reveals Pathogenetic Complexity of Limb-Girdle Muscular Dystrophy Type 2E. *Mol. Cell 5*:141-151, 2000.

Lebakken, C.S., Venzke, D.P., Hrstka, R.F., Consolino, C., Faulkner, J.A., Williamson, R.A., Campbell, K.P. Sarcospan Deficient Mice Maintain Normal Muscle Function. *Mol. Cell Biol*. *20*:1669-1677, 2000.

Flanigan, K.M., Kerr, L., Bromberg, M.B., Leonard, C., Tsuruda, J., Zhang, P.,Gonzalez-Gomez, I., Cohn, R., Campbell, K.P. and Leppert, M. Congenital Muscular Dystrophy with Rigid Spine Syndrome: A Clinical, Pathological, Radiological, and Genetic Study. *Ann. Neurol. 47*:152-161, 2000.

Holt, K.H., Crosbie, R.H., Venzke, D.P. and Campbell, K.P. Biosynthesis of Dystroglycan: Processing of a Precursor Propeptide. *FEBS Lett*. *468*:79-83, 2000.

Grady, R.M., Zhou, H., Cunningham, J.M., Henry, M.D., Campbell, K.P. and Sanes, J.R. Maturation and Maintenance of the Neuromuscular Synapse: Genetic Evidence for Roles of the Dystrophin-Glycoprotein Complex. *Neuron*. *25*:279-293, 2000.

Ertel, E.A., Campbell, K.P., Harpold, M.M., Hofmann, F., Mori, Y., Perez-Reyes, E., Schwartz, A., Snutch, T.P., Tanabe, T., Birnbaumer, L., Tsien, R.W. and Catterall, W.A. Nomenclature of Voltage-Gated Calcium Channels. *Neuron 25*, 533-535, 2000.

Crosbie, R.H., Lim, L.E., Moore, S.A., Hirano, M., Hays, A.P., Maybaum, S.W., Collin, H., Dovico, S.A., Stolle, C.A., Fardeau, M., Tomé, F.M.S. and Campbell, K.P. Molecular and Genetic Characterization of Sarcospan: Insights into Sarcoglycan-Sarcospan Domains. *Hum. Mol. Genet*. *9*:2019-2027, 2000.

Allamand, V., Donahue, K.M., Straub, V., Davisson, R.L., Davidson, B.L. and Campbell, K.P. Early Adenoviral-Mediated Gene Transfer Effectively Prevents Muscular Dystrophy in Alpha-Sarcoglycan-Deficient Mice. *Gene Ther*. *7*:1385-1391, 2000.

Crawford, G.E., Faulkner, J.A., Crosbie, R.H., Campbell, K.P., Froehner, S.C. and Chamberlain, J.S. Assembly of the Dystrophin Associated Protein Complex Does Not Require the Dystrophin C-Terminal Domain. *J. Cell Biol*. *18:*1399-1410, 2000.

Straub, V., Donahue, K.M., Allamand, V., Davisson, R.L., Kim, Y.R. and Campbell, K.P. Contrast Agent-Enhanced Magnetic Resonance Imaging of Skeletal Muscle Damage in Animal Models of Muscular Dystrophy. *Magn. Reson. Med. 44*:655-659, 2000.

Barresi, R., Moore, S.A., Stolle, C.A., Mendell, J. and Campbell, K.P. Expression of γ-Sarcoglycan in Smooth Muscle and Its Interaction with the Smooth Muscle Sarcoglycan-Sarcospan Complex. *J. Biol. Chem*. *275*: 38554-38560, 2000.

Heathcote, D.R., Ekman, J.M., Campbell, K.P. and Godfrey, E.W. Dystroglycan Overexpression *In Vivo* Alters Acetylcholine Receptor Aggregation at the Neuromuscular Junction. *Dev. Biol*. *227*, 595-605, 2000.

Sevilla, N., Kunz, S. Holz, A., Lewicki, H., Homman, D., Yamada, H., Campbell, K.P., de la Torre, J.C. and Oldstone, M.B.A. Immunosuppression and Resultant Viral Persistence by Specific Viral Targeting of Dendritic Cells. *J. Exp. Med*. *192*:1249-1260, 2000.

Piccolo, F., Moore, S.A., Ford, G.C. and Campbell, K.P. Intracellular Accumulation and Reduced Sarcolemmal Expression of Dysferlin in Limb-Girdle Muscular Dystrophies. *Ann. Neurol. 48(6)*:902-12, 2000.

Smelt, S.C., Borrow, P., Kunz, S., Cao, W., Tishon, A., Lewicki, H., Campbell K.P. and Oldstone, M.B.A. Differences in Affinity of Binding of Lymphocytic Choriomeningitis Virus Strains to the Cellular Receptor α-Dystroglycan Correlate with Viral Tropism and Disease Kinetics. *J. Virol*. *75*:448-457, 2000.

Cohn, R.D., Durbeej, M., Moore, S.A., Coral-Vazquez, R., Prouty, S. and Campbell, K.P. Prevention of the Cardiomyopathic Phenotype in Genetic Mouse Models with Absence of the Smooth Muscle Sarcoglycan-Sarcospan Complex. *J. Clin. Invest*. *107*:R1-R7, 2001.

Henry, M.D., Satz, J.S., Brakebusch, C., Costell, M., Gustaffson, E., Fässler, R. and Campbell, K.P. Distinct Roles for Dystroglycan, β1 Integrin, and Perlecan in Cell Surface Laminin Organization. *J. Cell Sci*. *114*:1137-44, 2001.

Ahern, C., Arikkath, J., Vallejo, P., Gurnett, C.A., Powers, P., Campbell, K.P. and Coronado, R. Intramembrane Charge Movements and Excitation-Contraction Coupling Expressed by Two-Domain Fragments of Ca^{2+} Channel. *Proc. Natl. Acad. Sci. U.S.A. 5(12)*:6935-6940, 2001.

Sugita, S., Saito, F., Tang, J., Satz, J., Campbell, K.P. and Sudhof, T.C. A Stoichiometric Complex of Neurexins and Dystroglycan in Brain. *J. Cell Biol*. *154*:435-446, 2001.

Ahern, C.A., Powers P.A., Biddlecome, G.H., Vallejo, P., Mortenson, L., Strube, C., Campbell, K.P., Coronado, R. and Gregg R.G. Modulation of the L-Type Ca^{2+} Current but Not Excitation-Contraction Coupling by the γ1 Subunit of the Dihydropyridine Receptor of Skeletal Muscle. *BMC Physiol. 1:8*, 2001.

Kang, M.G., Chen, C.C., Felix, R., Letts, V.A., Frankel, W.N., Mori, Y. and Campbell, K.P. Biochemical and Biophysical Evidence for γ2 Subunit Association with Neuronal Voltage-gated Ca^{2+} Channels. *J. Biol. Chem. 276(35)*, 32917-32924, 2001.

Henry, M., Cohen, M.B. and Campbell, K.P. Reduced Expression of Dystroglycan in Breast and Prostate Cancer. *Hum. Pathol*. *32(8)*:791-795, 2001.

Kunz, S., Sevilla, N., Campbell, K.P. and Oldstone, M.B.A Molecular Analysis of the Interaction of LCMV with Its Cellular Receptor α-Dystroglycan. *J. Cell Biol*. *155* :301-310, 2001.

Durbeej, M., Talts, J., Henry, M., Yurchenco, P., Campbell, K.P. and Ekblom, P. Dystroglycan Binding to Laminin α1LG4 Module Influences Epithelial Morphogenisis of Salivary Gland and Lung *In Vitro*. *Differentiation 69*:121-134, 2001.

Spiropoulou, C.F., Kunz, S., Rollin, P.E., Campbell, K.P. and Oldstone, M.B.A. New World Arenavirus Clade C, but Not Clade A and B Viruses, Utilize α-Dystroglycan as its Major Receptor. *J. Virol*. *76(10)*: 5140-5146, 2002.

Levi, S., Grady, R.M., Henry, M.D., Campbell, K.P., Sanes, J.R. and Craig, A.M. Dystroglycan Is Selectively Associated with Inhibitory Garbaergic Synapses but Dispensable for their Differentiation. *J. Neurosci*. *22*: 4274-4285, 2002.

Crosbie, R.H., Dovico, S.A., Flangan, J., Chamberlain, J.S., Ownby, C.L. and Campbell, K.P. Characterization of Aquaporin-4 in Muscle and Muscular Dystrophy. *FASEB J.16*: 943-949, 2002.

Moore, S.A., Saito, F., Chen, J., Michele, D.E., Henry, M., Messing, A., Cohn, R.D., Barta, S.R., Westra, S., Williamson, R., Hoshi, T. and Campbell, K.P. Deletion of Brain Dystroglycan Recapitulates Aspects of Congenital Muscular Dystrophy. *Nature 418*: 422-425, 2002.

Michele, D.E., Barresi, R., Kanagawa, M., Saito, F., Cohn, R.D., Satz, J.S., Dollar, H., Nishino, I., Kelley, R.I., Somer, H., Straub, V., Mathews, K.D., Moore, S.A. and Campbell, K.P. Post-translational Disruption of Dystroglycan-Ligand Interactions in Congenital Muscular Dystrophies. *Nature 418(6896)*: 417-422, 2002.

