Sanfilippo Children's Foundation

2018 OUR YEAR IN REVIEW

WHAT WE'VE ACHIEVED TOGETHER IN 2018

Our purpose is to fund medical research so a cure can be found in time for children battling Sanfilippo today and those born with it tomorrow.

IN MEMORIAM

Sam Gauci 2006-2018

In 2018 we said goodbye to a much-loved member of our Australian community. Sam Gauci was just 12 years old when he lost his battle to Sanfilippo Syndrome. Sam lived a full life, enjoying swimming, going to school and travelling the world. Sam enjoyed many family holidays, in particular to Fiji. He is sadly missed by his mum Annmarie, dad Craig and little brother Tom.

RIP Sam Gauci

Mikayla Campbell 2006-2019

In Jan 2019, we tragically lost Mikayla Campbell to Sanfilippo at the age of 13. Mikayla slipped away in her sleep while holidaying with her family. She is sadly missed by her parents Jamie and Kellie Campbell and her big brother Jake. Mikayla, also known as 'Mikey', was much-loved by her community and touched the lives of everyone she met in her short but very full life.

RIP Mikayla Campbell

CONTENTS

Cover photography: Jasmine Skye Photography

OUR EXECUTIVE DIRECTOR'S MESSAGE

Photography: Cristina Mahony

In 2018 we turned five! It was an extraordinary year for the Sanfilippo Children's Foundation as we reflected on five years of operation and celebrated some significant achievements.

When we launched the Foundation five years ago it was clear we needed to move and move fast. At the time we had three goals in mind: The first (and most urgent) was to give Australian children with Sanfilippo opportunity to access emerging therapies via clinical trials.

There were several clinical programs coming through the development pipeline overseas but little to no opportunity for kids in Australia to be included.

The second goal was to build a sustainable framework to enable better outcomes for children with Sanfilippo. This includes awareness, education and most critically, a focus on funding research programs that showed promise in either halting disease progression, reversing the damage done by the condition or improving the quality of life of kids with Sanfilippo.

The third goal was personal. I wanted to build a legacy for my children, Isla and Jude, and for the other beautiful children and their loving families I had met along the way. If there really was nothing we could do for this generation of children with Sanfilippo then I wanted to change the course of the disease for future families in honour of them.

There is still a long way to go of course to the ultimate goal – an effective and approved treatment for Sanfilippo, but what we have done in five years should be reflected upon and celebrated.

In mid 2017 the first Australian child was treated on a pioneering gene therapy clinical trial, here on our shores. This was an Australian-first and absolutely wouldn't have happened if not for the work and support of our Foundation.

As other programs have progressed through the pipeline, we've stayed close and made sure our families are kept updated on all scientific and medical progress.

In terms of our second goal, we have built infrastructure to raise funds and awareness required to drive research here in Australia and abroad. And we have implemented a competitive research funding program under which we do an annual call out for projects that are rigorously assessed by our esteemed Scientific Advisory Board.

Through this process, to date we have funded 18 different initiatives ranging from PhD students to the development of new disease models. And that is just to name a few. So far, we have already directed well over AUD$5 million into research.

As we look back over 2018 in this *Year in Review* document, we are of course also looking forward, and delighted to announce a very exciting project set to begin in 2019.

We're thrilled that this project (outlined on page 6) has received $2 million from the Australian Federal Government's Medical Research Future Fund (MRFF). As a Foundation, we are contributing a further $500,000. This ground-breaking project which involves cell models from individual patients could not only accelerate drug discovery for Sanfilippo, but it is also expected to be the first personalised medicine model approach in the world for this condition.

And none of this would have been possible without you – our incredible network of supporters.

Since our first launch event we've been overwhelmed with support and seen the most generous acts of philanthropy. To help us... you have baked, sizzled and "lemonaded". You have run, walked and cycled. You have eaten, danced, sung, swum, golfed, loom-banded, cross-trained, tough muddered, gardened, coin-spun, paddled, jumble-saled and even shaved!

And every single action, every single dollar raised, was done with warmth, passion and commitment to our cause. Together we have achieved a lot! Perhaps more than I ever dreamed possible. And while we are not at the end of our mission yet, it's exciting to celebrate how far we've come and dream where we might be in another five years' time.

It is entirely plausible to imagine that we might have an effective treatment available on the market by then, that we might have genetic testing programs in place to avoid the inheritance of Sanfilippo in the first place, and that the course of life for families with Sanfilippo might be forever altered.

So please, stay with us and let's see this through!

With gratitude and hope,

Megan Donnell

OUR HIGHLIGHTS

WHAT YOU HELPED ACHIEVE IN 2018!

SECURED $2 MILLION FOR MAJOR PROJECT

Our Foundation secured $2 million from the Federal Government's Medical Research Future Fund (MRFF) to fund a pioneering $2.5 million project. The Foundation will partner with the South Australian Health & Medical Research Institute (SAHMRI), Adelaide's Women's and Children's Hospital and the University of Adelaide to develop a ground-breaking cell model and drug screening technology that will, amongst other uses, investigate a library of existing drugs that might help children with Sanfilippo.

TURN TO PAGE 6 TO LEARN MORE.

FUNDED 5 NEW RESEARCH PROJECTS

In 2018 we funded 5 research projects including new therapeutic strategies aimed at slowing cognitive decline, managing behavioural problems, targeting the immune system, and improving the effectiveness of gene and enzyme replacement therapies.

TURN TO PAGES 6 AND 8 TO READ ABOUT THESE EXCITING NEW PROJECTS.

SF SUPER SERIES RAISED $200,000 ACROSS 6 SUPER EVENTS

A record 354 participants competed (running, cycling, crossfitting and sweating it out) in our flagship fundraising event. Our community grew by over 50% in 2018 and is set for even bigger challenges and greater impact in 2019.

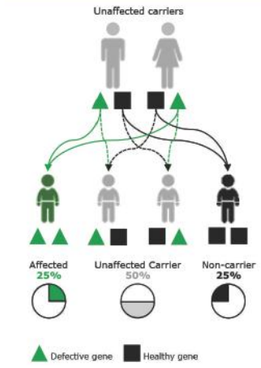
SFSUPERSERIES

IN 2018 WE TURNED 5

The Sanfilippo Children's Foundation celebrates its fifth year of operation. In five short years, our Foundation has:

- Enabled an Australian arm of a gene therapy clinical trial.
- Won the 2017 Advocacy Award in the Research Australia annual Health & Medical Research Awards.
- Implemented a sustainable research funding framework that funds approx. 4-5 research projects per year.
- Brought a glimmer of hope to families of children battling Sanfilippo.

