Despite the challenges of COVID-19, Rare Disease Day 2021 was an overwhelming success for the ACDA. We raised significant funds for ACDMPV research and connected during a very special virtual event featuring many of our ACDA families. Our sincerest thanks to the families, friends, colleagues and classmates of the ACDA and The David Ashwell Foundation. Please read all the details on page 5!

Regards, Eliza Rista, President
It is the great pleasure of the ACDA and The David Ashwell Foundation to announce a $100,000 grant will be issued in 2021 for ACDMPV research. The ACDA announced the Request for Full Applications in May 2021 (see the box to the right for additional application information). The 2020 grant process was deferred due to the COVID-19 emergency and such funds ($50,000) will now be applied to the 2021 grant cycle, totaling $100,000.

As background, over $650,000 has been issued for ACDMPV research with a total of twelve grants since 2005. Thank you for keeping the momentum going with annual ACDMPV research grants the last seven years in a row prior to COVID-19.

Every single dollar matters in rare disease research, perhaps more than ever as significant research developments regarding possible therapeutic approaches for ACDMPV are emerging, pending the development of clinical trials. The smaller seed grants issued in recent years through money raised by ACDMPV affected families and friends has collected data for use in larger multi-year government grants, including the $1,900,000+ grant awarded to Baylor College of Medicine from the NIH in 2017 for a four-year study. The seed grants also sustain ACDMPV research during the very difficult NIH or FDA application processes. It can take research institutions a few years (and rejections) to finally have enough research material for NIH or FDA approval. Larger governmental grants and approvals would simply be inaccessible without the ongoing seed grants raised by families and friends affected by ACDMPV. So please keep up those birthday fundraisers, off-roading events, softball tournaments, marathon pledges and all the other amazing ways you raise money for ACDMPV research! Progress is being made each year and we are thankful for every donation. Please visit our website HERE to read a full history of grants for ACDMPV research.

None of this would be possible without the hard work, contributions and fundraising efforts of families and friends affected by ACDMPV. We are deeply grateful for the support as we continue to work towards ending this disease.

ACDA Request for Full Applications – 2021 Research Grant:

The Alveolar Capillary Dysplasia Association (ACDA), on behalf of the ACDA and The David Ashwell Foundation, is currently accepting applications for a total of $100,000 for scientific research studies and/or clinical research studies related to Alveolar Capillary Dysplasia/misalignment of the pulmonary veins (ACDMPV). The ACDA encourages all U.S. and international researchers interested in studying ACDMPV to consider applying for 2021 funding. The Full Application Deadline is July 31, 2021. Contact president@acdassociation.org for the Full Application Details and Guidelines.
Genetic Research Summary (Dr. Stankiewicz):

Below please find a six-minute video prepared by world renowned ACDMPV genetic expert, Dr. Pawel Stankiewicz at Baylor College of Medicine in Houston, Texas, USA, on the topic, "Current state and summary of developments regarding ACDMPV genetic research." This video was prepared by Dr. Stankiewicz for the ACDA in February 2021 in honor of Rare Disease Day.

Watch Video (Transcript)

Journal Article (Human Mutation):

The genetic research team at Baylor College of Medicine in Houston, Texas, USA recently collaborated with an international team in Poland to publish a manuscript entitled, “Lung-specific distant enhancer cis regulates expression of FOXF1 and IncRNA FENDRR” in Human Mutation, which can be found HERE.

Abstract: “The FOXF1 gene, causative for a neonatal lethal lung developmental disorder alveolar capillary dysplasia with misalignment of pulmonary veins (ACDMPV), maps 1.7 kb away from the long noncoding RNA gene FENDRR on the opposite strand, suggesting they may be coregulated. Using RNA sequencing in lung tissue from ACDMPV patients with heterozygous deletions of the FOXF1 distant enhancer located 286 kb upstream, leaving FOXF1 and FENDRR intact, we have found that the FENDRR and FOXF1 expressions were reduced by approximately 75% and 50%, respectively, and were monoallelic from the intact chromosome 16q24.1. In contrast, ACDMPV patients with FOXF1 SNVs had biallelic FENDRR expression reduced by 66%-82%. Corroboratively, depletion of FOXF1 by small interfering RNA in lung fibroblasts resulted in a 50% decrease of FENDRR expression. These data indicate that FENDRR expression in the lungs is regulated both in cis by the FOXF1 distant enhancer and in trans by FOXF1. Our findings are compatible with the involvement of FENDRR in FOXF1-related disorders, including ACDMPV.”