Cohn, R.D., Henry, M.D., Michele, D.E., Barresi, R., Saito, F., Moore, S.A., Flanagan, J.D., Skwarchuk, M.W., Robbins, M.E., Mendell, J.R., Williamson, R.A. and Campbell, K.P. Disruption of *Dag1* in Differentiated Skeletal Muscle Reveals a Role for Dystroglycan in Muscle Regeneration. *Cell 110*: 639-648, 2002.

Kang, M., Felix, R. and Campbell, K.P. Long-term Regulation of Voltage-Gated Calcium Channels by Gabapentin. *FEBS Lett. 528*: 177-182, 2002.

Crosbie, R.H., Barresi, R. and Campbell, K.P. Loss of Sarcolemma nNOS in Sarcoglycan-Deficient Muscle. *FASEB J. 16:* 1786-1791, 2002.

Muschler, J., Levy, D., Boudreau, R., Henry, M., Campbell, K.P. and Bissel, M.J. A Role for Dystroglycan in Epilthelial Polarization: Loss of Function in Breast Tumor Cells. *Cancer Res. 62*: 7102-7109, 2002.

Arikkath, J., Chen, C., Ahern, C., Allamand, V., Flanagan, J., Coronado, R., Gregg, R. and Campbell, K.P. γ1 Subunit Interactions Within the Skeletal Muscle L-type Voltage Gated Calcium Channels. *J. Biol. Chem*. *278*: 1212-1219, 2003.

Arikkath, J., Felix, R., Ahern, C., Chen, C.C., Song, I., Shin, H., Coronado, R. and Campbell, K.P. Molecular Characterization of a Two-Domain Form of the Neuronal Voltage-Gated P/Q Type Calcium Channel $\alpha_1$2.1 Subunit. *FEBS Lett*. *532:* 3, 261-468, 2002.

Bansal, D., Miyake, K., Vogel, S.S., Groh, S., Chen, C.C., Williamson, R., McNeil, P.L. and Campbell, K.P. Defective Membrane Repair in Dysferlin-Deficient Muscular Dystrophy. *Nature 423(6936):*168-172, 2003.

Ferletta, M., Kikkawa, Y., Yu, H., Talts, J.F., Durbeej, M., Sonnenberg, A. Timpl, R., Campbell, K.P., Ekblom, P. and Genersch, E. Opposing Roles of Integrin α6Aβ1 and Dystroglycan in Laminin-mediated Extracellular Signal-regulated Kinase Activation. *Mol. Biol. Cell 14(5):* 2088-2103, 2003.

Saito, F., Moore, S.A., Barresi, R., Henry, M.D., Messing, A., Ross-Barta, S.E., Cohn, R.D., Williamson, R.A., Sluka, K.A., Sherman, D.L., Brophy, P.J., Schmelzer, J.D., Low, P.A., Wrabetz, L., Fletri, M.L. and Campbell, K.P. Unique Role of

Dystroglycan in Peripheral Nerve Myelination, Nodal Structure, and Sodium Channel Stabilization. *Neuron 38(5)*:747-758, 2003.

Durbeej, M., Sawatzki, S.M., Barresi, R., Schmainda, K.M., Allamand, V., Michele, D.E. and Campbell, K.P. Gene Transfer Establishes Primacy of Striated Versus Smooth Muscle Sarcoglycan Complex in Limb-Girdle Muscular Dystrophy. *Proc. Natl. Acad. Sci. U.S.A. 100(15)*:8910-8915, 2003.

Sampaolesi, M. Torrente, Y., Innocenzi, A., Tonlorenzi, R., D'Antona, G., Pellegrino, M.A., Barresi, R., Bresolin, N., Cusella de Angelis, M.G., Campbell, K.P., Bottinelli, R. and Cusso, G. Cell Therapy of Alpha-Sarcoglycan Null Dystrophic Mice Through Intra-Arterial Delivery of Mesoangioblasts. *Science 301(5632)*: 487-492, 2003.

Letts, V.A., Kang, M.-G., Mahaffey, C.L., Beyer, B., Tenbrink, H., Campbell, K.P. and Frankel, W.N. Phenotypic Heterogeneity in the Stargazin Allelic Series. *Mamm. Genome 14(8)*: 506-513, 2003.

Chen, C.C., Lamping, K.G., Nuno, D.W., Barresi, R., Prouty, S.J., Lavoie, J.L., Cribbs, L.L., England, S.K., Sigmund, C.D., Weiss, R.M., Williamson, R.A., Hill, J.A. and Campbell, K.P. Abnormal Coronary Function in Mice Deficient in α_{1H} T-type Ca^{2+} Channels. *Science 302(5649)*:1416-1418, 2003.

Murakami, M., Yamamura, H., Suzuki, T., Kang, M.-G., Ohya, S., Murakami, A., Miyoshi, I., Sasano, H., Muraki, K., Hano, T., Kasai, N., Nakayama, S., Campbell, K.P., Flockerzi, V., Imaizumi, Y., Yanagisawa, T., Yanagisawa, T. and Iijima, T. Modified Cardiovascular L-Type Channels in Mice Lacking the β3 Subunit of the Voltage-Dependent Ca^{2+} Channel. *J. Biol. Chem. 278(44)*: 43261-43267, 2003.

Rambukkana, A., Kunz, S., Min, J., Campbell, K.P. and Oldstone, M.B.A. Targeting gene Cells by Nonlytic Arenaviral Infection Selectively Inhibits Myelination. *Proc. Natl. Acad. Sci. U.S.A. 100(26)*:16071-16076, 2003.

Opatowsky, Y., Chomsky-Hecht, O., Kang, M.-G., Campbell, K.P. and Hirsch, J.A. The Voltage-Dependent Calcium Channel β Subunit Contains Two Stable Interacting Domains. *J. Biol. Chem. 278(52)*: 52323-52332, 2003.

Kunz, S., Campbell, K.P. and Oldstone, M.B.A. Alpha-Dystroglycan Can Mediate Arenavirus Infection in the Absence of Beta-Dystroglycan. *Virology 316(2)*: 213-220, 2003.

Yurchenco, P.D., Cheng, Y-S., Campbell, K.P. and Li, S. Loss of Basement Membrane, Receptor and Cytoskeletal Lattices in a Laminin-Deficient Muscular Dystrophy. *J. Cell Sci. 117(5)*: 735-742, 2004.

Kim, D.-S., Hayashi, Y.K., Matsumoto, H., Ogawa, M., Noguchi, S., Murakami, N, Sakuta, R., Mochizuki, M., Michele, D.E., Campbell, K.P., Nonaka, I. and Nishino, I. *POMT1* Mutation Results In Defective Glycosylation and Loss of Laminin-Binding Activity in α-Dystroglycan. *Neurology 62(6):* 1009-1011, 2004.

Opatowsky, Y., Chen, C.C., Campbell, K.P. and Hirsch, J.A. Structural Analysis of the Voltage-dependent Calcium Channel β Subunit Functional Core and its Complex with the α1 Interaction Domain. *Neuron 42(3)*: 387-399, 2004.

Kanagawa, M., Saito, F., Kunz, S., Yoshida-Moriguchi, T., Barresi, R., Kobayashi, Y.M., Muschler, J., Dumanski, J.P., Michele, D.E., Oldstone, M.B.A. and Campbell, K.P. Molecular Recognition by LARGE is Essential for Expression of Functional Dystroglycan. *Cell 117(7)*: 953-964, 2004.

Barresi, R., Michele, D.E., Kanagawa, M., Harper, H.A., Dovico, S.A., Satz, J.S., Moore, S.A., Zhang, W., Schachter, H., Dumanski, J.P., Cohn, R.D., Nishino, I. and Campbell, K.P. LARGE Can Functionally Bypass α-Dystroglycan Glycosylation Defects in Distinct Congenital Muscular Dystrophies. *Nature Med. 10(7):* 696-703, 2004.

Singh, J., Itahana, Y., Knight-Krajewski, S., Kanagawa, M., Campbell, K.P., Bissell, M.J. and Muschler, J. Proteolytic Enzymes and Altered Glycosylation Modulate Dystroglycan Function in Carcinoma Cells. *Cancer Res. 64(17)*: 6152-6159, 2004.

Kikkawa, Y., Yu, H., Genersch, E., Sanzen, N., Sekiguchi, K., Fassler, R., Campbell, K.P., Talts, J.F. and Ekblom, P. Laminin Isoforms Differentially Regulate Adhesion, Spreading, Proliferation and ERK Activation of β1 Integrin-Null Cells. *Exp. Cell Res. 300*: 94-108, 2004.

Kanagawa, M. and Campbell, K.P. Dystroglycan Posttranslational Modification by LARGE and Congenital Muscular Dystrophy. *Zikkenigaku 22(15)*: 2171-2173, 2004.

Kanagawa, M. and Campbell, K.P. α-Dystroglycanopathy and LARGE. *Med. Sci. Digest 30(12)*: 491-494, 2004.

Saito, F., Matsumura, K. and Campbell, K.P. Function of Dystroglycan in the Nervous System. *Tanpakushitsu Kakusan Koso. 49(15)*: 2437-2444, 2004.

Huang, H., Sylvan, J., Jonas, M., Barresi, R., So, P.T.C., Campbell, K.P. and Lee, R.T. Cell Stiffness and Receptors: Evidence for Cytoskeletal Subnetworks. *Am. J. Physiol. Cell Physiol*. *288*: C72-C80, 2005.

