

# Craig Frank John Munns

## Curriculum Vitae

### PERSONAL DETAILS

Name: Craig Frank John MUNNS

Qualifications:	MBBS	University of Queensland	1992
	FRACP	RACP	2001
	PhD	University of Queensland	2004

PhD Thesis: "Role of the Short Stature Homeobox Gene in Skeletal Growth and Development".

E mail: [craig.munns@health.nsw.gov.au](mailto:craig.munns@health.nsw.gov.au)

Current Positions: Senior Staff Specialist Bone & Mineral Medicine and Endocrinology  
Section Head Bone & Mineral Medicine  
Section Head Endocrine Laboratory Services  
The Children's Hospital at Westmead  
Sydney, NSW, Australia

Clinical Trials Lead  
Kids Research  
The Children's Hospital at Westmead  
Sydney, NSW, Australia

Professor of Paediatric Bone and Mineral Medicine  
Paediatrics and Child Health  
Sydney Medical School  
University of Sydney  
Sydney, NSW, Australia

Honorary Professor  
Department of Clinical Medicine  
Faculty of Medicine and Health Sciences  
Macquarie University  
Sydney, NSW, Australia

## **CAREER HISTORY**

### **Previous Appointments**

- 2016-2020    Clinical Program Director - Diagnostic Services  
The Children's Hospital at Westmead  
Sydney, NSW, Australia
- 2002-2004    Clinical Associate in Genetic and Metabolic Bone Disease  
Genetics Unit, Shriners Hospital for Children, Montreal, Canada.
- 2002          Royal Children's Hospital Foundation/Cressbrook Clinical Research  
Fellow in Endocrinology  
Royal Children's Hospital and District Health Service, Brisbane,  
Australia.  
Part-time Staff Specialist  
Department of Endocrinology and Diabetes, Mater Children's Hospital,  
South Brisbane, Australia.  
Visiting Medical Officer  
Department of Emergency Medicine, Mater Children's Hospital, South  
Brisbane Australia.
- 2001          Visiting Medical Officer  
Department of Emergency Medicine, Mater Children's Hospital, South  
Brisbane Australia.
- 1999 -2001    Royal Children's Hospital Foundation/Cressbrook Clinical Research  
Fellow in Endocrinology, Royal Children's Hospital and District Health  
Service, Brisbane, Australia.
- 1996 - 1999    Paediatric Registrar  
Royal Children's Hospital, Brisbane, Australia.
- 1995 - 1996    Paediatric Senior House Officer  
Royal Children's Hospital, Brisbane, Australia.
- 1994 - 1995    Senior House Officer  
Gladstone Hospital, Gladstone, Australia.
- 1993          Intern  
Royal Brisbane Hospital  
Brisbane, Australia. Queensland Department of Health Scholarship  
holder.

## **UNIVERSITY OF SYDNEY**

2018 – Current	Conjoint Professor of Paediatric Bone and Mineral Medicine, Sydney Medical School
2010 – 2017	Conjoint Associate Professor, Sydney Medical School
2004 – 2010	Conjoint Senior Lecturer, Sydney Medical School

## **MACQUARIE UNIVERSITY**

2018 – Current	Honorary Professor, Faculty of Medicine and Health Sciences
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## **TEACHING**

### **University of Sydney Summer Students**

- Craig Coorie 2014
- Daniel Yeo 2014
- Craig Coorie 2013
- Jenny Le Quan 2013

### **Masters Supervision**

- Paul Tannous – University of Notre Dame – Awarded 2020
- Komal Vora - University of Sydney – Awarded 2021

### **PhD Supervision**

- Pascal Bridge – University of Sydney – Awarded 2012
- Verity Pacey – University of Sydney - Awarded 2014
- Denise Brookes – University of Queensland - Awarded 2014
- Kim Ramjan – University of Sydney – Awarded 2017
- Anna Middleton – University of Sydney – Awarded 2019
- Muhd Kamal Muhd Jamil – University of Sydney – Awarded 2020
- Bhavna Payde – University of Sydney – Awarded 2020
- Julie Briody - University of Sydney
- Alison Wesley – University of Sydney
- Alexandra O'Donohue – University of Sydney
- Karissa Ludwig – University of Sydney / McGill University, Montreal, Canada

### **Honours Supervision**

- Jessica Mumford – University of New England – Completed 2014

### **Diploma of Child Health Lecture, Children's Hospital at Westmead**

- Rickets 2016 – Current

### **Paediatric Endocrinology Fellow Schools**

- Asia Pacific Paediatric Endocrine Society – 2006 – Current (Annual)
- Indian Society Paediatric and Adolescent Endocrinology – 2015, 2019
- *Australasian Paediatric Endocrine Group 2021*

## **SOCIETIES**

American Society of Bone and Mineral Research (ASBMR).

- Editor JBMR Plus

Asia Pacific Paediatric Endocrinology Society (APPES).

- Honorary Treasure 2006 – 2018
- Scientific Committee and Faculty of Fellow School 2006 – 2021

Australasian Paediatric Endocrine Group (APEG).

- Chair ASM Scientific Committee 2008 – 2012
- Chair Bone and Mineral Working Group 2012 – Present

Australian and New Zealand Bone and Mineral Society (ANZBMS).

- Co-Chair Scientific Committee 2020 – 2021
- Therapeutics Committee 2011 – Present

Endocrine Society

European Society of Paediatric Endocrinology (ESPE)

International Bone and Mineral Society (IBMS).

International Conference on Children's Bone Health

- Scientific Committee 2015, 2017, 2019
- Executive Steering Committee 2019 – Present

Vitamin D Workshop

- Joint organising Committee 2019 – 2020

## **COMMITTEE APPOINTMENTS & RESPONSIBILITIES**

### **The Children's Hospital at Westmead**

- Head of Laboratory Services, Department of Endocrinology and Diabetes
- Head of Bone and Mineral Medicine, Department of Endocrinology and Diabetes
- Head of Clinical Research and Executive Committee Member, Children's Centre for Bone and Musculoskeletal Health, Kids Research Institute 2015 – Current
- SCHN Workforce Advisory Committee 2018 – Current
  - Medical Lead – Doctor in Five Years Project 2019
  - Medical Lead – Research at SCHN 2021
- SCHN Physician Site Champion – I-ACT 2019 – Current
- Paediatrics and Youth Health Community of Practice (NSW Health) 2020 – Current
- Clinical Trials Community of Practice (Office of Health and Medical Research NSW Health) 2000 – Current
- SCHN Human Research Ethics Committee – Executive Representative 2021 – Current
- SCHN representative on New South Wales Health Pathology Clinical Council Board 2016 – 2021
- SCHN Performance and Planning Committee 2016 – 2020
- SCHN Information Strategy Executive Committee 2016 – 2020

### **University of Sydney**

- University of Sydney; Sydney Arthritis & Musculoskeletal Research Network–Steering Committee 2015 – 2017
- University of Sydney; Sydney Health Partners SydMSK Alliance Steering Group 2018 – Present
- University of Sydney; Sydney Health Partners Clinical Trials Community of Practice 2020 – Present

### **New South Wales Health Pathology**

- Executive Steering Committee – State-wide Laboratory Information System 2019 - 2021
- SCHN representative on NSW Health Pathology Clinical Council Board 2016 - 2021

### **Scientific Societies**

- Asia Pacific Paediatric Endocrinology Society (APPES) Honorary Treasurer 2006 – 2018
- Asia Pacific Paediatric Endocrinology Society (APPES) Scientific Committee and Faculty of Fellow School 2006 – Current
- ANZBMS Therapeutic Committee 2011 – Current
- ANZBMS Co-Chair Program Organising Committee 2020 – 2021
- Australasia Paediatric Endocrine Group (APEG) Bone and Mineral Subcommittee Chair 2012 – Current
- APEG Scientific Committee, Member 2007 – 2008 and Chair 2009 – 2013.

