December 1, 2019

Dear Friends of Merkel cell carcinoma research,

Greetings! As we enter this holiday season, I would like to express my gratitude for your

support of our Merkel cell carcinoma program. I am proud to outline some of the highlights of the past year, many of which were made possible through your generosity.

**FDA Approval of pembrolizumab**

In the past year, efforts by our UW Dermatology Merkel Team have led to the FDA approval of pembrolizumab (an ‘anti PD-1’ immune therapy) for advanced Merkel cell carcinoma patients. Our studies that supported this approval were published in the New England Journal of Medicine (2016) and the Journal of Clinical Oncology (2019). It is incredibly meaningful to be able to change the management of a disease in general, but given that this cancer is one of the most serious skin diseases (at 35% mortality, it is far more dangerous than melanoma), helping patients in this difficult situation is particularly meaningful.

**Merkel Antibody Test**

The Merkel Antibody test (known clinically as ‘AMERK’) we developed over the past years to detect when MCC is returning in a patient was recently recommended in the most important guidelines for managing Merkel cell carcinoma, published by the National Comprehensive Cancer Network. Usage of this test is increasing rapidly around the world, sparing patients from side effects of radiation and contrast dye exposure, while detecting recurrent MCC earlier and more accurately than scans.

**Increasing the Effectiveness of Immunotherapy**

Our research team has recently changed the way Merkel cell carcinoma (MCC) is managed, and increased the chance of surviving advanced MCC by nearly 10-fold by using immune therapy. However, we are still not able to provide lasting benefit for about half of patients whose MCC spreads throughout the body. We are excited about several initiatives to address this major challenge in our field, as indicated below.

Reprograming T-cells

We just started a trial in which a patient’s own killer T cells are efficiently reprogrammed to target and eliminate MCC tumor cells. We are also working on a way to make cancer cells much more sensitive to small doses of radiation, which causes the cancer cells to die in a special way that is particularly visible to the immune system. This approach is exciting as it will allow us to more specifically target cancer cells, have less damage to surrounding normal tissues, and potentially make the dying cancer cells act like a vaccine. This will cause the immune system to seek and destroy microscopic collections of the cancer that have spread elsewhere in the body.

Therapeutic vaccine for MCC

We received an American Cancer Society ‘Mission Boost Grant’ (one of only 4 given nationally this year) to develop a therapeutic vaccine for Merkel cell carcinoma, together with Dr. David Koelle.

**A Program Project Grant**

In April 2019, our team received a large 5year grant from the NIH/National Cancer Institute which will be shared among investigators at UW and Fred Hutch. The main goals of the grant is to better predict which MCC patients will benefit from the newly available immune therapies and to develop new ways to help the patients who do not benefit from the currently available drugs.

**International Recognition**

The past year has been remarkable in terms of recognition of the accomplishments of our Seattle-based Merkel cell carcinoma team. In March, I delivered the Van Scott/Philip Frost leadership award at the American Academy of Dermatology in Washington DC, the top honor for our largest professional organization. In October, I gave the kick-off lecture for the First International MCC Symposium, held at Moffitt Cancer Center in Tampa FL. In November, I gave a lecture and received the 2019 Tanioku Kihei Memorial Award, the highest honor afforded by the Japanese Society for Investigative Dermatology.

**Sharing MCC Research Around the Globe**

MCC research and treatment has progressed rapidly in recent years, so I have made it a priority to educate dermatologists around the world so that they may take these developments into the clinic. I have given talks in Helsinki, Paris, Kaohsiung (Taiwan), and Seoul. This year I will give ‘virtual lectures’ by webinar in Brazil and the United Kingdom, as well as to the National Comprehensive Cancer Network. Such webinars are efficient in terms of time, money and avoiding travel-associated greenhouse gas emission.

**Personal Updates**

My older son Alex is now a sophomore at Harvey Mudd College in Claremont, California, focusing on a mixture of liberal arts, engineering and computer science. He plays in the orchestra there and I love to attend their concerts, take his friends out to dinner and get a taste of modern college life. My younger son Max is a freshman in high school. He plays ultimate frisbee and complains less and less about being forced to play the violin (which does cut into time for video games). Stephanie, my wife, is engaged in her research at the Fred Hutchinson Cancer Research Center focused on ‘graft versus host disease’, a very serious complication of a bone marrow transplant. She is in the middle of a major three-year commitment as the President of the American Society of Hematology, a group of over 30,000 hematologists from around the world.

**Thank You**

On behalf of Team Merkel, thank you wholeheartedly for your partnership. If you are interested in supporting MCC research, please go to: https://merkelcell.org/join-thefight/donate/. The Yolles Charitable Foundation has generously offered to match contributions. If you have any questions about our work, please contact me or my advancement colleague Christine Chan Anderson, at ccanders@uw.edu or 206.221.3286. Have a wonderful holiday season and a joyful new year.

Sincerely,



Paul Nghiem, M.D, Ph.D.

George F. Odland Endowed Chair in Dermatology

Professor and Head, Division of Dermatology

University of Washington School of Medicine

Affiliate Investigator, Fred Hutchinson Cancer Research Center