

## Dr Filippo Prischi - CV

<https://filippoprischilab.org> // <https://www.essex.ac.uk/people/prisc89105/filippo-prischi>

### Employment History

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**Jun 2015 – Present:** **Group Leader and Lecturer in Biochemistry** (Tenured Mar 2018).  
Since 2019 **Deputy-Director of Recruitment**  
University of Essex, School of Biological Sciences, Colchester, UK.

**May 2010 – May 2015:** **Postdoctoral Researcher.**  
Department of Life Sciences, Imperial College London, London, UK.  
The project I worked on focused on gaining structural and mechanistic insights into components of the Unfolded Protein Response (UPR). -  
*Group Leader: Dr Maruf Ali.*

### Qualifications

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**Jul 2017:** **Fellow of the Higher Education Academy (FHEA)**  
The fellowship is a professional recognition accredited by the Higher Education Academy, the UK national body which champions teaching excellence.

**Nov 2013:** **Executive Education in Project Management**  
University College London (UCL), London, UK.  
The course is based on the Association for Project Management's Body of Knowledge and offers an effective grounding in project management.

**Oct 2005 – Feb 2010:** **Ph.D. Biochemistry** – Joint project National Institute for Medical Research - MRC (London, UK) and University of Siena (Siena, Italy) –  
*Supervisors: Professor Annalisa Pastore & Professor Neri Niccolai.*

**Nov 2003 – Sep 2005:** **2 years M.Sc. Molecular and Cell Biology (110 summa cum laude)** –  
*Supervisor: Professor Neri Niccolai.* University of Siena, Siena, Italy.

**Sep 2000 – Nov 2003:** **B.Sc. Biological Sciences (110 summa cum laude)** – *Supervisor: Professor Neri Niccolai.* University of Siena, Siena, Italy.

### Grants and Awards

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**Jul 2019** Atomwise AIMS Award Programme (Nominal value \$385,000) - Androgen Receptor (AR) (A19-396). Co-Pi Dr Brooke.

**Oct 2019 – Sep 2020** Bicycle Therapeutics (£15,000) - Development of novel cancer treatments: structural studies of Nectin 4 in complex with bespoke anti-cancer peptides.

**Aug 2019 – May 2020** Apollo Therapeutics and EIRA research grant (£87,500) - Development of specific inhibitors that prevent hnRNPA1-mediated therapy resistance in small cell lung cancer. Co-I Dr Pardo (Imperial College London).

**May 2019 – Jun 2019** East Suffolk and North Essex NHS Foundation Trust (£7,700) - ProteinSafe™.

**Apr 2019 – Mar 2022** Leverhulme: Research Grant (£237,494.31) - Flipping the switch; regulating protein synthesis in response to stress. Co-I Dr Belchtold.

**Sept 2017 - Aug 2019** Wellcome Trust: Seed Awards in Science (£99,825.00) – Understanding how RSKs regulate Transcription Factors in Triple Negative Breast Cancer.

**Dec 2017** X-Chem Diamond Light Source (nominal value £76,752.00) Targeting hnRNPA1 for the treatment of Small Cell Lung Cancer.

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2019	Biochemical Society: <i>Travel grant (£400)</i> .
2013	Imperial College: <i>Support for professional development grant (£500)</i> .
2012	Biochemical Society: <i>Travel grant (£650)</i> .
2007	EMBO: <i>Short-Term Fellowship (£5,236.64)</i> .
2007	British Council: <i>Italy-UK collaboration grant (£2,500)</i>

### Teaching & Supervision

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2020 – Present	Lecturer “Biotecnologie farmacologiche” (Fondazione VITA, Siena, Italy).
2017 – Present	Module Supervisor “BS281 Protein Bioinformatics” (University of Essex).
2015 – Present	Module Supervisor “BS131 Biochemistry of Macromolecules” (University of Essex).
2005 – 2009	Lecturer “Laboratorio di Bioinformatica” (University of Siena, Siena, Italy).

- I am supervising 3 PhD and 3 MSD students at University of Essex.
- Coordinator of an ERASMUS+ project between the School of Biological Sciences (University of Essex) and the Department of Biotechnology, Chemistry and Pharmacy (University of Siena, Italy).
- I have supervised to successful completion 21 final year BSc students (University of Essex).
- I have supervised to successful completion 1 PhD, 5 MSc and 1 MSD students (University of Essex).
- I have co-supervised to successful completion 1 PhD student (University of Siena), and 1 PhD and 5 MRes students (Imperial College London).