- International Federation of Musculoskeletal Research Societies (IFMRS) Big Data Working Group (ANZBMS Representative) – 2013 – Current
- International Conference of Children’s Bone Health (ICCBH) Scientific Committee – 2015 – Current.
- International Conference of Children’s Bone Health (ICCBH) Executive 2019 – Present
- Vitamin D Workshop Joint organising Committee 2019 – 2020

### **NSW Health**

- NSW Musculoskeletal Network Executive Agency for Clinical Innovation 2007- Current

### **Advocacy and Philanthropic Groups**

- Osteoporosis Australia Medical and Scientific Advisory Committee 2008 – 2016
- Standards of Care Committee - Nemaline and related myopathies 2008 – 2010
- Caring and Living as Neighbours (CLAN) Technical Advisory Committee: Bone and Mineral Consultant 2010 – Current
- Sticks and Stones (Philanthropic Group) – Director 2015 – Current

### **Royal Australasian College of Physicians’**

- National Examiner 2011 – 2014
- Local Examiner 2005 – Current

### **Industry Advisory Boards and Consultancies**

- Early Recognition of Hypophosphatasia (HPP) Advisory Board (Alexion International)
- Hypophosphatasia (HPP) Treatment Monitoring Guidance Advisory Board (Alexion International)
- Kyowa Kirin Asia Pacific Advisory Board for X-linked Hypophosphataemic Rickets (Chair) 2020
- Kyowa Kirin Australian Advisory Board for X-linked Hypophosphataemic Rickets (Chair) 2020
- Ipsen Palovarotine Advisory Board 2020
- Asfotase alfa in Hypophosphatasia Alexion Australia advisory board
- Consultant for Alexion Australia
- Consultant for Sanofi
- Consultant for Kyowa Kirin

## AWARDS

- 2019 Selected for NSW Health Clinical Excellence Commission Executive Leadership Program
- 2015 - Best Oral Communication Award. 7<sup>th</sup> International Conference on Children's Bone Health. Salzburg, Australia
- 2012 - The Henry Kilham Award for Outstanding Contribution to Postgraduate Teaching. The Children's Hospital at Westmead
- 2010 - Kaichi Kida Award for Best Oral Presentation. Asia Pacific Paediatric Endocrine Society.
- 2002 - Royal Children's Hospital Foundation/Woolworth's Traveling Scholarship to undertake advanced training in Paediatric Genetic and Metabolic Bone Disorders.
- 2001 - Australasian Paediatric Endocrine Group (APEG) Young Investigator of the Year. Paper title: "The Spectrum of *SHOX* Haploinsufficiency Disorder: Diagnostic Markers."  
- Asia Pacific Paediatric Endocrine Society travel scholarship to attend "Paediatric Endocrinology Montreal 2001".  
- Serono Postgraduate Travel Award 2001.
- 1999 - Australia & New Zealand Bone & Mineral Society Travel Grant to attend the 2000, 10<sup>th</sup> Annual Scientific Meeting.  
- Endocrine Society of Australia Travel Award to attend the International Congress of Endocrinology.  
- Endocrine Society of Australia / Serono Postgraduate Travel Award to attend the Serono Symposium USA.

## RESEARCH FUNDING

### Competitive Research Grants and Investigator Initiated Grants TOTAL \$3,480,700

1. Pacey V, Simm P, **Munns CF**. APEG 2020 Sandoz Research Grant. Development of Allied Health Management Guidelines for Children and Adolescents with Osteogenesis Imperfecta. 2020. Co-investigator. \$15,000.
2. Lee L, Biggin A, Schindeler A, Gunton J, **Munns C**. APEG 2020 Novo Nordisk Research Grant. Generating novel AAV vectors for preclinical modelling of gene therapy treatment for diabetes and other endocrine disorders. 2020. Co-investigator. \$15,000.
3. Biggin A, **Munns CF**. Clinical registry to evaluate treatment outcomes in paediatric X-linked Hypophosphataemic Rickets (XLH) in Australia. 2019. Investigator initiated research grant. \$75,000.
4. Biggin A, **Munns C**, Schindeler A. APEG 2019 APEG Research Grant. Understanding the genetic and cellular mechanisms of reduced bone health caused by obesity. \$25,000.
5. Biggin A, Ambler G, Srinivasan S, McGuire A, Craig M, Benitez P, Donoghue K, **Munns CF**. APEG Patient Registry Grant. 2019. \$100,000.
6. **Munns CF**, Simm P, Ebeling P, Milat F, Duncan E, Biggin A, Siafarikas A, Crafter S, Coates P, Clifton-Bligh R, Elliott E, Teutsch S. APSU Prevalence Study of X-linked Hypophosphataemic Rickets. 2019. Principle Investigator. Initiated research grant. \$75,000.
7. **Munns CF**, Simm P, Savarirayan R, Ebeling P, Duncan E, Hooper H, Widmer R, Hibbert S, McGill J, Siafarikas A, Tham E, Elliott E, Teutsch S. APSU Prevalence Study of Hypophosphatasia. 2019. Principle Investigator. Investigator initiated research grant. \$75,000.
8. Bernitez-Aguirre P, **Munns CF**, Donoghue K. Diabetes Australia Research Program. Effect of Childhood Type 1 Diabetes on Bone Health: Is abnormal bone development during childhood related to increased adult fracture risk? – 2016. \$60,000
9. L Nicholson, V Pacey, L Tofts, **C Munns**. Clinical characteristics of children with generalised joint hypermobility, Arthritis Australia, Zimmer Australia Grant & Arthritis Australia and State and Territory Affiliate Grant - 2015. \$10,000
10. **Munns CF**, Koyyalamudi SR, Biggin A, Lee J, Wiley V, Padhye B. Assessment of neonatal vitamin D status using dried blood spots: epidemiology of neonatal vitamin D deficient and association with childhood cancer and type 1 diabetes mellitus. Kids Research Institute – 2015 - 2016. \$180,000.
11. Zacharin M, **Munns CF**, North K. Thrasher Foundation: Clinical trial of Zoledronic acid in children and adolescents with Duchenne(DMD) . 2014. US\$86,571.

12. **Munns CF**, Biggin A. OA/ANZBMS Clinical Grant. A fracture prevention service to optimise bone health and prevent osteoporosis in the paediatric population – 2013. \$50,000
13. L Nicholson, V Pacey, L Tofts, **C Munns**. Clinical characteristics of children with generalised joint hypermobility, Arthritis Australia, Barbara Cameron Memorial Grant – 2013. \$15,000
14. **Munns CF**, North K, Clarke N, Rose K, Fitzgerald D, Selvadurai H. A Foundation Building Strength. Whole Body Vibration Training for Nemaline Myopathy. – 2012. US\$86,412.
15. **Munns CF**. Thyne Reid Foundation. Osteogenesis Imperfecta Fellow. 2011-2012. \$264,000.
16. **Munns CF**, Zacharin M, North K. Muscular Dystrophy Association for Research Grant: Clinical trial of Zoledronic acid in children and adolescents with Duchenne(DMD) . 2011-2014. US\$250,000.
17. NHMRC Project Grant 1008226. Verge C, Hameed S, Jaffe A, Peat J, Selvadurai H, Cooper P, Hilton J, Donaghue K, **Munns CF**, Crock P. Cystic Fibrosis - Insulin Deficiency, Early Action (CFIDEA). 2 years 2011-2012. \$381,530
18. NHMRC Project Grant 632532. Cowell CT, Little DG, **Munns CF**, Foster B, Zacharin M. Bisphosphonate Treatment of Childhood Femoral Head Avascular Necrosis due to Perthes Disease. 5 years 2010-2014. \$1,305,625.
19. Zacharin M, **Munns CF**, Kornberg A, North K, Little D. Pfizer Endocrine Care Paediatric Research Grant. Clinical trial of Zoledronic acid (Aclasta) in children and adolescents with Duchenne muscular dystrophy. 2010, 1 year. \$40,000.
20. Simm P, **Munns CF**, Cowell C, North K, Little D. Pfizer Endocrine Care Paediatric Research Grant. Bone Health in Neurofibromatosis Type I. 2009, 1 year. \$55,000.
21. Ramjan K, **Munns CF**, Garnet S, Cowell C. Pfizer Endocrine Care Paediatric Research Grant. Flabulous: The effect of whole body vibration training on insulin sensitivity in adolescents. 1 year. 2009, \$55,000.
22. Ramjan K, **Munns CF**, Garnet S, Cowell C. The effect of whole body vibration training on insulin sensitivity in adolescents. Novo Nordisk Regional Research Grant. \$10,000.
23. NHMRC Project Grant 402714. Little DG, **Munns CF**. Role of Osteoclasts during the early stages of bone healing. 3 years 2006-2008. \$303,875.
24. **Munns CF**, Glass I, Batch J. APEG Novonordisk Resaerch Grant. Role of the Short Stature Homeobox Gene in Skeletal Growth and Development. 1 year 2000. \$15,000.