Saito, F., Blank, M., Schroder, J., Manya, H., Shimizu, T., Campbell, K.P., Endo, T., Mizutani, M., Kroger, S. and Matsumura. Aberrant Glycosylation of α-dystroglycan causes Defective Binding of Laminin in the Muscle of Chicken Muscular Dystrophy. *FEBS Lett. 579*: 2359-2363, 2005.

Jones, J.C.R., Lane, K., Hopkinson, S.B., Lecuona, E., Geiger, R.C., Dean, D.A., Correa-Meyer, E., Gonzales, M., Campbell, K.P., Sznajder, J.I. and Budinger, S. Laminin-6 Assembles into Multimolecular Fibrillar Complexes with Perlecan and Participates in Mechanical-signal Transduction via a Dystroglycan-dependent, Integrin-independent Mechanism. *J Cell Sci. 118(2)*: 2557-2566, 2005.

Vogtlander, N.P.J., Dijkman, H., Bakker, M.A.H., Campbell, K.P. and van der Vlag, J., Berden, J.H.M. Localization of alpha-dystroglycan on the Podocyte: From Top to Toe. *J. Histochem. Cytochem. 53*:1345-53, 2005.

Consolino, C.M., Duclos, F., Lee, J., Williamson, R.A., Campbell, K.P. and Brooks, S.V. Muscles of Mice Deficient in α-sarcoglycan Maintain Large Masses and Near Control Force Values Throughout the Life Span. *Physiol. Genomics 22*: 244-256, 2005.

Matsumoto, H., Hayashi, Y.K., Kim, D., Ogawa, M., Murakami, T., Noguchi, S., Nonaka, I., Nakazawa, T., Matsuo, T., Futagami, S., Campbell, K.P. and Nishino, I. Congenital Muscular Dystrophy with Glycosylation Defects of α-dystroglycan in Japan. *Neuromusc. Disord. 15*: 342-348, 2005.

Nakagawa, O., Arnold M., Nakagawa M., Hamada H., Shelton J.M., Kusano H., Harris T.M., Childs G., Campbell K.P., Richardson J.A., Nishino I. and Olson E.N. Centronuclear Myopathy in Mice Lacking a Novel Muscle-specific Protein Kinase Transcriptionally Regulated by MEF2. *Genes Dev. 19*: 2066-2077, 2005.

Kanagawa, M., Michele, D.E., Satz, J. S., Barresi, R., Kusano, H., Sasaki, T., Timpl, R., Henry, M.D. and Campbell, K.P. Disruption of Perlecan Binding and Matrix Assembly by Post-Translational or Genetic Disruption of Dystroglycan Function. *FEBS Lett. 579*: 4792-4796, 2005.

Occhi, S., Zambroni, D., Del Carro, U., Amadio, S., Sirkowski, E.E., Scherer, S.S., Campbell, K.P., Moore, S.A., Chen, Z.-L., Strickland, S., Di Muzio, A., Uncini, A., Wrabetz, L. and Feltri, M.L. Both Laminin and Schwann Cell Dystroglycan are Necessary for Proper Clustering of Sodium Channels at Nodes of Ranvier. *J. Neurosci. 25*: 9418-9427, 2005.

Kunz, S., Rojek, J.M., Kanagawa, M., Spiropoulou, C.F., Barresi, R., Campbell, K.P. and Oldstone, M.B. Posttranslational Modification of Alpha-dystroglycan, the Cellular Receptor for Arenaviruses, by the Glycosyltransferase LARGE is Critical for Virus Binding. *J. Virol. 79*: 14282-96, 2005.

Turk R., Sterrenburg E., van der Wees C.G.C., de Meijer E.J., de Menezes R.X., Groh S., Campbell K.P., Noguchi S., van Ommen G.J.B., den Dunnen J.T. and 't Hoen P.A.C. Common Pathological Mechanisms in Mouse Models for Muscular Dystrophies. *FASEB J. 20(1)*: 127-9, 2006.

Kang M-G., Chen C.C., Wakamori M., Hara Y., Mori Y. and Campbell K.P. A Functional AMPA Receptor-calcium Channel Complex in the Postsynaptic Membrane. *Proc. Natl. Acad. Sci. U.S.A. 103(14)*: 5561-5566, 2006.

Mehes, E, Czirok, A, Hegedus, B, Szabo, B, Vicsek, T, Satz, J, Campbell, K.P. and Jancsik, V. Dystroglycan is Involved in Laminin-1-Stimulated Motility of Muller Glial Cells: Combined Velocity and Directionality Analysis. *Glia 49(4)*: 492-500, 2005.

Vogtlander, N.P., Tamboer, W.P., Bakker, M.A., Campbell, K.P., van der Vlag J. and Berden, J.H. Reactive Oxygen Species Deglycosilate Glomerular Alpha-Dystroglycan. *Kidney Int. 69(9)*:1526-34, 2006.

Murakami, T., Hayashi, Y.K., Noguchi, S., Ogawa, M., Nonaka, I., Tanabe, Y., Ogino, M., Takada, F., Eriguchi, M., Kotooka, N., Campbell, K.P., Osawa, M. and Nishino, I. Fukutin Gene Mutations cause Dilated Cardiomyopathy with Minimal Muscle Weakness. *Ann. Neurol. 60(5)*:597-602, 2006.

Choi, S., Na, H.S., Kim, J., Lee, J., Lee, S., Kim, D., Park, J., Chen, C.C., Campbell, K.P. and Shin, H-S. Attenuated Pain Responses in Mice Lacking $Ca_V3.2$ T-type Channels. *Genes Brain Behav*. *6(5)*:1742-1749, 2006.

Bhosle, R.C., Michele, D.E., Campbell, K.P., Lic, Z. and Robson, R.M. Interactions of Intermediate Filament Protein Synemin with Dystrophin and Utrophin. *Biochem. Biophys. Res. Commun*. *346(3)*:768-77, 2006.

Weir, M.L., Oppizzi, M.L., Henry, M.D., Onishi, A., Campbell, K.P., Bissell, M.J. and Muschler, J.L. Dystroglycan Loss Disrupts Polarity and β-casein Induction in Mammary Epithelial Cells by Perturbing Laminin Anchoring. *J. Cell Sci*. *119*:4047-4058, 2006.

Moore, S.A., Shilling, C.J., Westra, S., Wall, C., Wicklund, M.P., Stolle, C., Brown, C.A., Michele, D.E., Piccolo, F., Winder, T.L., Stence, A., Barresi, R., King, N., King, W., Florence, J., Campbell, K.P., Fenichel, G.M., Stedman, H.H., Kissel, J.T., Griggs, R.C., Pandya, S., Matthews, K.D., Pestronk, A., Serrano, C., Darvish, D. and Mendell, J.R. Limb-Girdle Muscular Dystrophy in the United States. *J. Neuropathol. Exp. Neurol. 65(10)*:995-1003, 2006.

Joksovic P., Nelson M., Jevtovic-Todorovic V., Patel M., Perez-Reyes E., Campbell K.P., Chen C.C. and Todorovic S. CaV3.2 is the Major Molecular Substrate for Redox Regulation of T-type Ca2+ Channels in the Rat and Mouse Thalamus. *J. Physiol*. *15;574(Pt 2):* 415-30, 2007.

Escoffier, J., Boisseau, S., Serres, C., Chen, C-C., Kim, D., Stamboulian, S., Shin, H-S., Campbell, K.P., Waard, M.D. and Arnoult, C. Expression, Localization and Functions in Acrosome Reaction and Sperm Motlitily of Ca_V 3.1 and $Ca_V3.2$ Channels in Sperm Cells: an Evaluation From $Ca_V3.1$ and $Ca_V3.2$ Deficient Mice. *J. Cell Physiol. 212(3):*753-63, 2007.

Sandoval, A., Andrade, A., Beedle, A.M., Campbell, K.P. and Felix, R. Inhibition of Recombinant N-Type Ca_V Channels by the γ_2 Subunit Involves Unfolded Protein Response (UPR)-Dependent and UPR-Independent Mechanisms. *J. Neurosci*. *27(12)*:3317-3327, 2007.

Rojek, J.M., Spiropoulou, C.F., Campbell, K.P. and Kunz, S. Old World and Clade C New World Arenaviruses Mimic the Molecular Mechanism of Receptor Recognition Used by {alpha}-Dystroglycans's Host-Derived Ligands. *J. Virol*. *81(11)*:5685-95, 2007.

Beedle, A., Nienaber, P. and Campbell, K.P. Fukutin-related Protein Associates with the Sarcolemmal Dystrophin-Glycoprotein Complex. *J. Biol. Chem*. *282(23):*16713-16717, 2007.

Handschin, C., Kobayashi, Y.M., Chin, S., Seale, P., Campbell, K.P. and Spiegelman, B.M. PGC-1α Regulates the Neuromuscular Junction Program and Ameliorates Duchenne Muscular Dystrophy. *Genes Dev. 21*: 770-783, 2007.

Han, R., Bansal, D., Miyake, K., Muniz, V.P., Weiss, R.M., McNeil, P.L. and Campbell, K.P. Dysferlin-Mediated Membrane Repair Protects the Heart From Stress-Induced Left Ventricular Injury. *J. Clin. Invest. 117(7):*1805-1813, 2007.

Kiyonaka, S., Wakamori, M., Miki, T., Uriu, Y., Nonaka, M., Bito, H., Beedle, A., Mori, E., Hara, Y., DeWaard, M., Kanagawa, M., Itakura, M., Takahashi, M., Campbell, K.P. and Mori, Y. RIM1 confers Sustained Activity and Neurotransmitter Vesicle Anchoring to Presynaptic Ca(2+) Channels. *Nature Neurosci. 10(6)*:691-701, 2007.

