## Ronchi, Francesca, Prof., PhD (B07)

### Personal Data

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|---|---|
| Title | Prof. Dr. |
| First name | Francesca |
| Name | Ronchi |
| Current position | Professor of Microbiology (W2), Department of Microbiology, Infectious Diseases and Immunology, Charité – Universitätsmedizin Berlin, Campus Benjamin Franklin (CBF), Campus Virchow-Klinikum (CVK), Charité Campus Mitte (CCM), Germany |
| Current institution(s)/site(s), country | Department of Microbiology, Infectious Diseases and Immunology, Charité – Universitätsmedizin Berlin, Campus Benjamin Franklin (CBF), Campus Virchow-Klinikum (CVK), Charité Campus Mitte (CCM), Hindenburgdamm 30, 12203 Berlin, Germany |
| Identifiers/ORCID | ORCID-ID: 0000-0002-2035-6528 |

### Qualifications and Career

| **Stages** | **Periods and Details** |
|---|---|
| Degree programme: Biotechnology | 2002 – 2004, Bachelor, Università degli Studi di Milano-Bicocca, Milan-Monza, Italy |
| Degree programme: Medical Biotechnology | 2005 – 2007, Master, Università degli Studi di Milano-Bicocca, Milan-Monza, Italy |
| Doctorate: PhD thesis | 10.11.2011: Supervisor: Federica Sallusto, "*On the role of IL-1beta in T cell-mediated immunopathology*", Università Vita Salute San Raffaele, Milan, Italy; Institute for Research in Biomedicine, Bellinzona, Switzerland |
| Stages of academic / professional career | |
| Since 2021 | W2 Professor of Microbiology and Microbiome Research, Department of Microbiology, Infectious Diseases and Immunology, Charité – Universitätsmedizin Berlin, Germany |
| 2018 – 2021 | Senior Scientist, Department of BioMedical Research, University of Bern, Bern, Switzerland |
| 2013 – 2018 | Postdoctoral Research fellow, Department of BioMedical Research, University of Bern, Bern, Switzerland |
| 2008 – 2012 | PhD Graduate Student, Institute for Research in Biomedicine - Bellinzona, Switzerland |

### Engagement in the Research System

- Member of the Research Foundation-Flanders (FWO) Review College (2021 – 2023)
- Guest Associate Editor Frontiers in Immunology (2020)
- Reviewer of grants [The Research Foundation-Flanders (FWO), French National Research Agency (ANR), Canada Foundation for Innovation (CFI), National Science Center Poland, Dutch Multiple Sclerosis Research Foundation (since 2015)]

- Reviewer of journals [*eLife, Eur J Immunol, Immunology, J Clin Immunol, Gut Microbes, Front Immunol, Front Cell Neurosci, Brain Commun, J Mol Med, PlosOne*]