## Collaborative Industry Grants

1. **Munns CF**, Biggin A. An Observational, Longitudinal, Prospective, Long-Term Registry of Patients with Hypophosphatasia (Alexion Pharmaceuticals Inc). 2017-Ongoing. Principle Investigator.
2. **Munns CF**, Biggin A. Prospective, Multicenter, Single-arm Study to Evaluate Efficacy, Safety, and Pharmacokinetics of Denosumab in Children with Osteogenesis Imperfecta (Amgen Ltd). 2014-Ongoing. Principle Investigator.
3. **Munns CF**, Biggin A. A Retrospective, Non-Interventional Epidemiologic Study of the Natural History of Patients with Juvenile-Onset Hypophosphatasia (HPP) (Alexion Pharmaceuticals Inc). 2015-Ongoing. Principle Investigator.
4. **Munns C**, Cowell C, Woods N, Moody P, Hayes E. Bio-Ceuticles. Safety and Effectiveness of Stoss Therapy in the Treatment of Vitamin D Deficiency. 2010-2012. Principle Investigator
5. **Munns C**, Cowell C, Little D, Foster B, Zacharin C. Novartis. Bisphosphonate Treatment of Childhood Femoral Head Avascular Necrosis due to Perthes Disease. 5 years 2010-2014. Principle Investigator
6. Zacharin M, **Munns CF**, Kornberg A, North K, Little D. Novartis. Clinical trial of Zoledronic acid (Aclasta) in children and adolescents with Duchenne muscular dystrophy. 2010-2019. Principle Investigator
7. **Munns CF**, Biggin A, Little D. A multicentre, randomised, double-blind, placebo controlled efficacy and safety trial of intravenous zoledronic acid twice yearly compared to placebo in osteoporotic children treated with glucocorticoids. (Novartis). 2011-2017. Principle Investigator.
8. **Munns CF**, Biggin A, Little D. A 1-year, multicentre, open-label extension to CZOL446H2337 to evaluate safety and efficacy of zoledronic acid twice yearly in osteoporotic children treated with glucocorticoids for chronic inflammatory conditions. (Novartis). 2013-2017. Principle Investigator.
9. **Munns CF**, Biggin A, Poon M. A Randomised, Open-Label, Phase 3 Study to Assess the Efficacy and Safety of KRN23 Versus Oral Phosphate and Active Vitamin D Treatment in Pediatric Patients with X-linked Hypophosphatemic (XLH) (ultragenyx). 2017-2019. Principle Investigator.
10. Bishop N, Silience D, **Munns CF**. Alliance for Better Bone Health (Procter and Gamble, and Sanofi-Novartis). A Randomized, Double-Blind, Placebo-controlled, Multicenter, Parallel Group Study of One-Year Duration followed by 2 years of Open Label Treatment to Determine the Safety and efficacy of Orally Administered 2.5mg or 5.0mg Daily Risedronate, in Children with Osteogenesis Imperfecta. 2005-2010. Co-investigator

## RESEARCH OUTPUT

- (i) **Peer-review journal articles: At 17 years post PhD, total 138 publications (55 in last 5 yrs); 20 top 5%, 33 top 10% FWCI. Scopus H index 40. Cited >4920 times. 12 articles cited >100 times. Scopus May 2021.**

### Five best publications from the past 10 years

1. **Munns CF**, Shaw N, Kiely M, Specker BL, Thacher TD, Ozono K, Michigami T, Tiosano D, Mughal MZ, Mäkitie O, Ramos-Abad L, Ward L, DiMeglio LA, Atapattu N, Cassinelli H, Braegger C, Pettifor JM, Seth A, Wasagu Idris H, Bhatia V, Fu J, Goldberg G, Sävendahl L, Khadgawat R, Pludowski P, Maddock J, Hyppönen E, Oduwole A, Frew E, Aguitar M, Tulchinsky T, Butler G, Höglér W. Global Consensus Recommendations on Prevention and Management of Nutritional Rickets. *J Clin Endocrinol Metab.* 2016 Feb;101(2):394-415. [Cited 409X, FWCI=29.15; top 1%, Alt 16]

The first international consensus document on nutritional rickets. This document has led to a change in practice in many nations including Australia for the prevention and management of nutritional rickets.

2. Bishop N, Adami S, Ahmed SF, Antón J, Arundel P, Burren CP, Devogelaer JP, Hangartner T, Hosszú E, Lane JM, Lorenc R, Mäkitie O, **Munns CF**, Paredes A, Pavlov H, Plotkin H, Raggio CL, Reyes ML, Schoenau E, Semler O, Sillence DO, Steiner RD. Risedronate in children with osteogenesis imperfecta: a randomised, double-blind, placebo-controlled trial. *Lancet.* 2013 Oct 26;382(9902):1424-32. [Cited 118X, FWCI=15.57; top 1%, Alt 75]

The first international randomised controlled trial of bisphosphonates in children. This has led to a change in management for children with both primary and secondary bone fragility. I led this study at CHW and internationally we were the leading recruitment site for this study.

3. Imel EA, Glorieux FH, Whyte MP, **Munns CF**, Ward LM, Nilsson O, Simmons JH, Padidela R, Namba N, Cheong HI, Pitukcheewanont P, Sochett E, Höglér W, Muroya K, Tanaka H, Gottesman GS, Biggin A, Perwad F, Mao M, Chen CY, Skrinar A, San Martin J, Portale AA. Burosumab versus conventional therapy in children with X-linked hypophosphataemia: a randomised, active-controlled, open-label, phase 3 trial. *Lancet*, 2019 Jun 15;393(10189):2416-2427. [Cited 56X, FWCI=16.92; top 1%, Alt 64]

The first phase 3 RCT of Burosumab in children with X-linked hypophosphataemic rickets. The article will result in a paradigm shift in the management of this debilitating disorder. I was the Australian PI for this study and CHW was the leading recruitment site internationally for this study.

4. **Munns CF**, Simm PJ, Rodda CP, Garnett SP, Zacharin MR, Ward LM, Geddes J, Cherian S, Zurynski Y, Cowell CT; on behalf of the APSU Vitamin D Study Group. Incidence of vitamin D deficiency rickets among Australian

children: an Australian Paediatric Surveillance Unit study. *Med J Aust.* 2012 Apr 16;196(7):466-468. [Cited 79X, FWCI=5.46; top 3%; Alt 9]

The first Australia surveillance study of nutritional rickets. It led to a similar study being performed in New Zealand, and to the development of Australasian and Global statements on the prevention and treatment of nutritional rickets.

5. Zacharin M, Lim A, Gryllakis J, Siafarikas A, Jefferies C, Briody J, Heather N, Pitkin J, Emmanuel J, Lee KJ, Wang X, Simm PJ, **Munns CF**. Randomised controlled trial evaluating the use of Zoledronic acid in Duchenne Muscular Dystrophy. *J Clin Endocrinol Metab.* 2021 May 6:dgab302. doi: 10.1210/clinem/dgab302. Online ahead of print. [Yet to be recorded on Scopus]

The first randomised controlled trial of bisphosphonates in Duchenne Muscular Dystrophy and showed an increase in BMD and trend towards a reduction in primary vertebral compression fracture rate. This is an important study for both the impact it will have on the field of paediatric bone and mineral medicine and as an example of the collaborative Bone and Mineral Network that I have built in Australia.

#### Articles cited over 100 times

1. **Munns CF**, Shaw N, Kiely M, Specker BL, Thacher TD, Ozono K, Michigami T, Tiosano D, Mughal MZ, Mäkitie O, Ramos-Abad L, Ward L, DiMeglio LA, Atapattu N, Cassinelli H, Braegger C, Pettifor JM, Seth A, Wasagu Idris H, Bhatia V, Fu J, Goldberg G, Säwendahl L, Khadgawat R, Pludowski P, Maddock J, Hyppönen E, Oduwole A, Frew E, Aguitar M, Tulchinsky T, Butler G, Högl W. Global Consensus Recommendations on Prevention and Management of Nutritional Rickets. *J Clin Endocrinol Metab.* 2016 Feb;101(2):394-415. [Cited 409X, FWCI=29.15; top 1%]
2. **Munns CF**, Rauch F, Zeitlin L, Fassier F, Glorieux FH. Delayed osteotomy but not fracture healing in pediatric osteogenesis imperfecta patients receiving pamidronate. *J Bone Miner Res.* 2004 Nov;19(11):1779-86.[Cited 191X, FWCI=4.28; top 5%]
3. **Munns C**, Zacharin MR, Rodda CP, Batch JA, Morley R, Cranswick NE, et al. Prevention and treatment of infant and childhood vitamin D deficiency in Australia and New Zealand: a consensus statement. *Med J Aust.* 2006 Sep 4;185(5):268-72. [Cited 184X, FWCI=11.52; top1%]
4. Plotkin H, Rauch F, Zeitlin L, **Munns C**, Travers R, Glorieux FH. Effect of pamidronate treatment in children with polyostotic fibrous dysplasia of bone. *J Clin Endocrinol Metab.* 2003 Oct;88(10):4569-75. [Cited 169X, FWCI=3.21; top 7%]