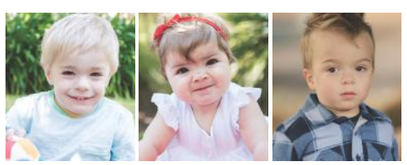
GENETIC RISK A HOT TOPIC IN 2018



The Foundation developed an 'Understanding Genetic Risk' resource for our Sanfilippo families and extended family members. Our Executive Director, Megan Donnell spoke passionately on pre-conception carrier screening in Melbourne during Knowledge Week, and at the Above All Human conference in 2018.

In Sydney, she spoke on the topic at the 42nd Human Genetics Society of Australasia (HGSA) Annual Scientific Meeting. Megan also shared her personal story in a Channel 9 News story about genetic screening and again in an article in *The Australian* upon the launch of Eugene Lab's at-home saliva genetic testing kit.

LAUNCHED 3 NEW HOPE CAMPAIGNS



The families of three newly-diagnosed children joined our fight in Australia to raise research funds in honour of their children, collectively raising over $60,000 in 2018. Our Hope campaigns empower families to participate in fundraising activities and become a part of the search for answers to progress research for a cure for Sanfilippo.

#hopeforlucas
#hopeformatilda
#hopeforjobe

STATE OF PLAY:

Sanfilippo Science Around The World

GENE THERAPY NEWS : Abeona results

Encouraging results from the Abeona trial continue to be reported. As of November 2018, 14 children with Sanfilippo Type A and one with Type B had been treated with the intravenous gene therapy. The gene therapy continues to be safe and tolerable and reductions in heparan sulfate, the toxic substance that builds up in children with Sanfilippo, have been seen in both the urine and the cerebral spinal fluid (CSF). The liver, which is enlarged in children with Sanfilippo, was also reduced at all doses.

Information available so far on cognitive function after treatment is limited but the trend emerging is that younger, higher functioning children are showing some stabilisation or improvement of their cognitive ability according to the testing used. Caregiver observations have reported other benefits for older patients such as improved sleep. Abeona will focus their recruitment on younger patients for the remainder of this trial – children aged six months to two years. Children over two can only take part if they have a minimum cognitive level (DQ of 60 or above calculated by Bayley Scales of Infant and Toddler Development). Older patients may be able to take part in another separate trial. Preparations are underway for this trial with sites in Spain, Australia, and the United States.

A STEP TOWARDS A GENE THERAPY TRIAL FOR SANFILIPPO TYPE C

In June, US-based biotech Phoenix Nest Inc. signed a license deal with the University of Manchester to take its gene therapy product, developed by Professor Brian Bigger's laboratory, to clinical trial for patients with Sanfilippo Type C. This is a highly anticipated and much welcomed move for the families of children with Sanfilippo Type C – and will be the first clinical trial for this particular Sanfilippo subtype.

The Sanfilippo Children's Foundation was one of eight Foundations who helped co-fund the research that developed the gene therapy that was able to improve symptoms in a mouse model of the disease.

LYSOGENE INITIATES GENE THERAPY TRIAL FOR SANFILIPPO TYPE A

In October a licensing agreement between French biotech Lysogene and US company Sarepta was announced which provided the funds for the launch of the Lysogene gene therapy clinical trial for children with Sanfilippo Type A.

The trial has commenced recruiting in the USA and involves injecting a virus carrying a healthy copy of the SGSH gene directly into the brain (intra-cerebral injection). The first patient has been treated and further sites have been announced in Europe but have not started recruiting yet.

OTHER NEWS

GENISTEIN FAILS TO SLOW DISEASE PROGRESSION

In August, Manchester University released a statement about the two-year genistein study conducted in the UK. Unfortunately, this Phase III double-blinded placebo-controlled clinical trial of high dose oral genistein aglycone did not show any "clinically meaningful benefit" for the 21 children in the trial. No further clinical trials with this product are planned.

For years the Sanfilippo community held hope that genistein would slow disease progression in children with Sanfilippo Syndrome and it is disappointing to hear that this relatively cheap and widely available potential therapy proved ineffective.

ENZYME REPLACEMENT THERAPY NEWS

SOBI'S TRIAL BEGINS

In October 2018, SOBI, a biopharmaceutical company based in Sweden, announced that the first patient had been dosed in a clinical trial of their enzyme replacement therapy called "SOB1003". SOB1003 is a version of the enzyme that is missing in Sanfilippo Type A which has been chemically modified so that it lasts for longer inside the body, and crosses the blood brain barrier, giving it more of a chance to get inside cells and do its job of breaking down heparan sulphate.

The study aims to assess the safety, tolerability and efficacy of SOBI003 in nine children in the USA and Turkey aged 1-6 years with Sanfilippo Type A. The enzyme will be given by weekly intravenous (IV) infusion.

BIOMARIN'S TRIAL CONTINUES

At the WORLDSymposium in February 2019, BioMarin gave an update on their Phase I/II trial with the enzyme replacement therapy called tralesinidase alfa (formerly referred to as BMN 250) for Sanfilippo Type B. Tralesinidase alfa is a version of the enzyme missing in Sanfilippo Type B fused with a tag that allows the enzyme to pass through the blood brain barrier. Tralesinidase alfa is administered weekly directly into the cerebrospinal fluid of the brain (ICV) via a port implanted under the scalp.

Nine children have now been treated in the trial for more than 24 weeks. Heparan sulfate in the cerebrospinal fluid was shown to decrease into the normal range and participants' livers reduced to normal size. Five out of seven participants showed encouraging trends in brain function tests but further data will be needed to prove the effectiveness of this potential treatment.

OUR MAJOR PROJECT

DRUG DISCOVERY MODEL

The Sanfilippo Children's Foundation is thrilled to have secured $2 million of Government funding and engaged leading researchers at three partner institutes for a major drug screening project set to fast-track research towards effective treatments for Sanfilippo Syndrome.

This project further cements Australia's role as a global player in the Sanfilippo research space, and brings hope to Australian families with children battling Sanfilippo.

From L-R (back) Dr. Nicholas Smith, Associate Professor Kim Hemsley, Dr. Cedric Bardy, (front) Dr. Kristina Elvidge and Megan Donnell.

