

**Biosketch** *Joris R. Vermeesch, Ph.D. Ir*, is heading the department of human genetics, is professor Molecular Cytogenetics and genome research. He is heading the Constitutional Cytogenetics unit of the Center of Human Genetics, and coordinating the genomic core.

The laboratory has been pioneering genomic applications with a focus on preimplantation, prenatal and postnatal diagnosis. The group has a special focus on structural variation detection. The laboratory studies the mechanisms underlying chromosomal instability and rearrangements. He developed methods for single cell CNV detection and addresses questions about the origins of chromosomal rearrangements and genomic instability by the genetic analysis of IVF embryos. The laboratory developed and translated novel methods for non-invasive prenatal and cancer testing. In collaboration with clinical geneticists, the laboratory actively seeks to define the molecular causes of developmental, mental and behavioural disturbances. The group is partner of the SymbioSys, the systems biology center of excellence in computational biology to mine high throughput data analysis tools and to identify novel gene functions through data fusion methods and, at an institutional level, involved in creating the framework for genomic data storage, analysis and exchange. He has published over 300 papers with an H-index 45 and founder of a spin-off company Cartagena.