5. Bouillon R, Marcocci C, Carmeliet G, Bikle D, White JH, Dawson-Hughes B, Lips P, **Munns CF**, Lazaretti-Castro M, Giustina A, Bilezikian J. Skeletal and extra-skeletal actions of vitamin D: Current evidence and outstanding questions. *Endocr Rev.* 2019 Aug 1;40(4):1109-1151. [Cited 160X, FWCI=13.90; top1%]
6. Bönnemann CG, Wang CH, Quijano-Roy S, Deconinck N, Bertini E, Ferreira A, Muntoni F, Sewry C, Bérout C, Mathews KD, Moore SA, Bellini J, Rutkowski A, North KN; Members of International Standard of Care Committee for Congenital Muscular Dystrophies. Diagnostic approach to the congenital muscular dystrophies. *Neuromuscul Disord.* 2014 Apr;24(4):289-311. [Cited 155X, FWCI=9.64; top 1%]
7. Bishop N, Arundel P, Clark E, Dimitri P, Farr J, Jones G, Makitie O, **Munns CF**, Shaw N. Fracture Prediction and the Definition of Osteoporosis in Children and Adolescents: The ISCD 2013 Pediatric Official Positions. *J Clin Densitom.* 2014 Apr-Jun;17(2):275-80. [Cited 134X, FWCI 8.24; top 2%]
8. Bishop N, Adami S, Ahmed SF, Antón J, Arundel P, Burren CP, Devogelaer JP, Hangartner T, Hosszú E, Lane JM, Lorenc R, Mäkitie O, **Munns CF**, Paredes A, Pavlov H, Plotkin H, Raggio CL, Reyes ML, Schoenau E, Semler O, Sillence DO, Steiner RD. Risedronate in children with osteogenesis imperfecta: a randomised, double-blind, placebo-controlled trial. *Lancet.* 2013 Oct 26;382(9902):1424-32. [Cited 118X, FWCI=15.57; top 1%]
9. **Munns CF**, Rauch F, Travers R, Glorieux FH. Effects of intravenous pamidronate treatment in infants with osteogenesis imperfecta: clinical and histomorphometric outcome. *J Bone Miner Res.* 2005 Jul;20(7):1235-43.[Cited 112X, FWCI=4.55; top 4%]
10. Paxton GA, Teale GR, Nowson CA, Mason RS, McGrath JJ, Thompson MJ, Siafarikas A, Rodda CP, **Munns CF**. Vitamin D and health in pregnancy, infants, children and adolescents in Australia and New Zealand: a position statement.; Australian and New Zealand Bone and Mineral Society; Osteoporosis Australia. *Med J Aust.* 2013 Feb 18;198(3):142-3. [Cited 111X, FWCI=13.21; top 1%]
11. Rauch F, Plotkin H, DiMeglio L, Engelbert RH, Henderson RC, **Munns C**, Wenket D, Zeitler P. Fracture prediction and the definition of osteoporosis in children and adolescents: the ISCD 2007 Pediatric Official Positions. *J Clin Densitom.* 2008 Jan-Mar;11(1):22-8. [Cited 106X, FWCI=4.19; top 5%]
12. Land C, Rauch F, **Munns CF**, Sahebjam S, Glorieux FH. Vertebral morphometry in children and adolescents with osteogenesis imperfecta: effect of intravenous pamidronate treatment. *Bone.* 2006 Oct;39(4):901-6. [Cited 103X, FWCI=3.49; top 7%]

## List of all cited publications

1. Ward L, Choudhury A, Alos N, Cabral DA, Rodd C, Sbrocchi A, Padidela R, Shaw NJ, Hosszu E, Kostik M, Alexeeva E, Thandrayen K, Shenouda N, Jaremko JL, Sunkara G, Sayyed S, Aftring RP, **Munns CF**. Zoledronic acid versus placebo in pediatric glucocorticoid-induced osteoporosis: A randomized double-blind phase 3 trial. *J Clin Endocrinol Metab*. 2021. In Press.
2. Zacharin M, Lim A, Gryllakis J, Siafarikas A, Jefferies C, Briody J, Heather N, Pitkin J, Emmanuel J, Lee KJ, Wang X, Simm PJ, **Munns CF**. Randomised controlled trial evaluating the use of Zoledronic acid in Duchenne Muscular Dystrophy. *J Clin Endocrinol Metab*. 2021 May 6:dgab302. doi: 10.1210/clinem/dgab302. Online ahead of print.
3. Thacher TD, Sempos CT, Durazo-Arvizu RA, Fischer PR, **Munns CF**, Pettifor JM. The validity of serum alkaline phosphatase to identify rickets in Nigerian children on a calcium-deprived diet. *J Clin Endocrinol Metab*. 2021 May. Dgab328. doi:10.1210/clinem/dgab328. Online ahead of print.
4. Sempos CT, Durazo-Arvizu RA, Fischer PR, **Munns CF**, Pettifor JM, Thacher TD. Serum 25-hydroxyvitamin D requirements to prevent nutritional rickets in Nigerian children on a low-calcium diet – a multivariable reanalysis. *Am J Clin Nutr*. 2021 March: nqab048. doi: 10.1093/ajcn/nqab048. Online ahead of print.
5. Rushworth RL, Gouvoussis N, Goubar T, Maguire A, **Munns CF**, Neville KA, Torpy DJ. Acute illness in children with secondary adrenal insufficiency. *Clin Endocrinol (Oxf)*. 2021 Feb 5. doi: 10.1111/cen.14427. Online ahead of print.
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**(ii) Book Chapters**

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### **(iii) Peer Reviewed Presentations**

1. **Munns C**, Morris A, Simm P, Biggin A, Elliott E. X-linked Hypophosphataemic Rickets. RACP Annual Scientific Meeting. May 2021.
2. Little D, Jamil K, **Munns C**, Cowell C, Foster B, Johnson M, Donald G, Whitehead C. A Randomized Controlled Trail of Zoledronic Acid in Perthes Disease (ZAP). Pediatric Orthopedic Society of North America, Annual Scientific Meeting. Charlotte, USA, May 2019.
3. **Munns C**, Jamil K, Cowell C, Foster B, Johnson M, Donald G, Whitehead C, Little D. Bisphosphonate improves hip range of motion and pain but not femoral head sphericity. A multicentre, randomized clinical trail of children with Perthes Disease. APEG Annual Scientific Meeting. Adelaide. September 2019.
4. Imel EA, Whyte MP, **Munns C**, et al. Burosumab Resulted in Greater Improvement in Rickets than Conventional Therapy in Children with X-linked Hypophosphatemia (XLH). In. Vol March 23-26, 2019. Endocrine Society Annual Meeting (ENDO) New Orleans, LA; 2019. [Oral].
5. Jamil K, Little DL, **Munns CF**. The effects of intravenous zoledronic acid in children with Perthes Disease; clinical, quality of life and safety data after 1 year. 20th Asia Pacific Orthopaedic Association Congress. Antalya, Turkey, 10-14th April 2018.
6. Imel EA, Whyte MP, **Munns C**, et al. Burosumab Improved Rickets, Phosphate Metabolism, and Clinical Outcomes Compared to Conventional Therapy in Children with XLH. In. Vol September 28 - October 01, 2018. American Society for Bone and Mineral Research (ASBMR): Montreal, QC, Canada; 2018. [Oral].
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11. Little D, Jamil K, **Munns C**, Cowell C, Foster B, Johnson M, Donald G, Whitehead C. A Randomized Controlled Trail of Zoledronic Acid in Perthes Disease (ZAP). Pediatric Orthopedic Society of North America, Annual Scientific Meeting. Charlotte, USA, May 2019.
12. Jamil K, Little DL, **Munns CF**. The effects of intravenous zoledronic acid in children with Perthes Disease; clinical, quality of life and safety data after 1 year. 20th Asia Pacific Orthopaedic Association Congress. Antalya, Turkey, 10-14th April 2018.
13. Pacey V, Tofts L, Nicholson L, Adams R, **Munns C**. Physical Activity of Children with Heritable Disorders of Connective Tissue: A Comparative Study. Australian Physiotherapy Association Biennial Conference Momentum, October 2017.
14. Hutchence M, Pacey V, **Munns C**, North K, Clarke N, Rose K, Biggin A. Whole Body Vibration Training for Children and Adolescents with Congenital Myopathy.

Australian Physiotherapy Association Biennial Conference Momentum, October 2017

15. Jones T, Theophile I, Price A, **Munns C**, Pacey V. Physical Activity Levels and the Perceived Barriers to Physical Activity Participation in Children with Osteogenesis Imperfecta. Australian Physiotherapy Association Biennial Conference Momentum, October 2017.
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18. Jones T, Theophile I, Price A, Chmielewski A, Lozano M, **Munns C**, Pacey V. Barriers Impacting on Participation in Physical Activity for Children with Osteogenesis Imperfecta: A Study of Child and Parent Perspectives. World Confederation for Physical Therapy Congress. New York, USA. July 2017
19. Jamil K, Little DL, **Munns CF**. Randomized Clinical Trial Of Bisphosphonate Treatment In Childhood Femoral Head Avascular Necrosis Due To Perthes Disease: Study Design, Methods And Baseline Data' 47th Malaysian Orthopaedic Association Annual General Meeting/Annual Scientific Meeting, 19-21st May 2017.
20. Jamil K, **Munns CF**, Little DL. Comparison Of Contrast-Enhanced Mri With And Without Subtraction Technique In Perthes Disease APOS Instructional Course & Combined APOS/POSNZ Annual Scientific Meeting, Millennium, Queenstown, New Zealand, 29th August - 2nd September & 3rd - 4th September, 2017.
21. Pacey V, Jones T, Lozano M, Chmielewski A, Price A, Theophile I, **Munns C**. Physical activity of children with Osteogenesis Imperfecta. 1st Asia Pacific Bone Disorders Symposium. September, 2016.
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23. Theophile I, Pacey V, Price A, Chmielewski A, Lozano M, **Munns C**, Jones T. Barriers impacting on participation in physical activity for children with osteogenesis imperfecta: a cross sectional study of child and parent perspectives. 1st Asia Pacific Bone Disorders Symposium. Melbourne, Australia. September, 2016.
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25. Biggin A, **Munns CF**, Peacock L, Mikulec K, Kneissel M, Kramer I, Cheng T, Schindeler A, Little DG. Combination Sclerostin Antibody and Zoledronic Acid Treatment Outperforms Either Treatment Alone in a Mouse Model of Osteogenesis Imperfecta. 7<sup>th</sup> International Conference on Children's Bone Health, Salzburg, Austria. June 2015

