11/12/2023

Michelle A Grenier

Professor Pediatric cardiology

1. **Biography**

**Name**

Michelle Ann Grenier, MD

**Current Position**

Professor of Pediatrics

**Professional Address**

Children’s Hospital Colorado Anschutz Medical Campus

Division of Cardiology

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Aurora, CO 80045

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**2. Education**

B.S. 1981 George Mason University Fairfax, VA Evolutionary Biology

M.D. 1988 Eastern Virginia Medical School Norfolk, VA Medicine

Intern 1989 The Johns Hopkins Hospital Baltimore, MD Pediatrics

Resident 1991 The Johns Hopkins Hospital Baltimore, MD Pediatrics

Fellow 1992 The Johns Hopkins Hospital Baltimore, MD Pediatric Cardiology

Fellow 1994 Children’s National Medical Center, Washington, D.C. Pediatric Cardiology

1. **Academic Positions**

Assistant Professor Pediatrics 08/01/94 - 11/30/95 University of Texas Health Science Center Houston, TX

Research Fellow (SLipshultz) 12/1/95 - 06/30/97 Boston Children’s

Assistant Professor Pediatrics 07/01/97 - 12/30/99 University of Rochester Strong Hospital Rochester, NY

Assistant Professor Pediatrics 09/01/02 - 06/30/04 Emory School of Medicine Atlanta, GA

Assistant Professor Pediatrics 09/01/02 - 06/30/04 Mercer School of Medicine Macon, GA

Assistant Professor Pediatrics 07/01/04 - 03/01/08 Texas Children’s Hospital Houston, TX

Associate Professor Pediatrics 04/10/08 - 06/30/10 University of Kentucky Children’s Hospital Lexington, KY

Associate Professor Pediatrics 07/01/10 - 03/30/13 Cincinnati Children’s Hospital Medical Center

Professor Pediatrics 04/15/13 - 10/15/ 14 University of Mississippi Medical Center Jackson, MS

Professor Pediatrics 10/14/19 – 2/28/22 University of New Mexico

Professor Pediatrics 05/01/22 – present University of Colorado

1. **Hospital/Professional Positions**

Private Pediatric Cardiologist 1/1/96 – 6/30/97 Exeter Hospital Exeter, NH

Private Ped/Ped Cardiologist 1/1/00 – 11/30/00 Pulaski Virginia (Appalachian service)\*

Private Pediatric Cardiologist 1/1/01 – 8/1/03 SW Tx Pediatric Cardiology McAllen, TX\*

Private Pediatric Cardiologist 12/01/14 - 07/14/16 Pediatrix Cardiology Associates of New Mexico (A Mednax Corporation) Albuquerque, NM

Private Pediatric Cardiologist 01/01/17 - 06/30/18 Valley Children’s Hospital Madera, CA\*

Director of Imaging 07/01/18 - 09/30/19 Driscoll Children’s Hospital Corpus Christi, TX

\*These positions were solo rural positions involving 24/7 coverage/call

1. **Honors and Awards**

Alpha Omega Alpha, Selected Junior Year

 1987 Eastern Virginia Medical School

The Robert Campe Goodman and Augusta S. Goodman Award,

Awarded on the basis of both academic excellence and an unselfish concern for others(Service)

 1988 Eastern Virginia Medical School

Janet M. Glasgow Memorial Citation for Scholastic Achievement

 1988 Eastern Virginia Medical School

The David Kamsler Memorial Award for Outstanding Compassion and Care of Pediatric Patients (Service) 1991 The Johns Hopkins Hospital

Outstanding Faculty (teaching) 1995 University of Texas

Outstanding Faculty (teaching) 1997 University of Rochester

Buswell Fellowship (research) 1998 University of Rochester

Physician Recognition Award 1999 American Medical Association

(service)

Outstanding Faculty (Teaching) 2004 Mercer College of Medicine

Selected for AHA 32nd Annual 2006 American Heart Association

Conference on Epidemiology (research)