### Publications - <https://scholar.google.co.uk/citations?hl=en&user=j8hfZGIAAAAJ>

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#### Peer Reviewed Publications:

1. Brooke, G.<sup>§</sup> and Prischi, F.<sup>§</sup> “Structural and functional modelling of SARS-CoV-2 entry in animal models”. §corresponding authors. *in submission*
2. Trezza, A., Iovinelli, D., Santucci, A., Prischi, F.<sup>§</sup> and Spiga, O.<sup>§</sup> “An integrated drug repurposing strategy for the rapid identification of potential SARS-CoV-2 viral inhibitors”. §corresponding authors. *in submission*
3. Galderisi, S., Millucci, L., Cicaloni, V., Rossi, R., Giustarini, D., Cicaloni, V., Spiga, O., Tinti, L., Salvini, L., Tinti, C., Braconi, D., Lupetti, P., Prischi, F., Bernardini, G. and Santucci, A. “Homogentisic acid induces autophagy alterations leading to chondroptosis in human chondrocytes: implications in Alkaptonuria” *FASEB J. Accepted with major revision*
4. Chrysostomou, S.\*, Roy, R. \*, Prischi, F.\*, Chapman, K., Mufti, U., Peach, R., Ding, L., Mauri, F., Bellezza, G., Cagini, L., Barbareschi, M., Ferrero, S., Abrahams, J.M., Pascoe, J., Billingham, L., Cullen, M., Hroudá, D., Winkler, M., Klug, D.R., Yaliraki, S.N., Barahona, M., Aboagye, E., Wang, Y., ali, M.M., Seckl, M.J., Pardo, O.E. “Targeting RSK4 prevents both chemoresistance and metastasis in lung and bladder cancer: potential of re-purposed floxacins as novel therapeutic agents”. \*contributed equally. *Science Translational Medicine. Accepted with major revision.*
5. Spiga, O., Cicaloni, V., Fiorini, C., Trezza, A., Visibelli, A., Millucci, L., Bernardini, G., Bernini, A., Marzocchi, B., Braconi, D., Prischi, F., Santucci, A. “Machine Learning application for development of a data-driven predictive model able to investigate Quality of Life scores in a rare disease”. *Orphanet Journal of Rare Diseases*. 12;15(1):46 (2020)
6. Prischi, F. & Pastore, A. “Hybrid methods in iron-sulfur cluster biogenesis”. *Frontiers in Molecular Biosciences*. 4, 12 (2017).
7. Zabet, N. R., Catoni, M., Prischi, F., Paszkowski, J. “DNA methylation of specific CpG sites directs the establishment and maintenance of CpHpG methylation”. *Nucleic Acid Research*. gkw1330 (2017).
8. Prischi, F. & Pastore, A. “Application of nuclear magnetic resonance and hybrid methods to structure determination of complex systems”. *Advances in Experimental Medicine and*