26. Pacey V, Nicholson LL, Adams RD, Tofts L, **Munns C**. A randomized controlled trial of two exercise programmes for children with Joint Hypermobility Syndrome and knee pain. Australian Physiotherapy Association 10th Biennial Conference. October, 2013
27. Pacey V, Nicholson LL, Adams RD, Tofts L, **Munns C**. Quality of life, pain and fatigue in Joint Hypermobility Syndrome: A parent and child's perspective (invited speaker). Australian Rheumatology Association 54th Annual Scientific Meeting, Paediatric Satellite Meeting. May 2013
28. Pacey V, Nicholson LL, Adams RD, Tofts L, **Munns C**. The fatigue experience of children with Joint Hypermobility Syndrome: A parent and child's perspective. Australian Rheumatology Association 54th Annual Scientific Meeting. May 2013
29. **Munns CF**. Long-term effects of bisphosphonate therapy in children with osteogenesis imperfecta. 6<sup>th</sup> International Conference on Children's Bone Health, Rotterdam, Netherlands. June 2013.
30. Biggin A, **Munns CF**. Six monthly intravenous zoledronic acid in childhood osteoporosis. 6<sup>th</sup> International Conference on Children's Bone Health, Rotterdam, Netherlands. June 2013.
31. Gusso S, **Munns CF**, Hofman P. Short-term whole body vibration therapy improves bone density and muscle function in adolescents with cerebral palsy. Annual Scientific Meeting Australasian Paediatric Endocrine Group. Sydney, Australia. 2013.
32. Zheng L, Biggin A, **Munns CF**. Long-term effects of bisphosphonate therapy in children with osteogenesis imperfecta. Annual Scientific Meeting Australasian Paediatric Endocrine Group. Sydney, Australia. 2013.
33. Robinson A, **Munns CF**, Kristi Jones, Helena Young, Yen Thanh Mac, Sue Ditchfield, Kate Armstrong, Quynh T.V. Huynh, Nguyen Ngoc Khanh, Bui Phuong Thao, Can Thi Bich Ngoc, Vu Chi Dung. Working together so all children can have the chance to walk and run. Annual Scientific Meeting Australasian Paediatric Endocrine Group. Sydney, Australia. 2013.
34. Estrella J, Bakshi M, **Munns CF**, Schwarze U, Cundy T, Sillence D. Moderately-Severe Osteogenesis Imperfecta due to FKBP10 Mutations in Non-Consanguineous Australian Families. Conference: American Society of Human Genetics 2012. San Francisco, USA. November 2012.
35. Middleton A, Selvadurai H, Christodoulou J, **Munns CF**. Whole body vibration training for children with cystic fibrosis. Conference: European Cystic Fibrosis Conference, Dublin, Ireland, June 2012.
36. Pacey V, Nicholson L, Adams R, Munn J, **Munns CF**. Generalised joint hypermobility and risk of lower limb joint injury during sport: A systematic review with meta-analysis. Australian Rheumatology Association 53rd Annual Scientific Meeting, Canberra, Australia. May 2012
37. Pacey V, Tofts L, Adams, R, **Munns CF**, Nicholson L. Exercise Programmes for Children with Joint Hypermobility Syndrome and Knee Pain: A Randomised Controlled Trial. Conference: Australian Rheumatology Association 53rd Annual Scientific Meeting, Canberra, Australia, May 2012.
38. Ooi HL, Briody J, McQuade M, Cowell CT, **Munns CF**. Zoledronic Acid Improves Bone Mineral Density if Paediatric Spinal Cord Injury. Conference: 29<sup>th</sup> Annual Scientific Meeting Australasian Paediatric Endocrine Group. Perth, Australia. 2011.
39. Ooi HL, Briody J, McQuade M, Cowell CT, **Munns CF**. Six Monthly Intravenous Zoledronic Acid in Childhood Osteoporosis. Conference: 29<sup>th</sup> Annual Scientific Meeting Australasian Paediatric Endocrine Group. Perth, Australia. 2011.
40. Pacey V, Tofts L, Adams R, Nicholson L, **Munns CF**. Quality of Life in Children with Joint Hypermobility Syndrome. Australian Physiotherapy Association 9th Biennial Conference, Brisbane, October 2011

41. Ramjan KA, Broderick C, Van Doorn N, Briody JN, Garnett SP, Winning K, Lawrie E, Burrell S, Chisholm K, Baur L, **Munns CF**, Cowell CT. Effect of Whole Body Vibration Training on Insulin Sensitivity in Overweight Adolescents: A Randomised Control Trial. Diabetes Symposia RNS/ Kolling Institute/ USYD/UTS scientific meeting. 2011.
42. Rana M, **Munns C**, Selvaduria H, Cooper P, Craig M. The Impact of Dysglycaemia on Bone Mineral Density in Young Cystic Fibrosis Patients 9th Australasian Cystic Fibrosis Conference, Melbourne Victoria, August 2011.
43. Ramjan KA, Broderick CR, Briody JN, Van Dooran N, Barzi F, Winning K, Lawrie E, Garnett SP, Burrell S, Chisholm K, Baur LA, **Munns CF**, Cowell CT. The Effect of Whole Body Vibration Training on Insulin Sensitivity in Overweight Adolescents: A Randomised Control Trial. Conference: ENDO 2011. Boston, USA. June 2011.
44. Simm PJ, Briody J, Schindler A, Cowell CT, Little D, North K, **Munns CF**. Bone Health in Children with Neurofibromatosis Type 1 – A High Incidence of abnormal Vertebral Morphometry, Impaired Muscle Function and altered Skeletal Geometry. Conference: 6<sup>th</sup> Black Forrest Forum for Musculoskeletal Interactions. Germany. May 2011.
45. Rana M, Simonds S, Selvaduria H, Cooper P, Crock P, Lafferty T, Hameed S, Verge C, **Munns C**, Craig M. Population-based Incidence and Prevalence of CFRD in NSW and ACT. Conference: 70th American Diabetes Association Scientific Sessions, Orlando Florida, June 2010.
46. Ramjan KA, Broderick C, Van Doorn N, Briody JN, Garnett SP, Winning K, Lawrie E, Burrell S, Chisholm K, Baur L, **Munns CF**, Cowell CT. Cardio-respiratory fitness is related to fatness, insulin sensitivity and body composition in overweight insulin resistant adolescents. APEG ASM Adelaide, SA, Australia. 2010.
47. Birke O, Schindeler A, Ramachandran M, Peacock L, Mikulec K, Morse A, Yu N, Baldock P, Cowell C, **Munns C**, Bellemore M, Little DG. Treatment of congenital pseudarthrosis of the tibia using recombinant bone morphogenetic protein and bisphosphonates. Conference: IBMS Davos Workshops: Bone Biology and Therapeutics, Davos, Switzerland, 2010.
48. Rana M, Simonds S, Selvaduria H, Cooper P, Crock P, Lafferty T, Hameed S, Verge C, **Munns C**, Craig M. Incidence and Prevalence of CFRD in NSW and ACT. Conference: 27<sup>th</sup> Annual Scientific Meeting Australasian Paediatric Endocrine Group. Coolum, Australia. 2009.
49. Alcausin M, Ault J, Pacey V, Briody J, McQuade M, Sillence D & **Munns CF**. The effects of early intravenous pamidronate therapy on gross motor function and fracture frequency in children with osteogenesis imperfecta. Conference: Australian Physiotherapy Association 8th Biennial Conference, Sydney, October 2009
50. Rana M, Selvaduria H, **Munns C**, Craig M. Impact of Diabetes and Impaired Glucose Tolerance of Bone Mineral Density in young Cystic Fibrosis Patients. Incidence and Prevalence of CFRD in NSW and ACT. Conference: 27<sup>th</sup> Annual Scientific Meeting Australasian Paediatric Endocrine Group. Coolum, Australia. 2009.
51. Rana M, Simonds S, Selvaduria H, Cooper P, Crock P, Lafferty T, Hameed S, Verge C, **Munns C**, Craig M. Incidence and Prevalence of CFRD in NSW and ACT. Conference: 8th Australasian Cystic Fibrosis Conference, Brisbane Queensland, August 29 to September 1, 2009

