

## **Regenerative medicine in Urology (UMC Utrecht)**

The urologists in the UMCU are skilled in the treatment of urethral stricture disease, an obstruction of the male urethra due to fibrosis of the urethra and the surrounding corporal tissue. Urethral stricture disease occurs after trauma (motor or car accidents, blunt trauma), after endoscopic treatment or can be caused by inflammation due to Lichen Sclerosus or sexual transmitted diseases.

The experimental urology department focuses on tissue engineering of the urethra and surrounding tissue. We are a starting group, we are embedded in Regenerative Medicine Utrecht and collaborate closely with the department of nephrology and hypertension in the UMCU. Furthermore, we have collaborations with groups in the Netherlands (experimental urology in Nijmegen) but also abroad (Switzerland and Great Britain) with possibilities for international internships. Challenges in our research are finding the right scaffold, the right cell type, induce regeneration of the tissue without inducing fibrosis, generating a barrier for urine and preserve erectile function of the penis.

Techniques include: scaffold production, decellularization of tissue, isolation of primary cells, (dynamic) cell culture, co-culture on scaffolds from different origin (biological and synthetic), imaging, molecular biological techniques, standard biochemistry.

We are looking for a Master student with strong interest in translational science, you are skilled, both practical as in communication, open and willing to work in a starting group. Experience in cell culture, microscopy or animal experiments is favored but not required. We offer an insight in urology, a variety of techniques and challenging science.

For more information, please contact Dr. Petra de Graaf ([p.degraaf-4@umcutrecht.nl](mailto:p.degraaf-4@umcutrecht.nl))