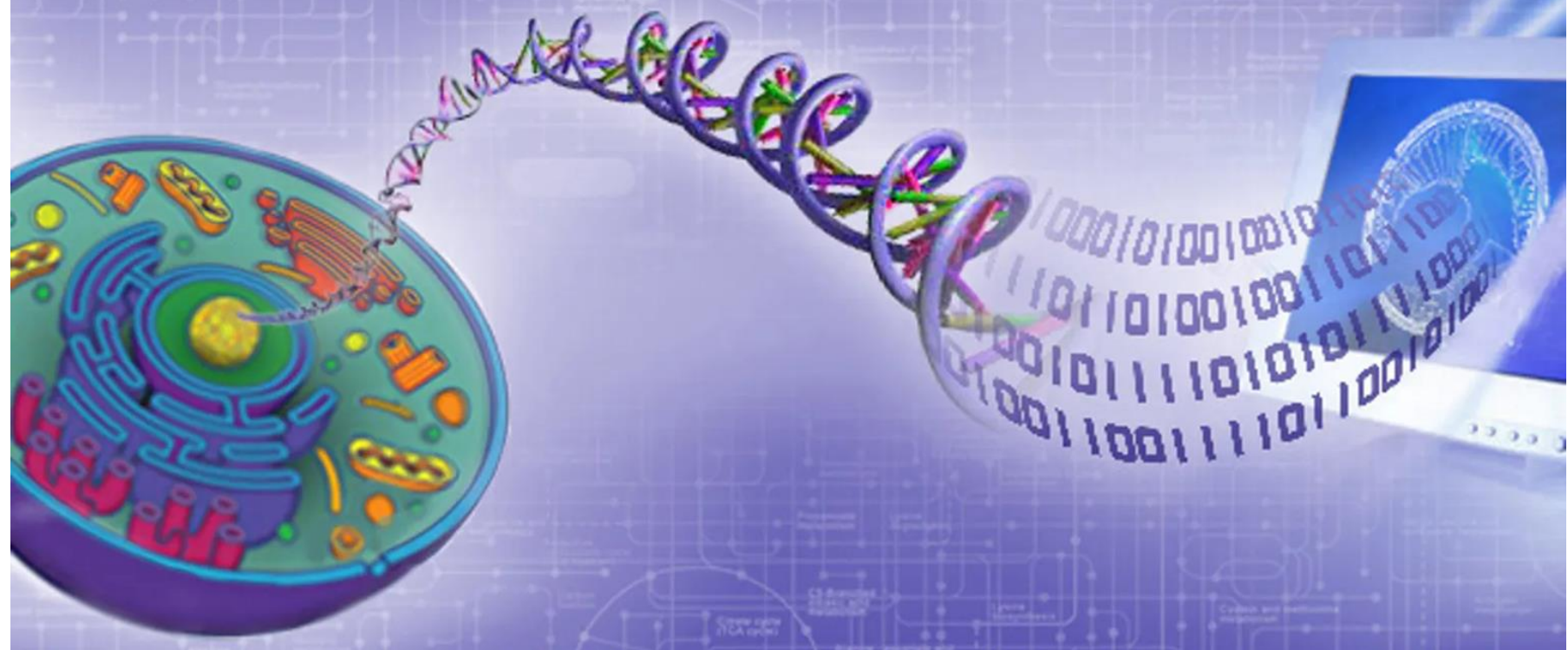


2020 Summer Rome Bioinformatics Course



Dr Toby
UD Biology Department

Bioinformatics



Converting biological questions ...

Massive
amount of data
and data types:
genetics, text,
biochemical,
imaging, etc.



Hospitals
and clinics



Research
institutes



Private
sector



International
institutions

Life sciences and health actors

... into answers

with various applications



Basic research



Medicine



Environmental
sciences



Agriculture

- Protein Sequences
- Nucleotide Sequences
- Structural Data
- Genomics and Proteomics