Researchers from the South Australian Health and Medical Research Institute (SAHMRI), Adelaide's Women's and Children's Hospital and the University of Adelaide, in partnership with the Sanfilippo Children's Foundation, will create cell models that will be used to search for drugs to address Sanfilippo Syndrome and provide a world-first personalised medicine approach for the condition.

Associate Professor Kim Hemsley from SAHMRI is one of the project's Chief Investigators.

"We will use advances in the development of personalised cellular methods and drug screening technology to test a wide range of experimental compounds and existing medications, searching for an effective therapy for Sanfilippo," Dr. Hemsley said.

Researchers will take skin cells from patients and reverse engineer them into neural cells, creating a "brain in a dish" – an individualised representation of a person's brain.

"Testing using a patient's own cells fast-tracks the research because it enables multiple drug combinations to be trialled rapidly and without risks to the children themselves."

"The other benefit is we can investigate whether individual patients react differently to a variety of treatments, enabling a more personal treatment plan."

The Sanfilippo Children's Foundation will fully fund the $2.5 million project having worked with the researchers to secure $2 million from the Federal Government's Medical Research Future Fund (MRFF) and chipping in a further $500,000 of their own funds.

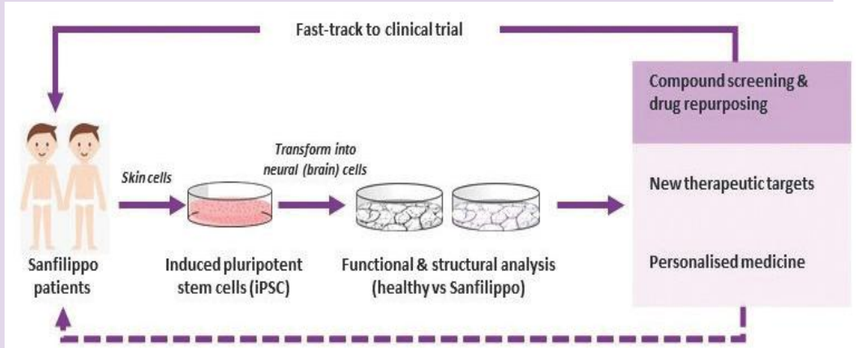
Dr. Nicholas Smith, the head of the Paediatric Neurodegenerative Diseases Research Group, University of Adelaide and the Paediatric Neurology Service at the Women's and Children's Hospital in Adelaide is the project's other Chief Investigator. He welcomes the funding as a demonstration of the Government's commitment to invest in rare disease research.

" This vital work can not only improve the lives of those suffering with Sanfilippo but has the potential to yield findings with far-reaching clinical influence on many more common neurological diseases. " Dr. Nicholas Smith

This two-year project starting in the first half 2019 will involve two other key researchers: Dr. Cedric Bardy at SAHMRI and the University of Adelaide's Professor Mark Hutchinson. A panel of Australian and international experts will help steer the project.

Megan Donnell, Executive Director of the Sanfilippo Children's Foundation said: "We are thrilled to be partnering with the Government and world-leading researchers in Adelaide to accelerate research towards effective treatments for this devastating condition.

"We hope this ground-breaking method of personalised drug screening will lead to treatments that will help improve the quality of life of children battling Sanfilippo, while also potentially sparing them from invasive experimental treatments and their accompanying side effects."



Reverse engineering patient skin cells into neural (brain) cells to be used as a tool for therapy development

Why do we need a new model?

Currently research into new treatments uses a limited range of available animal models that don't always accurately replicate the response to treatment in human patients. This can result in treatments often not translating into effective treatments in children with Sanfilippo and makes drug development complex and expensive.

Animal research, although necessary, is also expensive, slow and raises ethical issues. An alternative, especially in the early stages of drug development, would be of great value in the search for treatments.

Ideally, potential treatments would be tested on brain cells from a wide range of children with Sanfilippo. However, obtaining brain tissue from patients to study neurodegenerative conditions such as Sanfilippo and maintaining the cells in culture is near impossible.

In the absence of an alternative, researchers sometimes use skin cells from patients to test new treatments but these cells do not behave in the same way as the brain cells that are primarily affected in Sanfilippo.

So, what is needed is a cost-effective, efficient and sustainable model that closely resembles the brain cells that are affected in children with Sanfilippo.

Scientific breakthrough

The Nobel prize-winning discovery of induced pluripotent stem cells (iPSCs) in 2006, and the development of this technology over the past decade, have provided models for personalised drug discovery efforts and understanding the patient-specific basis of disease.

Patient fibroblasts (from a skin biopsy) are re-programmed to form iPSCs that are infinitely expandable in the laboratory and can be transformed into many different cell types, including neurons (brain cells). The neurons are then studied and can be exposed to chemical libraries or novel therapeutics for drug screening.

Patient-specific iPSCs have been generated and widely used to model human neurodegenerative diseases, such as Parkinson's disease, Huntington's disease and Alzheimer's disease. In recent years researchers have started to apply this technology to rare disorders similar to Sanfilippo.

Using iPSC technology to generate patient-derived neuronal tissue will provide an opportunity for studying Sanfilippo and developing treatments.

WHAT IS PERSONALISED MEDICINE?

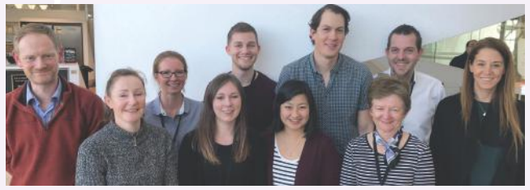
Personalised medicine is a type of medical care in which a treatment is customised for an individual patient's genetic makeup. According to the Walter & Eliza Hall Institute of Medical Research, every human is unique and we often differ in how we develop disease and respond to treatments.

Personalised medicine aims to tailor treatments to achieve the best outcome for individual patients, rather than treating patients with a 'one size fits all' approach.