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- Biology*. 896:351-368 (2016).
9. Carrara, M., **Prischi, F.**, Nowak, P., Ali, M.M. "Crystal Structures of Perk Luminal Domains Reveal Transient Tetramer State Important for ER Stress Signaling". *EMBO Journal*. 34(11):1589-600 (2015). One recommendation by F1000 Prime  
<https://f1000.com/prime/725455246>
  10. Popovic, M., Sanfelice, D., Pastore, C., **Prischi, F.**, Temussi, P.A., Pastore, A. "Selective observation of the disordered import signal of a globular protein by in-cell NMR: The example of frataxins". *Protein Science*. 24(6):996-1003 (2015).
  11. Carrara, M., **Prischi, F.**, Nowak, P., Kopp, M.C., Ali, M.M. "Noncanonical binding of BiP ATPase domain to Ire1 and Perk is dissociated by unfolded protein CH1 to initiate ER stress signaling". *eLife*. 4:e03522 (2015). Two recommendations by F1000 Prime  
<https://f1000.com/prime/725357434>
  12. **Prischi, F.**, Nowak, P., Carrara, M., Ali, M.M. "Phosphoregulation of human Ire1 RNase splicing activity". *Nature Communication*. 5, 3554 (2014).
  13. Carrara, M., **Prischi, F.**, Ali, M.M. "UPR signal activation by luminal sensor domains". *International Journal of Molecular Sciences*. 14(3):6454-66 (2013)
  14. Bernini, A., Spiga, O., Venditti, V., **Prischi, F.**, Botta, M., Croce, G., Tong, A.P., Wong, W.T., Niccolai, N. "The use of a ditopic Gd(III) paramagnetic probe for investigating  $\alpha$ -bungarotoxin surface accessibility". *Journal of Inorganic Biochemistry*. 112:25-31 (2012)
  15. **Prischi, F.**, Konarev, P.V., Iannuzzi, C., Pastore, C., Adinolfi, S., Martin, S.R., Svergun, D.I., Pastore, A. "Structural bases for the interaction of frataxin with the central components of iron-sulphur cluster assembly". *Nature Communication*. 1, 95 (2010).
  16. **Prischi, F.**, Pastore, C., Carroni, M., Iannuzzi, C., Adinolfi, S., Temussi, P., Pastore, A. "Of the vulnerability of orphan complex proteins: the case study of the E. coli IscU and IscS proteins". *Protein Expression and Purification*. 73(2):161-6 (2010).
  17. **Prischi, F.**, Giannini, C., Adinolfi, S., Pastore, A. "The N-Terminus of human frataxin is an intrinsically unfolded region". *FEBS J*. 276(22):6669-76 (2009).
  18. Adinolfi, S., Iannuzzi, C., **Prischi, F.**, Pastore, C., Iametti, S., Martin, S.R., Bonomi, F., Pastore, A. Bacterial frataxin "CyaY is the gatekeeper of iron-sulfur cluster formation catalyzed by IscS". *Nat Struct Mol Biol*. 16(4):390-6 (2009).
  19. Bernini, A., Venditti, V., Spiga, O., Ciutti, A., **Prischi, F.**, Consonni, R., Zetta, L., Arosio, I., Fusi, P., Guagliardi, A., Niccolai, N. "NMR studies on the surface accessibility of the archaeal protein Sso7d by using TEMPOL and Gd(III)(DTPA-BMA) as paramagnetic probes". *Biophys Chem*. 137(2):71-5 (2008).
  20. Venditti, V., Bernini, A., De Simone, A., Spiga, O., **Prischi, F.**, Niccolai, N. "MD and NMR studies of alpha-bungarotoxin surface accessibility". *Biochem Biophys Res Commun*. 356(1):114-7 (2007).
  21. Spiga, O., Padula, M.G., Scarselli, M., Ciutti, A., Bernini, A., Venditti, V., **Prischi, F.**, Falciani, C., Lozzi, L., Bracci, L., Valensin, P.E., Caudai, C., Niccolai, N. "Structurally driven selection of human hepatitis C virus mimotopes". *Antivir Ther*. 11(7):917-22 (2006).
  22. Bernini, A., Spiga, O., Venditti, V., **Prischi, F.**, Bracci, L., Tong, A.P., Wong, W.T., Niccolai, N. "NMR studies of lysozyme surface accessibility by using different paramagnetic relaxation probes". *J Am Chem Soc*. 128(29):9290-1(2006).
  23. Bernini, A., Spiga, O., Ciutti, A., Venditti, V., **Prischi, F.**, Governatori, M., Bracci, L., Lelli, B., Pileri, S., Botta, M., Barge, A., Laschi, F., Niccolai, N. "NMR studies of BPTI aggregation by using paramagnetic relaxation reagents". *BBA*. 1764(5):856-62 (2006).
  24. Bernini, A., Spiga, O., Venditti, V., **Prischi, F.**, Bracci, L., Huang, J., Tanner, J.A., Niccolai, N. "Tertiary structure prediction of SARS coronavirus helicase". *Biochem Biophys Res Commun*. 343(4):1101-4 (2006).
  25. Spiga, O., Bernini, A., Ciutti, A., Chiellini, S., Menciasci, N., Finetti, F., Causarone, V., Anselmi, F., **Prischi, F.**, Niccolai, N. "Molecular modelling of S1 and S2 subunits of SARS coronavirus spike glycoprotein". *Biochem Biophys Res Commun*. 310(1):78-83 (2003).