Carmignac, V., Salih, M.A., Quijano-Roy, S., Marchand, S., Al Rayess, M.M., Mukhtar, M.M., Urtizberea, J.A., Labeit, S., Guicheney, P., Leturcq, F., Gautel, M., Fardeau, M., Campbell, K.P., Richard, I., Estournet, B. and Ferreiro, A. C-terminal Titin Deletions Cause a Novel Early-Onset Myopathy With Fatal Cardiomyopathy. *Ann. Neurol. 61(4)*:340-351, 2007.

Miki, T., Kiyonaka, S., Uriu, Y., De Waard, M., Wakamori, M., Beedle, A.M., Campbell, K.P. and Mori, Y. Mutation Associated with an Autosomal Dominant Cone-Rod Dystrophy CORD7 Modifies RIM1-Mediated Modulation of Voltage-Dependent Ca^{2+} Channels. *Channels 1*(3):144-147, 2007.

Figueroa, X., Chen, C.C., Campbell, K.P., Damon, D.N., Day, K.H., Ramos, S. and Duling, B.R. Are Voltage-Dependent Ion Channels Involved In the Endothelial Cell Control of Vasomotor Tone? *Am. J. Physiol. Heart Circ. Physiol. 293*(3): H1371-83, 2007.

Kobuke, K., Piccolo, F., Garringer, K.W., Sweezer, E., Yang, B. and Campbell, K.P. A Common Disease-Associated Missense Mutation in Alpha-Sarcoglycan Fails to Cause Muscular Dystrophy in Mice. *Hum. Mol. Genet. 17(9):*1201-13, 2007.

Pacak, C.A., Walter, G.A., Gaidosh, G., Bryant, N., Lewis, M.A., Germain, S., Mah, C.S., Campbell, K.P. and Byrne, B.J. Long-term Skeletal Muscle Protection After Gene Transfer in a Mouse Model of LGMD-2D. *Mol. Ther. 15*(10):1775-81, 2007.

Kabosova, A., Azar, D.T., Bannikov, G.A., Campbell, K.P., Durbeej, M., Ghohestani, R.F., Jones, J.C.R., Kenney, M.C., Koch, M., Ninomiya, Y., Patton, B.L., Paulsson, M., Sado, Y., Sage, E.H., Sasaki, T., Sorokin, L.M., Steiner-Champliaud, M.F., Sun,

T.T., Sundarraj, N., Timpl, R., Virtanen, I. and Ljubimov A.V. Compositional Differences Between Infant and Adult Human Corneal Basement Membranes. *Invest. Ophthalmol. Vis. Sci. 48*(11):4989-99, 2007.

Jethwaney, D., Islam, M.R., Leidal, K.G., de Bernabe, D.B., Campbell, K.P., Nauseef, W.M. and Gibson, B.W. Proteomic Analysis of Plasma Membrane and Secretory Vesicles from Human Neutrophils. *Proteome Sci. 10*; 5-2, 2007.

Sandoval, A., Arikkath, J., Manjaraz, E., Campbell, K.P. and Felix, R. γ_1 - Dependent Down-Regulation of Recombinant Voltage-Gated Ca^{2+} Channels. *Cell Mol. Neurobiol. 27(7)*:901-8, 2007.

Rojek, J.M., Campbell, K.P., Oldstone, M.B.A. and Kunz, S. Old World Arenavirus Infection Interferes with the Expression of Functional Alpha-Dystroglycan in the Host Cell. *Mol. Biol. Cell 18:* 4493-4507, 2008.

Nodari, A., Previtali, S.C., Dati, G., Occhi, S., Court, F.A., Colombelli, C., Zambroni, D., Dina, G., Del Carro, U., Campbell, K.P, Quattrini, A., Wrabetz, L. and Feltri, M.L. α6β4 Integrin and Dystroglycan Cooperate to Stabilize the Myelin Sheath. *J. Neurosci. 28(26)*:6714-9, 2008.

Dylla, D.C., Michele, D.E., Campbell, K.P. and McCray, P.B. Basolateral Entry and Release of New and Old World Arenaviruses. *J. Virol. 82(12)*:6034-8, 2008.

Satz, J.S., Barresi, R., Durbeej, M., Willer, T., Turner, A., Moore, S.A. and Campbell, K.P. Brain and Eye Malformations Resembling Walker-Warburg Syndrome are Recapitulated in Mice by Dystroglycan Deletion in the Epiblast. *J. Neurosci. 28*:10567-75, 2008.

Kobayashi, Y.M., Rader, E.P., Crawford, R.W., Iyengar, N.K., Thedens, D.R., Faulkner, J.A., Parikh, S.V., Weiss, R.M., Chamberlain, J.S., Moore, S.A. and Campbell, K.P. Sarcolemma-Localized nNOS is Required to Maintain Activity After Mild Exercise. *Nature 456*:511-5, 2008.

Becker, A., Pitsch, J., Sochivko, D., Opitz, T., Staniek, M., Chen, C.C., Campbell, K.P., Schoch, S., Yaari, Y. and Beck, H. Transcriptional Upregulation of CaV3.2 Mediates Epileptogenesis in the Pilocarpine Model of Epilepsy. *J. Neurosci. 28*:13341-53, 2008.

Kanagawa, M., Nishimoto, A., Chiyonobu, T., Takeda, S., Miyagoe-Suzuki, Y., Wang, F., Fujikake, N., Taniguchi, M., Lu, Z., Tachikawa, M., Nagi, Y., Tashiro, F., Miyazaki, J.I., Tajima, Y., Takeda, S., Endo, T., Kobayashi, K., Campbell, K.P. and Toda, T. Residual Laminin-Binding Activity and Enhanced Dystroglycan Glycosylation in Novel Model Mice to Dystroglycanopathy. *Hum. Mol. Genet. 18*:621-31, 2008.

Murakami, T., Hayashi, Y.K., Ogawa, M., Noguchi, S., Campbell, K.P., Togawa, M., Inoue, T., Oka, A., Ohno, K., Nonaka, I. amd Nishino, I. A Novel POMT2 Mutation Causes Mild Congenital Muscular Dystrophy with Normal Brain MRI. *Brain Dev. 31*:465-8, 2008.

Zong, H., Bastie, C.C., Xu, J., Fassler, R., Campbell, K.P., Kurland, I.J. and Pessin, J.E. Insulin Resistance in Striated Muscle Specific Integrin Receptor Beta 1 Deficient Mice. *J. Biol. Chem. 284*:4679-88, 2009.

Chiang, C.S., Huang, C.H., Chieng, H., Chang, Y.T., Dory Chang, Chen, J. J., Chen, Y.H., Molkentin, J.D., Campbell, K.P. and Chen, C.C. The CaV3.2 T-type Ca2+ Channel is Required for Pressure Overload-Induced Cardiac Hypertrophy in Mice. *Circ. Res. 104*:522-30, 2009.

Puckett, R.L., Moore, S.A., Winder, T.L., Willer, T., Romansky, S.G., King Covalt, K., Campbell, K.P. and Abdenur, J.E. Further Evidence of Fukutin Mutations as a Cause of Childhood Onset Limb-Girdle Muscular Dystrophy Without Mental Retardation. *Neuromusc. Disord. 19*:352-6, 2009.

Beltran-Valero de Barnabe, D., Inamori, K., Moriguchi, T., Weydert, C.J., Harper, H.A., Willer, T., Henry, M.D. and Campbell, K.P. Loss of Alpha-Dystroglycan Laminin Binding in Epithelium-Derived Cancers is Caused by Silencing of LARGE. *J. Biol. Chem. 284:*11279-84, 2009.

Groh, S., Haihong, Z., Goddeeris, M.M., Lebakken, C.S., Venzke, D., Pessin, J.E. and Campbell, K.P. Sarcoglycan Complex: Implications for Metabolic Defects in Muscular Dystrophies. *J. Biol. Chem. 284*:19178-82, 2009.

Han, R., Kanagawa, M., Yoshida-Moriguchi, T., Rader, E., Ng., R.A., Michele, D.E., Muirhead, D.E., Kunz, S., Moore, S.A., Iannaccone, S.T., Miyake, K., McNeil, P.L., Mayer, U., Oldstone, M.B.A., Faulkner, J.A. and Campbell, K.P. Basal Lamina Strengthens Cell Membrane Integrity via the Laminin G Domain Binding of α-Dystroglycan. *Proc. Natl. Acad. Sci. U.S.A. 31*:12573-79, 2009.

Jimenez-Mallebrera, C., Torelli, S., Feng, L., Godfrey, C., Clement, E., Mein, R., Abbs, S., Brown, S.C., Campbell, K.P., Kroger, S., Talim, B., Topaloglu, H., Quinlivan, R., Roper, H., Childs, A.M., Kinali, M., Sewry, C.A. and Muntoni, F. A Comparative Study of α-Dystroglycan Glycosylation in Dystroglycanopathies Suggests that the Hypoglycosylation of α-Dystroglycan Does Not Consistently Correlate with Clinical Severity. *Brain Pathol. 19*:596-611, 2009.

