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The 2015 Paul Ehrlich and Ludwig Darmstaedter Prize for Young Researchers awarded for a novel diagnostic method in Crohn's disease

Raja Atreya has developed a fluorescent antibody spray that enables physicians to detect the target molecules in an anti TNF immunotherapy of Crohn's disease. The treatment is more effective in patients with a large number of target molecules than in patients with few target molecules.

FRANKFURT am MAIN. Professor Raja Atreya from Medical Clinic 1 of the Erlangen University Hospital has won the 60,000€ Paul Ehrlich and Ludwig Darmstaedter Prize for Young Researchers for 2015. With his innovative diagnostic method, physicians can predict the clinical response of an expensive treatment of Crohn's disease which is associated with potential side effects. Treatment with TNF antagonists is effective in only half the patients. The other patients bear the risks of side effects without any clinical benefits of the therapy. With the award, the Scientific Council of the Paul Ehrlich Foundation acknowledges the avenues that the novel diagnostic opens up for personalized medicine in Crohn's disease. The award will be presented by Professor Harald zur Hausen in the Paulskirche, Frankfurt.

Crohn's disease is a highly debilitating, chronic-inflammatory bowel disease. Constant diarrhea and abdominal cramps make it difficult to live a normal life. Therapies that target proinflammatory mediators in Crohn's disease have been available for some years. Some involve TNF antagonists which are therapeutic antibodies that neutralize the molecular messenger TNF. This messenger is implicated as a major factor perpetuating the disease. Since only half the patients benefit from the treatment, medical science has long been seeking

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a way of predicting the success of this therapy. The prize-winner has closed this gap with his research. Atreya was guided by the idea that only those medicines are effective that actually find their target. To help this process along, the prize-winner developed a novel antibody spray that makes the target molecules necessary for the success of treatment visible in endoscopic imaging prior to therapy. In a clinical trial with 25 Crohn's disease patients, he succeeded in demonstrating that patients who have a large number of target molecules for a TNF antagonist in their bowel mucosa respond better to the subsequent therapy than do patients with few target molecules. The success of this approach was underscored by a number of other factors: fewer additional medicines had to be prescribed, the intestinal mucosa healed within a year, and patients did not require surgery for complications during the trial period. The Young Researcher prize-winner and his co-workers now plan to test the new diagnostic in large-scale trials.

Short biography of Professor Raja Atreya

Raja Atreya (age 39) was born in 1975 and studied medicine at the Johannes Gutenberg University in Mainz. He completed his doctorate there in 2004 and was resident physician at the local University Hospital until 2009. In 2010 he moved to Medical Clinic 1 of the Erlangen-Nuremberg University Hospital. Atreya was appointed W1 Assistant Professor there in 2010 and has headed the outpatient care unit for clinical studies since 2012. In 2013 he completed his exams as a specialist in internal medicine. Atreya is now a Senior Resident and heads the "Inflammatory Bowel Disease" unit as well as outpatient care for the university and clinical trials. The Young Researcher prize-winner has also been awarded the Ludwig Demling Research Prize of the German Crohn's Disease / Ulcerative Colitis Association, the Research Incentive Prize of the Boehringer Ingelheim Foundation and the Theodor Frerichs Prize of the German Society for Internal Medicine.

Paul Ehrlich and Ludwig Darmstaedter Prize for Young Researchers

The Paul Ehrlich and Ludwig Darmstaedter Prize for Young Researchers, awarded for the first time in 2006, is conferred once a year by the Paul Ehrlich Foundation on a young investigator working in Germany for his or her outstanding achievements in the field of biomedical research. The prize money must be used for research purposes. University faculty members and leading scientists at German research institutions are eligible for nomination. The selection of the prizewinner is made by the Scientific Council on a proposal by the eight-person selection committee.

The Paul Ehrlich Foundation

The Paul Ehrlich Foundation is a legally dependent foundation which is managed in a fiduciary capacity by the Association of Friends and Sponsors of the Goethe University,

Frankfurt. The Honorary Chairman of the Foundation, which was established by Hedwig Ehrlich in 1929, is the German Federal President, who also appoints the elected members of the Scientific Council and the Board of Trustees. The Chairman of the Scientific Council is Professor Harald zur Hausen, and the Chair of the Board of Trustees is Dr. Rolf-E. Breuer. Professor Wilhelm Bender, in his function as Chair of the Association of Friends and Sponsors of the Goethe University, is Member of the Scientific Council. The President of the Goethe University is at the same time a member of the Board of Trustees.

Further information

You can obtain selected publications, the list of publications and a photograph of the prizewinner from the Press Office of the Paul Ehrlich Foundation, c/o Dr. Hildegard Kaulen, phone: +49 (0) 6122/52718, email: h.k@kaulen.wi.shuttle.de and at www.paul-ehrlich-stiftung.de.