OUR RESEARCH

RESEARCH FUNDED BY OUR FOUNDATION

In 2018 the Sanfilippo Children's Foundation selected the following projects to fund in 2019:

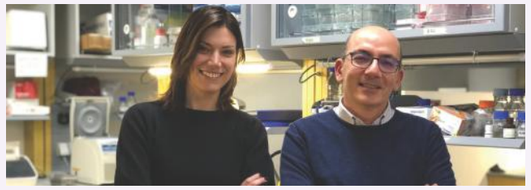


Targeting the immune system as a treatment approach for Sanfilippo

The South Australian Health and Medical Research Institute (SAHMRI) in Adelaide was awarded $355,000 to evaluate a new treatment approach that targets a certain part of the immune system that is thought to contribute to cognitive decline seen in children with Sanfilippo Syndrome. In this two-year research project led by *Associate Professor Kim Hemsley*, drugs targeting the immune system will be tested in mice with Sanfilippo, to see if cognitive decline can be reduced. If an already developed drug is found to be effective, translation of this approach could be rapid, and it may also be applicable to other neurodegenerative lysosomal storage disorders.

Transitional | 2 YEAR | A | B | C | D *

** Sanfilippo Type A will be studied in this project but the findings could be applied to all types of Sanfilippo*



Targeting autophagy as a therapeutic strategy for Sanfilippo

Another research team at TIGEM will receive $90,000 for a research project that will target a process called "autophagy", which is the process that clears unnecessary or dysfunctional components from cells. The team led by *Dr. Ivan Conte* and *Dr. Nicolina Cristina Sorrentino* will study an autophagy-activating drug in cells grown in the laboratory and mice, to investigate if the toxic heparan sulfate that accumulates in the cells can be cleared out, allowing the cells to function better.

Incubator | 1 YEAR | A | B | C | D *

** Sanfilippo Type A will be studied in this project but the findings could be applied to all types of Sanfilippo*

Generation of 'super active' enzymes to treat Sanfilippo

We awarded $90,500 to the Telethon Institute of Genetics and Medicine (TIGEM) in Italy for a research project that aims to improve the effectiveness of gene and enzyme replacement for Sanfilippo Syndrome. In this one-year project, the team led by *Dr. Alessandro Fraldi* will search for enzymes that can more efficiently degrade the toxic heparan sulfate that builds up inside the cells of children with Sanfilippo Type A.

Incubator | 1 YEAR | A | B | C | D

New therapeutic strategies for the treatment of behavioural symptoms in Sanfilippo

The Sanfilippo Children's Foundation and Cure Sanfilippo Foundation have joined forces to award $90,000 to *Dr. Elvira De Leonibus* at TIGEM for a one-year research project that aims to further understand the behavioural difficulties experienced by children with Sanfilippo and test potential therapies. In this project the researchers will treat mice with Sanfilippo Type A with an already approved drug used to treat ADHD and another new drug that has shown promise for Parkinson's disease in mouse models. They will test whether these drugs can help restore the chemical balance in the brains of the mice and improve their behaviour.

Incubator | 1 YEAR | A | B | C | D *

** Sanfilippo Type A will be studied in this project but the findings could be applied to all types of Sanfilippo*

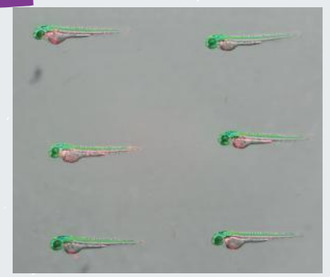
OUR RESEARCH

AN UPDATE:

Ongoing research projects

In 2018 we funded three one-year projects that are nearing completion and we look forward to the final results:

ZEBRAFISH MODEL



Dr. Jan Kaslin at the Australian Regenerative Medicine Institute at Monash University in Melbourne has created a zebrafish model of Sanfilippo. The research team is now in the process of characterising this new tool to be used in the fight against Sanfilippo.

CHAPERONE DRUG TESTS

In a project led by *Associate Professor Vito Ferro* at the University of Queensland, computer programs have been used to search existing drugs and design new molecules with the required characteristics to act as chaperones for the enzyme sulfamidase that is affected in Sanfilippo Type A. Chaperones help a protein to fold correctly and partially restore its function.

Candidate drugs have been identified that are being tested by collaborators at the South Australian Health and Medical Research Institute (SAHMRI).

Professor Alexey Pzhezhetsky at the Research Institute University Hospital Centre Sainte Justine in Montreal Canada is also developing chaperone drugs, but Sanfilippo Type C is the focus. Research is continuing on this project towards the aim of improving the chemistry of previously discovered chaperones and testing if they can reduce the symptoms in mice with Sanfilippo Type C.

DRUG DEVELOPMENT

A two-year project led by *Associate Professor Andreas Schulze* at the Hospital for Sick Children in Toronto is also nearing completion. Thousands of chemical compounds have been screened for their potential to treat Sanfilippo Types A, C, D and E. The researchers are in the process of narrowing down the potential drugs to the most promising to take forward to the next steps.

PHD RESEARCHERS

Our two PhD students in Adelaide continue to work hard in the fight against Sanfilippo.

Laura Hewson at the University of Adelaide is studying a fruit fly model of Sanfilippo Type C. She has discovered which types of brain cells are involved in the various symptoms of Sanfilippo, invaluable information when developing therapies that may only target certain cell types. She is also currently investigating inflammation in the brain and how this contributes to symptoms, and comparing this Type C model to fruit fly models of the other Sanfilippo subtypes.

Andrew Shoubridge who is undertaking a University of Adelaide PhD project on Sanfilippo at SAHMRI continues to look at how neurons are damaged in Sanfilippo and how it can be prevented. He has discovered new information about how inflammation in the brain contributes to neuronal deficits in mice with Sanfilippo and uncovered the role of glial (neuron-supporting) cells in this process.

OUR FAMILIES

EVERY FAMILY HAS A STORY

These are just some of the Australian children battling Sanfilippo Syndrome

Jobe is a fighter and has been since he started life prematurely. Luckily, Jobe has his fraternal twin, Tate (unaffected), by his side. Our hope is the adorable brothers have a future together.

www.hopeforjobe.com.au

LUCAS

Lucas is best buddies with his twin, Dominic. This little "blonde bombshell" loves the outdoors and keeps his mum and dad on their toes. Lucas has hearing loss but his family fear he will lose much more than his hearing.

www.hopeforlucas.com.au

Kyuss loves his pet dog named "Hope" and visiting his grandparents' farm. Kyuss no longer talks but this little rock star still charms everyone he meets. His family lives in hope. All they want is for Kyuss to keep smiling and live beyond his current life expectancy.

www.hopeforkyuss.com.au

ALEC

Alec loves camping with his family. He loves to run but these days is unsteady on his feet. His mum, Michelle, says a hug from Alec makes the hardships of the day disappear. If only Sanfilippo would disappear.