### Published Preprints:

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1. Brooke, G.<sup>§</sup> and **Prischi, F.**<sup>§</sup> "Structural and functional modelling of SARS-CoV-2 entry in animal models". §corresponding authors. 19 May 2020, PREPRINT (Version 1) available at Research Square [[+https://doi.org/10.21203/rs.3.rs-29443/v1](https://doi.org/10.21203/rs.3.rs-29443/v1)]
2. Trezza, A., Iovinelli, D., Santucci, A., **Prischi, F.**<sup>§</sup> and Spiga, O.<sup>§</sup> "An integrated drug repurposing strategy for the rapid identification of potential SARS-CoV-2 viral inhibitors". §corresponding authors. 30 April 2020, PREPRINT (Version 2) available at Research Square [[+https://doi.org/10.21203/rs.3.rs-24586/v2](https://doi.org/10.21203/rs.3.rs-24586/v2)]
3. Trampari, E., Holden, E., Wickham, G.J., Ravi, A., **Prischi, F.**, de Oliveira Martins, L. Savva, G.M., Bavro, V.N., Webber, M.A. "Antibiotics select for novel pathways of resistance in biofilms." *bioRxiv*, 605212 (2019)
4. Bernini, A., Venditti, V., Spiga, O., **Prischi, F.**, Botta, M., Tong, A.P, Wong, W., Niccolai, n. "The surface accessibility of a-bungarotoxin monitored by a novel paramagnetic probe" *arXiv:1105.0126* (2011)

### In preparation:

1. Obomighie, I.C.\* , Lapenas, K.\* , Murphy, B.E., Bowles, A.M.C., Prischi, F.<sup>§</sup>, Bechtold, U<sup>§</sup>. "Ribosomal protein S6 kinases roles in plant homeostasis". §corresponding authors
2. Dunnett, L., Sicorello, A., Trezza, A., Roy, R., Spiga, O., Pardo, O.E., Pastore, A., Prischi, F.<sup>§</sup> "hnRNPA1 phosphorylations modulate mRNA binding by direct interaction with the mRNA." §corresponding author
3. Cronin, R., Brooke, G., Prischi, F.<sup>§</sup> "Metastatic and Tumor suppressor activities of the Ribosomal Kinases in Prostate Cancer: a Review". §corresponding author
4. Prischi, F. and Filippakopoulos, P. Editorial: Structural Studies of Protein Complexes in Signalling Pathways. *Frontiers in Molecular Biosciences*.

### Talks & Conferences

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1. **Prischi, F.** "Targeting RSK4 prevents both chemoresistance and metastasis in lung and bladder cancer". Jain (deemed-to-be) University in Bangalore (India), February 5<sup>th</sup> 2020.
2. **Prischi, F.** "Targeting RSK4 prevents both chemoresistance and metastasis in lung and bladder cancer". St. Joseph's College in Bangalore (India), February 6<sup>th</sup> 2020.
3. **Prischi, F.** "Targeting RSK4 prevents both chemoresistance and metastasis in lung and bladder cancer". PES University in Bangalore (India), February 7<sup>th</sup> 2020.
4. **Prischi, F.** "Targeting RSK4 prevents both chemoresistance and metastasis in lung and bladder cancer". M.S.Ramaiah University of Applied Sciences (India), February 7<sup>th</sup> 2020.
5. **Prischi, F.** "Targeting RSK4 prevents both chemoresistance and metastasis in lung and bladder cancer". University Malaya in Kuala Lumpur (Malaysia), February 10<sup>th</sup> 2020.
6. **Prischi, F.** "Targeting RSK4 prevents both chemoresistance and metastasis in lung and bladder cancer". Universiti Teknologi MARA System (UiTM) in Kuala Lumpur (Malaysia), February 11<sup>th</sup> 2020.
7. **Prischi, F.\***, Chrysostomou, S.\* , Roy, R. \* , Chapman, K., Mufti, U., Peach, R., Ding, L., Mauri, F., Bellezza, G., Cagini, L., Barbareschi, M., Ferrero, S., Abrahams, J.M., Pascoe, J., Billingham, L., Cullen, M., Hrouda, D., Winkler, M., Klug, D.R., Yaliraki, S.N., Barahona, M., Aboagye, E., Wang, Y., ali, M.M., Seckl, M.J., Pardo, O.E. "Targeting RSK4 prevents both chemoresistance and metastasis in lung and bladder cancer", *FEBS congress 2019*, Krakow (Poland), 6-14<sup>th</sup> July 2019. Molecular Oncology Poster Prize Winner
8. **Prischi, F.** "Targeting hnRNPA1 for the treatment of Small Cell Lung Cancer" *EEMaX symposium*, Norwich, December 12<sup>th</sup> 2018.
9. **Prischi, F.** "Purification of protein kinases for structural studies" *Cambridge AKTA user day*, Cambridge, September 21<sup>th</sup> 2018.
10. **Prischi, F.** "The black sheep of the p90 ribosomal kinase family: RSK4" *EEMaX symposium*, Colchester, December 20<sup>th</sup> 2016.
11. **Prischi, F.** "Interaction of BiP and ER stress transducers is disrupted by unfolded proteins

