

Dr Filippo Prischi - CV

<https://filippoprischilab.org>

Employment History

- Oct 2020 – Present:** **Group Leader and Senior Lecturer (Associate Professor) in Biochemistry.**
- Jun 2015 – Oct 2020:** **Group Leader and Lecturer in Biochemistry.**
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

- 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

- Jan 2021** SACLA (60h beamtime in June 2021) - High throughput and time-resolved fixed target SFX of metalloproteins (2021A803). PI Dr Hough.
- Oct 2019 – June 2021** Bicycle Therapeutics (£15,000) - Development of novel cancer treatments: structural studies of Nectin 4 in complex with bespoke anti-cancer peptides.
- Jul 2019** Atomwise AIMS Award Programme (Nominal value \$385,000) - Androgen Receptor (AR) (A19-396). Co-Pi Dr Brooke.
- Aug 2019 – Apr 2021** Apollo Therapeutics and EIRA research grant (£50,000) - 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.

Dr Filippo Prischi - CV

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

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 4 PhD, 2 MSc and 1 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 3 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>

Peer Reviewed Publications:

1. Chrysostomou, S.*, Roy, R. *, **Prischi, F.***, Thamlikitkul, L., Chapman, K., Mufti, U., Peach, R., Ding, L., Hancock, D., Moore, C., Molina-Arcas, M., Mauri, F., Pinato, D., Abrahams, J.L., Ottaviani, S., Castellano, L., Giamas, G., Pascoe, J., Moonamale, D., Pirrie, S., Gaunt, C., Billingham, L., Steven, N.M., Cullen, M., Hrouda, D., Winkler, M., Post, J., Cohen, P., Salpeter, S.J., Bar, V., Zundeleovich, A., Golan, S., Leibovici, D., Lara, R., Klug, D.R., Yaliraki, S.N., Barahona, M., Wang, Y., Downward, J., Skehel, J.M., Ali, M.M.U., 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". *Science Translational Medicine*. *In publication*. *contributed equally.
 2. **Prischi, F[§]** and Filippakopoulos, P[§]. "Editorial: Structural Studies of Protein Complexes in Signalling Pathways." *Frontiers in Molecular Biosciences*. *In publication*. §corresponding authors.
 3. Cronin, R., Brooke, G.N. [§], **Prischi, F[§]**. "The role of the p90 ribosomal S6 kinase family in prostate cancer progression and therapy resistance." *Oncogene*. *In publication*. §corresponding authors.
 4. Obomighie, I., Lapenas, K., Murphy, B.E., Bowles, A., Bechtold, U.[§], **Prischi, F[§]**. "Ribosomal Protein S6 Kinases roles in plant homeostasis". *Frontiers in Molecular Biosciences*. 8, 24 (2021). §corresponding authors
 5. Deganutti, G., **Prischi, F.**, Reynolds, C.A. "Supervised molecular dynamics for exploring the druggability of the SARS-CoV-2 spike protein" *J Comput Aided Mol Des* (2020).
 6. Brooke, G.[§] and **Prischi, F.[§]** "Structural and functional modelling of SARS-CoV-2 entry in animal models". *Sci Rep* 10, 15917 (2020). §corresponding authors.
- To facilitate the development of medical approaches and novel treatments, we compared the ACE2 receptor, and TMPRSS2 and Furin proteases usage of the SARS-CoV-2 Spike glycoprotein in human and in a panel of animal models. Computational analysis of binding modes and protein contacts indicates that macaque, ferrets and hamster are the most

Dr Filippo Prischi - CV

suitable models for the study of inhibitory antibodies and small molecules targeting the SARS-CoV-2.

7. Trezza, A., Iovinelli, D., Santucci, A., **Prischi, F.**[§] and Spiga, O.[§] "An integrated drug repurposing strategy for the rapid identification of potential SARS-CoV-2 viral inhibitors". *Sci Rep* 10, 13866 (2020). [§]corresponding authors.
8. 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)
9. **Prischi, F.** & Pastore, A. "Hybrid methods in iron-sulfur cluster biogenesis". *Frontiers in Molecular Biosciences*. 4, 12 (2017).
10. Zabet, N. R., Catoni, M., **Prischi, F.**, Paszkowski, J. " Cytosine methylation at CpCpG sites triggers accumulation of non-CpG methylation in gene bodies". *Nucleic Acid Research*. 45, 3777–3784 (2017).
11. **Prischi, F.** & Pastore, A. "Application of nuclear magnetic resonance and hybrid methods to structure determination of complex systems". *Advances in Experimental Medicine and Biology*. 896:351-368 (2016).
12. 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>
13. 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).
14. 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>
15. **Prischi, F.**, Nowak, P., Carrara, M., Ali, M.M. "Phosphoregulation of human Ire1 RNase splicing activity". *Nature Communication*. 5, 3554 (2014).
16. Carrara, M., **Prischi, F.**, Ali, M.M. "UPR signal activation by luminal sensor domains". *International Journal of Molecular Sciences*. 14(3):6454-66 (2013)
17. 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 α -bungarotoxin surface accessibility". *Journal of Inorganic Biochemistry*. 112:25-31 (2012)
18. **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).
19. **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).
20. **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).
21. 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).
22. 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).
23. 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).
24. Spiga, O., Padula, M.G., Scarselli, M., Ciutti, A., Bernini, A., Venditti, V., **Prischi, F.**,