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53. Ramjan K, Broderick C, Garnett S, Baur L, **Munns C**, Cowell C. Metabolic, Cardiorespiratory and Musculoskeletal in Overweight Insulin Resistant Adolescents. Conference: 27<sup>th</sup> Annual Scientific Meeting Australasian Paediatric Endocrine Group. Coolum, Australia. 2009.
54. Alcausin M, Ault J, Pacey V, Briody J, McQuade M, Sillence D, **Munns C**. Intravenous Pamidronate Treatment on Children with Moderate to Severe Osteogenesis Imperfecta started less than 36 months of age. Conference: 5<sup>th</sup> International Conference on Children's Bone Health, Cambridge, United Kingdom. 2009.
55. Alcausin M, Ault J, Pacey V, Briody J, McQuade M, Sillence D, **Munns C**. The effects of early intervention treatment on infants with Moderate to Severe Osteogenesis Imperfecta. Conference: 19<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Bone and Mineral Society, Sydney, Australia. 2009.
56. David N, Birke O, Dalla Pozza L, Hobson S, **Munns C**, Little DG. Multiple growth arrests after treatment with cis-transretinoic acid for metastatic neuroblastoma. Conference: Australian Paediatric Orthopaedic Society, Gold Coast, Australia. 2009.
57. Ault, J, Pacey V, Alcausin M, **Munns C**, Broley S & Sillence D. A Multidisciplinary Care Programme for Children with Osteogenesis Imperfecta. 10th International Conference on Osteogenesis Imperfecta, Gent, Belgium October 2008.
58. Johannesen J, Briody J, Little D, Cowell C, **Munns C**. Effects of Zoledronic Acid on Bone and Mineral Metabolism in Children with Femoral Head Avascular Necrosis. Conference: APPEs Biennial Scientific Meeting. Seoul, Korea. 2008.
59. Johannesen J, Briody J, Little D, Cowell C, **Munns C**. A 2 years follow-up study of the effects of Zoledronic Acid on Bone and Mineral Metabolism in Children with Osteoporosis. Conference: 18<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Bone and Mineral Society. Melbourne, Australia. 2008.
60. **Munns C**, Zacharin M, Rodda C, David E, Harris M, Batch J, Pascoe M, Fairchild J, Lafferty A, Whybourne A, Ward L, Morley R, Garnett S, Burgner D, Geddes J, Cherian S, Mahajan D, Zurynski Y, McKay N and Cowell C. Vitamin D Deficiency Rickets In Australian Children: APSU Update. Conference: 18<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Bone and Mineral Society. Melbourne, Australia. 2008.
61. **Munns C**, Zacharin M, Rodda C, David E, Harris M, Batch J, Pascoe M, Fairchild J, Lafferty A, Whybourne A, Ward L, Morley R, Garnett S, Burgner D, Geddes J, Cherian S, Mahajan D, Zurynski Y, McKay N and Cowell C. Vitamin D Deficiency Rickets In Australian Children: APSU Update. Conference: Royal Australasian College of Physicians ASM. Adelaide, Australia. 2008.
62. Ramjan K, Briody J, Gallego P, Waugh MC, **Munns C**. Evaluation of Regional Bone Mineral Density in Paediatric Patients after Spinal Cord Injury. Conference: 26<sup>th</sup> APEG Scientific Conference. Canberra, Australia. 2008.
63. McDonald MM, Morse A, Mikulec K, Mai H, **Munns C**, Little DG. Normal endochondral bone healing follows continuous bisphosphonate pre-treatment in a rat closed fracture model. IBMS Davos Workshops: Bone Biology and Therapeutics. Davos, Switzerland, March 2008.

64. **Munns C**, Zacharin M, Rodda C, David E, Harris M, Batch J, Pascoe M, Fairchild J, Lafferty A, Whybourne A, Ward L, Morley R, Garnett S, Burgner D, Geddes J, Cherian S, Mahajan D, Zurynski Y, McKay N and Cowell C. Vitamin D Deficiency Rickets In Australian Children: APSU Update. Conference: 25<sup>th</sup> APEG Scientific Conference. Broome, Australia. 2007.
65. **Munns C**, Cowell C, North K, Little D. Regional Osteopenia in Paediatric Patients with Neurofibromatosis Type 1. Conference: 25<sup>th</sup> APEG Scientific Conference. Broome, Australia. 2007.
66. **Munns C**, Briody, Little D, Cowell C, North K. Regional Bone Mineral Density in Children with Neurofibromatosis Type 1. Conference: 17<sup>th</sup> Scientific Meeting of the International Bone and Mineral Society Annual Scientific Meeting. Montreal, Canada. June 2007.
67. Cheung M, Rauch F, Cornibert S, **Munns C**, Land C, Glorieux F. Risedronate in the Treatment of Mild Pediatric Osteogenesis Imperfecta: A Randomized Placebo-Controlled Study. Conference: 5<sup>th</sup> International Conference on Children's Bone Health. Montreal, Canada. June 2007.
68. Sillence D, Roscioli T, **Munns C**. Infantile Arterial Calcification: Successful Treatment with Bisphosphonates. Conference: 5<sup>th</sup> International Conference on Children's Bone Health. Montreal, Canada. June 2007.
69. Cowell C, Gleeson H, Wilshire E, Grimwood K, Briody J, Hall J, Chaitow J, Sillence D, **Munns C**. Chronic Recurrent Multifocal Osteomyelitis: Effectiveness of Intravenous Pamidronate in Pain Relief and Spinal Involvement. Conference: 5<sup>th</sup> International Conference on Children's Bone Health. Montreal, Canada. June 2007.
70. Little DG, Ramachandran M, Ward K, Brown RR, **Munns C**, Cowell C. Intravenous bisphosphonate therapy for traumatic osteonecrosis of the femoral head in adolescents: a prospective case series. Pediatric Orthopaedic Society of North America Annual Meeting, Hollywood, Florida, USA, May 2007.
71. McDonald MM, Morse A, Mikulec K, Mai H, Munns C, Little DG. Normal endochondral bone healing follows continuous bisphosphonate pre-treatment in a rat closed model. 17<sup>th</sup> Scientific Meeting of the International Bone and Mineral Society, Montreal, Canada, June 2007.
72. **Munns C**, Liu A, Briody J, Waugh M-C. Regional Changes in Bone and Muscle Mass in Children following Spinal Cord Injury. Conference: 28<sup>th</sup> Annual Scientific Meeting of the American Society of Bone and Mineral Research. Philadelphia, USA. September 2006.
73. Bridge P, Cowell CT, **Munns CF**, O'Connor H, Woodhead H, Briody J, Thompson M. Lean Body Mass: More Important than Calcium Intake on Bone Mineral Accretion in Peripubertal Boy and Girl Elite Athletes. A 3-year Longitudinal Study. Conference: 2006 Joint Meeting of the 3<sup>rd</sup> International Osteoporosis Foundation Asia-Pacific Regional Conference on Osteoporosis and 16<sup>th</sup> Annual Meeting of the Australian and New Zealand Bone and Mineral Society. Port Douglas, Australia. October 2006.
74. Briody JN, **Munns C**. The Impact of Scan Speed and Voxel Size on Peripheral QCT results. Conference: 2006 Joint Meeting of the 3<sup>rd</sup> International Osteoporosis Foundation Asia-Pacific Regional Conference on Osteoporosis and 16<sup>th</sup> Annual Meeting of the Australian and New Zealand Bone and Mineral Society. Port Douglas, Australia. October 2006.
75. **Munns CF**, Briody J, McQuade M, Little DG, Cowell CT. Effect of zoledronic acid on growth and bone mineral accrual in children. Bone 36 (2005) S35. Conference: 3<sup>rd</sup> International Conference on Children's Bone Health. Sorrento, Italy. May 2005.

76. Sahebjam, S, **Munns CF**, Rauch F, Glorieux FH. Vertebral Morphometry During Pamidronate Treatment for Pediatric Osteogenesis Imperfecta. Conference: 26<sup>th</sup> Annual Meeting of the American Society of Bone and Mineral Research. Seattle, USA. Oct 2004.
77. **Munns CF**, Rauch F, Glorieux FH. Pamidronate Treatment in Infants with Severe Osteogenesis Imperfecta: Three-Year Follow-Up Results. Conference: 26<sup>th</sup> Annual Meeting of the American Society of Bone and Mineral Research. Seattle, USA. Oct 2004.
78. **Munns CF**, Rauch F, Zeitlin L, Fassier F, Glorieux FH. Delayed Fracture and Osteotomy Healing in Pediatric Osteogenesis Imperfecta Patients Receiving Pamidronate. Conference: 25<sup>th</sup> Annual Meeting of the American Society of Bone and Mineral Research. Minneapolis, USA. Sept 2003.
79. Haase H.R., **Munns C.F.J.**, Hayes M.T., Batch J.A. Short Stature Homeobox Gene: Subcellular Localization of SHOX in Chondrocyte-type cells. Conference: Matrix Biology Society of Australia and New Zealand Annual Meeting. Wisemans Ferry NSW, Australia. Sept 2002.
80. **Munns C**, Flanagan S, Hayes M, Berry M, Vickers D, O'Rourke P, Rao E, Rappold G, Hyland V, Glass I, Batch J. The Spectrum of SHOX Haploinsufficiency Disorder: Diagnostic Markers. Conference: Australasian Paediatric Endocrine Group Annual Scientific Meeting, Gold Coast, Australia, September 2001.
81. **Munns CF**, McGill J, Perry-Keene D, Batch J. Pamidronate: Novel treatment for Carpotarsal Osteolysis. Conference: "Paediatric Endocrinology Montreal 2001" : Joint meeting of the Lawson Wilkins Pediatric Endocrine Society and the European Society of Paediatric Endocrinology, Montreal, Canada. July 2001.
82. **Munns C**, Flanagan S, Hayes M, Berry M, Vickers D, O'Rourke P, Rao E, Rappold G, Hyland V, Glass I, Batch J. SHOX: Growth Effect in Leri-Weill dyschondrosteosis. Conference: Paediatric Endocrine Genes 2000, Sydney, Australia. October 2000.
83. **Munns CF**, McGill J, Batch J, Perry-Keene D. Pamidronate in Childhood Osteoporosis. Conference: International Bone and Hormone Meeting, Hamilton Island, Australia. October 2000.
84. **Munns C**, Flanagan S, Hayes M, Berry M, Vickers D, O'Rourke P, Rao E, Rappold G, Hyland V, Glass I, Batch J. SHOX: Effect in Leri-Weill dyschondrosteosis. Conference: International Bone and Hormone Meeting, Sydney, Australia. October 2000.
85. **Munns C**, Flanagan S, Hayes M, Berry M, Vickers D, O'Rourke P, Rao E, Rappold G, Hyland V, Glass I, Batch J. Leri-Weill dyschondrosteosis : Histopathology and SHOX Immunohistochemistry. Conference: 11<sup>th</sup> International Congress of Endocrinology, Sydney, Australia. October 2000.