Best Doctors in America (service) 2010 *Cincinnati Magazine*

MedEdPortal Reviewer Recognition 2016 MedEdPortal

Best Doctors (service) 2016 *Albuquerque Magazine*

Faculty Recognition Award 2/2020 Department of Pediatrics UNM

Recognition as Exemplary Teacher 9/9/20 Learning Education Office UNM

Subspecialist of the Year 12/2020 UNM Department of Pediatrics

Recognition as Exemplary Teacher 9/9/20 Learning Education Office UNM

1. **Memberships in Professional Societies**

American Medical Association 1988-1996

American Academy of Pediatrics (Fellow) 1991-Present

American College of Cardiology (Fellow) 1991- Present

American Heart Association 1994-2016, 2022 – present

Texas Pediatric Society 1994-1996

American Association of University Women 1994-2006

National Lipid Association (South West Chapter) 2006 -2008

Heart Failure Society of America 2006- 2016

American Society of Echocardiography 2008- Present

American Council for Physician Executives (ACPE) 2014

Physicians Committee for Responsible Medicine 2014

Fetal Heart Society 2021 – Present

1. **Major Committee and Service Responsibilities**

Departmental

Medical Director Pediatric Exercise Physiology Laboratory 08/09-10/09 University of Kentucky Lexington, KY

Director of 3-D Imaging 01/01/1-03/30/13

Cincinnati Children’s Hospital Medical Center Cincinnati, OH

Medical Director of Imaging 04/15/13 - 10/15/14 University of Mississippi Medical Center Jackson, MS

Medical Director of Imaging 12/01/12 - 07/14/16 Pediatrix Cardiology Associates Albuquerque, NM

*I maintained IAC (Intersocietal Accreditation Committee in Echocardiography Labs, aka ICAL) accreditation for this group by maintaining quality assurance.*

Medical Director of Imaging 7/1/2018-10/1/2019 Driscoll Pediatric Cardiology Corpus Christi, TX

*I obtained preliminary IAC (Intersocietal Accreditation Committee in Echocardiography Labs, aka ICAL) accreditation for this group by developing quality assurance. There had been prior unsuccessful attempts for the previous 10 years.*

University of Colorado 5/23 – present UNM ambassador

*I provide 24/7 availability to discuss UNM patients that may/will require care at UC. I coordinate biweekly surgical management conference.*

School of Medicine

Residency Review Committee UNM 2019-2022

Faculty Recruitment Committee 2019-2022

Hospital

Quality Assurance Officer 01/17- 06/18 Kaweah Delta Community Hospital Visalia, CA

Quality Assurance Specialist 07/01/18 - 09/30/19 Driscoll Children’s Hospital Corpus Christi, TX

State/National Committees

\*The following committees for *program and guideline development*, as well as *review of national guidelines*. Time commitment was usually a couple of hours per week, followed a 3 to 4 day annual.

American College of Cardiology Foundation Sports Cardiology Committee

 2012 – 2016\*

*This committee has been responsible for establishing sport screenings, ACC/AHA sports restrictions, development of Task Forces to establish guidelines.*

American College of Cardiology ACHD 2015 – Present\*

(ACHD – Adult Congenital Heart Disease)

American College of Cardiology WIC 2014 – 2016\*

(Women in Cardiology)

*This committee has been instrumental in establishing precedents for women in cardiology in academics and private practice. It is currently instrumental in evaluating gender equality in cardiology.*

American College of Cardiology 2014-16 program development

 2013 – 2016\*

*In concert with a select group of ACC members, I assisted in developing pediatric cardiology sessions for the national meetings.*

American College of Cardiology Cardio-Oncology Group 2016 – 2020

*This group is standardizing cardiac evaluation and care for oncology patients.*

**Invited speaker and panelist** for the ACC National Scientific meeting , Washington, DC

 2014

**Invited speaker, panelist and chair** of two sessions (Aortopathy and the Bethesda Guidelines) for the ACC National Scientific meeting San Diego, CA 2015

**Invited panelist** for session (coronary arteriopathy) for the ACC National Scientific meeting in Chicago 2016

Task Forces

Reviewer for the 2015/2016 athletic guidelines ‘published by the American College of Cardiology and the American Heart Association.