Journal Article (Am J Respir Crit Care Med.):

The developmental biology research team at Cincinnati Children’s Hospital Medical Center in Cincinnati, Ohio, USA (see Issues #57, #62-63, #68-69, #71-72 and #74 of ACDA Notes) recently published a manuscript entitled, “Generation of Pulmonary Endothelial Progenitor Cells for Cell-Based Therapy Using Interspecies Mouse-Rat Chimeras” in the American Journal of Respiratory and Critical Care Medicine, which can be found HERE.

As introduced previously, Dr. Kalinichenko and his team in Cincinnati are pursuing two possible therapeutic approaches for ACDMPV, pending the development of clinical trials. The first approach is the evolving nanoparticle technology discussed in prior Issues of ACDA Notes (stay tuned for further developments in the coming months). The manuscript discussed
below describes a second possible therapeutic approach in development in the years to come, a potential cell therapy for ACDMPV, as also previously discussed in prior Issues of ACDA Notes.

Abstract: “RATIONALE: While pulmonary endothelial progenitor cells (EPCs) hold promise for cell-based therapies for neonatal pulmonary disorders, whether EPCs can be derived from pluripotent embryonic stem cells (ESCs) or induced pluripotent stem cells (iPSCs) remains unknown.

OBJECTIVE: To investigate heterogeneity of pulmonary EPCs and derive functional EPCs from pluripotent ESCs.

METHODS: Single cell RNA sequencing of neonatal human and mouse lung was used to identify the heterogeneity of pulmonary EPCs. CRISPR/Cas9 gene editing was used to genetically label and purify mouse pulmonary EPCs. Functional properties of the EPCs were assessed after cell transplantation into neonatal mice with S52F Foxf1 mutation, a mouse model of alveolar capillary dysplasia with misalignment of pulmonary veins (ACDMPV). Interspecies mouse-rat chimeras were produced through blastocyst complementation to generate EPCs from pluripotent ESCs for cell therapy in ACDMPV mice.

MEASUREMENTS AND MAIN RESULTS: We identified a unique population of EPCs, FOXF1+cKIT+ EPCs, as a subset of recently described general capillary cells (gCAPs) expressing SMAD7, ZBTB20, NFIA, DLL4, but lacking mature arterial, venous and lymphatic markers. FOXF1+cKIT+ gCAPs are reduced in ACDMPV and their transcriptomic signature is conserved in mouse and human lungs. After cell transplantation into the neonatal circulation of ACDMPV mice, FOXF1+cKIT+ gCAPs engraft into the pulmonary vasculature, stimulate angiogenesis, improve oxygenation and prevent alveolar simplification. FOXF1+cKIT+ gCAPs, produced from ESCs in interspecies chimeras, are fully competent to stimulate neonatal lung angiogenesis and alveolarization in ACDMPV mice.

CONCLUSIONS: Cell-based therapy using donor or ESC/iPSC-derived FOXF1+cKIT+ endothelial progenitors may be considered for treatment of human ACDMPV.”

As background, the Kalinichenko Research Lab at Cincinnati was the winner of the 2017 NORD grant for ACDMPV research. The long-term goal of the Kalinichenko Research Lab is “to discover novel therapeutic approaches and generate novel FDA-approved drugs for treatment of these severe respiratory disorders.” To learn more about the Kalinichenko Research Lab, please click HERE and read about their current projects.

Join us on Instagram:

New! Introducing the new Instagram page for the ACDA. We will continue on Facebook but please also join the ACDA on Instagram.
AWARENESS NEWS

Update on Rare Disease Day (February 28, 2021):

We are pleased to announce that despite the worldwide uncertainty and closures due to COVID-19, **$802 was raised by the ACDA in connection with Rare Disease Day on February 28, 2021**! Our sincerest thanks to the families, friends, colleagues and classmates of the ACDA and The David Ashwell Foundation for raising funds for ACDMPV research!