Dr Filippo Prischi - CV

- Falciani, C., Lozzi, L., Bracci, L., Valensin, P.E., Cudai, C., Niccolai, N. "Structurally driven selection of human hepatitis C virus mimotopes". *Antivir Ther.* 11(7):917-22 (2006).
25. 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).
 26. 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).
 27. 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).
 28. Spiga, O., Bernini, A., Ciutti, A., Chiellini, S., Menciasci, N., Finetti, F., Causarono, 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:

1. Brooke, G.[§] and **Prischi, F.**[§] "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.**[§] and Spiga, O.[§] "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 submission:

1. 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"
2. Dunnett, L., Sicorello, A., Trezza, A., Roy, R., Spiga, O., Pardo, O.E., Pastore, A., **Prischi, F.**[§] "hnRNP1 phosphorylations modulate mRNA binding by direct interaction with the mRNA." [§]corresponding author

Talks & Conferences

1. **Prischi, F.** "Targeting RSK4 prevents both chemoresistance and metastasis in lung and bladder cancer". Jain (deemed-to-be) University in Bangalore (India), February 5th 2020.
2. **Prischi, F.** "Targeting RSK4 prevents both chemoresistance and metastasis in lung and bladder cancer". St. Joseph's College in Bangalore (India), February 6th 2020.
3. **Prischi, F.** "Targeting RSK4 prevents both chemoresistance and metastasis in lung and bladder cancer". PES University in Bangalore (India), February 7th 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 7th 2020.
5. **Prischi, F.** "Targeting RSK4 prevents both chemoresistance and metastasis in lung and bladder cancer". University Malaya in Kuala Lumpur (Malaysia), February 10th 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 11th 2020.
7. **Prischi, F.***, Chrysostomou, S.* , Roy, R. *, Chapman, K., Mufti, U., Peach, R., Ding, L.,

Dr Filippo Prischi - CV

- 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), 6-14th July 2019. Molecular Oncology Poster Prize Winner
8. **Prischi, F.** "Targeting hnRNPA1 for the treatment of Small Cell Lung Cancer" *EEMaX symposium*, Norwich, December 12th 2018.
 9. **Prischi, F.** "Purification of protein kinases for structural studies" *Cambridge AKTA user day*, Cambridge, September 21th 2018.
 10. **Prischi, F.** "The black sheep of the p90 ribosomal kinase family: RSK4" *EEMaX symposium*, Colchester, December 20th 2016.
 11. **Prischi, F.** "Interaction of BiP and ER stress transducers is disrupted by unfolded proteins causing UPR activation" *16th International MST Meeting*, NanoTemper HQ, Munich (Germany), June 18th-19th 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 6th 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 29th-May 5th 2014.
 14. **Prischi, F.** "Biochemical and Biophysical characterization of c-IRE1 α " *OPPF-MPL HTP Protein Production and Crystallization*, Harwell Research Complex, March 30th-April 7th 2011.
 15. **Prischi, F.** "Insights into the structure of an IscS/IscU/CyaY complex" *Frataxin meeting*, NIMR/MRC, London, May 7th-8th 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, Nicolai 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, Nicolai N.** Dimerization of α -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

- 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

- | | |
|-------------------|---|
| Since 2020 | Member of the British Crystallographic Association (BCA) |
| Since 2016 | East of Anglia and South-East coordinator of the <i>Association of Italian Scientists in the UK (AISUK)</i> |
| Since 2016 | Member of the <i>British Biophysical Society (BSS)</i> . |
| Since 2010 | Member of the <i>Biochemical Society</i> . |
| Since 2021 | Member of the <i>Biochemical Society</i> ECR taskforce. |
| Since 2020 | Associate Editor BMC Molecular and Cell Biology. |
| Since 2017 | PLOS ONE editorial board |
| Since 2017 | Review Editor for <i>Frontiers in Molecular Biosciences</i> . |

Dr Filippo Prischi - CV

- Since 2017** Reviewer of BBSRC and MRC grants.
- May 2020** Organised the 2020 School of Life Sciences webinar series "THE ONLY WAY IS SCIENCE".
- 20th Dec 2016** Organised the 5th *EEMaX Annual Symposium* at University of Essex, UK.