Satz, J.S., Philip, A.R., Kusano, H., Lee, J., Riker, M.J., Turk, R., Weiss, R.M., Anderson, M.G., Mullins, R.F., Stone, E.M., Moore, S.A. and Campbell, K.P. Visual Impairment in the Absence of Dystroglycan. *J Neurosci. 29*:13136-46, 2009.

Michele, D.E., Kabaeva, Z., Davis, S., Weiss, R.M. and Campbell, K.P. Dystroglycan Matrix Receptor Function in Cardiac Myocytes is Important for Limiting Activity-induced Myocardial Damage. *Cir. Res. 105*:984-93, 2009.

Andrade, A., Sandoval, A., Gonzalez-Ramirez, R., Lipscombe, D., Campbell, K.P. and Felix, R. The $\alpha_2\delta$ Subunit Augments functional Expression and Modifies the Pharmacology of $Ca_v1.3$ L-type Channels. *Cell Calcium 46*: 282-92, 2009.

Yoshida-Moriguchi, T., Yu, L., Stalnaker, S.H., Davis, S., Kunz, S., Oldstone, M.B.A., Schachter, H., Wells, L. and Campbell, K.P. *O*-Mannosyl Phosphorylation of Alpha-Dystroglycan is Required for Laminin Binding. *Science 327*:88-92, 2010.

Watanabe, H., Yamashita, T. Saitoh, N., Kiyonaka, S., Iwamatsu, A., Campbell, K.P., Mori, Y. and Takahashi, T. Involvement of Ca^{2+} Channel Synprint Site in Synaptic Vesicle Endocytosis. *J Neurosci. 30*:655-60, 2010.

Vogtländer, N.P.J., van der Vlag, J., Bakker, M.A.H., Dijkman, H.B., Wevers, R.A., Campbell, K.P., Wetzels, J.F.M. and Berden, J.H.M. Expression of sialidase and dystroglycan in human glomerular diseases. *Nephrol. Dial. Transplant 25:* 478-484, 2010.

Liou, L-Y., Walsh, K.B., Vartanian, A.R., Beltran, D., Campbell, K.P., Oldstone, M.B.A. and Kunz, S. Functional Glycosylation of Dystroglycan is Crucial for Thymocyte Development in the Mouse. *PLoS ONE 5:*e9915, 2010.

Wang, R.X., Urso, M.L., Zambraski, E.J., Rader, E.P., Campbell, K.P. and Liang, B.T. Adenosine A_3 Receptor Stimulation Induces Protection of Skeletal Muscle from Eccentric Contraction Meditated-Injury. *Am. J. Physiol. Regul. Integr. Comp. Physiol. 299*: R259-67, 2010.

Uriu, Y., Kiyonaka, S., Miku, T., Yagi, M., Akiyama, S., Mori, E., Nakao, A., Beedle, A.M., Campbell, K.P., Wakamori, M. and Mori, Y. RAB3-Interacting Molecule γ Isoforms Lacking the Rab3-binding Domain Induce Long-Lasting Currents but Block Neurotransmitter Vesicle Anchoring in Voltage-Dependent P/Q-type Ca^{2+} Channels. *J. Biol. Chem. 285: 21750-67*, 2010.

Weiss, R.M., Kerber, R.E., Jones, J.K., Stephan, C.M., Trout, C.J., Lindower, P.D., Staffey, K.S., Campbell, K.P. and Mathews, K.D. Exercise-Induced Left Ventricular Dysfunction in Heterozygous Dystrophinopathy. *J. Am. Soc. Echocardiogr. 23*: 848-53, 2010.

Vassilopoulos, S., Oddoux, S., Groh, S., Cacheaux, M., Faure, J., Brocard, J., Campbell, K.P. and Marty, I. Caveolin-3 is Associated with the Calcium Release Complex and is Modified Under *in vivo* Triadin Modification. *Biochemistry 49:* 6130-35, 2010.

Leonoudakis, D., Singh, M., Mohajer, R., Mohajer, P., Fata, J.E., Campbell, K.P. and Muschler, J.L. Dystroglycan Controls Signaling of Multiple Hormones Through Modulation of STAT5 Activity. *J. Cell Sci. 123:* 3683-90, 2010.

Satz, J.S., Ostendorf, A.P., Hou, S., Turner, A., Kusano, H., Lee, J.C., Turk, R., Nguyen, H., Ross-Barta, S.E., Westra., S., Hoshi, T., Moore, S.A. and Campbell, K.P. Distinct Functions of Glial and Neuronal Dystroglycan in the Developing and Adult Mouse Brain. *J Neurosci 30:* 14560-72, 2010.

Lueck, J., Rossi, A.E., Thornton, C.A., Campbell, K.P. and Dirksen, R.T. Sarcolemmal Restricted Localization of Functional C1C-1 Channels in Mouse Skeletal Muscle. *J. Gen. Physiol. 136:* 597-613, 2010.

Han, R., Frett, E.M., Levy, J.R., Rader, E.P., Lueck, J.D., Bansal, D., Moore, S.A., Ng, R.N., Beltran-Valero de Bernabe, D., Faulkner, J.A. and Campbell, K.P. Genetic Ablation of the Complement System Attentuates Dysferlin-deficient Muscular Dystrophy. *J. Clin. Invest. 120:* 4366-74, 2010.

Han, R., Kobuke, K, Anderson, M.E., Beltran-Valero de Bernabe, D., Kobayashi, Y., Yang, B., Campbell, K.P. Improved genotyping of the dysferlin null mouse. *Protocol Exchange* (2011) DOI: 10.1038/protex.2011.232

Mathews, K.D., Stephan, C.M., Laubenthal, K., Winder, T.L., Michele, D.E., Moore, S.A. and Campbell, K.P. Myoglubinuria and Muscle Pain are Common in Patients with Limb Girdle Muscular Dystrophy 2I. *Neurol. 76:* 194-95, 2011.

Wu J., Ruas, J.L., Estall, J.L., Rasbach, K.A., Choi, J.H., Ye, L, Bostrom, P., Tyra, H.M., Crawford, R.W., Campbell, K.P., Rutkowski, D.T., Kaufman, R.J. and Spiegelman, B.M. The Unfolded Protein Response Mediates Adaptation to Exercise in Skeletal Muscle through a PGC-1α/ATF6α Complex. *Cell Metab. 13:* 160-69, 2011.

Lueck, J.D., Rossi, A.E., Thornton, C.A., Campbell, K.P. and Dirksen, R.T. Response to the letter: "On the localization of ClC-1 in skeletal muscle fibers". *J. Gen. Physiol. 137:* 331-33, 2011.

Sullivan, B.M., Emonet, S., Welch, M.J., Lee, A.M., Campbell, K.P., de la Torre, J.C. and Oldstone., M.B.A. Point Mutation in the Glycoprotein of Lymphocytic Choriomeningitis Virus is Necessary for Receptor Binding, Dendritic Cell Infection, and Long-term Persistence. *Proc Natl Acad Sci USA*. *108*: 2969-74, 2011.

Hara, Y., Balci, B., Kanagawa, M., Beltran-Valero de Bernabe, D., Gundesli, H., Yoshida-Moriguchi, T., Willer, T., Satz, J.S., Burden, S.J., Oldstone, M.B.A., Accardi, A., Talim, B., Muntoni, F., Topaloglu, H., Dincer, P. and Campbell, K.P. A Dystroglycan Mutation Associated with Limb-Girdle Muscular Dystrophy. *N. Eng. J. Med. 364:* 939-46, 2011.

Clarke, N.F., Maugenre, S., Vandebrouck, A., Urtizberea, J.A., Willer, T., Peat, R., Gray, F., Bouchet, C., Manya, H., Vuillaumier-Barrot, S., Endo, T., Chouery, E., Campbell, K.P., Megarbane, A. and Guicheney, P. Congenital Muscular Dystrophy Type 1D (MDC1D) Due to a Large Intragenic Insertion/Deletion Involving intron 10 of the LARGE Gene. *Eur. J. Human Genet. 19:* 452-57, 2011.

Stalnaker, S.H., Aoki, K., Lim, J.M.., Porterfield, M., Lui, M., Satz, J.S., Buskirk, S., Campbell, K.P., Hu, H., Live, D., Tiemeyer, M. and Wells, L. Glycomic Analysis of Mouse Models of Congenital Muscular Dystrophy. *J. Biol. Chem. 286:* 21180-90, 2011.

Noell, S., Wolburg-Buchholz, K., Mack, A.F., Beedle, A.M., Satz, J.S., Campbell, K.P., Wolburg, H., Fallier-Becker, P. Evidence for a Role of Dystroglycan Regulating the Membrane Architecture of Astroglial Endfeet. *Eur. J. Neurosci. 33:* 2179-86, 2011.

Lei, D., Gao, X., Perez, P., Ohlemiller, K.K., Chen, C.-C., Campbell, K.P., Hood, A.Y. and Bao, J. Anti-Epileptic Drugs Delay Age-Related Loss of Spiral Ganglion Neurons via T-type Calcium Channel. *Hear. Res. 278:* 106-12, 2011.

Alnawaiseh, M., Albanna, W., Chen, C.-C., Campbell, K.P., Hescheler, J., Luke, M. and Schneider, T. Two Separate Ni2+-sensitive voltage-gated Ca2+ channels modulate transretinal signaling in the isolated murine retina. *Acta Ophthalmol. 89:* e579-e590, 2011.

