

# INTERVIEW



**GERRY NICOLAES  
AND  
KANIN WICHAPONG**

*Biochemists in the lead*

‘Three times is a charm’, says the proverb, and the coordinators of the EU-funded PRAETORIAN training network can only agree. Gerry Nicolaes and Kanin Wichapong from the Department of Biochemistry received a grant from the Horizon Europe Marie Skłodowska-Curie research and innovation programme. “Our proposal was rejected twice and we got the chance to resubmit one year later”, Wichapong says. “Now I understand why the project coordinators I used to work with in these types of consortia were looking so stressed at times”, Nicolaes laughs.

'PRAETORIAN: EuroPeAn Training NetwoRks to TArget DAMPs and NETs: novel apprOaches in pReCision SepsIs pAtieNt care' is the full project title. It involves five academic partners (the universities of Maastricht, Paris, Münster, Uppsala, and the Institute for Biomedical Research Barcelona), seven partners from industry, four organisations representing the perspective of patients and society and two organisations for international dissemination and outreach. The topic: systemic inflammation and sepsis. "Many septic patients develop thrombosis. Until about seven years ago, people did not realise that these are two sides of the same coin. Inflammation and sepsis, or other types of atherosclerosis, have a lot in common with what we traditionally regarded as cardiovascular disease or thrombosis", Gerry says. He and Kanin have in fact been working on immunothrombosis and thrombo-inflammation for years. Their group at the Department of Biochemistry uses computational techniques to find and optimise new molecules, and studies how proteins involved in coagulation and inflammation interact.

### **NO DRUG AGAINST SEPSIS**

The fact that there is to this day no cure for sepsis is what triggered their interest many years ago. Gerry: "There's not a single drug on the market aimed purely at sepsis. Treatment usually consists of antibiotics or fluids to raise the blood pressure, because if you go into shock, your blood pressure drops, which is an extremely serious and deadly medical condition. There are many factors that contribute to the disease. Everybody can get it and people can die within a matter of a few days, while having been perfectly healthy until then." Kanin: "The research group had been working on some proteins that are involved in sepsis, called extracellular histones, since 2010, and I then joined the group in 2013. We realised these proteins are important targets for sepsis and

inflammation too. Within this consortium, we at Maastricht will focus on how these histones enter your circulation."

Gerry adds: "Diagnostics is also a problem. There are several methods to detect a bacterial or viral infection, but these generally take a couple of days. And you don't have that time."

### **TRAINING FUTURE RESEARCHERS**

Content-wise, the aim of PRAETORIAN is to find new treatments, and new diagnostic tools, for sepsis. While researching these, the project will also train ten PhD candidates from all over Europe: the next generation of researchers. Each one of the five participating universities will employ two PhD candidates, who will also do placements at other participating universities or companies.

Kanin: "They can broaden their research scope, learn additional techniques, expand their network and so on." And the fact that the universities are not allowed to employ candidates who have been in their country for more than six months in the previous two years stimulates selecting students from abroad.

### **LITTLE SCIENCE SO FAR**

At the time of the interview, the two are very busy arranging administrative matters for the consortium. "Little science so far. It takes quite some time to find our way around university regulations, but also looking for funding for the fourth year of the PhD projects, since the EU only funds for three years", Gerry says. In September, they plan to have all ten PhD candidates together on their first training session, and they are already looking forward to the annual meetings with the entire consortium. Gerry: "We did all the work for the grant, but we don't get more money than the others. So on an hourly basis, we get far less, but it's worthwhile anyway. You learn a lot and work with the people you've

selected yourself. That's fun. But I do understand now why the coordinators of the networks I participated in were always a bit stressed. We're very happy with the support from the CARIM office, which has experience coordinating these kinds of projects."

#### **THE GOLDEN TIP**

When asked for a tip on how to obtain a grant like this, they start with "having a good idea and a very clear aim. Find people with types of expertise that contribute to the goal and don't overlap. Make sure the proposal is written around the theme of educating new researchers, since it's a training network fund. And make sure plans are realistic". And then they reveal the golden tip. Gerry: "The first proposal we

wrote all by ourselves, and we scored 92%. That wasn't good enough: you need to be in the top 5%. The research plans are probably of good quality in every proposal the EU receives, but they also want you to describe how you will set up the administrative side, how you guarantee equal opportunities and so on. You should not only organise it well, but also write it down well. In the end, we hired a company for the latter, which checked our application and advised us. It's a circus, and without a little luck you'll not succeed", he concludes.

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