Boards

Board member for *It’s My Heart* parent group 2004-2010 Houston, TX

Community Service/Public Health:

Community Sports Screenings 2004-2008 Texas Children’s Hospital

Medical Volunteer, Flying Pig Marathon, Cincinnati Ohio, 2010

NOTE***:*** *During this marathon, an adult male experienced sudden cardiac death at the finish line. It was raining, and as one of the physician leaders, I assisted in coding the patient as he was brought into the medical tent. After 15 minutes of compression, cardioversion and pharmacology, he was revived and successfully transferred to one of the adult facilities in Cincinnati where he underwent successful cardiac intervention and is alive and running today.*

**International Children’s Heart Foundation**, Ecuador 2011 and 2012

Coordinate 2 week outpatient cardiology clinics, triaging upwards to 200 patients in rural environment; providing medical and triaging for surgical treatment

Participant, AHA Mini-Heart Marathon, Cincinnati Ohio, 2011

Participant, Cincinnati Walks, Cincinnati Ohio, 2010

Matthew 25 Ministries through CCHMC, Cincinnati OH, 2010

Recess at the Stadium, Cincinnati OH, 2011

Physician Supervisor, First Aid, Heart the City through Seven Hills Church, Cincinnati Ohio, 2011

Volunteer for Hosea House, Newport KY, 2011

Community Sports Screenings 2011-2013 Cincinnati Children’s

Community Sports Screenings 2014-2015 University of Mississippi

PALS, ACLS instructor 01/01/17 - 06/30/18 Kaweah Delta Hospital Visalia, CA

Quarterly ZOOM meetings with developing pediatric cardiologists in Malawi, Africa 2020- Present

This has been coordinated by Dr. E. Anne Greene, MD at UNM

1. **Inventions, intellectual property and patents held or pending -** None
2. **Review and referee work**

Reviewer for *Pediatrics* 2011

American College of Cardiology CardioSurv 2011- 2014

Reviewer for *Physician and Sports Medicine* 2011-2014

Reviewer *MedEd Portal* 2013 - Present

Reviewer for the ACC Scientific Meeting 2015 - 2016

Abstracts in Sports Cardiology

 Reviewer for *Heart Rhythm* 2015 - 2016

Reviewer *Pediatrics* 2021-Present

1. **Licensures**

#### State Date of Issue

Wyoming 2023

Colorado 2022

California 2016

New Mexico 2015

Mississippi 2013

Ohio 2010

Indiana 2010

West Virginia 2010

Michigan 2008

Kentucky 2008

Georgia 2003

Virginia 2000

Texas 1994, reinstated 2004 and 2018

Maryland 1991

**Certifications**

National Board of Medical Examiners 1989

American Board of Pediatrics 1991

Board Certified Pediatric Cardiology 2000

1. **Invited extramural lectures, presentations and visiting professorships**

National Meetings

10/93 Cardiac Disease in Children with Human Immunodeficiency Virus: Relationship of Cardiac Disease to Virus Symptoms. Presented at: *American Academy of Pediatrics* Annual Meeting

10/98, 4/99 Effects of Afterload Reduction (Enalapril Therapy) in Long Term Survivors of Childhood Cancer. Invited lectures at the Pediatric Oncology Group meetings.

10/08 AAP Platform Presentation: “Prophylaxis Against Infectious Endocarditis” American Academy of Pediatrics National Meeting In Boston, MA

(See section

03/09 Invited speaker the American College of Cardiology Fellows in Training series: “Two Roads Diverged: Academic versus Private Practice” American College of Cardiology national meetings Orlando, Florida

09/12 Invited radio broadcast on Capitol Correspondent’s show *The Prism*

11/15 Invited Editorial in *Future Medicine*

 (Looking into an Athlete’s Heart: Pandora’s Box or Panacea)

03/13 Invited Case presentation *Twins and Sudden Cardiac Death* American College of Cardiology Meetings (Sports Cardiology section) in San Francisco

Regional Meetings

02/93 The Relationship of Echocardiographic and EKG Findings to Cardiac Pathology in Children with Human Immunodeficiency Virus. Presented at: *Southern Society for Pediatric Research*, February 1995.

