UniL SIB 3-5 September 2018

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Instructor Background

Robert M. Waterhouse

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Robert M. Waterhouse

2015-17	Marie Curie Fellow & Maître assistant University of Geneva *ZDOBNOV*	MARIE CURIE ACTIONS; UNIVERSITÉ DE GENÈVE FACULTÉ DE MÉDECINE Department of Genetic Medicine and Development
2013-14	Marie Curie Outgoing Fellow Massachusetts Institute of Technology *KELLIS*	MIT COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE LABORATORY; MIT CSAIL; BROAD INSTITUTE
2009-12	Postdoctoral Researcher University of Geneva *ZDOBNOV*	SIB Swiss Institute of Bioinformatics; UNIVERSITÉ DE GENÈVE FACULTÉ DE MÉDECINE Department of Genetic Medicine and Development
2005-09	Wellcome Trust PhD Imperial College London *CHRISTOPHIDES*	Imperial College London
2004-05	Wellcome Trust MSc Bioinformatics Imperial College London	wellcome trust
2000-04	MBioch Biochemistry University of Oxford	DEPARTMENT OF BIOCHEMISTRY UNIVERSITY OF OXFORD

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Robert M. Waterhouse

09.2017- Swiss National Science Foundation Assistant Professor
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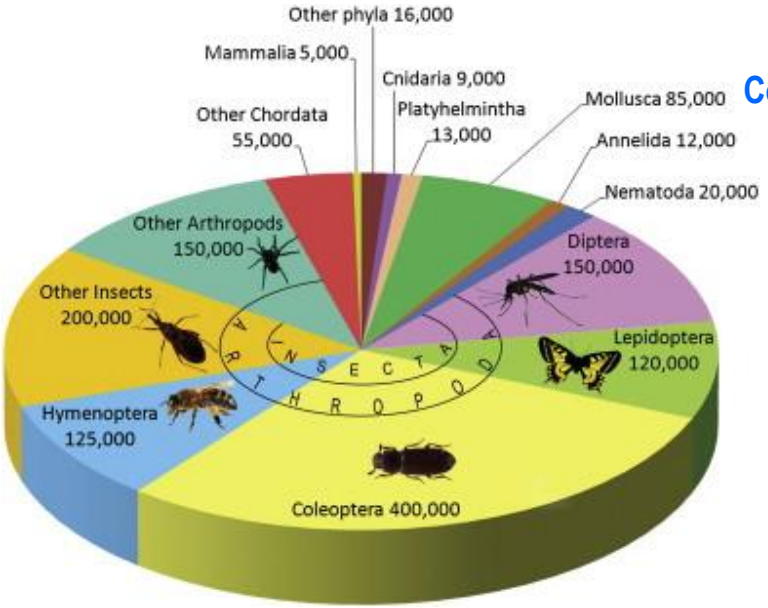
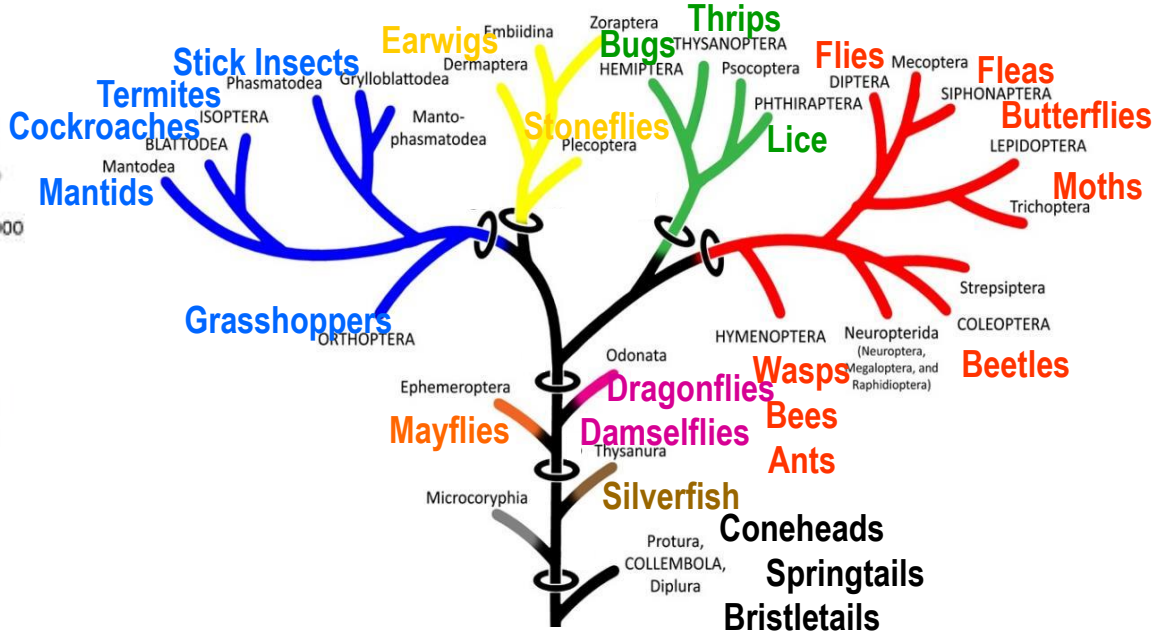
Arthropod Evolutionary Genomics





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Comparative genomics to bring an evolutionary perspective to understanding the genome biology of arthropod diversity

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Orthology: OrthoDB

The Hierarchical Catalogue of Orthologues

http://www.orthodb.org

Quality: BUSCO

Benchmarking Universal Single-Copy Orthologues

http://busco.ezlab.org

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9:00-12:00

Lecture: Orthology: concepts and methods

short break

Lecture: Assessing genomics data quality with BUSCO

coffee break 10:30-10:45 (ish)

Lecture: Arthropod comparative genomics with OrthoDB and BUSCO

Lunch break 12:00-13:00 (on your own)

13:00-17:00

Practical #1: BUSCO Genomes

Practical #2: Phylogenetics to Phylogenomics

Practical #3: Gene Family Evolution

coffee break 15:30-15:45 (ish)

Practical #4: Gene Family Evolution II

Bonus practicals: BUSCO, OrthoDB, Orthology