**(v) PhD University of Queensland**

PhD Thesis: "Role of the Short Stature Homeobox Gene in Skeletal Growth and Development". Supervisors: Prof Jennifer Batch, Prof Ian Glass. Awarded 2004

**(vi) Invited International Presentations**

1. Symposium: New Era of Management of X-linked Hypophosphatemia. APPEs 2021. Malaysia and Virtual Meeting. November 2021.
2. Symposium: Current and Future Treatment Perspectives for Osteogenesis Imperfecta. MAC 11 – Annual Congress of the Malaysian Endocrine and Metabolic Society. Virtual Meeting. July 2021.
3. Meet the Expert: Management of Hypophosphataemic Bone Disease. MAC 11 – Annual Congress of the Malaysian Endocrine and Metabolic Society. Virtual Meeting. July 2021.
4. Vitamin D Supplementation During Pregnancy and the First Year of Life. Sanofi India Educational Series. Virtual Meeting. May 2021.
5. Biologics Therapy for Perthes. International Perthes Study Group Annual Meeting. Virtual Meeting. January 2021.
6. Novel Therapeutics in Bone. ISPAE Annual Scientific Meeting. Kolkata, India. November 2019.
7. Approach to Resistant Rickets. ISPAE Annual Scientific Meeting. Kolkata, India. November 2019.
8. Current Perspectives in Diagnosis and Management of Metabolic Bone Diseases in Children. ISPAE PET Fellow School 2019. Kolkata, India. November 2019.
9. Challenge the Expert. 9<sup>th</sup> International Conference on Children's Bone Health. Salzburg, Austria, June 2019.
10. Bone fragility during childhood – beyond osteogenesis imperfecta. 9<sup>th</sup> International Conference on Children's Bone Health. Salzburg, Austria, June 2019.
11. Bone Health in Children with Chronic Disease. Continuous Medical Education Day. Hanoi, Vietnam. May 2018.
12. Multiple Fractures in Children / Osteogenesis Imperfecta. 17<sup>th</sup> NOFSA Congress. Cape Town, South Africa. March 2018.
13. Skeletal Health in Children with Chronic Disease. 17<sup>th</sup> NOFSA Congress. Cape Town, South Africa. March 2018.
14. Osteogenesis Imperfecta. OI and Paediatric Bone Health Working Group. Johannesburg, South Africa. March 2018.
15. Skeletal Health in Children with Chronic Disease. OI and Paediatric Bone Health Working Group. Johannesburg, South Africa. March 2018.
16. Nutritional Rickets. Vitamin D Standardization Program; The Road Ahead. NIH. Washington DC, USA. November 2017.
17. The Management of Osteoporosis in Children with Neuromuscular Disorders. Bone and Mineral Working Group Meeting of the 10<sup>th</sup> International Meeting of Pediatric Endocrinology. Washington DC, USA. September 2017.
18. Pediatric osteoporosis – Meet the Expert. 10<sup>th</sup> International Meeting of Pediatric Endocrinology. Washington DC, USA. September 2017.
19. Nutritional Rickets. 1<sup>st</sup> International Conference on Controversies in Vitamin D. Pisa, Italy. June 2017.
20. Bone fragility in adolescent: when to worry and what should we do? Malaysian Endocrine and Metabolic Society. Kuala Lumpur, Malaysia. May 2017.
21. Hypoparathyroidism in children. Malaysian Endocrine and Metabolic Society. Kuala Lumpur, Malaysia. May 2017.

22. Nutritional Rickets. Thailand Pediatric Endocrinology APPES CME. Bangkok, Thailand. May 2017.
23. Novel Treatment Approaches for Osteogenesis Imperfecta. 1st Asia-Pacific Bone Disorders Symposium. Melbourne, Victoria. September 2016.
24. Meet the Professor: Pediatric Osteoporosis. 9th APPES/50th JSPE Joint Scientific Meeting. Tokyo, Japan. November 2016.
25. The Birmingham consensus recommendations for prevention and treatment of rickets. International Society of Childhood and Adolescent Diabetes, Annual Scientific Meeting. India, November 2015.
26. Novel therapies for pediatric osteoporosis. International Society of Childhood and Adolescent Diabetes, Annual Scientific Meeting. India, November 2015.
27. Bone complications of childhood cancer. Combined APEG/ISPAD Scientific Meeting. Brisbane, Australia. September 2015.
28. Vitamin D Consensus Statement. 7<sup>th</sup> International Conference on Children's Bone Health. Salzburg, Austria, June 2015.
29. Duchenne and cerebral palsy. 7<sup>th</sup> International Conference on Children's Bone Health. Salzburg, Austria, June 2015.
30. Repeated Fractures in children: when is it endocrinological? Indonesian Pediatric Endocrine Society, 3rd Pediatric Endocrine Update. Bali, Indonesia, May 2015.
31. Vitamin D in sun-rich countries: do we need supplementation? Indonesian Pediatric Endocrine Society, 3rd Pediatric Endocrine Update. Bali, Indonesia, May 2015.
32. Novel Treatment Approaches for Osteogenesis Imperfecta. ENDO 2015 (Endocrine Society Annual Scientific Meeting). San Diego, CA, USA, March 2015.
33. Vitamin D and Calcium in Childhood. Training Course on Bone and Genetic Muscle Disorders. National Hospital of Pediatrics, Hanoi, Vietnam. May 2014.
34. Osteogenesis Imperfecta: Diagnosis and Management. Training Course on Bone and Genetic Muscle Disorders. National Hospital of Pediatrics, Hanoi, Vietnam. May 2014.
35. Treatment of Childhood Osteoporosis: Future Perspectives. 8<sup>th</sup> APPES/APEG Joint Scientific Meeting. Darwin, Australia. November 2014.
36. Medical therapies: present and future. 6<sup>th</sup> International Conference on Children's Bone Health, Rotterdam, Netherlands. June 2013.
37. Vitamin D and Calcium in Childhood. Training Course on Bone and Genetic Muscle Disorders. National Hospital of Pediatrics, Hanoi, Vietnam. May 2013.
38. Osteogenesis Imperfecta: Diagnosis and Management. Training Course on Bone and Genetic Muscle Disorders. National Hospital of Pediatrics, Hanoi, Vietnam. May 2013.
39. Paediatric Bone Health: Assessment and Optimisation. Continuous Medical Education Course. Children's Hospital 2, Ho Chi Minh City, Vietnam. May 2013
40. Osteogenesis imperfecta: Diagnosis and Management. Continuous Medical Education Course. Children's Hospital 2, Ho Chi Minh City, Vietnam. May 2013
41. Hypercalcaemia, hypocalcaemia and Rickets. Continuous Medical Education Course. Children's Hospital 2, Ho Chi Minh City, Vietnam. May 2013
42. Update in Osteogenesis Imperfecta. National Hospital of Pediatrics, Hanoi, Vietnam. November 2011.
43. Recent Discoveries in Pediatric Bone Health. APPES CME Meeting. Hanoi, Vietnam. November 2011.
44. Bone Health. Indonesian Pediatric Society. 15<sup>th</sup> Child Health National Congress. Manado, North Sulawesi, Indonesia. July 2011.
45. Investigation and Treatment of Paediatric Osteoporosis. Indonesian Pediatric Society. 15<sup>th</sup> Child Health National Congress. Manado, North Sulawesi, Indonesia. July 2011.

