

# Emma Bell Ph.D.

POSTDOCTORAL RESEARCH FELLOW · PRINCESS MARGARET CANCER CENTRE, UHN

Princess Margaret Cancer Research Tower, 101 College St., Toronto, ON M5G 1L7

✉ emma.bell@uhn.ca | 🏠 www.emmabell42.com | 📧 emmbell42 | 🐦 @emmabell42 | 📞 0000-0003-4103-3741

## Education

---

### Imperial College London

London, UK

PH.D. REGULATION OF CELL-TYPE SPECIFIC ENHANCERS IN PLURIPOTENT STEM CELLS

2013-2017

- Supervisors: Dr. Véronique Azuara, Dr. James Flanagan, Dr. Ed Curry

### Imperial College London

London, UK

M.RES. BIOMEDICAL RESEARCH (DISTINCTION)

2012-2013

- Investigating the influence of cellular context on EZH2-mediated transcriptional regulation
  - Supervisors: Dr. Ed Curry, Prof. Bob Brown
- Investigation of epigenetic effects of intragenic methylation in breast cancer
  - Supervisors: Dr. James Flanagan, Prof. Bob Brown

### King's College London

London, UK

B.SC.(HONS.) BIOMEDICAL SCIENCE (FIRST-CLASS HONOURS)

2008 - 2011

- Characterisation of transcripts arising from the murine Fam13c locus
  - Supervisors: Dr. Mike Cowley, Prof. Rebecca Oakey
- Transcription of the imprinted genes Ddc\_exon1a and Grb10 within the developing mouse heart
  - Supervisors: Dr. Adam Prickett, Prof. Rebecca Oakey

## Professional Experience

---

- 2019 - **Bioinformatics Research Fellow**, Princess Margaret Cancer Centre, UHN  
PI: Dr. Daniel De Carvalho
- 2017 - 2019 **Bioinformatics Research Associate**, Imperial College London  
PIs: Dr. James Flanagan, Dr John Krell
- 2011 - 2012 **Editorial Assistant**, BioMed Central

## Publications

---

\* these authors contributed equally

### PUBLISHED

- Bell, E.\***, Yau, H.L.\*, Ettayebi, I., Campos de Almeida, F., Boukhaled, G.M, Shen, S.Y., Allard, D., Morancho, B., Marhon, S.A., Ishak, C.A., Gonzaga, I., Medina, T., Singhanian, R., Chakravarthy, A., Chen, R., Mehdipour, P., Pommey, S., Klein, C., Amarante-Mendes, G., Roulois, D., Arribas, J., Stagg, J., Brooks, D.G., De Carvalho, D.D. (2021). DNA hypomethylating agents increase activation and cytolytic activity of CD8+ T-cells. *Molecular Cell*, Feb 10;S1097-2765(21)00058-7, doi: 10.1016/j.molcel.2021.01.038.
- Bell, E.\***, Curry, E.W.\*, Megchelenbrink, W.\*, Jouneau, L., Brochard, V., Tomaz, R.A., Mau, K.H.T., Atlasi, Y., de Souza, R.A., Marks, H., Stunnenberg, H.G., Jouneau, A., Azuara, V. (2020). Dynamic CpG methylation delineates subregions within super-enhancers selectively decommissioned at the exit from naive pluripotency. *Nature Communications*, 11(1112), doi: 10.1038/s41467-020-14916-7.
- Zhang, S., **Bell, E.**, Brown, S., Gao, Y., Kim, J., Azuara, V., Cui, W. (2019). OCT4 and PAX6 determine the dual function of SOX2 in human ESCs as a key pluripotent or neural factor. *Cell Research & Therapy*, 10(122), doi: 10.1186/s13287-019-1228-7.
- Tomaz, R.A., Harman, J.L., Karimlou, D., Weavers, L., Fritsch, L., Bou-Kheir, T., **Bell, E.**, del Valle Torres, I., Niakan, K.K., Fisher, C., Joshi, O., Stunnenberg, H.G., Curry, E.W., Ait-Si-Ali, S., Jørgensen, H.F., Azuara, V. (2017). Jmjd2c facilitates the assembly of essential enhancer-protein complexes at the onset of embryonic stem cell differentiation. *Development*, 144: 567-579. doi: 10.1242/dev.142489.

