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**♀** Lisbon, Portugal

in in/ana-correia

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#### **PROFILE**

Experienced protein biochemist with a passion for solving biological puzzles and transforming raw data into meaningful insights.

#### **SKILLS**

Data analysis and

Python, statistical methods and machine learning.

Project development and management (R&D).

Protein Engineering.

Biologics purification and analytical characterization.

Structural biology and structural-functional analysis of protein complexes.

Basic understanding of R, SQL and Apache Spark for ML.

## ANA R. CORREIA

## **Work Experience**

#### SCIENTIST | AMGEN INC.

Thousand Oaks, CA, USA | Apr 2018 - Sept 2022

- Integrated multidisciplinary teams focused on leveraging and structuring data for ML/AI applications.
- Project development and management.
- Protein engineering, development of purification and analytical characterization workflows for established and novel antibody-like formats (including bi- and multivalent biologics).
- Mentoring, cross-training and supervision of junior scientists in purification, data analysis, and high throughput sample tracking systems.

## POSTDOC | CALTECH

PASADENA, CA, USA | Nov 2013 - Mar 2018

**Hoelz Lab** 

- Expression, purification, assembly and characterization of large macromolecular complexes.
- Structural determination of protein complex by X-ray crystallography.
- Expression and characterization of synthetic antibodies, for further use in crystallization assays.

## POSTDOC | CNB-CSIC

Madrid, SPAIN | Aug 2011 - Oct 2013

Caston Lab

- Production of virus in mammalian and fish cell lines. Purification of virus and viral like particles and subsequent biochemical and structural characterization (negative-stain and Cryo-EM).
- Viral ribonucleoprotein complexes extraction and characterization.

## VISITNG RESEARCHER | BONN UNIVERSITY

Bonn, GERMANY | Feb 2010 - Jul 2010

**Voos Lab** 

• In vivo (yeast cells) and ex vivo (isolated mitochondria) characterization of a mitochondrial protein biogenesis.

#### CO-FOUNDER | EUROINGREDIENTES

Lisbon, PORTUGAL | 2000 - 2005

• Co-founder, responsible for business development and establishing new suppliers.

### **Education**

#### PHD STUDENT | ITOB-NOVA

Lisbon, PORTUGAL | 2006 - 2010

Gomes Lab

• Conformational and functional characterization of a mitochondrial protein using different biophysical techniques namely: fluorescence spectroscopy, differential scanning calorimetry, calorimetry, circular dichroism and NMR.

#### INTERN AND VISITNG PHD STUDENT | NIMR-MRC

London, UK | 2005 - 2009

• Research training on molecular biology and NMR.

BACHELOR'S DEGREE, BIOCHEMISTRY, 2005 | University of Lisbon (FCUL)

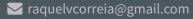
#### **LANGUAGES**

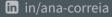
English Spanish

Portuguese (native)

# HOBBIES & INTERESTS

Hiking, scubadiving, ocean conservancy, MTB and traveling





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## **Additional Training & Certifications**

- • MicroMasters Programs MITx Statistics and Data Science Expected end date Dec 2024
- Python 3 Programming by University of Michigan on Coursera (2022).
- Applied Machine Learning in Python by University of Michigan on Coursera (2023).
- Machine Learning Specialization by Stanford University & DeepLearning.Al on Coursera (2023).
- Deep Learning Specialization by DeepLearning.Al on Coursera (2023).
- Data Science Specialization by Johns Hopkins University on Coursera (8 courses from the specialization including R programming, 2021).
- Bioinformatics I, II by University of Toronto on Coursera (2023).
- Algorithms for DNA sequencing by Johns Hopkins University on Coursera (2023).
- The Power of Statistics by Google on Coursera (2023).
- SQL for Data Science by University of California, Davis on Coursera (2023).
- Apache Spark for Data Engineering and Machine Learning by IBM on edX (2023)

Actively developing and expanding my skills in computational biology and data science.

## Publications (8 as a first author, \*)

- <u>Utility of physiologically based pharmacokinetic modeling to predict inter-antibody</u> variability in monoclonal antibody pharmacokinetics in mice. (2023) mAbs, 15(1): 2263926.
- <u>Development of in silico models to predict viscosity and mouse clearance using a comprehensive analytical data set collected on 83 scaffold-consistent monoclonal antibodies (2023) mAbs, 15(1):2256745.</u>
- Architecture of the cytoplasmic face of the nuclear pore (2022) **Science**, 376 (6598):1174-1192.
- Enhancing the Prefusion Conformational Stability of SARS-CoV-2 Spike Protein Through Structure-Guided Design (2021) Front. Immunol., 12, article 660198.
- Rational selection of building blocks for the assembly of bispecific antibodies (2020) mAbs, 13 (1), e1870058.
- Structural and functional analysis of mRNA export regulation by the nuclear pore complex (2018) Nat. Commun., 9 (1):2319-2338. \*
- A new MR-SAD algorithm for the automatic building of protein models from low-resolution X-ray data and a poor starting model (2018) IUCrJ., 5 (Prt 2):166-171.
- Nuclear pores. Architecture of the nuclear pore complex coat (2015) Science, 347, 1148-52. \*
- Probing the kinetic stabilities of Friedreich's Ataxia clinical variants using a solid phase GroEL chaperonin capture platform (2014) Biomolecules, 4 (4): 956-79. \*
- Revertants, low temperature, and correctors reveal the mechanism of F508del-CTFR rescue by VX-809 and suggest multiple agents for full correction (2013) Chem. Biol., 20 (7):943-55.
- Iron binding activity in yeast frataxin entails a trade off with stability in the a1/b1 acidic ridge region (2010) Biochem. J., 426(2):197-203. \*
- No evidence of direct binding between ursodeoxycholic acid and the p53 DNA-binding domain (2010) **Biosci Rep.**, 30(5):359-64. \*
- The conserved Trp-155 in human frataxin as a hotspot for oxidative stress related chemical modifications (2009) BBRC, 390(3):1007-11. \*
- <u>Dynamics</u>, <u>stability</u> and <u>iron-binding</u> <u>activity</u> of <u>frataxin</u> clinical <u>mutants</u> (2008) <u>FEBS</u>
  <u>J.</u>, 275, 3680-3690. \*
- Conformational stability of human frataxin and effect of Friedreich's ataxia related mutations on Protein Folding (2006) **Biochem. J.**, 398, 605-611. \*