www.hopeforalec.com.au

PETER

Sanfilippo may have stolen Peter's words, his ability to walk and even to eat without a tube, but it's yet to take away his smile or shining eyes. His mother, Nawal, watches old videos remembering the way he was.

www.hopeforpeter.com.au

Read more about the experiences of Australian families who are impacted by Sanfilippo Syndrome. Visit our website **sanfilippo.org.au**

Jacob likes to run, jump and bursts with energy. His nan Debbie says Jacob wakes up beaming and brightens every room he enters. His family fears he will one day lose his beautiful spark.

www.hopeforjacob.com.au

SKYE

Skye's Thai name is "Nongnaphat" which means Angel. This little angel loves to swim, play dress-ups and go to the park with her big brother Luke. She has a vibrant and bubbly personality and is always up to mischief. Her family fears one day she will lose her sense of adventure.

www.hopeforskye.com.au

ISLA & JUDE

Isla and Jude are brother and sister. They adore each other and are rarely apart. Isla and Jude love their therapy dog, a black lab named Remy. They love nothing more than doing "zoomies" up and down the hall with Remy. Isla and Jude's parents are hopeful that one day there might be a treatment available to both their children.

www.hopeforislaandjude.com.au

MECKENZIE

Meckenzie is full of personality and giggles. Her favourite thing to do is to meet and greet new people. Each year since diagnosis her parents and big brother Kyle celebrate that she hasn't lost the ability to move or talk. "It's a blessing," they say, but one they know will eventually disappear.

www.hopeformeckenzie.com.au

MATILDA

Matilda's parents learnt her fate when she was just three months old. They are doing everything in their power to stop Sanfilippo before it robs Matilda of every precious milestone.

www.hopeformatilda.com.au

RAISED $200,000

SF SUPER SERIES

In 2018 our flagship fundraising event, the SF Super Series had 6 events, raising $200,000 vital research dollars, putting our 5-year fundraising target of $1 million within reach for 2019.

The Series had encouraging growth in participation numbers in 2018. With 354 participants across 6 events (up 54% on 2017).

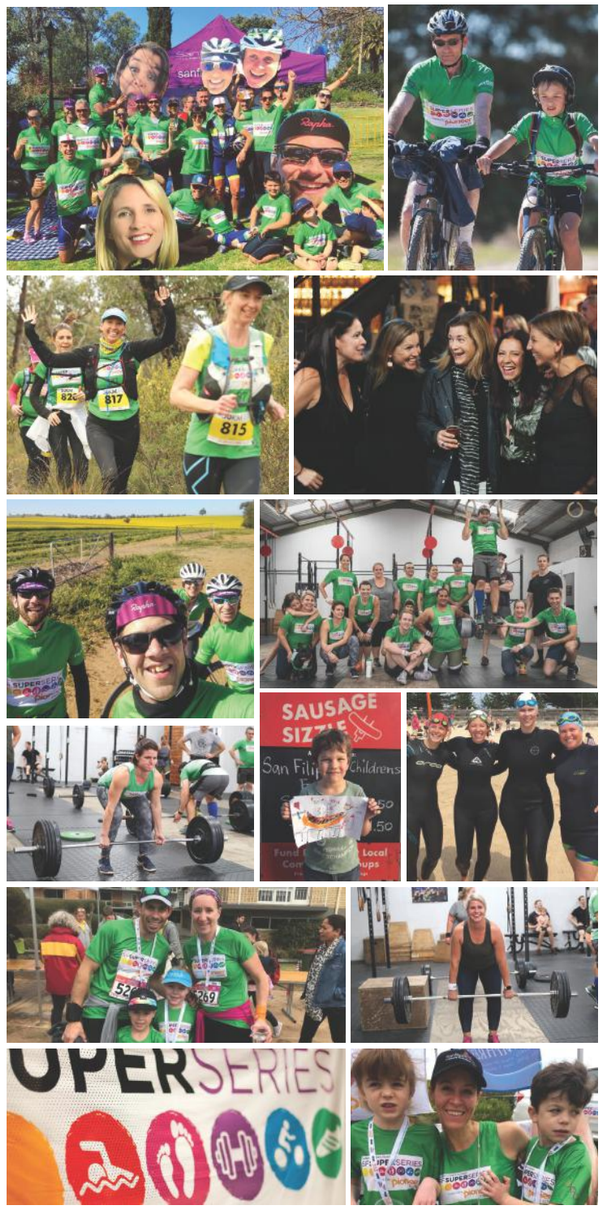
In 2018, the Series was comprised of the Surf Coast Ultra Marathon in Anglesea, Victoria (73 runners); the Big Feet & Little Feet – Pub 2 Pub family fun run from Dee Why to Newport (145 participants); the Big Feet & Little Feet – Spring to It family fun run in Perth, WA; the Gears & Beers Cycling Festival in Wagga Wagga, NSW (45 cyclists); Endure24 24hour CrossFit Challenge in Manly (17 participants); and the Coogee Island Challenge (14 swimmers).

Our participants pushed themselves to their super points both physically and mentally, many achieving physical goals they would have never dreamed. Our green shirts stood out at all events, our energy and sense of community was infectious and our camaraderie was second to none.

The campaign and sponsors enjoyed widespread engagement and media coverage, both traditional media and social media. All events were well attended and the wider community and Sanfilippo support base really got behind this campaign.

Throughout the campaign, posts relating to the SF Super Series reached as many as 96,000 people via our various social media channels. Articles were published in *The Manly Daily*, *Freemantle Herald*, *Surf Coast Times*, and *Daily Advertiser*.

We have big plans for 2019 and we hope you will join us again in this year's SF Super Series.



Thanks to the generosity and support of all our sponsors, the SF Super Series 2018 has been an incredible success.

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SUMPTUOUS SOUNDS EVENT

$50,000

Our Sumptuous Sounds - Havana Nights event in Manly, Sydney attracted 200 guests and generated $50,000. This was our third Sumptuous Sounds event. In 2018 we returned to the International College of Management Sydney (ICMS), aka the "Castle on the Hill", where guests were treated to the sounds of Martini Club, and drinks supplied by BevChain and 4Pines Beer. The event was managed by a committee of volunteers, and attracted major sponsor, Straight Up Built.