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- causing UPR activation" *16th International MST Meeting*, NanoTemper HQ, Munich (Germany), June 18<sup>th</sup>-19<sup>th</sup> 2015.
12. **Prischi, F.**, Carrara, M., Ali, M.M. "Phosphoregulation of human Ire1 RNase splicing activity" *Centre for Structural Biology Open Day*, Imperial College London, June 6<sup>th</sup> 2014.
  13. **Prischi, F.**, Carrara, M., Ali, M.M. "Phosphoregulation of human Ire1 RNase splicing activity" *Molecular Chaperones & Stress Responses*, Cold Spring Harbor Laboratory, Cold Spring Harbor (NY), April 29<sup>th</sup>-May 5<sup>th</sup> 2014.
  14. **Prischi, F.** "Biochemical and Biophysical characterization of c-IRE1 $\alpha$ " *OPPF-MPL HTP Protein Production and Crystallization*, Harwell Research Complex, March 30<sup>th</sup>-April 7<sup>th</sup> 2011.
  15. **Prischi, F.** "Insights into the structure of an IscS/IscU/CyaY complex" *Frataxin meeting*, NIMR/MRC, London, May 7<sup>th</sup>-8<sup>th</sup> 2010.
  16. **Prischi F**, Pastore C, Iannuzzi C, Martin S, Adinolfi S, Pastore A. Understanding the iron-sulphur cluster machinery: Characterization of the E. coli IscS/IscU complex. *IIX CCPN meeting*, University of Cumbria, Penrith, 5-7 August 2008.
  17. **Prischi F**, Niccolai N, Pastore A. Key features of EF-HAND superfamily structure using paramagnetic probe. *XXXVII National NMR Congress*, Verbania Pallanza, Lago Maggiore, 12-15 September 2007.
  18. **Prischi F**, Bernini A, Venditti V, Spiga O, Tong AP, Wong WT, Niccolai N. Dimerization of  $\alpha$ -bungarotoxin monitored by paramagnetic probes: a new approach for protein-protein interaction studies. *XXXVI National NMR Congress*, Vietri sul Mare (SA), 20-23 September 2006.

### Public Engagement

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- I am a STEM ambassador registered with STEM Learning.
- I am involved, in partnership with the local community, in "Pint of Science" and "Café Scientifique" the Essex off-campus public engagement forum.
- Education Outreach with Essex Children's University and local primary and secondary schools, and promotion of awareness of multidisciplinary science research through 3rd year honours school-based projects at Essex.

### Professional societies & Esteem factors

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| <b>Since 2020</b>               | Member of the British Crystallographic Association ( <i>BCA</i> )   |
| <b>Since 2016</b>               | East of Anglia and South-East coordinator of the <i>Association of Italian Scientists in the UK (AISUK)</i> |
| <b>Since 2016</b>               | Member of the <i>British Biophysical Society (BSS)</i> .  |
| <b>Since 2010</b>               | Member of the <i>Biochemical Society</i> .  |
| <b>Since 2020</b>               | Associate Editor BMC Molecular and Cell Biology.  |
| <b>Since 2017</b>               | Review Editor for Frontiers in Molecular Biosciences.   |
| <b>Since 2017</b>               | Reviewer of BBSRC grants.   |
| <b>May 2020</b>                 | Organised the 2020 School of Life Sciences webinar series "THE ONLY WAY IS SCIENCE".                        |
| <b>20<sup>th</sup> Dec 2016</b> | Organised the 5 <sup>th</sup> <i>EEMaX Annual Symposium</i> at University of Essex, UK.                     |