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People Focus

The importance of inspirational researchers

ANDREW PLUME

Ask any researcher how they started out, and they will often say it was thanks to a unique individual who inspired them to pursue a career in science. Indeed, the banquet speeches of Nobel Laureates are typically peppered with references to their mentors. Research Trends asked our successful early-career researchers featured in the previous article one more question: which researcher has inspired you most in your career, and why?

Professor Józef Barnaś

"I'm quite sure my supervisor would laugh if I called him 'inspiring', but the truth is, through his great passion for science, he has shown me what it means to be a real scientist." – Maciej Misiorny, Ph.D. student, Faculty of Physics, Adam Mickiewicz University, Poland.

Professor Józef Barnaś at the Faculty of Physics, Adam Mickiewicz University and the Institute of Molecular Physics, Polish Academy of Sciences, Poznan, Poland, is the author of more than 200 articles and conference papers published in international journals. In the late 1980s, Prof. Barnaś was part of the team that proposed the Camley-Barnaś semiclassical transport model that provided the theoretical underpinnings of giant magnetoresistance (GMR), a quantum effect exploited for the production of ever-smaller hard disk drives in laptops and mobile music players. The simultaneous and independent discovery of GMR by Albert Fert and Peter Grünberg in 1988 was recognized by the joint award of the Nobel Prize in Physics for 2007. Both awardees noted Barnas's contribution to their work in their Nobel autobiographies.

Associate Professor Zofia Bilinska

"My tutor inspires me and leads my career. She has put huge effort into helping young researchers and giving them the opportunity to develop their ideas." – Lukasz A. Malek, MD Ph.D., resident in cardiology, Institute of Cardiology, Warsaw, Poland.

Associate Professor Zofia Bilinska is an expert in myocardial and pericardial diseases. As Deputy Director for Science at the Institute of Cardiology, Warsaw, Poland, she has published more than 60 articles since the mid-1980s; about half of these have been published in English and the remainder in Polish. Bilinska's co-authorship on a 2008 position statement from the European Society of Cardiology on classification on heart muscle diseases (cardiomyopathies) constitutes her top-cited work to date, with more than 80 citations so far.

Professor Andrzej Gorski

"My doctoral thesis advisor is a man of great knowledge and scientific passion, and has always supported my work." – Aneta Kurzepa, Ph.D. candidate, Institute of Immunology and Experimental Therapy, Polish Academy of Sciences.

Professor Andrzej Gorski is an internal medicine specialist at the Institute of Immunology and Experimental Therapy, Polish Academy of Sciences, Warsaw. With more than 300 journal publications in clinical immunology and transplantation since 1969, Prof. Gorski has collaborated with more than 100 co-authors over the length of his career. He is editor-in-chief of Archivum Immunologiae et Therapiae Experimentalis and is a pioneer in the developing field of bacteriophage therapy for the treatment of infections in humans.

Dr Elaine Ostrander

"I was inspired by the way she presented her ideas on association mapping in dogs, which helped me understand how to arrange my own ideas on association mapping in plants." – Susanna Atwell, Post-Doctorate in plant genetics, University of Southern California.

Dr Elaine Ostrander, Chief, Cancer Genetics Branch, National Human Genome Research Institute, National Institutes of Health, Bethesda, Maryland, USA, heads a lab mapping genes responsible for cancer susceptibility in dogs and humans. Many canine cancers appear to be very similar

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to their human counterparts, such that comparative studies of canine and human cancer genetics could lead to important clinical outcomes for both species. Ostrander's research hit the headlines in 2007 when she and her team showed that most of the variation in body size of domestic dogs is due to differences in a single gene encoding a growth-promoting protein. Ostrander has an h-index of 41, and her 169 published papers have been cited a total of 3,614 times since 1996 (including more than 450 citations to the 2005 paper she co-authored describing the genome sequence of the domestic dog).

Professor Adrian Bejan

"Many of my research publications are based on Professor Bejan's ideas. His publication record, which includes the most publications and citations in the field of heat transfer, and the originality of his research have inspired me to pursue fundamental research." – Dr Tanmay Basak, Professor, Department of Chemical Engineering, Indian Institute of Technology, Madras, India.

Professor Adrian Bejan (Duke University, Durham, North Carolina, USA) is a mechanical engineer and inventor of the constructal theory of design in nature, which stresses that patterns and geometries found in nature are a result of fundamental physical phenomena. Prof. Bejan's more than 430 publications in international journals have been cited more than 3,140 times since 1996, making him one of the most highly cited engineering researchers globally, a fact also noted in an article published in the December 2008 issues of International Journal of Heat and Mass Transfer in honor of his 60th birthday.

Professor Karl Jansen and Dr Gregorio Herdoiza

Karl Jansen

Gregorio Herdoiza

"Discussions and work with them have helped me to learn a lot in a rather difficult field of physics." – Dr Krzysztof Cichy, Assistant Professor, Faculty of Physics, Poznan University of Economics.

Professor Karl Jansen and Dr Gregorio Herdoiza at the NIC Research Group Elementary Particles at Deutsches Elektronen-Synchrotron (DESY) in Zeuthen, Germany, conduct sophisticated research into the very structure of matter.

Using high-energy accelerators and detectors for photon science and particle physics, they delve into the realm of the sub-atomic world to gather insights on the nature of the universe. With almost 150 publications in the journal literature, Prof. Jansen's work has been cited more than 1,200 times since 1996. Actively publishing since 2001, Dr Herdoiza has maintained an impressive authorship rate of at least one article each year. His best-cited work to date, cited 34 times since publication in 2007, was on "dynamical twisted mass fermions with light quarks", and was co-authored with Prof. Jansen.

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