46. Management of Paediatric Osteoporosis. Sixth APPES Scientific Meeting. Xi'an, China. November 2010.
47. Recent Discoveries in Pediatric Bone Health. ASBMR – 2010 Pediatric Bone and Mineral Working Group. Vancouver, Canada. October 2010.
48. Importance of Vitamin D in Childhood and Adolescence. The 42nd International Symposium on Endocrinology & Metabolism. Vienna, Austria. May 2010
49. GI/Nutrition Literature Review and Identify Care Issues. First International Congenital Myopathies Standard of Care Conference. Stanford, USA. May 2010
50. Consensus Recommendations for GI/Nutrition Care. First International Congenital Myopathies Standard of Care Conference. Stanford, USA. May 2010
51. Investigation and Management of Pediatric Osteoporosis. International Update in Pediatric Endocrinology. Mumbai, India. February 2008.
52. Investigation and Management of Childhood Osteoporosis. 4<sup>th</sup> Biennial Scientific Meeting, Asia Pacific Paediatric Endocrine Society 2006. Pattaya, Thailand. November 2006.
53. Chronic Bone Disease in Children. APEG Annual Scientific Meeting. Auckland, New Zealand. December 2004.
54. When to Stop Bisphosphonates in Osteogenesis Imperfecta. Children's Bone Symposium. Sydney, Australia. September 2004.
55. Bisphosphonates in Type I Osteogenesis Imperfecta. Scientific Meeting on Mild OI. Chicago, USA. April 2004.
56. Genotype – Phenotype Correlations in Osteogenesis Imperfecta. Scientific Meeting on Mild OI. Chicago, USA. April 2004.
57. Natural History of Mild Osteogenesis Imperfecta. Scientific Meeting on Mild OI. Chicago, USA. April 2004.
58. SHOX: Role in Skeletal Growth and Development. University of Washington, Seattle, USA. July 2001.
59. Pamidronate Therapy in Osteogenesis Imperfecta. Shriners Hospital for Children, Montreal, Canada. February 2003.
60. SHOX: Role in Skeletal Growth and Development. Shriners Hospital for Children, Montreal, Canada. July 2001.

***(vii) Invited Local Presentations***

1. Burosumab Therapy In XLH. Hot Topics in Paediatric Endocrinology. APEG Annual Scientific Meeting. Mornington Peninsular. November 2021.
2. Bone Development in Children. Royal North Shore Hospital Endocrinology Grand Rounds. Sydney. June 2021.
3. Bisphosphonate therapy in Children. Paediatric Endocrine Education Symposium. Brisbane. June 2021.
4. Bone Health in Children with Chronic Disorders. Grand Rounds Queensland Children's Hospital. Brisbane. June 2021.
5. Outstanding progress achieved by CHW in enrolling patients in clinical trials. Sydney Health Partners' Annual Forum. Sydney. June 2021.
6. ZAP, Outcome of Randomised Controlled Trial. Bone and Mineral Working Group Virtual Meeting. March 2021.
7. Vitamin D supplementation during pregnancy and the first year of life. Grand Rounds. Nepean Hospital. September 2020.
8. X-linked Hypophosphataemic rickets. 30<sup>th</sup> Australian and New Zealand Bone and Mineral Society Annual Scientific Meeting. Virtual Meeting. Sept 2020.
9. Burosumab: role in management of X-linked hypophosphataemic rickets. 29<sup>th</sup> Australian and New Zealand Bone and Mineral Society Annual Scientific Meeting. Darwin, Northern Territory. Oct 2019.
10. Endocrinology – Bisphosphonate treatments: Australian Standard. Osteogenesis Imperfecta Foundation. Sydney. October 2019.
11. Vitamin D supplementation during pregnancy and the first year of life. 6<sup>th</sup> Annual Nepean Blue Mountains Clinical Paediatrics Day. Leura. October 2019.
12. Vitamin D in Pregnancy - Supplementation or not. Healthed Educational Series. Sydney, Melbourne, Adelaide and Brisbane. 2019.
13. Paediatric Bone Health. Paediatric Physiotherapy Musculoskeletal Forum. Sydney. July 2018.
14. Nutritional Rickets: A Call for Action. Australian Pharmacy Professional Conference. Gold Coast. May 2018.
15. Paediatric Osteoporosis: aetiology, diagnosis and management approached. Amgen Bone Academy. Melbourne. April 2017.
16. Paediatric Osteoporosis Diagnosis and Management. Paediatric Endocrine Update, Brisbane. 2017.
17. Metabolic Bone Disease: When Broken Does Not Mean Abuse: Child Protection Forum. Sydney, NSW. November 2016.
18. Cancer associate avascular necrosis of bone. ESA-SRA-ANZBMS Combined Scientific Meeting. Gold Coast, Queensland. August 2016.
19. Controversies in Endocrinology: International Consensus on Prevention and Management of Nutritional Rickets. APEG Annual Scientific Meeting. Alice Springs, Northern Territory. August, 2016.
20. Bone complications of childhood cancer. Combined APEG/ISPAD Scientific Meeting. Brisbane, Queensland. September 2015.
21. Bone Health in Cystic Fibrosis. 11th Australasia Cystic Fibrosis Conference. Sydney. August 2015.
22. Treatment of Childhood Osteoporosis: Future Perspectives. 8<sup>th</sup> APPES/APEG Joint Scientific Meeting. Darwin, Australia. November 2014.
23. Update on the Role of Bisphosphonate Therapy in Paediatric Orthopaedics. 24<sup>th</sup> Australian Paediatric Orthopaedic Society Annual Scientific Meeting. Noosa. Queensland. August 2014.
24. Osteogenesis Imperfecta – Diagnosis and Management. 24<sup>th</sup> Australian Paediatric Orthopaedic Society Annual Scientific Meeting. Noosa. Queensland. August 2014.

25. Metabolic Bone Disease and Fracture. Sydney Children's Hospital Grand Rounds. Sydney. August 2014.
26. Paediatric Osteoporosis: Present and Future. AIMSS Seminar and Lunch. Melbourne. February 2014.
27. Bones, Bones, Bones. SNIPS 2013. Disability Health Care in the Gong. Wollongong. August 2013.
28. Osteogenesis Imperfecta: Diagnosis and Management. Sydney Orthopaedic Update. Sydney. June 2013.
29. Paediatric Bone in Health and Disease. Australasian Academy of Paediatric Dentistry Annual Scientific Meeting. Melbourne. April 2013.
30. Bisphosphonate Therapy in Children. Australasian Academy of Paediatric Dentistry Annual Scientific Meeting. Melbourne. April 2013.
31. Paediatric Bone Health: Glucocorticoids and Rheumatic Disease. 53<sup>rd</sup> Annual Scientific Meeting of The Australian Rheumatology Association. Canberra, Australia. May 2012.
32. Vitamin D and Calcium Supplementation in Pregnancy. Annual Women's Health Update. Sydney, Adelaide and Perth. 2012.
33. Vitamin D Deficiency and calcium supplementation. Paediatric Update 2011. Sydney, Australia. October 2011.
34. Investigation and Treatment of Paediatric Osteoporosis. Paediatric Update 2011. Sydney, Australia. October 2011.
35. Vitamin D Deficiency in Childhood. Practice Paediatrics for GPs – 2011. Sydney, Australia. August 2011.
36. Bone Health in Children Following Spinal Cord Injury. SpineCare 2011. Sydney, Australia. March 2011.
37. Bisphosphonates – their usage and concerns in the young patient. ANZSPD (NSW). Sydney, Australia. March 2011.
38. Management of Paediatric Osteoporosis. APEG Annual Scientific Meeting. Adelaide, Australia. August 2010.
39. Osteoporosis in the Young. Endocrine Society of Australia Annual Seminar, Wollongong, Australia. April 2010.
40. Bone Health in DMD. Towards a Brighter Future: 2010 Neuromuscular Disorders Conference, Sydney, Australia. February 2010.
41. Dysphagia in Cerebral Palsy Workshop "Guts, Bones and Rattly Chests". Association of Doctors in Developmental Disability, Sydney. October 2009.
42. Bone Health in Childhood Disability. Australasian Faculty of Rehabilitation Medicine Annual Scientific Meeting 2007, Sydney, Australia.
43. Making Bones Strong – Leaning Towards what Really Matters. Nutrition Society of Australia, 30<sup>th</sup> Annual Scientific Meeting, Sydney, Australia. November 2006.
44. Rickets and Evaluation of Osteoporosis. Paediatric Update. Children's Hospital at Westmead. November 2006.
45. Regional Osteopenia Following Paediatric Spinal Cord Injury. Paediatric Bone Australasia, Paediatric Bone Update, Brisbane, Australia. October 2006.
46. Vitamin D Deficiency in Australian Children: Etiology and Treatment. Paediatric Bone Australasia, Paediatric Bone Update, Brisbane, Australia. October 2006.
47. Genetic Mineralization Disorders. Paediatric Bone Australasia, Paediatric Bone Update, Brisbane, Australia. October 2006.
48. Bisphosphonates in Metabolic Bone Disease. Paediatric Update. Children's Hospital at Westmead. November 2004.
49. When to Stop Bisphosphonates In OI. Paediatric Bone Symposium. Sydney, Australia. August 2004.
50. Bisphosphonates and metabolic bone disease. The Children's Hospital at Westmead Paediatric Update Conference, Sydney, Australia. November 2004.

51. Pamidronate in Paediatric Bone Disease – Improving Rehabilitation Outcomes. 10<sup>th</sup> Annual Scientific Meeting of the Australian Faculty of Rehabilitation Medicine AFRM, Brisbane, Australia. 7-10 May 2002.
52. Novel Treatments in Osteogenesis Imperfecta. University of Queensland, Brisbane, Australia. March 2002.
53. Pamidronate in Paediatric Bone Disease. Royal Children's Hospital. November 2001.