

### ***Biocomputing Group***

- 1) Evolution and structure-function relation. (*Dr. Profiti, Prof. Casadio*)
- 2) Prediction of protein-protein interaction sites (*Dr. Savojardo, Prof. Casadio*)
- 3) Coiled-coil prediction (*Prof. Martelli*)
- 4) Prediction of subcellular localization (*Dr. Savojardo, Prof. Martelli*)
- 5) Prediction of milk fat components from infrared spectra using machine learning methods (*Prof. Fariselli at University of Padova*)
- 6) Determination of possible SNPs that influence the development of dog melanoma from NGS data (*Prof. Fariselli at University of Padova*)
- 7) Dog melanoma analysis using RNA-Seq and Exome data (*Prof. Fariselli at University of Padova*)
- 8) Characterization of mutational landscape in cancer genes (*Dr. Capriotti*)

### ***MoZooLab***

Development, validation and automation of analytic pipelines for repetitive DNA content in eukaryotic genomes. (*Dr. Luchetti*)

### ***Animal Genetics***

- 1) Genome wide association studies and gene pathway analysis in pigs (*Prof. Fontanesi*)
- 2) Next generation sequencing data mining in pigs (*Prof. Fontanesi*)
- 3) Mining next generation sequencing datasets in cattle (*Prof. Fontanesi*)
- 4) Landscapes of mitochondrial insertions in the nuclear genome (NUMTS) of livestock species by next generation sequencing data analysis (*Prof. Fontanesi*)
- 5) RNA-seq and microRNA-seq analyses in pigs (*Prof. Fontanesi*)
- 6) Metagenomics in food products (*Prof. Fontanesi*)
- 7) Integration of metabolomics and genomics data in pigs (*Prof. Fontanesi*)