Please click HERE to check out our ACDA families and friends wearing the ACDA logo and #JeansForGenes on Rare Disease Day!

We would like to thank all of our individual donors and everyone who wore #JeansForGenes or sent pictures wearing the ACDA logo! Thank you for your outstanding support of our ACDA families.

NYPD Awareness Event (James Perrella):

The **NYPD** in New York City, USA hosted its annual Rare Disease Day Awareness Event on February 28, 2021 via Zoom. **Maria Catalano and Jimmy Perrella**, ACDA parents to **James** (January 23, 2019 – February 15, 2019) facilitated the event with the ACDA and were featured guest speakers. Maria also shared a slideshow presentation prepared by the ACDA for the program.

The online format enabled many of our ACDA registered families to attend the program worldwide and connect with each other, which was a substantial benefit during the COVID-19 year. Another special treat was hearing directly from five-year-old Imogen Bolton, an ACDMPV survivor in the UK and Europe’s smallest lung transplant recipient (see section below and Issues #56, #58, #61, #65, #68 and #73 of ACDA Notes).

Our special thanks to the NYC Police Department for organizing this important event and the Catalano/Perrella family for inviting the ACDA. “Alone we are rare, together we are strong.”

Maria Catalano & Jimmy Perrella, Hayley & Imogen Bolton and Bob Rilling, just a few of the ACDA attendees at the NYPD virtual Rare Disease Day Awareness Event on February 28, 2021
Below please find a “Thank You” badge for donations made on Rare Disease Day 2021 in your child’s honor:

International Bereaved Mother’s Day (May 1, 2021):

Love and light to our bereaved ACDA mothers this past International Bereaved Mother’s Day, which is observed annually on the first Sunday in May. It was created to “educate society about the true meaning of Mother’s Day…it is a heart centered attempt at healing the official Mother’s Day.”

International Bereaved Father’s Day will be on Sunday, August 29, 2021 (observed on the last Sunday in August each year).
LUNG TRANSPLANT UPDATES

Five Year Anniversary (Imogen Bolton):

Imogen Bolton’s story remains in the headlines in the UK and beyond! We introduced you to Imogen as an ACDMPV survivor in the UK and Europe’s smallest lung transplant recipient at the time of transplant (see Issues #56, #58, #61, #65, #68 and #73 of ACDA Notes). On May 12, 2021, Imogen celebrated five years post bilateral lung transplantation and her family has been busy spreading her story throughout the UK and raising awareness for ACDMPV and organ donation. For a listing of articles featuring Imogen, please click HERE and also follow Imogen’s story on Facebook HERE. Imogen will celebrate her sixth birthday in November 2021!

Nine Year Anniversary (Eleni “Ellie” Scott):

Eleni “Ellie” Scott (see Issues #57 and #68 of ACDA Notes), a lung transplant recipient and daughter of ACDA parents Karen and Nick Scott, will celebrate nine years post-transplant in June 2021 and is doing very well! Eleni was diagnosed with ACDMPV at eight months old and received a double lung transplant at nine months old at St. Louis Children’s Hospital in St. Louis, Missouri, USA. She will celebrate her 10th birthday on August 26, 2021!

Lung Transplant Update (Luca Palmisano):

We introduced you to Luca Palmisano in Issues #57-59, #61, #66-67 and #69 of ACDA Notes. In November 2016, Luca received a lung transplant at 4.5 months old at Children’s Hospital of Philadelphia in the USA. Luca became a big brother in February 2021! Congratulations to the growing Palmisano family, who also celebrated their first full calendar year without Luca being admitted to Children’s Hospital of Philadelphia in the entirety of 2020.

You can follow Luca’s Lung Transplant Story HERE. #teamluca #GiftofLife #acdwarriors

Lung Transplant Update (Tom Schnierle):

In December 2018, Tom Schnierle received a lung transplant at 2.5 years old in Germany, which was complicated by limited organ availability and the fact that lung transplants were not performed on small children in Germany at the time. Prior to his lung transplant, Tom lived in the intensive care unit since birth (See Issues #64, #66-67 and #69 of ACDA Notes). Although there are still only a select number of cases, it is now becoming more common for pediatric children in Germany to receive a bilateral lung transplant. Tom is doing great and will celebrate his fifth birthday on August 10, 2021!
FUNDRAISING NEWS

Donations:

To make a secure tax deductible donation to the ACDA or the NORD Research Fund (ACD), please visit our website for full instructions.

