Historical Timeline of Genome Sequencing Related Discoveries

1970

- 1970 - Baltimore, Temin: Reverse transcriptase discovered
- 1970 - Arber, Smith: First resctriction enzyme isolated that cuts DNA (*Hin*DIII)
- 1973 - Boyer, Cohen: Recombinant DNA molecule developed
- 1973 - Brookhave Protein Database developed
- 1974 - Cerf, Kahn: Concept of internet described
- 1974 - Goldfarb: Standard General Markup Language (SGML) created
- 1975 - Southern hybridization procedure developed
- 1976 - Maxam-Gilbert chemical modification sequencing procedure developed
- 1977 - Sanger, Gilbert: DNA sequencing techniques introduced
- 1977 - Roberts, Sharp: Introns discovered
- 1978 - Botstein et al: RFLP mapping developed

1980

- 1980 - Sanger et al: ΦX174 bacteriophage sequenced
- 1982 - NCBI GenBank established
- 1983 - Mullis: PCR procedure described
- 1986 - Hood, Hunkapiller et al: First automated DNA sequencer released
- 1986 - Human genome was announced by the DOE
- 1988 - DOE and NIH funded Human Genome project

1990

- 1990 - Human Genome Project launched
- 1990 - HTML language published; the WWW can be developed
- 1992 - Human molecular marker Map (814 markers)
- 1994 - First detailed human molecular (the CEPH map met the 1 marker per centimorgan threshold)
- 1995 - First paired end sequence assembler
- 1995 - ***H. influenzae* bacteria sequenced**
- 1996 - **Yeast genome sequenced**; 1996 - 2x resolution human molecular marker map (5,264 markers)
- 1996 - Bermuda principles on data sharing
- 1997 - ***E. coli* bacteria sequenced**
- 1997 - 2x Resolution Human Map 10,478 markers
- 1998 - **Nematode (*C. elegans*) genome sequenced**
- 1998 - Quality score for Sequencing Traces

2000

- 2000 - Celera assembler- the first WGS assembler
- 2000 - ***Arabidopsis* (model plant) genome sequenced**
- 2000 - ***Drosophila* genome sequenced**
- 2001 - **Public and private human genome sequences published**
- 2001 - Physical map of the human genome
- 2001 - 3x resolution human map (36,678 markers)
- 2002 - Arachne - WGS assembler
- 2004 - Illumina: Sequencing-by-synthesis sequencer released
- 2006 - RNA-seq procedure introduced
- 2008 - Nanopore sequencing described
- 2009 - Hi-C chromosomal conformational capture sequencing described

2010

- 2010 - Pacific Biosciences: Single molecule sequencing sequencer released

Compiled by J. Schmutz/P. McClean