02/95 The Relationship of Echocardiographic and EKG Findings to Cardiac Pathology in Children with Human Immunodeficiency Virus. Presented at: *Southern Society for Pediatric Research*

09/12 Invited Speaker *46th Annual Southeastern Pediatric Cardiology Society Conference*: Echo Evaluation of the RV in Pulmonary atresia/IVS University of Mississippi Medical Center Jackson, Mississippi

State:

07/07 Invited Speaker for MedImmune/Synagis on benefits of RSV Prophylaxis Houston, Texas

12/07 Invited MedImmune Speaker for Synagis Prophylaxis against RSV

 Houston, Texas

06/09 Invited speaker Chicago Children’s Memorial Hospital: “Regional Wall

 Motion Abnormality in Children” Chicago Memorial Hospital

Local:

10/01 “A String of Pearls” Grand Rounds Driscoll Children’s Hospital

10/02 “Total Anomalous Pulmonary Venous Return – Do I really need to know this?”

 Mercer Medical College

03/03 Cherry Blossom Conference: “Long QT Syndrome…Can you hear me? The Children’s Hospital Mercer Medical College

04/03 Grand Rounds: “Ventricular Hypertrophy: Friend or Foe?” Mercer Medical College

10/03 4th International Cardiovascular Symposium: “Heart Failure in Pediatrics” Mercer Medical College

10/03 Grand Rounds: “Pediatric HIV Cardiomyopathy” Mercer Medical College

11/03 Neonatal/Perinatal Symposium: Lecturer/coordinator for congenital heart disease breakout sessions Mercer Medical College

01/04 Grand Rounds: “Newer Treatments for CHF in children and

 HIV cardiac disease Mercer Medical College

11/08 Med/Peds Grand Rounds: “Not All Heart Failure is Created Equally” University of Kentucky

12/08 Central Baptist Staff Meeting: Systemic Hypertension in Kids Lexington, Kentucky

04/09 Invited speaker for University of Kentucky’s Contemporary Pediatrics session: “Sudden Cardiac Death in Young Athletes” University of Kentucky

04/10 Grand Rounds; “MythBusters: Left Ventricular Noncompaction Cardiomyopathy”

Cincinnati Children’s Hospital Medical Center, The Heart Institute

05/11 Invited Speaker to Moksha Community “Seven Pillars of Health” Cincinnati, Ohio

10/12 Invited Speaker at the University of Kentucky Graduate Exercise Science Seminar’s, topic: “Looking into an Athlete’s Heart: Panacea or Pandora’s Box” University of Kentucky

08/19 *A Primer of Pediatric Cardiomyopathy: The Nuts and Bolts* Grand Rounds Driscoll Children’s Hospital

09/20 *Athletics in the COVID Era* Grand Rounds UNM

1. **Teaching Record**

**Teaching / Education**

**Undergraduate medical students**

Development of UNM second year student curriculum in pediatric cardiology 2020 -2021

Participation in UNM second year student Law and Ethics course 2021

Participation in UNM third year clerkship training 2020

One-on-one UNM fourth year student teaching 2020-2021

One-on-one resident UNM Cardiology tutorial 2020-2021

UNM Resident School 2020- present

UNM MFM Fellow Didactic Curriculum 2020 - present

**Classroom, echo laboratory teaching, and tutoring**

1. Medical Student Teaching –typically blocks of pediatric cardiology (lectures of 20 to 25 students at a time, as well as those individually taught)

1994 – 1995 University of Texas

1997 - 1999 University of Rochester

2000 - 2002 McAllen Medical Center

2002 – 2004 Mercer University (formal lecture series)

2004 - 2008 Baylor College of Medicine

2008 - 2009 University of Kentucky

2009- 2013 Cincinnati Children’s Hospital

2011- 2013 University of Cincinnati

2013- 2014 University of Mississippi Medical Center

2018-2019 Driscoll Children’s Hospital

2019-present University of New Mexico

2022 – present University of Colorado

b. Graduate Program

Residency programs - typically blocks of pediatric cardiology (lectures of 20 to 25 students at a time, as well as those individually taught). I have on occasion, developed the curriculum. Medical student and resident inhouse rotations typically combined with 60 hour ward weeks. Outpatient clinic time between 12 and 20 hours per week.