Hara, Y., Kanagawa, M., Kunz, S., Yoshida-Moriguchi, T., Satz, J.S., Kobayashi, Y.M., Zhu, Z., Burden, S.J., Oldstone, M.B.A. and Campbell, K.P. LARGE-dependent modification of dystroglycan at Thr-317-319 is required for laminin binding and areanavirus infection. *Proc Natl Acad Sci USA*. *108:* 17426-31, 2011.

Lancioni, A., Luisa Rotundo, I., Kobayashi, Y.M., D'Orsi, L., Aurino, S., Nigro, G., Piluso, G., Acampora, D., Cacciottolo, M., Campbell, K.P. and Vincenzo, N. Combined deficiency of alpha and epsilon sarcoglycan disrupts the cardiac dystrophin complex. *Hum. Mol. Genet. 20:* 4644-54, 2011.

Di Blasi, C., Bellafiore, E., Salih, M.A.M., Manzini, M.C., Moore, S.A., Seidahmed, M.Z., Mukhtar, M.M., Karrar, Z.A., Walsh, C.A., Campbell, K.P., Mantegazza, R., Morandi, L. and Mora, M. Variable Disease Severity in Saudi Arabian and Sudanese Families with c.3924+2 T>C Mutation of *LAMA2. BMC Res. Notes.4:* 534, 2011.

Han, R., Rader, E.P., Levy, J.R., Bansal, D. and Campbell, K.P. Dystrophin Deficiency Exacerbates Skeletal Muscle Pathology in Dysferlin-null Mice. *Skelet. Muscle 1:35*, 2011.

Inamori, K., Yoshida-Moriguchi, T., Hara, Y., Anderson, M.E., Yu, L. and Campbell, K.P. Dystroglycan Function Requires Xylosyl- and Glucuronyltransferase Activities of LARGE. *Science 335:* 93-96, 2012.

Kobayashi, Y.M., Rader, E.P., Crawford, R.W. and Campbell, K.P. Endpoint Measures in the *mdx* Mouse Relevant for Muscular Dystrophy Pre-Clinical Studies. *Neuromuscul. Disord. 22:* 34-42, 2012.

Inamori, K., Yoshida-Moriguchi, T. and Campbell, K.P. New insights into laminin-binding glycosylation on alpha-dystroglycan. *Life Science Shinchaku Ronbun Review 30:* 1775-77, 2012.

Willer, T., Lee, H., Lommel, M., Yoshida-Moriguchi, T., Beltran Valero de Bernabe, D., Venzke, D., Cirak, S., Schachter, H., Vajsar, J., Voit, T., Muntoni, F., Loder, A.S., Dobyns, W.B., Winder, T.L., Strahl, S., Mathews, K.D., Nelson, S.F., Moore, S.A. and Campbell, K.P. *ISPD* loss-of-function mutations disrupt dystroglycan *O*-mannosylation and cause Walker-Warburg syndrome. *Nat. Genet. 44:* 575-80, 2012.

Rojek, J.M., Moraz, M.-L., Pythoud, C., Rothenberger, S., Gisou Van der Goot, F., Campbell, K.P. and Kunz, S. Binding of Lassa virus perturbs extracellular matrix-induced transduction via dystroglycan. *Cell Microbiol. 14*:1122-34, 2012.

Beedle, A., Turner, A., Saito, Y., Lueck, J.D., Nienaber, T. and Campbell, K.P. Mouse fukutin deletion impairs dystroglycan processing and recapitulates muscular dystrophy. *J Clin Invest. 122*(9): 3330–42, 2012.

Li, Z., Gilbert, J.A., Zhang, Y., Qui,Q., Ramanujan, V.K., Shavlakadze, T., Eash, J.K., Scaramozza, A., Goddeeris, M.M., Kirsch, D.G., Campbell, K.P., Brack, A.S., Glass, D.J. An HMGA2-IGF2BP2 Axis Regulates Myoblast Proliferation and Myogenesis. *Dev Cell. 23*: 1-13, 2012.

Myshrall, T.D, Moore, S.A., Ostendorf, A.P., Satz, J.S., Kowalczyk, T., Nguyen, H., Daza, R.A.M., Lau, C., Campbell, K.P., Hevner, R.F. Dystroglycan on Radial Glia End feet is Required for Pial Basement Membrane Integrity and Columnar Organization of the Developing Cerebral Cortex. *J Neuropath Exp Neurol. 71*(12): 1047-63, 2012.

Moraz, M.L., Pythoud, C., Turk, R., Rothenberger, S., Pasquato, A., Campbell, K.P., Kunz, S. Cell entry of Lassa virus induces tyrosine phosphorylation of dystroglycan. *Cell Microbiol. 15*(5): 689-700, 2013.

Inamori K., Hara Y., Willer T., Anderson M.E., Zhu Z., Yoshida-Moriguchi T., Campbell K.P. Xylosyl- and glucuronyltransferase functions of LARGE in α-dystroglycan modification are conserved in LARGE2. *Glycobiology 23*: 295-302, 2013.

Esser AK, Miller MR, Huang Q, Meier MM, Beltran-Valero de Bernabe D, Stipp CS, Campbell KP, Lynch CF, Smith BJ, Cohen MB, Henry MD. Loss of LARGE2 Disrupts Functional Glycosylation of α-Dystroglycan in Prostate Cancer. *J Biol Chem 288:* 2132-42, 2013.

Cirak, S., Foley, A.R., Herrmann, R., Willer, T., Stevens, E., Yau, S., Brodd, L., Torelli, S., Kamynina, A., Vondracek, P., Roper, H., Longman, C., Korinthenberg, R., Marrosu, G., Nürnberg, P., UK10K Consortium, Plagnol, V., Hurles, M., Sewry, C., Campbell, K.P., Voit, T. and Muntoni, F. ISPD gene mutations are a common cause of congenital and limb-girdle muscular dystrophies. *Brain 136* (1): 269-81, 2013.

Stevens, E., Carss, K., Cirak, S., Foley, A.R., Torelli, S., Willer, T., Manzini, C., UK10K consortium, Yau, M., Brodd, L., Sewry, C., Topaloglu, H., Haliloglu, G., Walsh, C., Hurles, M., Campbell, K.P., Stemple, D., Lin, Y. and Muntoni, F. Mutations in B3GalNT2 cause a novel congenital muscular dystrophy and hypoglycosylation of α-dystroglycan. *Am. J. Hum. Genet. 92*: 1-12, 2013.

Carss, KJ, Stevens, E, Foley, AR, Cirak, S, Riemersma, M, Torelli, S, Hoischen, A, Willer, T, von Scherpenzeel, M, Moore, SA, Messina, S, Bertini, E, Bonnemann, C, Abdenur, JE, Grosmann, AK, Punetha, J, Quinlivan, R, Waddell, LB, Young, HK, Wraige, E, Yau, S, Brodd, L, Feng, L, Sewry, C, MacArthur, DG, North, KN, Hoffman, E, Stemple, DL, Hurles, ME, van Bokhoven, H, Campbell, KP, Lefeber, DJ, UK10K consortium, Lin, YY, Muntoni, F. Mutations in GDP-mannose pyrophosphorylase B cause congenital and limb girdle muscular dystrophies associated with hypoglycosylation of α-dystroglycan. *Am J Hum Genet 93:* 1-13, 2013.

Yang, AC, Ng, BG, Moore, SA, Rush, J, Waechter, CJ, Raymond, KM, Willer, T, Campbell, KP, Freeze, HH, Mehta, L. Congenital disorder of glycosylation due to *DPM1* mutations presenting with dystroglycanopathy-type congenital muscular dystrophy. *Mol Genet Metab 110*(3): 345-351, 2013.

Yoshida-Moriguchi, T., Willer, T., Anderson, ME, Venzke, D., Whyte, T., Muntoni, F., Lee, H., Nelson, SF, Yu, L., Campbell, KP. SGK196 is a Glycosylation-Specific O-Mannose Kinase Required for Dystroglycan Function. *Science* 341: 896-9, 2013.

Goddeeris, M.M., Wu, B., Venzke, D., Yoshida-Moriguchi, T., Saito, F., Matsumura, K., Moore, S.A., Campbell, K.P. Large glycans on dystroglycan function as a tunable matrix scaffold to prevent dystrophy. *Nature 503:* 136-40, 2013.

Nguyen, H., Ostendorf, A.P., Satz, J.S., Westra, S., Ross-Barta, S.E., Campbell, K.P., Moore, S.A. Glial scaffold required for cerebellar granule cell migration is dependent on dystroglycan function as a receptor for basement membrane proteins. *Acta Neuropahol Commun 1* (1): 58, 2013.

Wallace, S.E., Conta, J.H., Winder, T.L., Willer, T., Eskuri, J.M., Haas, R., Patterson, K., Campbell, K.P., Moore, S.A., Gospe, S.M. A novel missense mutation in *POMT1* modulates the severe congenital muscular dystrophy phenotype associated with *POMT1* nonsense mutations. *Neuromuscul Disord 24*: 312-320, 2014.

Lin, S.-S., Tzeng, B.-H., Lee, K.-R., Smith, R.J., Campbell, K.P. and Chen, C.-C. $Ca_V3.2$ T-type calcium channel is required for the NFAT-dependent Sox9 expression in tracheal cartilage. *Proc Natl Acad Sci 111*: E1990-E1998, 2014.

