**Project Title:** Novel preclinical models of metabolic muscle weakness  
**Code:** CHW8  

| **Host School/ Institute** | The Children's Hospital at Westmead Clinical School | **Address:** Orthopaedic Research & Biotechnology  
The Children's Hospital at Westmead, Cnr Hawkesbury Rd & Hainsworth St, Westmead Westmead, 2145 |
|---------------------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| **Personal Supervisor:**  | Dr Aaron Schindeler                         | **Phone:** 02 98451451  
**Email:** aaron.schindeler@sydney.edu.au  |
| **Project Type:**         | Laboratory based                           | **Co-Supervisors:** Matthew Summers  |
| **Project Category:**     | Genetics, Endocrinology/Metabolism, Pharmacology, Paediatrics/Child Health, Molecular Biology |  |
| **Project Keywords:**     | 1. Muscle weakness  
2. Lipid/Fat biology  
3. Genetic disease  
4. Neurofibromatosis | **Project Description:**  
Our group has an interest in genetic diseases and creating pre-clinical models that allow us to investigate disease mechanism and potential treatments.  
One of the features of the genetic condition NF1 (neurofibromatosis type 1) is a muscle weakness that can reduce strength by up to 50%. We have created a new mouse model that shows lipid (fat) accumulation in the muscle, and we are currently treating the mice with drugs to reduce this fat. This treatment has the potential to ameliorate or perhaps cure the muscle weakness seen in children with this condition.  
We are looking for an interested summer student with a background in genetics, metabolics, pathology, and/or molecular biology. The student will perform histological and molecular biology techniques on tissue samples from drug treated mice to analyze the fat and cell signaling with and without treatments. This is an exciting project where laboratory science intersect with clinical applicability.  

Sydney Medical School Summer Research Scholarships 2015/16