Dr. rer. nat. Benjamin Escribano

Microscopy and Data Expert **Neuroscientist/-engineer** LinkedIn GitHub

Personal Data

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Birthday 05.04.1990
Languages:
Nationalities: CH & IT

Education

Doctor of Natural Sciences (Dr. rer. nat.) in Neuroscience
Technical University of Kaiserslautern (now RTPU), DE
Nov. 2017 - Oct. 2021

Master of Science (M. Sc.) in Molecular Biology
Friedrich Miescher Institute (FMI) Basel, CH
Oct. 2013 - Feb. 2015

Bachelor of Science (B. Sc.) in Biology, Major in Mol. Biology
University of Basel, CH
Aug. 2010 - Jul. 2013

Experience

Consulting Neuroscientist/-engineer
Collaborative Prototyping Core Facility, University of Bonn, DE
Nov. 2023 - Present

- *Provided 20+ research groups with expert advice for experimental design, hardware, software and data analysis during countless one-on-ones, 4 workshops and 1 seminar.*
- *Integrated devices, modifications and maintenance parts with 10+ microscopy systems.*
- *Engineered 30+ 3D-printed, electronic and optical prototypes for behavioral research.*

Postdoctoral Research Scientist
German Center for Neurodegenerative Diseases (DZNE) in Bonn, DE
Apr. 2022 - Oct. 2023

- *Established 1 intravital 2p-microscopy and 1 optical laser coupling system for behavioral research with data backup infrastructure and purchasing authority.*
- *Performed surgeries (FELASA-B), GRIN-lens implantations, viral tracings and histology for anatomical studies, while (co-) supervising 2 PhD, 1 master and 1 bachelor student.*
- *Analyzed data of 2 in-vivo deep-brain imaging studies resulting in 1+ co-authorship (Favila et al. 2024, in communication) and 1 conference participation.*

Research Associate
Technical University of Kaiserslautern (now RTPU), DE
Nov. 2017 - Oct. 2021

- *Established in-vivo 2p-microscopy with olfactory stimulation, conducted study and computational analysis, resulting in 1 co-authorship (Siegenthaler et al. 2019, PLOS Biology).*
- *Participated in funding acquisition, conceptualized and analyzed data of an in-silico model for neuronal signal propagation resulting in 1 co-authorship (Hafez et al. 2023, eLife).*
- *Taught 10+ practicals, supervised 5+ master and bachelor students while presenting 4 posters at international conferences, 3 presentations in meetings and securing 1 collaboration.*

Skills

Science Communication, Project Management, Support, Supervision, Creative Problem Solving

Microscopy (Confocal, Multiphoton, STED, Spinning Disc, GRIN-Lens, Lightsheet, Miniscope/2p, ScanImage, *in-/ex-vivo*, Calcium Imaging, Optics, Laser Alignment)

Image Analysis (Fiji, ImageJ, Imaris, CaImAn, CIAtah, suite2p)

Programming (Python, Matlab, Fiji Macros, C++, Swift, R, SQL, LaTeX)

Electronics (Relays, Solenoids, Valves, Actuators, Sensors, Servos)

Microcontrollers (NI-DAQ, Arduino, Raspberry Pi, bPod)

Research Associate
Charité Institute for Neurophysiology in Berlin, DE
May 2016 - Oct. 2017

- *Established 2 2p-microscopy systems for behavioral research including olfactory stimulation and electrophysiology.*
- *Implemented a protocol for antibody stainings in brain tissue.*
- *Acquired and analyzed in-vivo calcium imaging, STED and confocal microscopy data.*

Research Associate
Friedrich Miescher Institut (FMI) in Basel, CH
Sep. 2015 - Mar. 2016

- *Established a new method for longitudinal in vivo imaging of synaptic neurodegeneration markers with a spinning disc microscope and subsequent antibody staining.*
- *Acquired and analyzed time-series and confocal microscopy data with computational tools.*
- *Presented 1 poster at a conference and delivered 1 presentation at a local seminar.*

Quality Assurance Associate
Novartis AG in Basel, CH
Mar. 2012 - Mar. 2015

- *Supported administration of training records with learning management systems.*
- *Supported the administration and distribution of SOPs.*
- *Maintained an overdue list and interacted with authors to avoid overdue SOPs.*

Emergency Portier
University Hospital in Basel, CH
Jun. 2010 - Dec. 2011

- *Admitted patients at the emergency gate during shift operations.*

Engineering (Soldering, Laser Cutting, 3D Printing, Milling)

CAD (Fusion360, PCB Design, KiCAD, Cura)

Software (VS Code, Git, Jupyter, Prism, APIs, MS Office, Web Hosting, SAP, macOS, Windows, Linux, LabVIEW)

Vector Graphics (Affinity Designer, Illustrator, Photoshop, Inkscape)

Data (Analysis, Modeling, Visualization, Engineering, Statistics)

Neuroscience (EASI-FISH, Electrophysiology, Optogenetics, Sensory Stimulation, Behavior Monitoring, Histology, Genetics)

Scholarships

Bachelor's and master's studies were supported by the Dr. Gadient Engi-Foundation of Novartis AG.

Hobbies

In my spare time, I engage in science communication for the public. You can find me at various science fairs, open science nights or at the German Neuroscience Olympiad. Furthermore, I organize and host a regulars' table for the Bonn Neuro Community.

References

References are available upon request.