1994 - 1995 University of Texas

1997 - 1999 University of Rochester

2000 - 2002 McAllen Medical Center

2002 - 2004 Mercer University

2004 - 2008 Baylor College of Medicine

2004 - 2008 Fellowship Lecture series

Baylor College of Medicine

2008 - 2009 University of Kentucky

2009- 2011 Weekly Resident Teaching Clinics

2018-2019 Driscoll Children’s Hospital

2019- Present University of New Mexico, residents and MFM fellows

2022 – present University of Colorado

c. Other categories- nurses, echosonographers, NP, RT, PA students

 1994 - 1995 PALS instructor University of Texas

 1994 - 1995 Instructed nurses/RT University of Texas

1995 - 1997 PALS instructor Exeter, NH

1995 - 1997 Nursing seminars Exeter, NH

1995 - 1997 General public, lectures on

Sudden death screening Exeter, NH

1997 - 1999 Instructed nurses/RT

2000 Preceptor for PA/PNP

program Radford, Virginia

2002 - 2004 Instructor nurses/RT Mercer University

2004 - 2008 Community teaching lectures in obesity, prevention,

and sudden death

2007 - 2008 MedImmune Speaker for Synagis: Against

Respiratory Syncitial Virus

2011- 2016 International teaching (physicians, residents and students) through the International Children’s Heart Foundation (ICHF)

2016-2017 PALS, ACLS and instructor of family practice residents and Nursing, Kaweah Delta Community Hospital

**Pre-baccalaureate student and honors student mentoring.**

Anita Yalamachi, pre-medical student, mentored in clinical cardiology clerkship award winner for the Appalachian College Medical Council. Dr. Yalamachi went on to be an honors medical student.

**Fellow teaching and mentoring**

2003-2014 Responsible for 1:1 teaching echocardiography (hands on) as well as cardiomyopathy heart failure clinic (typical clinic load of 25 to 30 patients), included morning huddle and discussion of each case post hoc (usually a day separate from clinic). This commonly fostered novel research ideas which could then be further developed. This opportunity was through Texas and Cincinnati Children’s Hospitals.

2010-2014 Additional lectures were developed for echocardiographic topics. Attending faculty participated in these lectures as well, presented either as cases or controversial topics in debate format.

2019-2022 Weekly conferences with Maternal Fetal fellows

2022- present Quarterly conferences with UNM MFM fellows

2022- present Didactic and 1:1 teaching of imaging and Kawasaki disease

**Continuing Medical Education**

Responsible for development of sessions at the American College of Cardiology national conferences 2014-2016. We used an innovative TED talk format, round tables and I clicker audience response.

**Curriculum development or educational administrative positions**

2003-2004 Responsible for Mercer University resident core cardiology curriculum, teaching and evaluation.

2018-2019 Responsible for CME development in the form of journal club presented at weekly cath conferences, morbidity and mortality rounds and fetal conferences. Participating faculty received CME for participation. This was also the springboard for development of a curriculum based on perceived programmatic areas of weakness. For example, the question was raised: “Does fetal echocardiography play any role in the long-term in the long-term outcome of patients with Fontan procedure? In other words, we are spending all this money to make antenatal diagnoses; does it really make a difference if the patient is diagnosed antenatally versus natural presentation in infancy?”

2023 – present Responsible for UNM Resident School cardiology curriculum

**Mentoring of other faculty in research or scholarship**

* In conjunction with Dr. Richard Friedman, he and I oversaw the development of the first adult congenital heart defect p**rogram 2006-2008, at Texas Children’s Hospital, by** mentoring Dr. Wayne Franklin. Dr. Franklin has been extremely successful in his field, far surpassing Dr. Friedman and me in this area. He is now co-director of the Heart Center at Phoenix Children’s Hospital.
* **2012 through 2013,** in conjunction with Dr. Jeff Anderson, then junior faculty at Cincinnati Childrens Hospital, we developed a sports screening project in an effort to determine the yield, possibility and cost effectiveness of cardiac screening in 700 athletes. This project with conjoint supervision, resulted in multiple abstracts that inspired sometimes heated discussions of the utility of noninvasive cardiac testing in all comers. It culminated in a manuscript

Anderson JB, Grenier M, Edwards NM, Madsen NL, Czosek RJ, Spar DS, Barnes A, Pratt J, King E, Knilans TK.

