

PERSONAL INFORMATION

Davide Baldazzi

 Via Fratelli Pinardi 8, 40128 Bologna (Italy)

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 davide.baldazzi8@unibo.it

 Skype davide.baldazzi

Sex Male | Date of birth 22/03/1993 | Nationality Italian

PERSONAL STATEMENT

Presently, I am a student of a four year PhD course in Data Science and Computation at the University of Bologna. My scholarship is due to a collaboration between a cancer research center (IRCCS-CRO; <http://www.cro.sanita.fvg.it>) located in Aviano (IT) and the University of Bologna. I'm currently supervised by Prof. Rita Casadio, group leader of the Biocomputing Group in Bologna, and by Dr. Roberta Maestro, leader of the Oncogenetic and Oncogenomic department at IRCCS-CRO.

I'm involved in different projects including:

- Analysis of NGS data from cancer patients and specifically Whole Exome Sequencing Data (WES) and RNA Sequencing Data (RNA-Seq)
- Identification of novel human genomic structural variation at the transcriptomic level
- Structural Bioinformatics
- Database generation and curation
- Functional annotation of enzymes

My goal is to become an expert in order to perform high-quality research in the field of Bioinformatics and develop methods useful to the whole community by focusing on health-related problems and stratified medicine.

EDUCATION AND TRAINING

01/11/2017–Present

PhD in Data Science and Computation

EQF level 8

University of Bologna, Bologna (Italy)

Scholarship: provided by IRCCS-CRO located in Aviano (IT).

Tutor: Prof. Rita Casadio, leader of the Biocomputing Group (University of Bologna)

Workplace: Biocomputing Group; FABIT department (Via San Giacomo 9/2 - 40126 Bologna, BO, Italy)

Project: Development of a model for data standardisation and integration from different resources. A federated database about sarcomas (Research topics: Personalized Medicine)

01/10/2015–26/07/2017

Master Degree in Bioinformatics

EQF level 7

University of Bologna, Bologna (Italy)

Thesis title: The relation between protein function and structure: functional annotation based on structural domains

Degree Mark: 110/110 cum Laude

Main Subjects:

- Programming
- Structural Bioinformatics

- Computational Biology
- Proteomics
- Genomics
- Phylogenetics

01/10/2012–22/07/2015

Bachelor Degree in Biotechnology

EQF level 6

University of Bologna, Bologna (Italy)

Thesis title: "Studio della relazione tra funzione, struttura e sequenza in alcuni tipi di deidrogenasi"

Degree mark: 104/110

Main subjects:

- Biochemistry
- Biology (molecular biology, microbiology, structural biology)
- Genetics (classical genetics, molecular genetics)
- Biodiversity and Evolution
- Biotechnologies (industrial, genetics, molecular, medical)

INTERNATIONAL RESEARCH EXPERIENCES

13/06/2018-11/09/2018
Scholarship

"Study and development of computational methodology for the interpretation of cancer genome"

La Jolla, San Diego, CA 92093, US

Position: Recipient of a fellowship as Visiting Graduate.

The project has been developed under the lead of Dr. Hannah Carter at UCSD (University of California, San Diego).

Italian referent: Dr. Emidio Capriotti

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2
assessed by CLA (Centro Linguistico di Ateneo), University of Bologna in 2015					

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Job-related skills

- Application of Statistical Methods
DB has got a vast knowledge of statistical methods. He is proficient with R programming language for statistical computation with a focus on genomic related analysis.
- Data analysis and visualisation

DB is experienced with data integration and annotation from different resources/databases with manual curation through literature mining. He is also capable of handling structural alignment and sequence alignment methods, performing building by homology and developing HMM from alignment profiles.

DB is also familiar with the analysis of Big Data being able to deal with them taking advantage of complex informatic architectures.

- Machine Learning

DB is familiar with the development of the following machine learning approaches

- Support Vector Machines
- Artificial Neural Networks
- Hidden Markov Models

- Systems Biology

DB is expert on the computational and mathematical analysis for modelling complex biological networks

- Database generation and curation

DB is experienced in the development of databases and their integration in a web service with and without the usage of a pre-built framework.

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Independent user	Proficient user

Digital skills - Self-assessment grid

DB is capable of working with a variety of technology and software solutions. He has got a solid background and advanced knowledge in development programming languages such as:

- Python
- Javascript
- Shell Scripting

DB is also familiar with markup languages like:

- HTML
- Markdown
- LaTeX

As already stated, DB is also expert on database creation, curation and management taking advantages of dedicated database management tools:

- PostgreSQL
- MySQL

ORGANIZING ACTIVITIES

- 17/02/2020-21/02/2020 **21st Bologna Winter School – What can we learn from protein structure?**
<http://www.biocomp.unibo.it/~school2020/>
Local Committee
- 18/02/2019-22/02/2019 **20th Bologna Winter School – Data Science for Bioinformatics**
<http://www.biocomp.unibo.it/~school2019/>
Local Committee
- 12/02/2018-16/02/2018 **19th Bologna Winter School – Big Data and Bioinformatics**
<http://www.biocomp.unibo.it/~school2018/>
Local Committee
- 23/05/2018-25/05/2018 **FEBS 2018 - The molecular basis of diseases: Can we infer phenotypes from protein variant analysis?**
Bologna, 40124, BO, Italy
Local Committee