If you'd like to join our committee in 2019 or know someone who would, please email info@sanfilippo.org.au

ASX REFINITIV PARTNERSHIP

$60,000

In 2018 we were once again a beneficiary of the ASX Refinitiv Charity Foundation, which helps disability and medical research charities. We sold art union raffle tickets to our supporters. Our Foundation also sold tables to supporters at the ASX Refinitiv Charity Foundation's Charity Horse Race Day at Rosehill, with proceeds from our tables going directly to Sanfilippo research.

EOFY TAX CAMPAIGN

$51,000

In 2018 we undertook an email campaign for the End of the Financial Year (EOFY) tax appeal featuring our ambassador, Aussie actress Jessica McNamee and starring Sanfilippo siblings Isla and Jude Donnell. We raised $51,000 in cash gifts generously given by individuals, small business and households.

SANFILIPPO SANTA SLEIGH

$23,000

Our Christmas campaign featured a virtual Sanfilippo Santa Sleigh (SSS) which travelled the globe to highlight worldwide collaboration in the fight against Sanfilippo, as it dropped in on foundations, families and research institutions around the world. Santa's Sanfilippo Sleigh was fuelled by supporter donations.

OUR TRUSTS & FOUNDATIONS

The Sanfilippo Children's Foundation is grateful for the significant support of the following, as well as to those individuals and organisations who wish to remain anonymous:

- ASX REFINITIV CHARITY FOUNDATION
- COMMBANK FOUNDATION COMMUNITY GRANT
- PETERSEN FAMILY FOUNDATION
- RIPPLE FOUNDATION
- ST. GEORGE FOUNDATION
- LADY FAIRFAX CHARITABLE TRUST

OUR COMMUNITY EVENTS

The Sanfilippo Children's Foundation steadily maintained its grassroots fundraising model in 2018 with 60 community fundraisers raising just over $100,000.

In 2018 there were BBQs, school discos, bingo nights, birthday donations, workplace and team lunches, cupcake drives, plant and vegetable sales, online auctions, lemonade stands, cake stalls, socks sold, a folk dancing event, sustainability open house day and even a Tractor Trek. Pictured are some of the highlights of community events from 2018.

We're grateful to our incredible community of supporters who not only fundraise but spread awareness for the Sanfilippo cause across the country. We must also acknowledge the many volunteers who contribute to community fundraisers. Without the support of this optimistic and energetic group of people, we simply couldn't do what we do here at the Sanfilippo Children's Foundation.

If you wish to run a small fundraiser within your workplace, school or community, please email us at info@sanfilippo.org.au

PADDLE POWER FOR ISLA & JUDE

$11,830



Rob Pisto from Fit State of Mind together with Fox Sports presenter, Adam Peacock, former Wallaby, Mark Gerrard and a group of friends paddled 23kms on inflatable stand up paddles from Manly to Rhodes to raise funds for the Hope for Isla & Jude campaign.

HONOURING SWEET JAYDA

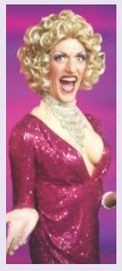
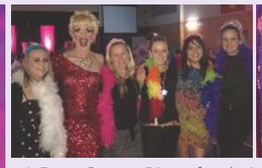
$8,500



Relatives and friends of the late Jayda Hannaford completed a state-wide cupcake drive in honour of sweet Jayda – baking, icing and selling thousands of cupcakes in the Illawarra and Gunnedah regions of NSW.

DRAG QUEEN BINGO Brisbane, Queensland

$6,000


A Drag Queen Bingo fundraising night in Ferny Hills, Brisbane, hosted by the Morrice family attracted 160 guests and raised over $6,000 for the Hope for Alec campaign.

TEAM TILLY - Run for a Reason

$3,211



"Our reason is Tilly" was the catchcry of the Page and Bowman families when participating in the HBF Run for a Reason event in Perth. Matilda 'Tilly' (youngest team member at 11 months) participated alongside her great grandmother, Betty (aged 87).

TOUGH MUDDER FOR A TOUGH MOTHER - Brisbane

$4,000


In Brisbane, Michelle Morrice and a team of 15 friends did the "Tough Mudder for a Tough Mother" as part of the Hope for Alec campaign. This was the third event for Michelle – she certainly lives up to the name!

FERNY GROVE STATE SCHOOL

Senior students at Ferny Grove State School in Brisbane hosted an Over-8s Fun Day in honour of much-loved student Alec Morrice, who has Sanfilippo. It was a fundraiser and a fitting farewell for Alec who began 2019 at a new school.


$3,000

TEAM TILLY - Delights Night Fundraiser

$4,500

This cheese and wine fundraiser in Perth, WA brought Tilly's community together to kick the winter blues and enjoy nibbles, wine and boutique beer for this adorable little guest and special cause.


WOODSTOCK SHOW INC. POP-UP PANTRY

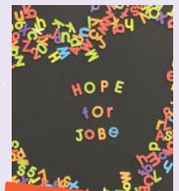
$3,000


The Tiefel family and Woodstock Show Inc raised funds for the Hope for Lucas campaign via its inaugural Pop-Up Pantry held at the annual Woodstock show selling homemade and homegrown produce.

HOPE FOR JOBE - Sugar Republic

The Koistinen family and friends raised funds for the newly launched Hope for Jobe campaign with a gathering at Sugar Republic in Melbourne. Jobe and his twin brother, Tate enjoyed the sugar-themed festivities.





$1,605

SÉBASTIEN IZAMBARD OFFICIAL FAN CLUB

$2,156

The Sébastien Izambard Official Fan Club, a group of worldwide Il Divo fans, continues to raise funds for the SCF in honour of our international ambassador, Sébastien Izambard. The group raffled album covers, sold t-shirts and organised an autographed photography sale!