**Scientific Results**

**Category A,** * contributed equally, # open access


1. Rutsch A, Kantsjö JB, **Ronchi F**. The Gut-Brain-Axis: How Microbiota and Host Inflammasome influence Brain Physiology and Pathology. **Front Immunol** 2020; 11:604179. doi: 10.3389/fimmu.2020.604179. #
2. Gil-Cruz C, Perez-Shibayama C, De Martin A, **Ronchi F**, van der Borght K, Niederer R, Onder L, Lütge M, Novkovic M, Nindl V, Ramos G, Arnoldini M, Slack EMC, Boivin-Jahns V, Jahns R, Wyss M, Mooser C, Lambrecht BN, Maeder MT, Rickli H, Flatz L, Eriksson U, Geuking MB, McCoy KD, Ludewig B. Microbiota-derived peptide mimics drive lethal inflammatory cardiomyopathy. **Science** 2019; 66(6467):881-886. doi: 10.1126/science.aav3487.
3. Uchimura Y, Fuhrer T, Li H, Lawson MA, Zimmermann M, Yilmaz B, Zindel J, **Ronchi F**, Sorribas M, Hapfelmeier S, Ganal-Vonarburg SC, Gomez de Agüero M, McCoy KD, Sauer U, Macpherson AJ. Antibodies Set Boundaries Limiting Microbial Metabolite Penetration and the Resultant Mammalian Host Response. **Immunity** 2018; 49(3):545-559.e5. doi: 10.1016/j.immuni.2018.08.004. #
4. Hebbandi Nanjundappa R*, **Ronchi F***, Wang J, Clemente-Casares X, Yamanouchi J, Umeshappa C, Yang Y, Blanco J, Bassolas H, Salas A, Serra P, Slattery RM, Mooser C, Wyss M, Macpherson AJ, McKay DM, McCoy KD, Santamaria P. A gut microbial autoantigen mimic that hijacks diabetogenic autoreactivity to suppress colitis. **Cell** 2017; 171(3):655-667.e17. doi: 10.1016/j.cell.2017.09.022. #
5. McCoy KD, Geuking MB, **Ronchi F**. Gut Microbiome Standardization in Control and Experimental Mice. **Curr Protoc Immunol** 2017; 117:23.1.1-23.1.13. doi: 10.1002/cpim.25.
6. Mamantopoulos M*, **Ronchi F***, Van Hauwermeiren F, Vieira-Silva S, Yilmaz B, Martens L, Saeys Y, Drexler SK, Yazdi AS, Raes J, Lamkanfi M, McCoy KD, Wullaert A. Nlrp6- and ASC-dependent inflammasomes do not shape the commensal gut microbiota composition. **Immunity** 2017; 47(2):339-348.e4. doi: 10.1016/j.immuni.2017.07.011. #
7. **Ronchi F***, Basso C*, Preite S, Reboldi A, Baumjohann D, Perlini L, Lanzavecchia A, Sallusto F. Experimental priming of encephalitogenic Th1/Th17 cells requires pertussis toxin-driven IL-1β production by myeloid cells. **Nat Commun** 2016; 7:11541. doi: 10.1038/ncomms11541. #
8. Preite S, Baumjohann D, Foglierini M, Basso C, **Ronchi F**, Fernandez Rodriguez BM, Corti D, Lanzavecchia A, Sallusto F. Somatic mutations and affinity maturation are impaired by excessive numbers of T follicular helper cells and restored by Treg cells or memory T cells. **Eur J Immunol** 2015; 45(11):3010-21. doi: 10.1002/eji.201545920. #
9. Balmer ML, Slack E, de Gottardi A, Lawson MA, Hapfelmeier S, Miele L, Grieco A, Van Vlierberghe H, Fahrner R, Patuto N, Bernsmeier C, **Ronchi F**, Wyss M, Stroka D, Dickgreber N, Heim MH, McCoy KD, Macpherson AJ. The liver may act as a firewall mediating mutualism between the host and its gut commensal microbiota. **Sci Transl Med** 2014; 6(237):237ra66. doi: 10.1126/scitranslmed.3008618. #

10. Baumjohann D, Preite S, Reboldi A, **Ronchi F**, Ansel KM, Lanzavecchia A, Sallusto F. Persistent antigen and germinal center B cells sustain T follicular helper cell responses and phenotype. **Immunity** 2013; 38(3):596-605. doi: 10.1016/j.immuni.2012.11.020. #

**Academic Distinctions**

- CRC/TR241/2 project B03, co-PI (2022 – 2026)
- Italian Multiple Sclerosis Foundation Grant (2021 – 2024)
- Novartis Foundation for Medical-Biological Research Grant (2020)
- Biostime Institute for Nutrition and Care (BINC)-Geneva Grant (2019 – 2021)
- Award of the “PIs of tomorrow” competition, Life Science, Switzerland (2019)
- Supporting Science Grant, Roche; Novartis Cyber Grant; Scientific Exchange Grant, Swiss National Science Foundation (SNSF) (2019)
- Helmut Horten Foundation grant (2018 – 2019)
- Beer-Brawand Fonds, University of Bern, Switzerland (2018)
- European Crohn’s and Colitis Organisation (ECCO) grant (2016 – 2016)
- Kontaktgruppe für Forschungsfragen (KGF), Novartis and F. Hoffmann-La Roche (2016)
- Fund for the Promotion of Young Researchers, University of Bern, Switzerland (2015)
- Swiss National Science Foundation/Marie Heim-Vögtlin Postdoctoral Fellowship (2013 – 2015)

**Collaborators**

| No. | Collaboration partners | Location/Institution |
|---|---|---|
| 1 | Andrew J Macpherson | Bern, Switzerland, University of Bern |
| 2 | Angela Kaindl | Berlin, Germany, Charité – Universitätsmedizin Berlin |
| 3 | Carsten Riether | Bern, Switzerland, University of Bern |
| 4 | Melanie Greter | Zurich, Switzerland, University of Zurich |

**Fields of Research**

| No. | Fields of research |
|---|---|
| 1 | 204-05 **Immunology** |
| 2 | 201-03 Basic Research in Biology and Medicine/**Cell Biology** |
| 3 | 205-15 Medicine/**Gastroenterology** |