[Usefulness of combined history, physical examination, electrocardiogram, and limited echocardiogram in **screening** adolescent athletes for risk for sudden cardiac death.](https://www.ncbi.nlm.nih.gov/pubmed/25307198)

*Am J Cardiol*. 2014 Dec 1;114(11):1763-7.

Dr. Anderson, an electrophysiologist, has since been promoted and has been very successful in quality assurance initiatives nationally as well as locally, and has been successfully promoted.

**Previous fellows 2010-2022**

Research Mentor for Thomas Ryan, MD, PhD

 Strain and Strain Rate Imaging in Patients with Duchenne’s Muscular Dystrophy (retrospective study)

 Dr. Ryan is now head of the Cardio-oncology section of the American College of Cardiology.

Research mentor for Dave Crowley, MD

Three Dimensional Imaging program developed by Dr. Crowley at Dartmouth where he attended.

Research mentor for Peace Madueme, MD

 Prediction of Double Chambered Right Ventricle. Dr. Madueme is faculty at the Cincinnati Children’s Hospital Medical Center.

Trevor Quiner, MD MFM fellow has stayed on at UNM as a research/clinical assistant professor of MFM

Sarah Smiley, MD MFM fellow has secured a position in Phoenix, AZ clinical assistant professor of MFM

Michael Nguyen, MD Advanced Imaging fellow at University of Colorado, joined Phoenix Childrens 2023

Kristen Young, MD Current Advanced Imaging fellow at University of Colorado 2023

Samantha Kop, MD Future Advanced Imaging fellow at the University of Colorado 2024

**Mentoring of Faculty in Education**

I personally mentored two junior faculty in imaging while at Driscoll Childrens Hospital: Dr. Gabriel Paris and Dr. Gary Butchko. Dr. Paris has since taken a position in Indiana as an assistant professor. Dr. Michael has taken a more senior position in the Imaging lab. Dr. Butchko was subsequently recruited to the Cleveland Clinic.. I mentored him virtually with echo interpretation and discussion of difficult patient cases, often providing recently published evidence-based medicine.

**ACC Faculty Education**

Responsible for development of creative approach toward presentation of information (sessions) at the American College of Cardiology national meetings. In particular, the adoption of the TED talk formats, as well as literal round table discussions with audience participation were developed as a creative method for conveying information and fostering audience participation. Audience response systems widely implemented in these sessions.

**Other teaching and student mentoring activities**

Development of UNM second year student curriculum in pediatric cardiology 2020 -2021

Participation in UNM second year student Law and Ethics course 2021

Participation in UNM third year clerkship training 2020

One-on-one UNM fourth year student teaching 2020-2021

One-on-one resident UNM Cardiology tutorial 2020-2021

1. **Past Grant and Contract Funding**

PI: Grenier, MA

100%

CRC Protocol C-5-94-188: "Early detection of human immunodeficiency virus-induced cardiomyopathy in children", funded by University of Texas Health Science Center CRC via NIH for $18,000.

1994-1995

PI: Grenier MA

100%

Buswell Award for Independent research in pediatric cardiovascular diseases. University of Rochester

#### (Salary support)

1998-1999

PI: Grenier MA

100%

 New York Chapter American Heart Association 9930296T “ Assessment of Endothelial Function through Vasoreactivity in Long Term Survivors of Childhood Cancer”

University of Rochester

(Salary support)

1999-2002

\*Under the guidance of Steve Lipshultz, I assisted in the writing of the NIH-sponsored Pediatric Cardiomyopathy Registry in 1996

 **Pending Grant and Contract Funding (proposals submitted):**

None currently.

1. **Original research or scholarly articles in refereed journals**

**Grenier MA**, Karr SS, Rakusan TA, Martin, GR. Cardiac disease in children with human immunodeficiency virus: relationship of cardiac disease to virus symptoms. *Pediatric AIDS & HIV* *Infection: Fetus to Adolescence.* 1994;5:174-179.

**Grenier MA** and Byrne B. Abdominal pain as a presenting symptom of supraventricular tachycardia. *Clinical Pediatrics* July 1995.