[acdassociation.org/donate]

The ACDA is a 501(c)(3) non-profit, tax-exempt organization as designated by the Internal Revenue Code of the United States.

Update from NORD:
The minimum amount required for the issuance of a 2022 NORD grant is $35,000.

Balance of ACDA account:
The adjusted balance of the ACDA bank accounts as of May 23, 2021 is [redacted] (2020 $50,000 grant deferred due to the COVID-19 emergency and reapplied to the 2021 grant issuance).

Update from AmazonSmile:
The ACDA was issued a [redacted] donation from the AmazonSmile Foundation as a result of AmazonSmile program activity between October 1 and December 31, 2020. To designate the ACDA as your charity, please follow the link below so that all of your eligible shopping will benefit the ACDA:

[http://smile.amazon.com/ch/46-2915711]

Update from Spreadshirt:
Items with the ACDA logo are available for purchase in our Spreadshirt store [HERE]. The accrued commission payment from Spreadshirt between February 2, 2021 and March 15, 2021 is [redacted]. Please continue to shop at our store as new items and new features are added regularly. You have the option to customize your products by choosing “Create,” including adding your child’s name or picture to most items featuring the ACDA logo. Don’t forget the ACDA earns a commission equal to 20% of every product sold! Look for 15% off everything from June 8-11, 2021!

Donations Received:
Thank you to the following families and friends that have made donations to the ACDA since the last ACDA Notes:

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Donors and In Memory Of:

To make a secure tax deductible donation to the ACDA or the NORD Research Fund (ACD), please visit our website for full instructions.

[acdassociation.org/donate]

The ACD Association is a 501(c)(3) non-profit, tax-exempt organization as designated by the Internal Revenue Code of the United States.
Notes

We are sorry we do not know the child for whom the memorial contribution was made. Please contact us to let us know.

Matching Gifts:

1. YOU DONATE.
2. THEY MATCH.
3. DOUBLE THE IMPACT.

Don’t forget about Matching Gifts – If your employer has a Matching Gifts Program for charitable organizations, your contributions to ACDMPV research can grow! Please check with your Human Resources department. The ACDA Tax Identification Number is 46-2915711.

Baere donations (Fraser Dunne):

Baere donates £1 to ACDMPV research from every item sold on its website.

Ariana Dunne, ACDA mother to Fraser Dunne (April 6, 2014 – April 7, 2014), is the owner of Baere, a shop in the UK specializing in organic cotton baby clothes and other handmade items. Baere donates £1 from every item sold through their website to the ACDA’s sister ACDMPV organization in the UK, The David Ashwell Foundation. The ACDA extends its gratitude to Baere for the contributions to ACDMPV research in memory of Fraser.
**jBloom Jewelry (Barrett Bone):**

In March 2021, Katy Bone, ACDA mother to Barrett Bone (June 14, 2019 - July 12, 2019), donated $530 from jBloom jewelry sales for **ACDMPV research in honor of Barrett Bone.** In Katy’s own words, “I just donated my first donation from my jewelry sales. $530 to the ACDA. I had to share because I’m so proud of myself for being able to do this. I started selling jBloom jewelry and a part of all proceeds will be donated on behalf of Barrett. I joined in order to be busier for Barrett. I have a full time job but thought doing these jewelry parties on Facebook and making money to donate would give me more purpose and it has. I will donate to several organizations but the ACDA is the main one.” Thank you Katy!

![Image](image1.png)

**Thanks for donating $530.00 USD to Alveolar Capillary Dysplasia Association**

$530 was raised by Katy Bone through jBloom jewelry sales in honor of Barrett Bone!