OUR TEAM

SCF BOARD MEMBERS

Thank you for your energy, expertise and enthusiasm

MEGAN DONNELL
Executive Director

ANGELINE VEENEMAN

DANIEL MADHAVAN

MARK ARNOLD

PAUL SCHOFF

SANFILIPPO TEAM MEMBERS

KRIS ELVIDGE
Research Manager

BRAD PHILLIPS
Business Development Manager

INGRID MAACK
Communications & Fundraising Manager

EMMA KIRKMAN
SF Super Series Campaign Manager

ERENE KERIAKOS
Bookkeeper

OUR PRO-BONO SUPPLIERS

These professionals and suppliers have provided much-valued ongoing time, material and resources to our cause free of charge. An enormous and sincere thank you to:

- **LEGAL SERVICES:** Jane Anne Gray, PWC.
- **GRAPHIC DESIGN:** Michelle Sangster
- **ANIMATION:** Andrew Cassidy
- **EMBROIDERY:** Julie's Embroidery
- **AUDITING:** Bentleys
- **SF SUPER SERIES TRAINERS:** Gary and Ana Mullins (TRT Running), Kylie and Ben Mildren (Mildren Events), Stuart and Emma Hale (CrossFit Manly Vale)
- **STYLISTS:** Donna Lee (Bella Donna Event Styling)
- **PHOTOGRAPHERS:** Georgina Garnham; Yariv Assouline; Cris Mahony, Little Love Photography; Tadas Gasiunas; Jasmine Skye Photography; Caroline, Beloved Photography.

THANK YOU

Our SCF Board members and Scientific Advisory Board generously provide all expertise pro-bono and receive no remuneration, for which we are forever grateful.

Our Patron

The Sanfilippo Children's Foundation is delighted to have Professor John Hopwood in the much-honoured role of Charity Patron for the Foundation. Until his retirement, John served as Chair of our Scientific Advisory Board (SAB).

Professor John Hopwood

AM FAA, Patron of the Sanfilippo Children's Foundation, former Head Lysosomal Disease Research Unit, Affiliate Professor at University of Adelaide, officer of the Order of Australia, Australian Academy of Science Fellow and SA Scientist of the Year.

OUR SCIENTIFIC ADVISORY BOARD

PROFESSOR IAN ALEXANDER
(Chair of our Scientific Advisory Board)

BMedSci MBSS (Hons), PhD, FRACP (paeds), HGSACG, FAHMS is head of the Gene Therapy Research Unit, a joint initiative of Sydney Children's Hospital Network and the Children's Medical Research Institute in Sydney.

ASSOCIATE PROFESSOR KIM HEMSLEY

BAppSci (Med. Lab. Sci), PhD, is a neuroscientist and Head of the CNS Therapeutics Group, in the Lysosomal Diseases Research Unit at the South Australian Health and Medical Research Institute (SAHMRI). She has affiliate status at the University of Adelaide.

DR. DAVID KETTERIDGE

MBBS, FRACP (Paediatrics) is a metabolic physician and General Paediatrician at the Women's and Children's Hospital in Adelaide.

PROFESSOR DAVID RYUGO

BA Psych, PhD Psychobiology. is a Professor of Neuroscience at the Garvan Institute of Medical Research in Sydney.

DR. MICHEL TCHAN

BMedSc, MBSS, PhD, FRACP is a clinical and metabolic geneticist and Head of Department, Genetic Medicine at Westmead Hospital in Sydney. He is also the Deputy chair of the Sanfilippo Children's Foundation Scientific Advisory Board.

DR. NICHOLAS SMITH

MBBS (Hon), DCH, FRACP, PhD (Cantab) currently heads the Department of Paediatric Neurology at the Women's and Children's Hospital in Adelaide.

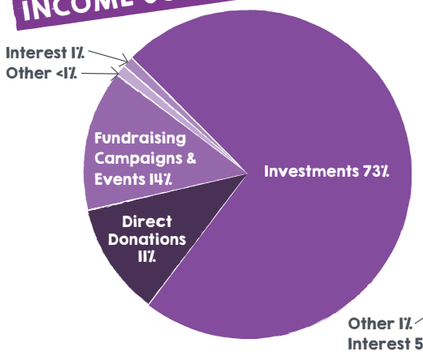
FINANCIALS 2018 + ABEONA SHARE SALE

THE BASICS

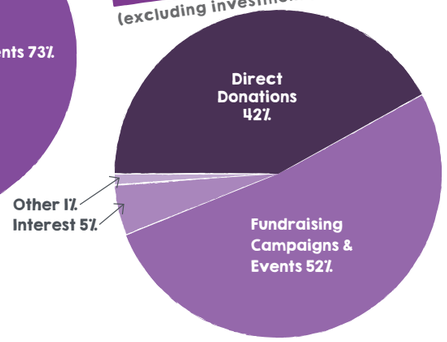
	FY17/18	FY16/17	FY15/16
INCOME	$3.266m	$1.126m	$1.002m
EXPENDITURE	$421k	$394k	$286k
FUNDS ALLOCATED :			
Programs & Research	$1.5m	$732k	$909k
Future Operations	$1.345m		

Research investment in FY15/16 included some funds from previous years surplus

INCOME SOURCES



INCOME SOURCES (excluding investment returns)



For a full copy of our audited report, please contact us via email info@sanfilippo.org.au

RESEARCH INVESTMENT SUMMARY

PROJECT	INVESTED / COMMITTED	FY
Abeona Therapeutics - Phase I/II Gene Therapy Clinical Trial	449,330	15/16
SA Pathology - Brain lipids in Sanfilippo	82,360	16/17
University of Florida - MPSIIIB Gene Therapy	45,000	16/17
University of Florida - MPSIIIB Stem Cell Therapy	45,000	16/17
University of Manchester - MPSIIIC Gene Therapy	90,000	16/17
Sick Kids Research Institute - High Throughput Screening	224,200	16/17
University of SA / SAHMRI - PhD Shoubridge	15,000	16/17
University of Adelaide / SAHMRI PhD - Hewson	10,000	17/18
Abeona Therapeutics - Phase 1B Gene Therapy Clinical Trial	2,025,720	17/18
University of Monash - Zebrafish	45,000	17/18
University of Qld - MPSIIIA Chaperone	90,000	17/18
University of Montreal - MPSIIIC Chaperone	98,000	17/18
University of Qld - SWIFT	10,000	18/19
SAHMRI - Immune System	355,000	18/19
Telethon Institute of Genetics & Medicine - Autophagy	45,000	18/19
Telethon Institute of Genetics & Medicine - Super Active Enzymes	90,500	18/19
Telethon Institute of Genetics & Medicine - Behavioural issues	90,000	18/19
Brain in a Dish Project	2,500,000	18/19
TOTAL	$6,310,110	

AN EXCEPTIONAL INVESTMENT WINDFALL

In 2014, the Foundation entered into an agreement with biotech Abeona Therapeutics with the primary purpose of enabling a clinical trial site for their pioneering gene therapy program in Australia. As this agreement was made with a commercial entity and not an academic or research institute, we decided to base our investment on two key principles:

1. **EQUITY**: while the prospect of a financial return was slim and not our primary objective, an equity holding would allow us to maintain some visibility and influence over the program. In addition, any favourable financial outcome would give us the opportunity to give back to the Sanfilippo community, and re-invest profits into other research programs.
2. **MILESTONES**: to mitigate any risk to the primary outcome of a local clinical trial, our agreement was designed to distribute payments only when the program met specific milestones. Through this mechanism, we made a total investment of $449,330 in the program.

