

# 2014 SCCM-Weil Research Grant Recipient Provides Update

Support from the Society of Critical Care Medicine's (SCCM) 2014 SCCM-Weil Research Grant (formerly known as the Vision Grant) enabled Krzysztof Laudanski, MD, PhD, to conduct research centered on the long-term decline of acquired immunity after sepsis in humanized mice. Dr. Laudanski, an assistant professor of anesthesiology and critical care at the Hospital of the University of Pennsylvania, took time out of his busy schedule to provide this brief write-up detailing his research and its progress.

Critical care is at the cutting edge of medicine. Being at the forefront of such an advanced specialty by contributing to patient care, research in the field or education of future colleagues is demanding but very rewarding. Our patients are coming to the limit of what their bodies can tolerate but we bring them back, with the ultimate goal of meaningful reunification with loved ones and participation in society.

The prerequisites for success in medicine and research are to have both unique research ideas and relevant expertise. Focusing on the effects of long-term immune dysfunction of acquired immunity after critical illness addresses important scientific questions. The idea that the immune system evolves over time in response to encountered illnesses perplexes me. As a physician, I see my patients as individuals trying to cope with the aftermath of long-term critical illness. The aim of my SCCM-Weil Research Grant (formerly known as the Vision Grant) was to determine whether sepsis induces a long-term aberration of the acquired immunity dysfunction. More specifically, I hypothesized that sepsis triggers a persistent defect in monocyte-derived dendritic cell differentiation due to the aberrant activation of the macrophage colony-stimulating factor (M-CSF). I decided to employ a humanized

model of sepsis in order to better approximate the clinical reality. We found that, 28 days after having sepsis, humanized mice had a profound defect in innate immunity that could be reversed by manipulating the M-CSF system. This unexpected discovery proved very rewarding and is the basis of my application to the National Institutes of Health for a K23 grant. At the time of my application, the SCCM-Weil Research Grant was to provide me with the opportunity to develop my niche and gain the new skills in grant management necessary to rigorously pursue immune regulation research and obtain federal funding. The SCCM-Weil Research Grant gave me a unique opportunity to take a leap forward from my prior experiences and become an established clinical researcher. This was a unique and very educational experience.

I was asked to give advice to applicants who were considering applying for an SCCM-Weil Research Grant. I think my advice is universal and very simple—keep trying. I applied to several places but it was the Society of Critical Care Medicine (SCCM) that saw value in my proposal. Other funding bodies did not provide me with support. At times, the application and evaluation processes seemed to be fair, while at other times they seemed arbitrary. SCCM-Weil Research Grants provide a very clear pathway for

applying and even better feedback. We all work hard for the betterment of our patients, and we all have exquisite ideas worth pursuing. So keep going and keep pushing the envelope. Your ideas are valuable and, if presented correctly, research will be funded. Do not spend too much time on the statistics of how many grants are funded, just do it. If you fail in a particular application, learn your lessons and go for the next application.

I have been a member of SCCM for several years. Initially, I was asked to be involved in SCCM's In-Training Section. I enjoyed the experience. It was a very valuable addition to the research experience provided by the SCCM-Weil Research Grant. Section management, with all the intricacies of guiding people to develop the section and the members themselves, was a very interesting, long-lasting experience, especially in the long term. Then I was awarded the SCCM-Weil Research Grant. Finally, I became involved in other SCCM activities. The Society provided me with opportunities to establish numerous connections and collaborations. So SCCM provided me with a multitude of opportunities to develop myself as a clinician, as a researcher and, most importantly, as an individual. ▲

CALL FOR APPLICATIONS

DEADLINE: AUGUST 12, 2016

## SCCM-Weil Research Grants

# \$50,000

in Funding Available for Your Research Project



Through generous funding from the SCCM-Weil Research Trust, the Society of Critical Care Medicine (SCCM) is offering two grants of \$50,000 each to support member researchers. Basic, translational and clinical research submissions are encouraged. Eligible research should focus on one or more of the following areas of investigation:

- **Basic Research:** Expand our understanding of complex critical illness processes.
- **Bench to Bedside:** Improve patient care by translating basic scientific findings into therapeutic interventions for critical care patients.
- **Clinical Outcomes:** Advance our understanding of patient outcomes and continuous improvement practices.

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Critical Care Medicine  
The Intensive Care Professionals

Right Care  
Right Now.

For submission information, visit  
[www.sccm.org/WeilResearchGrants](http://www.sccm.org/WeilResearchGrants)

Please note: Investigators must be current SCCM members and remain so throughout the grant process. Applications are encouraged from both established and junior investigators. Priority will be given to projects having broad relevance. Award notification will occur by December 2016 with grant support initiated in January 2017. Recipients will be recognized at SCCM's 46th Critical Care Congress, which will be held January 21 to 25, 2017, in Honolulu, Hawaii, USA.