Lipshultz SE and **Grenier MA**. Left ventricular dysfunction in infants and children infected with the human immunodeficiency virus. *Progress in* *Pediatric Cardiology*, 1998;7:33-43.

Lipshultz SE, **Grenier MA**, Colan SD. Doxorubicin-induced cardiomyopathy. *N Engl J*

*Med.* 1999 Feb 25; 340 (8) 653-4.

**Grenier MA,** Lipshultz SE. Epidemiology of anthracycline cardiotoxicity in children and

adults. *Semin Oncol.* 1998 Aug 25 (Suppl 10):72-85.

**Grenier MA**, Osganian V, Cox G, Towbin JA, Sleeper L, et al. Design and Implementation of the North American Pediatric Cardiomyopathy Registry. *American Heart Journal* 2000 Feb;139 (2 Pt3):S86-95.

Knowlton AA, **Grenier M**, Kirchoff SR, Salfity M. Phosphorylation at tyrosine 524 influences nuclear HSP72 with heat stress. *American Journal of Physiology and Heart Circulation Physiology,* 2000; 278 (6) H2143-9.

Yang Z, McMahon CJ, Smith LR, Bersola J, Adesina AM, Breinholt JP, Kearney DL, Dreyer WJ, Denfield SW, Price JF, **Grenier M,** Kertesz NJ, Clunie SK, Fernbach SD, Southern JF, Berger S, Towbin JA, Bowles KR, Bowles NE. Danon disease as an under recognized cause of hypertrophic cardiomyopathy in children. *Circulation,* 2005 112(11):1612-7.

Jefferies JL, Denfield, Price JF, Dreyer WJ, McMahon CJ, **Grenier MA**, Kim JJ, Dimas V, Clunie SK, Moffett BS, Chang AC, Wann TI, Smith EO, Towbin JA. A prospective evaluation of Nesiritide in the treatment of pediatric heart failure *Pediatric Cardiology* 2006 Jul-Aug; 27 (4):402-7.

Price JF, Thomas AK, **Grenier MA**, Eidem BW, Denfield SW, Towbin JA, Dreyer WJ. B-type natriuretic peptide predicts adverse events in infants and children with chronic left ventricular dysfunction. *Circulation* 2006; 114 (10) 1063-9.

Podoll AS, **Grenier MA**, Feig DI. Inaccuracy in standard blood pressure measurement in a pediatric clinic. *Pediatrics* 2007; 119 (3): e538-543.

Tan LH, Jefferies JL, Liang JF, Denfield SW, Dreyer WJ, Mott AR, **Grenier MA**, Dickerson HA, Price JF, Towbin JA, Ou CN, Chang AC. Concentrations of brain natriuretic peptide in the plasma predicts outcomes of treatment of children with decompensated heart failure admitted to the Intensive Care Unit. *Cardiol Young.* 2007, Jun 18; 1-10.

Rossano JW, **Grenier M,** Dreyer WJ, et al. Effect of body mass index on outcome in pediatric heart transplant patients. *J Heart Lung Transplant* 2007; 26 (7):718-23.

Jefferies JL, Price JF, Denfield SW, Chang AC, Dreyer WJ, McMahon CJ, **Grenier MA**, Clunie SK, Thomas A, Moffett BS, Wann TS, Smith EO, Towbin JA. A prospective evaluation of nesiritide in the treatment of pediatric heart failure.  *J Card Fail* 2007; 13 (7):541-8.

Jefferies JL, Price JF, Denfield SW, Chang AC, Dreyer WJ, McMahon CJ, **Grenier**

**MA**, Clunie SK, Thomas A, Moffett BS, Wann TS, Smith EO, Towbin JA. Safety and

efficacy of nesiritide in pediatric heart failure. J Card Fail. 2007, Sep;13(7):541-8. PubMed PMID: 17826644.

Lu X, Nadvoretskiy V, Bu L, Stolpen A, Ayres N, Pignatelli RH, Kovalchin JP, **Grenier M,** Klas B, Ge S. Accuracy and Reproducibility of Real-time 3-dimensional echocardiography for assessment of right ventricular volumes and ejection fraction in children. *J Amer Soc Echocardiography* 2008,.(1): 84-9.

