

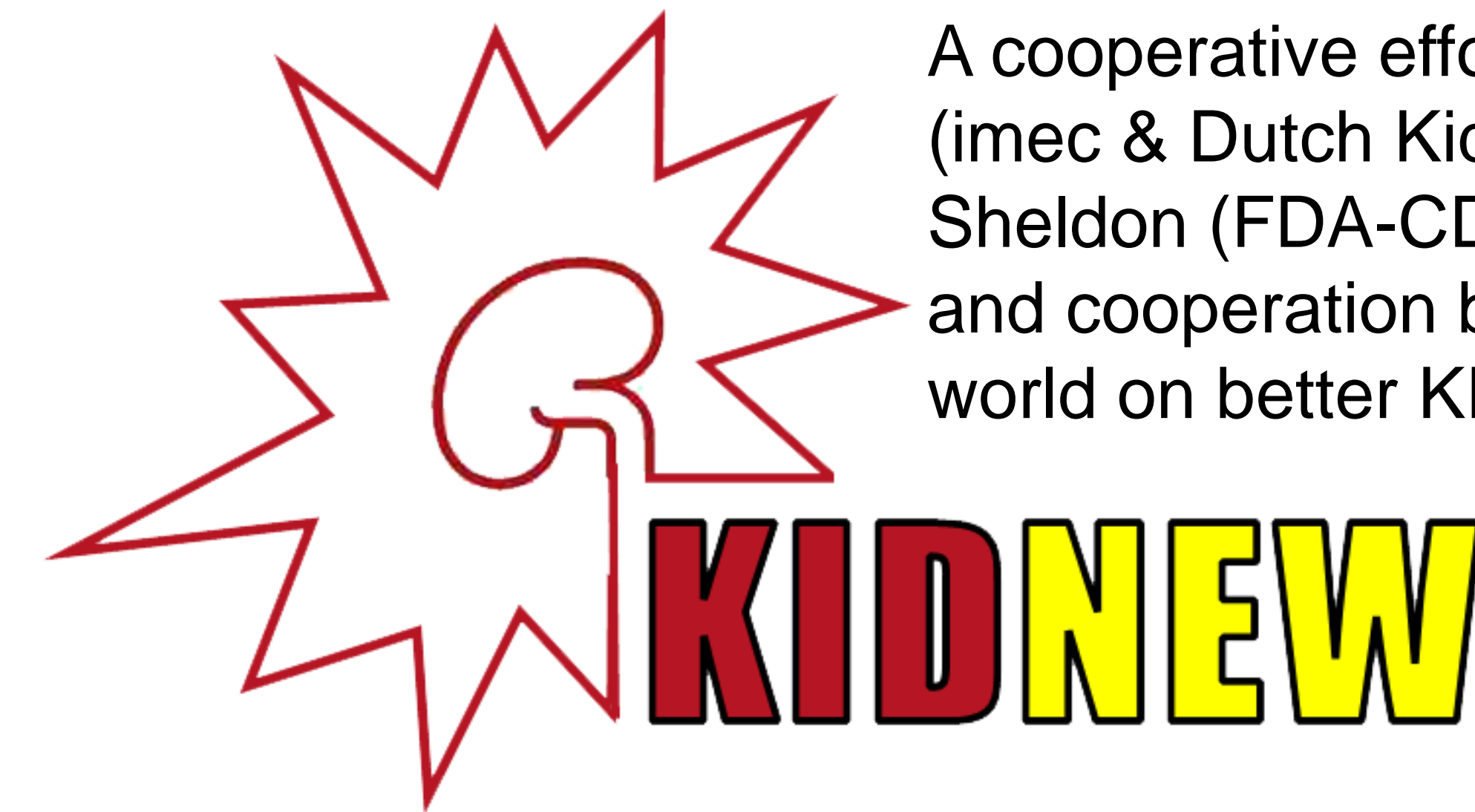
Kidney Implant Development Network Worldwide (KIDNEW): Status Report

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An article covering the topics within this poster is in press in the IFAO journal Artificial Organs

Current Kidney Replacement Therapy (KRT) comprises various types of dialysis and kidney transplantation. Transplantation, the present gold standard, is in most countries available to <50% of KRT patients and requires life-long immunosuppression with risk of rejection. Dialysis is expensive and offers poor quality of life with significantly shortened life expectancy. Given the state of technology development, it seems possible that an artificial implantable kidney, capable of most basic filtration and cellular kidney functions, can be developed as envisioned by the Kidney Health Initiative (KHI) Technology Roadmap. In line with the KHI roadmap, it is likely that this will be achieved via intermediate milestones like enhanced (home) dialysis and portable/wearable devices. Much of the **scientific expertise & technological skills** needed for this seem to **already exist** but are **scattered around the world** within different “silos”. **KIDNEW** aims to merge these silos:



A cooperative effort, pulled by Fokko Wieringa (imec & Dutch Kidney Foundation) and Murray Sheldon (FDA-CDRH) to stimulate communication and cooperation between the best brains in the world on better KRTs, ultimately aiming at an IAK.



- **Targets** supporting disruptive KRT solution(s) that can fundamentally improve quality of life for people with kidney failure, will be affordable and become available worldwide.
- **Promotes** synchronization between roadmaps from KHI, European Kidney Health Alliance (EKHA) & International Society of Nephrology (ISN), as well as direct interaction between relevant international scientists, engineers, physicians, patients, policy makers, investors, regulators, foundations & other stakeholders (all interacting at IDEAS) to boost the development of an (ultimately) implantable artificial kidney.
- **Expresses** no preferences about the exact form of resulting product(s), like technical device, bioreactor, xenotransplant, chimera, or others.

EKHA webinar “Need for Innovation in RRT” (June 9th 2020)

This webinar was organized to encourage scientists, product developers and policymakers in Europe to collaborate on developing groundbreaking innovations in KRT. Link to full video recording:

<https://www.youtube.com/watch?v=mppriCykios&feature=youtu.be>

ASAIO-IFAO IAK “KIDNEW” meeting (June 12th 2020)

For the 66th ASAIO meeting, the IFAO planned a special session on the Implantable Artificial Kidney (IAK) and the Kidney Implant Developers NETwork Worldwide “KIDNEW”. Link to full video recording:

<https://www.imec-int.com/en/connected-health-solutions/watch-the-video-of-the-kidnew-meeting-on-wearable-and-implantable-kidneys#video>

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Currently existing organizational structures within the nephrology-related field. KIDNEW promotes cooperation. Nephrologists, dialysis/transplantation nurses, patient associations, and kidney foundations from *Europe* (left) & the *United States of America* (right) – both supported by their respective *political* representatives (EU Kidney Health MEP Group & US Congressional Kidney Caucus) – as well as the established worldwide structure of *societies for Artificial Organs* (bottom row) could jointly coordinate efforts towards the ultimate goal of an Implantable Artificial Kidney (IAK).

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