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An interview with Dr. Larisa Geskin on an MF-CTCL fellowship at Columbia University supported by Helsinn

Columbia University has launched a new fellowship funded with a grant from Helsinn. The fellowship program will focus on mycosis fungoides, a type of cutaneous T-cell lymphoma (MF). The program director, Dr. Larisa Geskin, Director of the Comprehensive Skin Cancer Center (CSCC) at Columbia University Medical Center, took time to answer some key questions about the initiative.

What is the MF-CTCL fellowship?

This new fellowship is a one-year program that aims to develop important clinical skills in managing cutaneous lymphoma patients through dedicated research projects. This is the first fellowship of its kind that is focussed on MF, and I'm delighted that Helsinn has decided to fund such an important program.

Why is there a need for a MF-CTCL fellowship?

There are very few specialists in MF-CTCL in the country and in the world, but there is a great need for well-trained specialists. It is difficult to learn the state-of-the-art management of cutaneous lymphomas, including current treatment guidelines, from the textbooks or even from the literature. Every patient is different and requires a unique approach. That is why it is important to gain personal experience in diagnosis and management of these lymphomas, while being guided by an experienced specialist in this disease.

What is the end goal of the fellowship?

The main aim of the fellowship is to train and educate an aspiring cutaneous lymphoma specialist who would be able to contribute to the collection of vital information on MF. The current fellow will focus on correlative studies of clinical and genomic data. We have previously demonstrated that some CTCL patients have genetic profiles which may signify their clinical outcomes, responses to therapy and prognosis. We wish to correlate these unique genetic signatures with real clinical outcomes in hopes to create a true genetically driven algorithms for diagnosis and therapy of these patients.

Has a fellow already been appointed?

Yes, we have selected Dr. Tiffany J. Garcia-Saleem for the program and I'm looking forward to working closely with her over the coming months. Dr. Garcia-Saleem holds degrees of Bachelor of Science from Cornell University, Master of Biomedical Science from University of Medicine and Dentistry of New Jersey, and Doctor of Medicine from Rutgers University. She completed her General Surgery Internship at New York-Presbyterian/Columbia University Irving Medical Center and started her Cutaneous Lymphomas Fellowship at Columbia University in September 2020.

How will the research be conducted?

Artificial intelligence (AI) is clearly a growing force in medicine and showing potential across a wide variety of disciplines. Integrating AI as an intelligence layer will help to unlock the power of all the data that we, as a group, have collected. Widespread advancement in machine learning (ML), deep learning, and natural language processing (NLP) have enabling creation of an AI algorithm layer. ML is playing a key role in the development of AI, which then can be used to solve specific cases or provide demonstrable value. We work with world renown experts in the field from Columbia and Carnegie Mellon Universities, to obtain high-quality data to form a cross-discipline taskforce, integrate different data sets together, and sort out inconsistencies so that the data is accurate and rich, with all the right dimensions required for ML. I hope

that we will be able to develop an artificial intelligence-based algorithm that can support diagnosis, enable treatment selection and predict outcomes for CTCL patients.

How could a new algorithm impact clinical practice in this area?
Introducing a reliable algorithm based on artificial intelligence has the potential to guide physicians in the early identification of MF and therefore potentially reduce diagnosis time.

The cutaneous lymphoma community is undertaking a massive cooperative effort of data collection through several prospective international studies. Using AI for analysis of data will enable the medical community to better understand the disease, identify risk factors and thus improve current clinical practice.

Why did you decide to be involved in the research program and what do you hope to achieve?
Having spent many years researching the field, I was keen to take advantage of the opportunity to share my insights and to collaborate with number of leaders in the field of machine learning and AI, very talented programmers, mathematicians and bioinformaticians to advance the field of cutaneous lymphomas. As we deepen our understanding of the disease and how to best use AI tools in this research, our collective goal is to improve the lives of MF patients across the world.

HELS-US-0057