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Our ACDA families have organized very successful campaigns for the ACDA through Facebook birthday fundraisers and Donate buttons. Although the ACDA does not receive individual donor notifications, one hundred percent of funds donated through Facebook’s platform are passed on to the ACDA. Please see [FAQs](#).
In February 2021, Felicia, ACDA mother to Landen and Brian, organized a birthday fundraiser for ACDMPV research in honor of Landen and Brian. In Felicia’s own words, “ACD is what took my boys lives. It stolen cherished memories together, a siblings forever bond, and every bit of a mothers joy and happiness. It broken so many hearts, it took so many tears, it has taken EVERYTHING! Every little bit helps find the research for a cure for all the babies affected by this disorder, when all they want and deserve is a chance at life. Let's make a difference for these vulnerable innocent little lives! As a promise to my boys I will continue to fight and not give up hope.”

In February 2021, Liz Man organized a birthday fundraiser for ACDMPV research in honor of her nephew, Johnny Rista (February 20, 2013 – March 4, 2013), son of ACDA parents John and Eliza Rista. In Liz’s own words, “For my birthday this year, I'm asking for donations to Alveolar Capillary Dysplasia Association (ACDA). I've chosen this nonprofit because their mission means a lot to me, and I hope you'll consider contributing as a way to celebrate with me. Every little bit will help me reach my goal. I've included information about Alveolar Capillary Dysplasia Association below. I've selected this charity in memory of my nephew Johnny who passed away 8 years ago.”

ACDA COMMITTEE POSITIONS

Please check our website for a full listing of Board and Committee members and let us know if you would like to get involved.

http://acdassociation.org/board-members
Mathijs Lourens, ACDA father to Myla (November 20, 2015 - December 17, 2015), continues his amazing work in support of his Dutch ACDMPV foundation, “Stichting ACD.” Mathijs plans to continue running marathons for ACDMPV awareness in Europe and then worldwide! He previously completed Rotterdam Marathon (April 2017, 2018 and 2019), Amsterdam Marathon (October 2016 (half), 2017, 2018 (Kids Run), 2019 (Kids Run)), Berlin Marathon (September 2019), Stichting Marathon #1 (October 2020), Stichting Marathon #2 (April 2021) and various other running events. Please contact Mathijs if you are interested in participating or cheering on his upcoming plans to raise ACDMPV awareness in the Netherlands or beyond! For additional information about the upcoming runs highlighted below, please visit Run4ACD on Stichting ACD’s website.

**Chicago Marathon (October 10, 2021):**
Upcoming Event: Chasing the dream to cross the world with Myla! Mathijs is coming to the USA!! In his own words, “It makes us proud every time again and motivates us continuing our mission raising awareness for ACDMPV and keeping Myla’s legacy alive. Next stop for us is the Chicago Marathon on October 10, 2021 if the current global situation allows us to. Otherwise, we will probably organize it ourselves again because giving up is not an option.” Please contact Mathijs at contact@stichtingacd.nl if you want to join the team, cheer him on or can help with his travel logistics to the USA!

**NN Marathon Rotterdam (October 24, 2021):**
Upcoming Event: Mathijs and Stichting ACD are planning to run the Rotterdam marathon on October 24, 2021 for the fourth time in a row (canceled in 2020 due to COVID-19). The ACDA sends our very best to Mathijs and the team of Stichting ACD runners in Rotterdam. In Mathijs’ own words, “Recharge mode is now on and I’m definitely coming out stronger for the @chimarathon and @marathonrotterdam next fall!”

**Stichting ACD Marathon #2 (April 11, 2021):**
Mathijs and team Stichting ACD ran Stichting ACD Marathon #2 on April 11, 2021 to raise ACDMPV awareness! In Mathijs’ own words a few days before the big event: “This time with 42, 12, 5 km distances… Now in 2021 so many years later. So many kilometers, so many old and new friends, so much blood, sweat and tears further, but still the legacy of #Myla lives on! On April 11th we will make it another fantastic day, together, celebrating life with
a smile during our second own marathon! Support us with a small or large donation. Come cheer us on! Commit, let's hear from you so we can all get that terrible disease #ACD on a beautiful day! Always love 😍

In Mathijs' own words, “There were 31 (!!) Team Myla riders that crossed the finish line during Stichting ACD Marathon #2. Of which 5 abroad. They all shine with that beautiful medal that they have well earned. All those riders in our shirts, all those posts on the socials, all that attention the weather has brought. It was a very successful day that we will enjoy for a long time! Team Myla, congratulations on your accomplishments and until next time.”