Over the past 5 years the program has made great progress, and as result of our agreement, Australian children are now participating in the trial locally. Results from the clinical trial have shown promise and this has been reflected in the commercial value of Abeona Therapeutics. In 2018, the Foundation took advantage of this increase in share value and sold 75% of the original holding for AUD $2.72 million, a more than **SIXFOLD RETURN ON INVESTMENT**. This return means that not only has our original investment been fully recovered, but we are now able to invest in other strategic research projects for Sanfilippo Syndrome, and cover our operating costs for the next 3 years. **FROM NOW ON, EVERY DOLLAR DONATED TO THE FOUNDATION WILL GO DIRECTLY TO RESEARCH PROGRAMS.**

This is a remarkable achievement for the Foundation and the Sanfilippo community that we serve, and a wonderful example of a successful "impact investment". We are particularly grateful to our early supporters who trusted us in investing their donations into pioneering programs that can change the life of Sanfilippo families. It's incredibly rewarding to know that their generosity led to this exceptional windfall, and that our Foundation is now well set up for the future.

THE DISEASE

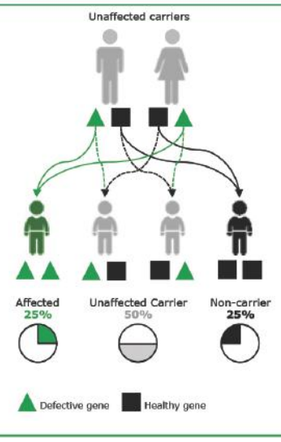
The following information provides a better understanding of the disease Sanfilippo (MPS III).

A Rare, Life-Limiting Disease That Is Part Of A Wider Group Of Pathologies

LSD	**Lysosomal Storage Disorders** 50 main diseases 1 in 5,000 births	The lysosome is a very small unit in the cell and contains enzymes responsible for recycling cellular materials. A LSD is a disease where those materials don't get recycled correctly and accumulate in the cell, causing dysfunctions.
MPS	**MucoPolySaccharidosis** 7 main diseases 1 in 25,000 births	MPS are complex sugar molecules also called GAGs (GlycoAminoGlycans) naturally produced by the body and used in the building of bones, cartilage, skin, and tissues. The body continuously produces GAGs which need to be recycled.
MPSIII	**MPSIII or Sanfilippo** 4 disease types 1 in 70,000 births	Children with MPSIII lack an enzyme required to recycle the heparan sulfate, one of the many complex sugar molecules (GAGs) the body needs, resulting in extra storage of these molecules in the cells.
	**MPSIII Type A, B, C, D** A & B most common, C & D rarer	Each Sanfilippo type corresponds to a particular enzyme that is deficient. There is considerable variation in severity and life expectancy within each type.

An Autosomal Recessive Genetic Condition

Genetic	It is inherited: children get one defective gene from both their parents. With both parents carriers, there is 1 chance out of 4 for each child to inherit the disease.
Recessive	Each individual has two copies of each gene. In recessive disorders, affected individuals have two defective genes. Individuals who have one defective gene and one healthy copy are called carriers and are unaffected.
Autosomal	The defective gene is on a chromosome that is not a sex chromosome. Both males and females can be affected in autosomal disorders and either males or females can be a carrier for the disease.



A Metabolic And Neuro-Degenerative Disorder

Metabolic

Metabolism is the set of life-sustaining chemical transformations within the cells. These transformations are done through the actions of enzymes which act as catalysts; the missing enzyme in Sanfilippo results in a metabolic disorder.

Neuro-degenerative

This disorder affects primarily the cells in the Central Nervous System (CNS), resulting in brain damage. Children experience hyperactivity, sleeplessness, loss of speech and cognitive skills, mental retardation, cardiac issues, seizures, loss of mobility, dementia and finally death.

A Progressive & Fatal Disease

Children at birth appear healthy; the first symptoms are often mild developmental delays. The disease progresses very differently from one child to the next, making it very difficult to predict.

Symptoms spectrum

- Brain, sense & nerves
- Nose, throat, chest & ear
- Mouth & teeth
- Heart
- Bowel
- Bones & joints
- Hands & feet
- Skin & hair

The disease does not yet have a cure and only limited palliative treatment currently exist; average life expectancy is 15-20 years. However medical research has recently achieved promising break-throughs with real hopes for the future.

THANK YOU

Thank you to our valued supporters, donors, sponsors, suppliers, volunteers and fundraisers. We couldn't do what we do at the SCF without you!

THE SANFILIPPO CHILDREN'S FOUNDATION PARTNERS WITH:

genetic alliance australia

Global Genes™ Allies in Rare Disease

rare voices AUSTRALIA

NORD .2018 MEMBER.

FURTHER TOGETHER

The Sanfilippo Children's Foundation acknowledges the mutual support and respect amongst many organisations within the rare disease community.

OUR VALUES

Here at the Sanfilippo Children's Foundation, we live the following organisational values: Determination, Differentiation, Collaboration, Energy and Resilience.

Determination

We are making the impossible happen and understand no matter what obstacles we face there is always a way.

Differentiation

We believe we need to do things differently - our own way - and that there is always opportunity for success off the beaten track.

Energy

We face a marathon not a sprint - both for research we fund and the families we help. We bring strength and infinite energy to everything we do.

Collaboration

Our cause is rare and we need to join forces with others to collectively make a difference and enable our scarce resources to go further.

Resilience

We are experts at taking knocks - from families to fundraising to scientific research projects. We dust ourselves off after each fall and continue on.

SANFILIPPO CHILDREN'S FOUNDATION
PO Box 475, Freshwater, NSW 2096 Australia
E info@sanfilippo.org.au **T** 1800 664 878

REGISTERED CHARITY · acnc.gov.au/charityregister

Sanfilippo Children's Foundation