Kidney transplantation is the most cost-effective treatment option for eligible patients with end stage renal disease but organ demand exceeds organ availability. Efforts to approach the problems arising from increasing waiting lists need to be undertaken to improve patient and graft outcome. Based on quantitative modeling techniques, the PhD thesis will investigate two important decisions that need to be made in the course of kidney transplantations:

1. **Living donor selection for altruistic kidney transplantation.**
   Potential altruistic living kidney donors need to be examined whether short or long term adverse events for the potential donor can be ruled out and whether graft patency of the potentially donated kidney can be assumed long enough.

The objective of the PhD thesis is to provide decision support for evaluating...
the potential living kidney donation based on the best available evidence.
2. Optimal time point for steroid withdrawal after kidney transplantation. Steroids are effective in preventing rejections but exhibit severe adverse effects. Steroid withdrawal is performed in many transplant centers worldwide but its safety, potential benefit as well as appropriate time point after transplantation remain elusive.

The objective of the PhD thesis is to determine the optimal time point after kidney transplantation to withdraw steroids in order to reduce long term toxicity and improve patient survival without sacrificing the kidney transplant.

The ERBP (http://www.european-renal-best-practice.org/) group produces guidelines for the care of patients with chronic kidney disease in Europe and supports Maria Haller to specifically study such important clinical decision processes in the area of kidney disease and transplantation.