Inamori, K., Willer, T., Hara, Y., Venzke, D., Anderson, M.E., Clarke, N.F., Guicheney, P., Bönnemann, C.G., Moore, S.A., Campbell, K.P. Endogenous glucuronyltransferase activity of LARGE or LARGE2 required for functional modification of α-dystroglycan in cells and tissues. *J Biol Chem* 280(41): 28138-48, 2014.

Willer, T., Inamori, K., Venzke, D., Harvey, C.D., Morgensen, G., Hara, Y., Beltrán Valero de Bernabé, D., Yu, L., Wright, K.M., Campbell, K.P. The glucuronyltransferase B4GAT1 is required for initiation of LARGE-mediated α-dystroglycan functional glycosylation. *eLife* 3;3:e03941, 2014.

Hara, Y. & Campbell, K.P. Dystroglycan: Extracellular Matrix Receptor that Links to Cystoskeleton. *Glycoscience: Biology and Medicine* 1245-1251, 2015. doi: 10.1007/978-4-431-54841-6_173

Yoshida-Moriguchi T., Campbell K.P. Matriglycan: a novel polysaccharide that links dystroglycan to the basement membrane. *Glycobiology*. 25(7):702-713, 2015.

Jensen, B. S., Willer, T., Saade, D. N., Cox, M. O., Mozaffar, T., Scavina, M., Stefans, V. A., Winder, T. L., Campbell, K. P., Moore, S. A. and Mathews, K. D. (2015), GMPPB-Associated Dystroglycanopathy: Emerging Common Variants with Phenotype Correlation. Hum. Mutat.. doi: 10.1002/humu.22898.

Wiktorowicz, T., Kinter, J., Kobuke, K., Campbell, K.P., Sinnreich, M. Genetic characterization and improved genotyping of the dysferlin-deficient mouse strain Dysf tm1Kcam. *Skelet. Muscle 5:32, 2015.*

de Greef J.C., Hamlyn R., Jensen B.S., O'Campo Landa, R., Levy, J.R., Kobuke, K., Campbell, K.P. Collagen VI Deficiency Improves Muscle Pathology, but Not Muscle Function, in the Y-Sarcoglycan-Null Mouse. *Hum. Mol. Genet*. 2016; 25(7):1357-1369. doi:10.1093/hmg/ddw018 PMID: 26908621 PMCID: PMC4787905

Agre, P., Bertozzi, C., Bissell, M, Campbell, K.P., Cummings, R., Desai, U., Estes, M., Flotte, T., Fogleman, G., Gage, F., Ginsburg, D., Gordon, J., Hart, G., Hascall, V., Kiessling, L., Kornfeld, S., Lowe, J., Magnani, J., Mahal, L., Medzhitov, R., Roberts, R., Sackstein, R., Sarker, R., Schnaar, R., Schwartz, N., Varki, A., Weissman, I. Training the Next Generation of Biomedical Investigators in Glycosciences. *J Clin Invest*. 2016;126(2):405-408. doi:10.1172/JCI85905

Blaeser A., Harper A., Campbell K., Lu Q. L. Report: Fourth International Workshop for Glycosylation Defects in Muscular Dystrophies. *J Genet Syndr Gene Ther.* 2016, 7:1. doi:10.4172/2157-7412.1000286

Allamand, V., Bonaldo, P., Bönnemann, C., Brown, S.C., Burkin, D., Campbell, K.P., Durbeej-Hjalt, M., Girgenrath, M., Nevo,Y., Ruegg, M., Saunier, M., Toda, T., Willmann, R. 212th ENMC workshop: Animal models of Congenital Muscular Dystrophies, Naarden, The Netherlands, May 29th-31st, 2015. *Neuromuscular Disorders* 2016; 26(3): 252-259. doi:10.1016/j.nmd.2016.02.002

Praissman, J.L., Willer, T., Sheikh, M. O., Toi, A, Chitayat, D, Lin, Y, Lee, H, Stalnkaker, S, Wang, S, Prabhakar, P, Nelson, SF, Stemple, D.L., Moore, S.A., Moremen, K.W., Campbell, K.P., Wells, L. The Functional O-Mannose Glycan on α-Dystroglycan Contains a Phospho-ribitol Primed for Matriglycan Addition. eLife 2016, 29;5:e14473. doi:http://dx.doi.org/10.7554/eLife.14473 PMID: 27130732 PMCID: PMC4924997

Turk R., Hsiao J.J., Smits, M.M., Ng, B.H., Pospisil, T.C., Jones, K.S., Campbell, K.P., Wright, M.E. Molecular Signatures of Membrane Protein Complexes Underlying Muscular Dystrophy. *Mol Cell Proteomics* 2016 Jun;15(6):2169-85. doi:10.1074/mcp.M116.059188 PMID: 27099343 PMCID: PMC5083101

Briggs, D., Yoshida-Moriguchi, T., Zheng, T., Venzke, D., Anderson, M., Strazzulli, A., Moracci, M., Yu, L., Hohenester, E., Campbell, K.P. Structural Basis of Laminin Binding to the LARGE Glycans on Dystroglycan. *Nat Chem Biol*. 12(10):810-814, 2016. doi:10.1038/nchembio.2146 PMID: 27526028 PMCID: PMC5030134

Inamori, K., Beedle, A.M., Beltrán-Valero de Bernabé, D., Wright, M.E., Campbell, K.P. LARGE2-dependent Glycosylation Confers Laminin-Binding Ability on Proteoglycans. *Glycobiology,* 2016, 26(12): 1284-1296. doi: 10.1093/glycob/cww075. PMID: 27496765 PMCID: PMC5137251

Rader, E., Turk, R., Willer, T., Beltrán, D., Inamori, K., Peterson, T.A., Engle, J., Prouty, S., Matsumura, K., Saito, F., Anderson, M.E., Campbell, K.P. Role of Dystroglycan in Limiting Contraction-Induced Injury to the Sarcomeric Cytoskeleton of Mature Skeletal Muscle. *Proc Natl Acad Sci U S A*. 2016 Sep 27;113(39):10992-7. doi:10.1073/pnas.1605265113 PMID: 27625424 PMCID: PMC5047148

Früh, S., Romanos, J., Panzanelli, P., Bürgisser, D., Tyagaragan, S.K., Campbell, K.P., Santello, M., Fritschy, JM. (2016). Neuronal Dystroglycan is Necessary for Formation and Maintenance of Functional CCK-Positive Basket Cell Terminals on Pyramidal Cells. *The Journal of Neuroscience*, *36*(40), 10296-10313. doi:10.1523/jneurosci.1823-16.2016 PMID: 27707967

Jerber, J., Zaki, M.S., Al-Aama, J.Y., Ozgur Rosti, R., Ben-Omran, T., Dikoglu, E., Silhavy, J. L., Caglar, C., Musaev, D., Albrecht, B., Campbell, K.P., Willer, T., Almuriekhi, M., Okay Çağlayan, A., Vajsar, J., Bilgüvar, K., Ogur, G., Abou Jamra, R., Günel, M., Gleeson, J.G. (2016). Biallelic Mutations in TMTC3, Encoding a Transmembrane and TPR-Containing Protein, Lead to Cobblestone Lissencephaly. *Am. J. Hum. Genet*, 99(5): 1181–1189. doi:10.1016/j.ajhg.2016.09.007 PMID: 27773428 PMCID: PMC5097947

Zhu, Q., Venzke, D., Walimbe, A.S., Anderson, M.E., Fu, Q., Kinch, L., Wang, W., Chen, X., Grishin, N., Huang, N., Yu, L., Dixon, J.E., Campbell, K.P., Xiao, J. (2016). Structure of Protein O-Mannose Kinase Reveals a Unique Active Site Architecture. *eLife*, 5. doi: 10.7554/eLife.22238.001 PMID: 27879205 PMCID: PMC5142810

Clements, R., Turk, R., Campbell, K.P., Wright, K.M. (2017). Dystroglycan Maintains Inner Limiting Membrane Integrity to Coordinate Retinal Development. *Journal of Neuroscience,* 30;37(35): 8559-8574. doi: 10.1523/JNEUROSCI.0946-17.2017 PMID: 28760865 PMCID: PMC5577860

Cox, M.L., Evans, J.M., Davis, A.G., Guo, L.T., Levy, J.R., Starr-Moss, A.N., Salmela, E.T., Hytönen, M.K., Lohi, H., Campbell, K.P., Clark, L.A., Shelton, G.D. (2017). Exome Sequencing Reveals Independent SGCD Deletions Causing Limb Girdle Muscular Dystrophy in Boston Terriers. *Skeletal Muscle,* 7(1):15. doi: 10.1186/s13395-017-0131-0 PMID: 28697784 PMCID: PMC5506588

Brun, B.N., Willer, T., Darbro, B.W., Gonorazky, H.D., Naumenko, S., Dowling, J.J., Campbell, K.P., Moore, S.A., Mathews, K.D. (2018). Uniparental Disomy Unveils a Novel Recessive Mutation in POMT2. *Neuromuscular Disorders*, 28(7), 592-596. doi:10.1016/j.nmd.2018.04.003 PMID: 29759639 PMCID: PMC6115279

González Coraspe, J.A.,Weis, J., Anderson, M.E., Münchberg, U., Lorenz, K., Buchkremer, S., Carr, S., Zahedi, R.P., Brauers, E., Michels, H., Sunada, Y., Lochmüller, H., Campbell, K.P., Freier, E., Hathazi, D., Roos, A. (2018). Biochemical and Pathological Changes Result from Mutated Caveolin-3 in Muscle. *Skelet. Muscle*, 8(28). doi: 10.1186/s13395-018-0173-y PMID:30153853 PMCID: PMC6114045

