

Genetic maps and their importance

Genetic maps are based on **gene linkage**. A different or contrasting category is formed by **physical maps**. See also Q5, 19 and 68. Genetic and physical maps together were invaluable for **human genome project**. During genome sequencing, multiple copies of human genome were cut to smaller overlapping pieces and these were sequenced. However, due to repetitive sequences, that comprise more than 50% of the genome, many of the overlaps were not true matching sequences. Making good linkage and physical maps can help in clustering together sequence fragments that are truly belonging together and thus reconstruct the whole chromosome sequence. The linkage and physical maps are also useful for positional cloning and DNA diagnostics (see Q5).