MESSAGE FROM THE EDITOR

2020 has been a challenging year. Many dermatologists were redeployed to work on Covid-19 wards in the UK earlier in the year, in particular the residents and younger attendings. There is ongoing catch up work going on. There are still telephone/virtual consultations which are not so satisfactory for patients with complicated problems. Many labs closed for a long period during lockdown. In the UK, we have been back in the research labs since June, but there are some limitations because of space and social distancing. However, we are about 80% back to normal interrupted by bouts of orders to self-isolate, especially for those who have school-age children. Hope is on the horizon with the many vaccines being developed and rolled out to the most vulnerable and front-line health care workers and perhaps in a year or so we will have achieved herd immunity.

Earlier in the year, I came across Mat and Savanna Shaw on YouTube, fittingly from Utah, a father and daughter singing duo. They have gone viral on YouTube and many people have derived comfort from their singing. So if you are feeling a little bit down in the dumps, I would suggest listening to Mat and Savanna. https://www.youtube.com/c/MatandSavanna/videos

Season’s greetings to everyone and let’s hope 2021 will be a better year. I look forward to the virtual PC MSAB meeting in February 2021.
PC Project wishes to express sincere appreciation to the PC Genetics Team. Once a month, this group of scientific and medical professionals joins PC Project on a web meeting to review cases received through the International PC Research Registry (IPCRR). These remarkable individuals donate their time and expertise to discuss patient cases that may or may not be PC, and also reviews the cases once the genetic testing has been confirmed. Because we know this group is exceptionally busy with the demands of their own clinics and labs, PC Project is especially grateful to them for their sacrifices.

The Case for Genetic Testing

The IPCRR registry receives individuals with all types of painful keratodermas, nail dystrophy and cyst issues. Some patients don’t seem like PC, but all are welcome and if possible, all are helped. However, even after a patient’s questionnaire answers and photos have been reviewed, it’s not always possible to determine clinically what condition a patient has. Thus, the critical need for genetic testing, which is offered through PC Project’s IPCRR registry.

One registry participant wrote: “I recently found PC Project’s website and it was absolutely wonderful to know that I was not the only one!!! PC has impacted hugely my life, yet no-one was able to tell me much about it. PC Project has given me hope, and a sense of identity... Doctors always called it heredity hyperkeratosis which I have since learned is a bit of a catch all phrase for many, many skin conditions. To have proof that it is PC would finally give me something real to point to and say its PC, instead of going into my usual routine of trying to explain that it is not simply a case of hard skin that just needs a trip to the chiropodist!”

**ANSWERS:**
Case A has a Connexin30 (GJB6) mutation, Case B has PC-K6c, Case C has PC-K16, and Case D has a Desmoglein-1 (DSG1) mutation.
Recent Publications


VALO TRIAL UPDATE

The Palvella team is deeply grateful to the PC patients and their families who participated in the VALO Phase 2/3 study evaluating PTX-022, an investigational topical gel formulation of sirolimus (also known as rapamycin), for PC.

The primary VALO study has officially completed, and the Palvella team is currently in the process of analyzing data from both the Phase 2 and Phase 3 portions to inform next steps with the PTX-022 program for PC.

Palvella is committed to working collaboratively with PC Project and the PC community to communicate the planned next steps with the PTX-022 program by year-end.

Ten Bio—A Skin Culture System

Drs Robyn Hickerson and Michael Conneely have spun out Ten Bio from the University of Dundee to commercialize technology developed while working with Prof Irwin McLean in which full-thickness human skin (obtained from abdominoplasties) is cultured at physiological tension. Ten Bio’s advanced human skin testing solution, TenSkin™, addresses the unmet need for products that accurately mimic the behaviour of living skin when on the body. TenSkin™ accurately mimics the mechanobiology of living skin making it the most suitable system for testing potential therapeutics in preparation for clinical trials. Congratulations Robyn and Michael!

Click here to read the full article.
PC In A Virtual 2020

BADGEM Best Poster Award -

Congratulations to Xiang Li Tan and her mentor, Edel O'Toole, for winning the Clinical Meeting Best Poster Presentation for Genotype-phenotype correlations of neurovascular structures on the feet in pachyonychia congenita at the British Association of Dermatologists Dermatology and Genetics Medicine (BADGEM) meeting at the British Association of Dermatologists annual meeting in September.

