




Joan Martí Carreras

6th September 1993, Llers (Spain)



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Expert in Sequencing, Genomics, Bioinformatics, Molecular Biology and Infectious Diseases

Employment

May 2020 – Present: Freelance Consultant at BioExpert Network/Capital Cell (Barcelona, Spain)
Panel Research Expert on Virology/Immunology/Oncology
< Marc Sastre (marcsastre@capitalcell.net) >

Sep 2017 – Present: Doctoral researcher at the Rega Institute, KU Leuven (Leuven, Belgium)
Third-generation sequencing and herpesvirus genome diversity: Towards complete large dsDNA virus genomes
< Piet Maes (piet.maes@kuleuven.be) >

Jul 2016 – Jun 2017: Research Assistant at the ICM-CSIC (Barcelona, Spain)
Biogeography of genes related to methyl-mercury degradation by comparative analyses of deep ocean metagenomes and metatranscriptomes
< Silvia G. Acinas (sacinas@icm.csic.es) >

Jun 2014 – Aug 2014: Freelance Molecular Biologist at ICTA-UAB (Barcelona, Spain)
Phylogeographic reconstruction of *Rhynchophorus ferrugineus* world-wide populations for pest control
< Victor Sarto i Monteys (victor.sarto@uab.cat) >

Education

2017-Present: PhD in Biomedical Sciences (Virology), Rega Institute - KU Leuven (Leuven, Belgium).

2015-2017: Master's in Bioinformatics for Health Science, Universitat Pompeu Fabra (UPF, Barcelona, Spain).

2011 - 2015: Bachelor in Genetics, Universitat Autònoma de Barcelona (UAB, Barcelona, Spain).

Courses

- **Outbreak Antenna Setting and Media training, 13-15/11/2017, KU Leuven, Leuven, Belgium.**
- **Infectious Diseases, 18-22/11/2017, AMC, Amsterdam, The Netherlands.**
- **Flavivirus serology and routine diagnostics, 07-09/12/2017, IFIK, Bern, Switzerland.**
- **Unbiased Next-generation sequencing with IonTorrent after shearing, 18-22/11/2018, FLI, Greifswald, Germany.**

- Advanced diagnosis through **RT-qPCR** and **oligo degeneration**, 25-29/11/2018, **Charité Institute**, Berlin, **Germany**.
- **Primate non-human animal models**, 22-25/10/2018, **BPRC**, Rijswijk, **The Netherlands**.
- Optimization of **next-generation protocols: VIDISCA**, 26-02/11/2018, **AMC**, Amsterdam, **The Netherlands**.
- **Novel diagnostics**, 21-23/01/2019, **University of Leeds**, Leeds, **UK**.
- **Microarrays** for virus detection, 06-08/05/2019, **FLI**, Greifswald, **Germany**.
- **Protein production**, 08-11/10/2019, **Ingenasa-Eurofins**, Madrid, **Spain**
- **Vaccine design** and **commercialization**, 18-22/12/2019, **MSD Animal Health**, Boxmeer, **The Netherlands**.

Skills



Sequencing: Sanger, Illumina (NexteraXT, Westburg, Agilent SureSelect hybrid-capture), Nanopore (rapid, ligation, ultra-long read libraries). Some experience with IonTorrent.
Molecular biology: Cloning techniques (currently learning TAR cloning), PCR, RT-qPCR, FACs.

Cell culture: *E. coli*, primary and immortalized lines (HFF, MRC-5, VeroE, Huh-7, THP-1, ...), transduction, production and titration of viral strains (human cytomegalovirus and SARS-CoV-2).

BSL 1-3: Currently under BSL-3 training at the Rega Institute, KU Leuven.



Catalan & Spanish: Native, **English:** C1, **Dutch:** A2.



Office: Experience in **Windows** (Microsoft Office) and **Ubuntu**. Basic graphic design (**Inkscape**). Project managing (**Scinote**).



Binary: Data-analysis and data visualization with **R** (Rstudio, tidyverse, vegan, etc). Fluent in **Bash** and **Python**, some Perl, SQL and BigQuery. Project managing and accounting (**git**, <https://github.com/joanmarticarreras/>), pipeline managers (**Nextflow** and Snakemake) and virtualization (Docker and **Singularity**). Basic web-app design and development (SQL and Django).

Academics



Publications: 14 international peer-reviewed articles (3 first author, 1 corresponding author, 11 as co-author).



Teachings: 3 supervised students (1 master thesis), Computational Genomics Course (2018-2020, 3 days/year, Prague, Czech Republic), Nanopore sequencing and data-analysis (2018-2019, 2 days/year, Leuven, Belgium).



Grants: 3 grants (2 undergraduate research grants in Spain, 1 Marie Skłodowska-Curie in Belgium for the PhD).



International: 5 international conferences, 3 international coding working sessions (2 NCBI-NIH in USA, 1 EUvsVirus in Europe), Belgian SARS-CoV-2 genomic surveillance (in the GISAID EpiCoV group).

Detailed CV available at www.joanmarticarreras.com