

New computational tool could help match kidney donors to recipients

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A new scoring system that compares the genetic matching of kidney donors and recipients could help improve predictions of transplant success, according to a study published in *PLOS Computational Biology*.

To investigate broader genetic impact on kidney transplants, Dr. Laurent Mesnard and colleagues collected DNA data for a large number of genes from 53 pairs of [kidney donors](#) and recipients.

Together with the lab of study co-senior author Dr. Fabien Campagne, the investigators developed a computational method that assigned a score to each donor/recipient pair based on mismatches in their DNA sequences.

After transplantation surgery, the researchers followed each donor/recipient pair for several years to see how well their mismatch score predicted kidney function. They found that the score significantly predicted the ability of the transplanted kidneys to properly filter blood.

More information: Mesnard L, Muthukumar T, Burbach M, Li C, Shang H, Dadhania D, et al. (2016) Exome Sequencing and Prediction of Long-Term Kidney Allograft Function. *PLoS Comput Biol* 12(9): e1005088. [DOI: 10.1371/journal.pcbi.1005088](https://doi.org/10.1371/journal.pcbi.1005088)

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