Lay Abstract: We conducted a questionnaire study on neurovascular structures on the feet in pachyonychia congenita (PC). Neurovascular structures are nerve and vessel bundles often found in plantar calluses (hard, thickened area of the skin at the bottom of the feet). Neurovascular structures are sometimes found as small black blood spots that are very painful, worsening the plantar pain. These may also bleed when paring the calluses. Our aim was to find out whether any PC-subtypes or mutations are associated with the presence and characteristics of neurovascular structures. We also studied how they affect patients' quality of life. Through surveying nearly 300 patients, we found that some PC-subtypes have different likelihood of getting neurovascular structures and are affected differently by them. A better understanding of the effects of neurovascular structures on patients and the new findings on their links with specific genes will help ongoing development of treatment for PC.

Israeli Society of Dermatology and Venerology Meeting -

Thanks to Dr. Liat Samuelov for presenting on PC at the Virtual Annual Meeting of the Israeli Society of Dermatology and Venereology. Dr. Samuelov’s talk was the only one on PC and her research from IPCRR data brought greater awareness and understanding of PC.

Genomics for Dermatologists -

David Kelsell and Edel O’Toole were involved in organizing this course with Neil Rajan and Sara Brown. There were 40 international delegates including delegates from Europe, Japan, South Africa, Argentina and Singapore. This course was designed to provide an introduction to human genetics and the genomic approaches used currently to understand disease mechanisms for those working in dermatology and skin biology. There was some discussion of the biology and genetics of PC.

PC Town Hall—In November, PC Project held a live town hall style web meeting to update and connect with the PC community. Watch the recording at https://www.pachyonychia.org/townhall/

PC Teen Meeting—PC Teens from around the world gathered virtually to discuss a teenager’s life with PC, how they cope, and what their hopes and dreams are for the future. Four teenagers with PC presented.

AADA Virtual Legislative Conference - PC Project participated in the American Academy of Dermatology Association’s Virtual Legislative Conference in September, and talked one-on-one with representatives of the US Congress and Senate about the important issues facing those who suffer from rare diseases like PC.

Global Genes Virtual Summit – PC Project attended and was reminded that the number one recommendation for attracting researchers and drug developers is to have a patient registry.
PeDRA Annual Meeting – PC Project had a virtual booth and two posters in collaboration with Palvella, at the Pediatric Dermatology Research Alliance Annual Conference. Because patients continue to join the registry as adults, having a presence and raising PC awareness among clinicians who can potentially make the earliest diagnoses of PC is important for PC Project.
PC Project launched a #Worst2First4PC Campaign to raise funds and awareness for Giving Tuesday 2020. Patients and caregivers were asked the following questions: What is the Worst thing about PC? And, What is the First thing you’ll do when there is a cure?

Here are just a few of the many responses:

- The Worst part of PC is pain, shame and not always being able to do what you want. The First thing I’ll do when we have a cure is to not hide my feet and walk as much as I want.

- The Worst thing about PC is seeing my loved ones suffer. The First thing we’ll do when there’s a cure is go for a long, long walk on the rocky coastal path as a family!

- The Worst thing about PC is the embarrassment. A perfect example is this past Halloween, me and a few friends were together, and I was in too much pain and left early. I was ashamed in myself that I couldn’t hang out anymore. The First thing I’ll do when we have a cure is hang out with my friends and family, and hit the track.

- For the Worst thing about PC, I think it’s according to where you are in life. As a youngster it was remembering to curl fingers under to hide nails. Teen years, it was the fact you didn’t want your feet exposed for fear of being seen. As an adult, trying to be stylish and wear shoes like everyone else (and suffering for it later), turning down offers for beaches, pools, etc., for the feeling of shame and embarrassment. As older adult just being tired of all the restrictions put upon you by this unforgiving disease. The First thing I’ll do when there is a cure, is after giving thanks to PC Project, I’ll be getting a manicure, pedicure and wearing sandals all summer long!

- The Worst thing about PC is the restrictions I have in doing what I want to do, making it so I have to plan again around the potential pain I’ll have later. The First thing I’ll do when we have a cure is work out and go skating to be able to play hockey again.

Thanks to all who participated, including many of you in the IPCC. PC is not an easy condition to live with and it’s because of all of you that our patients have hope!