Special medals made by Stichting ACD in honor of Marathon #2 on April 11, 2021!

Stichting ACD Marathon #2 (April 11, 2021)

“Together we've all managed the fantastic amount of € 2903.20!!!”
REPORT FROM THE DAVID ASHWELL FOUNDATION (UK):

To celebrate David's 10th birthday we had hoped to organize a ceilidh (Scottish/ Irish barn dancing fun!). However, a global pandemic hit and we had to be a bit more creative! We came up with the idea of #10forDavid. This turned into a wide reaching online fundraising effort with friends running up Arthur’s Seat (a hill in Edinburgh) 10 times, families walking 10KM, friends doing 10Km walks/ runs/ cycles. We also had two online zoom children’s cookery classes (thanks to Jo Taylor for her support), an online art class, pilates and yoga class! It was a great way to remember David and to be together with friends and family.

Through these #10forDavid events we have raised £5,354.00 for ACDMPV research. Our online Virgin Money Giving site was very useful for all of these. You can set up your own ‘someone special’ page if you would like to fundraise for ACDMPV (in the UK).

As always a huge thank you to those families who have set up direct debits for the charity and whose families fundraise at work for us. At the moment we have £12,767.93 in our bank account ready to spend on the next round of ACDMPV Research Funding.

Another plea for everyone in the UK – please use The Giving Machine to generate income from online shopping (for free!). Everyone in the UK can do this – it is so easy to register and is a way of earning money for ACDMPV research. Please also encourage your friends and family too! Watch here how it works. I have the giving machine app on my phone and it makes giving as I shop so easy. It’s very quick and easy to sign up!

If you live in the UK (and elsewhere), there are a number of options available for funding ACDMPV research through The David Ashwell Foundation:

1. UK families you can set up direct debits to The David Ashwell Bank Account (we have a number of people who do this – just ask me for bank details.)

2. Through the Virgin Money Giving account you can set up a page in memory of your child or for special occasions (e.g. birthdays or Christmas).

3. You can make a donation directly, using the Virgin Money Giving website.

4. Fundraise while you online shop (The Giving Machine) (a percentage of what you spend is donated)

5. Collect postage stamps

All UK & Europe based families are welcome to use The David Ashwell Foundation as a means of fundraising for ACDMPV Research. Please raise awareness of our small charity via social media including Twitter (@TDavidAshwellF) and Facebook.

We are here to help UK families fundraise for ACDMPV research so that we can help to find answers to the condition that has become such a major part of our lives. All money raised will be used to fund ACDMPV Research. Thank you to all who have used The David Ashwell Foundation to fundraise for ACDMPV. For additional information, contact Simon and Amelia.

Email: davidashwellfoundation@yahoo.co.uk
Twitter: @TDavidAshwellF
Mobile (Amelia): 07855473686
REMEMBERING OUR BABIES

WELCOME TO NEW FAMILIES

A sad but warm welcome to the following newly registered families:

- Name 1
- Name 2
- Name 3
- Name 4
- Name 5
- Name 6
- Name 7
- Name 8
- Name 9
- Name 10
SAFE ARRIVALS!

Congratulations on the birth of the following little siblings (and grandson!) in our ACDA registered families:

CONNECT WITH US

Facebook:
- Official ACDA Public Page
- Parent Group (private)
- Family Group (private)

Read about the private groups with information on how to join:
http://acdassociation.org/support-groups/

Instagram:
- Follow us alveolar_capillary_dysplasia

Twitter:
- Follow us @acdassociation

Website:
- acdassociation.org

Email:
- President@acdassociation.org (Eliza Rista)
- Secretary@acdassociation.org (Renee Murray)
- Treasurer@acdassociation.org (John Rista)

A note from the President: We absolutely want to hear from you as to how we can best meet your needs with respect to information about ACDMPV and also grief support. We are here to help in any way we can. Please know we always want to hear your ideas and we love community involvement on any level. Please never hesitate to contact me at President@acdassociation.org.

Regards, Eliza Rista, mom to Johnny
(February 20, 2013 – March 4, 2013)