Herrador, A., Fedeli, C., Radulovic, E., Campbell, K.P., Moreno, H., Gerold, G., Kunz, S. (2019). Dynamic Dystroglycan Complexes Mediate Cell Entry of Lassa Virus. *mBio,* 10(2). doi: 10.1128/mBio.02869-18 PMID:30914516 PMCID: PMC6437060

Chakravorty, S., Berger, K., Arafat, D., Nallamilli, B.R.R., Subramanian H.P., Joseph, S., Anderson, M.E., Campbell, K.P., Glass, J., Gibson, G., Hegde, M. (2019). Clinical Utility of RNA Sequencing to Resolve Unusual GNE Myopathy with a Novel Promoter Deletion. *Muscle Nerve,* 60(1):98-103. doi: 10.1002/mus.26486 PMID:30990900 PMCID: PMC7688010

Beltrán, D, Anderson, M.E., Bharathy, N., Settelmeyer, T.P., Svalina, M.N., Bajwa, Z., Shern, J.F., Gultekin, S.H., Cuellar, M., Yonekawa, T., Keller, C., Campbell, K.P. (2019). Exogenous Expression of the Glycosyltransferase LARGE1 Restores α-Dystroglycan Matriglycan and Laminin Binding in Rhabdomyosarcoma. *Skelet. Muscle*, 9(1). doi:10.1186/s13395-019-0195-0 PMID:31054580 PMCID: PMC6500046

de Greef, J.C., Slütter, B., Anderson, M.E., Hamlyn, R., O'Campo Landa, R., McNutt, E.J., Hara, Y., Pewe, L.L., Venzke, D., Matsumura, K., Saito, F., Harty, J.T., Campbell, K.P. (2019). Protective role for the N-terminal domain of α-dystroglycan in Influenza A virus proliferation. *Proc. Natl. Acad. Sci. USA.*, 116(23). doi:10.1073/pnas.1904493116 PMID:31097590 PMCID: PMC6561248

Ware, B.C., Sullivan, B.M., LaVergne, S., Marro, B., Egashira, T., Campbell, K.P., Elder, J., Oldstone, M.B.A. (2019). A unique variant of lymphocytic choriomeningitis virus that induces pheromone binding protein MUP: Critical role for CTL. *Proc. Natl. Acad. Sci. USA*, 116(36):18001-18008. doi:10.1073/pnas.1907070116 PMID:31427525 PMCID: PMC6731760

Wang, Y., Gallant, R.C., Neves, M.A.D., Lei, X., Gupta, S., Coelho, R., Wong, T., Cohn, R.D., Campbell, K.P., Ni, H. (2019). Alpha-Dystroglycan Supports Platelet Aggregation and Thrombus Formation. *Blood,* 134(Supplement_1): 11. doi: https://doi.org/10.1182/blood-2019-131521

Day, B.W., Lathia, J.D., Bruce, Z.C., D'Souza, R.C.J., Baumgartner, U., Ensbey, K., Chieh Lim, Y., Stringer, B.W., Akgül, S., Offenhäuser, C., Li, Y., Jamisen, P.R., Smith, F.M., Jurd, C.L.R., Robertson, T., Po-Ling, I., Lwin, Z., Jeffree, R.L., Johns, T.G., Bhat, K.P.L., Rich, J.N., Campbell, K.P., Boyd, A.W. (2019) The dystroglycan receptor maintains glioma stem cells in the vascular niche. *Acta Neuropathol.*, 138(6):1033-1052. doi: 10.1007/s00401-019-02069-x. PMID: 31463571; PMCID: PMC6851226

Bez Batti Angulski, A., Bauer, J., Cohen, H., Kobuke, K., Campbell, K. P., Metzger, J. M. (2020). Investigations of an inducible intact dystrophin gene excision system in cardiac and skeletal muscle in vivo. *Sci. Rep.*, 10(1):10967. doi:10.1038/s41598-020-67372-0 PMID: 32620803 PMCID: PMC7335168

Sheikh, M.O., Venzke, D., Anderson, M.E., Yoshida-Moriguchi, T., Glushka, J.N., Nairn, A.V., Galizzi, M., Moremen, K.W., Campbell, K. P., Wells, L. (2020). HNK-1 sulfotransferase modulates α-dystroglycan glycosylation by 3-O-sulfation of glucuronic acid on matriglycan. *Glycobiology,* 30(10):817-829. doi: 10.1093/glycob/cwaa024 PMID: 32149355 PMCID: PMC7673472

Walimbe, A. S., Okuma, H., Joseph, S., Yang, T., Yonekawa, T., Hord, J. M., Venzke, D., Anderson, M. E., Torelli, S., Manzur, A., Devereaux, M., Cuellar, M., Prouty, S., Ocampo Landa, S., Yu, L., Xiao, J., Dixon, J.E., Muntoni, F., Campbell, K. P. (2020) POMK regulates dystroglycan function via LARGE1-mediated elongation of matriglycan. *eLife*, (9:e61388). doi: 10.7554/eLife.61388 PMID: 32975514 PMCID: PMC7556876

Shelton, G. D., Minor, K. M., Guo, L. T., Friedenberg, S. G., Cullen, J. N., Hord, J. M., Venzke, D., Anderson, M. E., Devereaux, M., Prouty, S. J., Handelman, C., Campbell, K. P., & Mickelson, J. R. (2021). Muscular dystrophy-dystroglycanopathy in a family of Labrador retrievers with a LARGE1 mutation. *Neuromuscular Disorders*, *31*(11), 1169–1178. doi: 10.1016/j.nmd.2021.07.016 PMID: 34654610 PMCID: PMC8963908

Joseph, S. and Campbell, K.P. (2021) Lassa fever virus binds matriglycan – a polymer of alternating xylose and glucuronate – on α-dystroglycan. *Viruses*, 13(9), 1679. doi: 10.3390/v13091679 PMID: 34578260 PMCID: PMC8473316

Yonekawa, T., Rauckhorst, A.J., El-Hattab, S., Cuellar, M.A., Venzke, D., Anderson, M.E., Okuma, H., Pewa, A.D., Taylor, E.B., Campbell, K.P. 2022. *Large1* Gene Transfer in Older *myd* Mice with Severe Muscular Dystrophy Restores Muscle Function and Greatly Improves Survival. *Sci Adv, 8*(21), eabn0379. doi: 10.1126/sciadv.abn0379 PMID: 35613260 PMCID: 35613260

Sheikh, M.O., Capicciotti, C.J., Liu, L., Praissman, J., Mead, D.G., Brindley, M.A., Willer, T., Campbell, K.P., Moremen, K.W., Wells, L., Boons, G.J. (2022) Cell Surface Glycan Engineering Reveals that Matriglycan Alone can Recapitulate Dystroglycan Binding and Function. *Nat Commun* 13, 3617. doi: 10.1038/s41467-022-31205-7 PMID: 35750689 PMCID: PMC9232514

Joseph, S., Schnicker, N. J., Xu, Z., Yang, T., Hopkins, J., Watkins, M., Chakravarthy, S., Davulcu, O., Anderson, M. E., Venzke, D., Campbell, K. P. (2022). Structure and mechanism of LARGE1 matriglycan polymerase. bioRxiv doi: https://doi.org/10.1101/2022.05.12.491222

Okuma, H., Hord, J. M., Chandel, I., Venzke, D., Anderson. M. E., Walimbe, A. S., Joseph, S., Gastel, Z., Hara, Y., Saito, F., Matsumura, K., Campbell, K. P. (2023). N-terminal domain on dystroglycan enables LARGE1 to extend matriglycan on α-dystroglycan and prevents muscular dystrophy. *eLife* 12: e82811. doi: 10.7554/eLife.82811 PMID: 36723429 PMCID: PMC9917425

Chandel, I. and Campbell, K. P. (2023). Identification of Matriglycan by Dual Exoglycosidase Digestion of α-Dystroglycan. *Bio-protocol* 13(18): e4827. doi: 10.21769/BioProtoc.4827 PMID: 37753476 PMCID: PMC10518772

Ma, K., Ng, K.K., Huang, S., Lake, N.J., Xu, J., Lek, A., Ge, L., Woodman, K.G., Koczwara, K.E., Ho, V., O'Connor, C.L., Joseph, S., Brindley, M.A., Campbell K.P., Lek, M. (2023). Deep Mutational Scanning in Disease-related Genes with Saturation Mutagenesis-Reinforced Functional Assays (SMuRF). bioRxiv doi: https://doi.org/10.1101/2023.07.12.548370

Yang, T., Chandel, I., Gonzales, M., Okuma, H., Prouty, S., Zarei, S., Joseph, S., Garringer, K.W., Ocampo Landa, S., Yonekawa, T., Walimbe, A.S., Venzke, D., Anderson, M.E., Hord, J.M., Campbell, K.P. A short, single site matriglycan maintains neuromuscular function. bioRxiv doi: https://doi.org/10.1101/2023.12.20.572361

Complete List of Published Work in MyBibliography:
http://www.ncbi.nlm.nih.gov/sites/myncbi/kevin.campbell.1/bibliography/40337863/public/?sort=date&direction=descending

Google Scholar

Original papers published: 481
Number of times work cited: 80,006
Average citation rate per year: 1,666
H-index: 156 (Google Scholar – 1/2/24)