TEACHING ACTIVITIES

- A.Y. 2020-2021
(60 hours) **Academic Tutor**
Bologna, 40125, BO, Italy
"Laboratory of Bioinformatics 1"; Master Degree in Bioinformatics; University of Bologna
DB supervised the technical part of the course. He helped students with the installation of the bioinformatics tools required for the final project and taught how to use them. DB collected and provided a first evaluation of the final projects for the course.
- A.Y. 2019-2020
(60 hours) **Academic Tutor**
Bologna, 40125, BO, Italy
"Laboratory of Bioinformatics 1"; Master Degree in Bioinformatics; University of Bologna
DB supervised the technical part of the course. He helped students with the installation of the bioinformatics tools required for the final project and taught how to use them. DB collected and provided a first evaluation of the final projects for the course.
- September 2019
(15 hours) **An Introduction to R – How to perform Differential Expression Analysis**
CRO, Aviano, 33081, PN, Italy
DB held a practical course about R, a programming language and software environment for statistical computing. He taught the basic syntax of R and how to perform differential gene expression analysis using dedicated additional packages.
- A.Y. 2018-2019
(60 hours) **Academic Tutor**
Bologna, 40125, BO, Italy
"Laboratory of Bioinformatics 2"; Master Degree in Bioinformatics; University of Bologna
DB supervised the technical part of the course. He helped students with the installation of the bioinformatics tools required for the final project and taught how to use them. DB collected and provided a first evaluation of the final projects for the course.

PUBLICATIONS

ORCID ID 0000-0001-5731-3663

- 05/2021
First Author **BENZ WS: the Bologna ENZYme Web Server for four-level EC number annotation**
Baldazzi, D.; Castrense, S.; Martelli, P.L.; Casadio, R.; *Nucleic Acids Research*; 2021
DOI: 10.1093/nar/gkab328
Journal Impact Factor: 11.501 (2021)
- 10/2020
Following Author **Tumor genotype, location and malignant potential shape the immunogenicity of primary, untreated Gastrointestinal Stromal Tumors**
Gasparotto, D.; Sbaraglia, M.; Rossi, S.; Baldazzi, D.; Brenca, M.; Mondello, A.; Nardi, F.; Racanelli, D.; Cacciatore, M.; Dei Tos, A.; Maestro, R.; *JCI Insight* 2020.
DOI: 10.1172/jci.insight.142560
Journal Impact Factor: 6.205 (2020)
- 07/2020
Following Author **Highlighting Human Enzymes Active in Different Metabolic Pathways and Diseases: The Case Study of EC 1.2.3.1 and EC 2.3.1.9**
Babbi, G.; Baldazzi, D.; Savojardo, C.; Pier Luigi, M.; Casadio, R.; *Biomedicines* 2020, 8, 250.
DOI: 10.3390/biomedicines8080250
Journal Impact Factor: 3.600 (2020)
- 04/2020
Co-First Author **Next-Generation Sequencing Approaches for the Identification of Pathognomonic Fusion Transcripts in Sarcomas: The Experience of the Italian ACC Sarcoma Working Group.**
Racanelli D, Brenca M, Baldazzi D, et al.; *Front Oncol.* 2020;10:489.
DOI: 10.3389/fonc.2020.00489
Journal Impact Factor: 4.250 (2020)

ABSTRACTS

- 05/2020
Following Author **Epithelioid sarcoma: Molecular insights into proximal versus classic variant.**
Frezza A.M., Sigalotti L., Del Savio E., Baldazzi D., Sbaraglia M., Righi A., Gambarotti M., Barisella M., Brich S., Dei Tos A.P., Stacchiotti S., and Maestro R.; *Journal of Clinical Oncology* 2020, 38, no. 15_suppl
DOI: 10.1200/jco.2020.38.15_suppl.e23552
Journal Impact Factor: 18.230 (2020)
- 10/2019
Following Author **Myoepithelial tumours of soft tissues and extraskelatal myxoid chondrosarcomas feature a distinct transcriptional pattern**
Racanelli D., Stacchiotti S., Brenca M., Sbaraglia M., Fassetta K., Baldazzi D., Piccinin S., Brich S., Casali P.G., Collini P., Dagrada G.P., Fiore M., Gronchi A., Astolfi A., Pantaleo M.A., Righi A., Pilotti S., Dei Tos A.P., Maestro R.; *Annals of Oncology* 2019, Vol 30, Suppl. 5, V704
DOI: 10.1093/annonc/mdz283.054

Journal Impact Factor 10.570 (2020)

OTHERS

PRIN; 2017
Researcher

Cutting Edge Analytical Chemistry Methodologies and Bio-Tools to Boost Precision Medicine in Hormone-Related Diseases

Scientific Coordinator: Mondello, L.
Scientific Director: Guardigli, M.
PRIN (Progetto di Ricerca di Interesse Nazionale); 36 months.

ADDITIONAL WORK EXPERIENCE

2010-2015

Lifeguard
Summer Job

2011-2013

Professional Athlete
Sport Club: Romagna Rugby Football Club