The Willem Kolff Battle of the Universities 2018

In 2018 we celebrate 75 years of dialysis since dr. Willem Kolff (1911-2009) invented the rotating drum artificial kidney. We also celebrate 50 years of Dutch Kidney Foundation (Nierstichting). In CORPUS Leiden – the city where Kolff was born – the Willem Kolff Foundation and the Dutch Kidney Foundation team up to organize the 3rd edition of the Willem Kolff Battle of the Universities on Thursday and Friday, October 11-12, 2018.

During the Kolff Battle, a contest on medical invention, teams of young university researchers will compete to find the best innovative approach to solve a kidney-related medical problem with (bio)medical engineering. The team with the most innovative idea, according to a jury of experts in the field, and the audience, wins the Van Noordwijk Award.

The Van Noordwijk Award recognizes the team for the highest level of innovative approach, originality, skill, knowledge and determination to find new solutions to a problem that affects millions of patients. A problem that might one day be tackled with innovations stemming from their new approach.

In this flyer, we ask you to gather a team of 5 researchers at your university and to apply for this exciting contest.

THE COMPETITION
The Willem Kolff Foundation and the Dutch Kidney Foundation would like to invite university teams to compete in this contest of medical invention and to come up with brand new ideas and approaches for a medical problem which affects millions of people but might be solved. We’ve focused on the heart and lungs in earlier contests, but in this 3rd edition of the Kolff Battle we focus on the field where it all started: kidneys.

We would like to ask the teams to search for new ways of approaching the problems we are now facing. We ask you to do that with 5 people in one team per university. You have 4 months to come up with a concept approach or concept invention.

PRESENTATIONS AND FINALS
All teams are invited to present their ideas on October 11, 2018 in front of a jury in CORPUS Leiden. All teams present their concept solution with:
- a demonstrator (if needed)
- a 10 minute presentation (with powerpoint)
- and a paper (max. 3 A4 to be submitted in advance)

A jury of 8 people, professionals in the innovative field of (a/o) artificial organs, nephrology and (bio)medical engineering, and a kidney patient, will choose the 3 best ideas. These three teams will go on to the Willem Kolff Battle of the Universities 2018 FINALS on the following day, during the Science Day (Wetenschapsdag), also in CORPUS, Leiden.
The Science Day Symposium audience, many of whom are patients, will decide by voting who will receive the 2018 Van Noordwijk Award. The winning team will receive a 7,500 euro grant from the Dr. E. E. Twiss Research Fund to further explore the feasibility of their winning concept.

**THE CHALLENGE**

In the seventy-five years after Kolff’s first attempts to treat a kidney patient with dialysis, hemodialysis has become a standard treatment for end stage renal disease in the western world. Almost 2.5 million patients continue to live because of Kolff’s invention. A great success, but at a cost. Living with dialysis today is still demanding. Dialysis every other day for several hours has a great impact on the patient’s well-being and social life. Chronic hemodialysis is labor intensive, consumes high volumes of disposables materials and ultrapure water and is therefore one of the most expensive and far from sustainable medical treatments we know. Where dialysis should be a bridge to transplantation, it many times isn’t. There are simply not enough donor kidneys to treat all patients and not all patients are medically suited for transplantation. Only half of the people in the world who need kidney replacement, are in fact receiving it. Besides putting more effort into kidney disease prevention, we also need to revise our way of thinking about the way we offer dialysis treatment and kidney transplantation. This is not only about revising models of care and new business concepts, but also about inventing new technologies to replace kidney function.

In the spirit of Willem Kolff, and in celebration of his work to help kidney patients, we challenge teams from all biomedical and bioengineering departments across The Netherlands to invent a simple and feasible technological solution to make kidney replacement more patient centered, available, accessible, sustainable and affordable for everyone. Further information will be provided after you sign up.

**ARE YOU UP TO THAT?**

**TIME SCHEDULE**

- **Battle team registration, deadline:** May 31
- **Instructions for Battle by email:** June 1
- **Battle time:** June 1 – Oct 10, 2018  
  *(deadline: 24 hrs before presentation)*
- **Presentations:** October 11, 2018
- **Finals (best 3 teams):** October 12, 2018

**BUDGET**

Each competing team will be provided with a maximum budget of **1,000 euros** to be able to cover for expenses to make a demonstrator or any other (low budget) proof of concept.

**APPLICATION**

We are looking forward to your team application, the latest by **May 31, 2018** at info@willemkolffstichting.nl.

In your email application (in Dutch or English), please mention:

- Name, work address and the university you represent
- Names, departments, email addresses and phone numbers of each team member (maximum: 5, including the team captain)

We will get in touch with you personally, as soon as we have received your application.