Prada C, Jefferies, JL, **Grenier M**, Huth C, Page K, Spicer R, Towbin J, Leslie N. Malonyl Coenzyme A Decarboxylase Deficiency: Early Dietary Restriction and Time Course of Cardiomyopathy Pediatrics Vol. 130 No. 2 August 1, 2012 pp. e456 -e460
[Walsh MA](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Walsh%20MA%22%5BAuthor%5D), [**Grenier MA**](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Grenier%20MA%22%5BAuthor%5D), [Jefferies JL](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Jefferies%20JL%22%5BAuthor%5D), [Towbin JA](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Towbin%20JA%22%5BAuthor%5D), [Lorts A](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Lorts%20A%22%5BAuthor%5D), [Czosek RJ](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Czosek%20RJ%22%5BAuthor%5D). Conduction Abnormalities in Pediatric Patients with Restrictive Cardiomyopathy.

[Circ Heart Fail.](http://www.ncbi.nlm.nih.gov/pubmed/22260945) 2012 Jan 19.

**Grenier MA.** Looking into an athlete's heart: Panacea or Pandora's box?

[Future Cardiol.](http://www.ncbi.nlm.nih.gov/pubmed/23176683) 2012 Nov;8(6):805-7

[Ryan TD](http://www.ncbi.nlm.nih.gov/pubmed?term=Ryan%20TD%5BAuthor%5D&cauthor=true&cauthor_uid=23358912), [Taylor MD](http://www.ncbi.nlm.nih.gov/pubmed?term=Taylor%20MD%5BAuthor%5D&cauthor=true&cauthor_uid=23358912), [Mazur W](http://www.ncbi.nlm.nih.gov/pubmed?term=Mazur%20W%5BAuthor%5D&cauthor=true&cauthor_uid=23358912), [Cripe LH](http://www.ncbi.nlm.nih.gov/pubmed?term=Cripe%20LH%5BAuthor%5D&cauthor=true&cauthor_uid=23358912), [Pratt J](http://www.ncbi.nlm.nih.gov/pubmed?term=Pratt%20J%5BAuthor%5D&cauthor=true&cauthor_uid=23358912), [King EC](http://www.ncbi.nlm.nih.gov/pubmed?term=King%20EC%5BAuthor%5D&cauthor=true&cauthor_uid=23358912), [Lao K](http://www.ncbi.nlm.nih.gov/pubmed?term=Lao%20K%5BAuthor%5D&cauthor=true&cauthor_uid=23358912), [**Grenier MA**](http://www.ncbi.nlm.nih.gov/pubmed?term=Grenier%20MA%5BAuthor%5D&cauthor=true&cauthor_uid=23358912), [Jefferies JL](http://www.ncbi.nlm.nih.gov/pubmed?term=Jefferies%20JL%5BAuthor%5D&cauthor=true&cauthor_uid=23358912), [Benson DW](http://www.ncbi.nlm.nih.gov/pubmed?term=Benson%20DW%5BAuthor%5D&cauthor=true&cauthor_uid=23358912), [Hor KN](http://www.ncbi.nlm.nih.gov/pubmed?term=Hor%20KN%5BAuthor%5D&cauthor=true&cauthor_uid=23358912). Abnormal circumferential strain is present in young Duchenne muscular dystrophy patients. [Pediatr Cardiol.](http://www.ncbi.nlm.nih.gov/pubmed/23358912) 2013 Jun;34(5):1159-65.

Pignatelli RH, Texter KM, Denfield SM, **Grenier M**, et al. Left Ventricular Non-Compaction in association with Ebstein's Anomaly in infants: A marker of worse outcome. JACC Cardiovasc Imaging 2014 7: 207-209.

Anderson, JB, **Grenier M,** Edwards NM, et al. Usefulness of combined history, physical examination, electrocardiogram and limited echocardiogram in screening adolescent athletes for risk of sudden cardiac death. Am J Cardiol. 2014

**Grenier MA**. Syncope at the Free Throw Line. http://www.acc.org. May 28, 2015. Accessed http://www.acc.org/education-and-meetings/patient-case-

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