Data management
planning



Secure computing and
storage infrastructure



Databases and
software tools



Cutting-edge analyses
and research

Dedicated multidisciplinary experts

Tailoring
treatment to cancer
patients

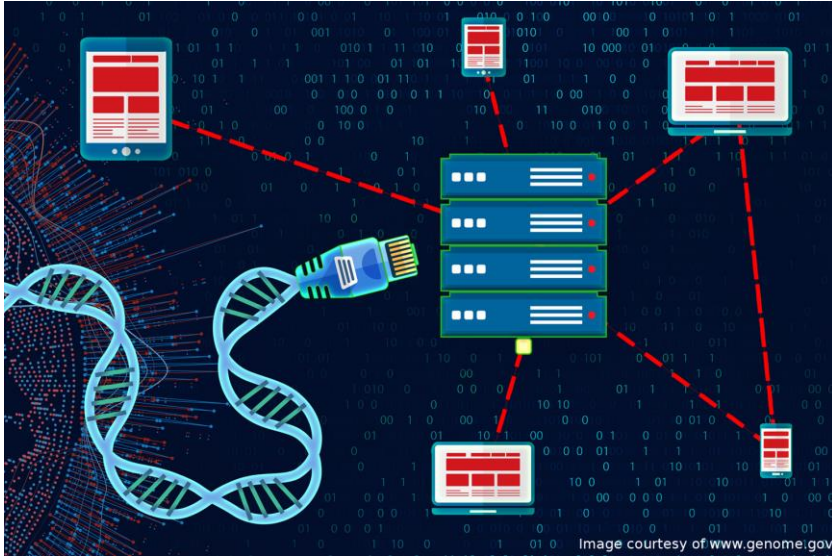
Understanding
how chameleons
change colour

Predicting
the spread
of bird flu



How is Bioinformatics utilized beyond the
classroom?






- DNAnexus, the global leader in biomedical informatics and data management, recently announced **DNAnexus Apollo**, an enhanced platform for clinico-genomic data science exploration, analysis, and discovery.
- Working with clinical data requires specialized capabilities to maintain privacy; DNAnexus Apollo offers a robust features and maintains compliance with HIPAA and CLIA among others.

Other Examples

- Pharmaceutical Industry
- Genetic Diseases
- Plant pathology
- Criminal investigations (Forensics)
- Food supply (Genetic engineering)



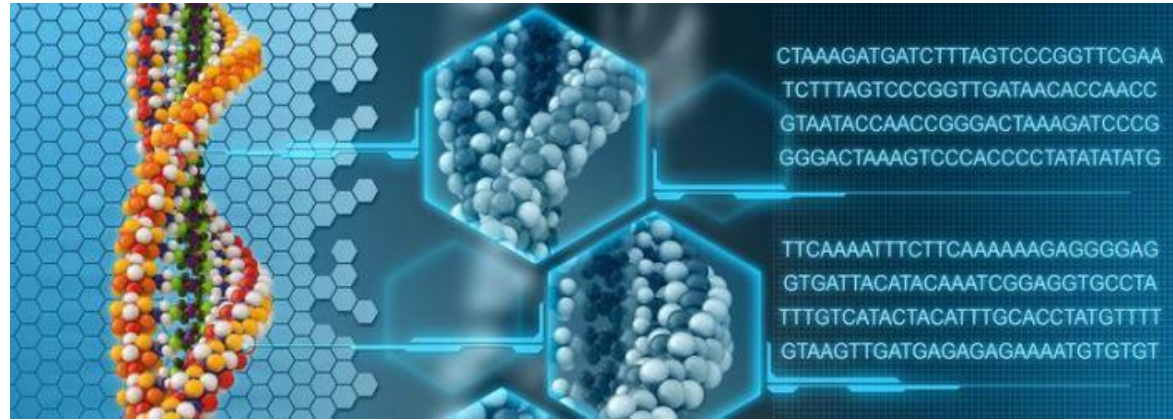
What is the time commitment for this
program?



2 weeks, 10 lectures

Schedule at a glance

- Lecture- 10am-12noon
- Coffee breaks,
Snacks/Food
- Afternoon Computer
Lab-
- 12:00-2:30pm (Flex-time
to work interact with
fellow students)
- Weekends are free!



Outline of Lecture Topics

- ❖ Web Resources
- ❖ Analysis and integration of “omic” and “high-throughput” data
- ❖ Protein sequences
- ❖ Protein structure prediction
- ❖ Drug Design: I want a new drug!
- ❖ Molecular dynamics simulations

Highlights

- One of the most prestigious universities in the world
- One of the largest universities in Europe
- Highly ranked across disciplines
- Among top 3% of universities in the world
- 10 Masters Programmes taught entirely in English



Program Estimated Costs

\$1650- Course tuition (from UD)

*\$2200- Room, board and transportation

*Plus Airfare



Join us online @

<https://github.com/initoby/UDRomeBioinformatics>

