I2MC
Institut des Maladies Métaboliques et Cardiovasculaires
TOULOUSE

Inserm
La science pour la santé
From science to health

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Biomarkers, mechanisms and complications of kidney disease

www.i2mc.inserm.fr

www.renalfibrosis.fr

Team - June 2019

Kidney disease – state of the art

Diabetes

Hypertension

Old age

Common causes

10-14% of the world population has chronic kidney disease (CKD)

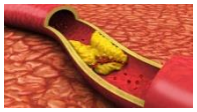
Replacement therapies
Quality of life ↓↓

Acute kidney inury (AKI)

End stage renal disease (**ESRD**) accounts for **2-3%** of the national health care budgets

Developmental renal disease
(rare but **first cause of CKD in children**)

Major issues
- Early detection
- Treatments



Cardiovascular complications
--calcification--

Research aims of the team

Needs in:

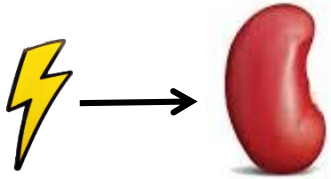
- **Early detection:** clinic, industry for stratification.
- **Treatments:** "complete" absence of novel treatments/management.

Our aim:

Translational research, mostly based on **systems biology**, in the field of kidney disease.

Early non-invasive detection
Mechanistic -> Drugs/management

Cardiovascular (CVD) complications



Acute kidney injury (AKI)

Developmental renal rare disease

Some reading

- Decramer et al Nat Med 2006
- Klein et al Sci Transl Med 2013
- Schanstra et al J Am Soc Nephrol 2015
- Boizard et al Sci Report 2016
- Casemayou et al J Am Soc Nephrol 2017
- Schanstra et al JCI Insight 2019