- Shenker, N.S., Flower, K.J., Wilhelm-Benartzi, C.S., Dai, W., **Bell, E.**, Gore, E., El Bahrawy, M., Weaver, G., Brown, R., Flanagan, J.M. (2015). Transcriptional implications of intragenic DNA methylation in the oestrogen receptor alpha gene in breast cancer cells and tissues. *BMC Cancer*, 15(337), doi: 10.1186/s12885-015-1335-5.
- Curry, E.W., Green, I., Chapman-Rothe, N., Shamsaei, E., Kandil, S., Cherblanc, F.L., Payne, L., **Bell, E.**, Ganesh, T., Srimongkolpithak, N., Caron, J., Li, F., Uren, A.G., Snyder, J.P., Vedadi, M., Fuchter, M.J., Brown, R. (2015). Dual EZH2 and EHMT2 histone methyltransferase inhibition increases biological efficacy in breast cancer cells. *Clinical Epigenetics*, 7(84), doi: 10.1186/s13148-015-0118-9.

## Awards, Fellowships, & Grants

---

2022	<b>Spark Award</b> , Cancer Digital Intelligence	\$ 20,000
2022	<b>Biosciences Oncology Leadership Development (BOLD) Program</b> , Princess Margaret Cancer Centre	
2022	<b>Rising Stars Award</b> , Ontario Institute of Cancer Research	\$ 2,000
2021	<b>Women in Media Fellowship</b> , Enterprise Canada & Women Who Lead	
2021	<b>Top-ups for Postdoctoral Fellows Data Science</b> , CANSSI Ontario	\$ 10,000
2019	<b>Student Academic Choice Award (long-listed)</b> , Imperial College London	
2012	<b>Medical Research Council Doctoral Training Partnership Research Studentship</b> , Imperial College London	£ 133,200
2011	<b>Biomedical Science BSc Final Year Student Prize</b> , King's College London	
2010	<b>Summer Studentship Award</b> , Genetics Society	£ 3,000
	<b>Undergraduate Research Bursary (offered and declined)</b> , Nuffield Foundation	£ 1,800

## Presentations

---

\* *presenting author*; + *mentored student*

### PRESENTATIONS

2021. *Is gene therapy in your future?*. Invited talk: EURORDIS (Rare Diseases Europe).
2019. *Crimes against data sharing in functional genomics (abridged)*. Lightning talk: R-Ladies Toronto, Toronto, ON, Canada.
2019. *Crimes against data sharing in functional genomics*. Oral presentation: Canadian Research Software Conference, Montréal, QC, Canada.
2018. *ESRRB demarcates enhancers decommissioned during pluripotency maturation*. Invited talk: Princess Margaret Cancer Research Centre, Toronto, Canada.
2018. *Cell-type specific enhancers in mouse pluripotent stem cells*. Invited talk: Cancer Research UK Edinburgh Centre, Edinburgh, U.K..
2018. *Cell-type specific enhancers in mouse pluripotent stem cells*. Invited talk: Cancer Bioinformatics Group, King's College London.
2018. *How to approach debugging*. Oral presentation: Division of Cancer Bioinformatics Network, Imperial College London.
2015. *The role of Esrrb at tissue-specific enhancers in mouse embryonic stem cells*. Oral presentation: Work In Progress Seminar Series, Department of Surgery & Cancer, Imperial College London, London, U.K..
2014. *Transcriptional regulation by nuclear receptor co-activators in mouse embryonic stem cells*. Oral presentation: Epigenetics Group, Department of Surgery & Cancer, Imperial College London, London, U.K..

### CONTRIBUTED PRESENTATIONS

- Bell, E.**, Desveaux, L., Wouters, B., O'Brien, S. 2021. Enhancing Inclusion in Academic Medicine. Panel discussion: University Health Network, Toronto, ON, Canada.
- Bell, E.**, Catton, J., Desveaux, L., Whitham, L. 2020. Acknowledging and Overcoming Imposter Syndrome. Panel discussion: Women Who Lead, Toronto, ON, Canada.
- Patel, A.\*\* , **Bell, E.**, Sutton, J., Flanagan, J.F. 2019. Younger LINE-1s are hypomethylated in pre-diagnosis ovarian cancer leading to transcriptional deregulation of oncogenes. Poster: M.Res. Cancer Biology Poster Session, Imperial College London, London, U.K..

**Bell, E.\***, Shenker, N.S., Flanagan, J.F., Brown, R.. 2013. Antisense mRNA and intragenic DNA methylation: cause or consequence?. Poster: M.Res. Biomedical Research Poster Session, Imperial College London, London, U.K..

## Teaching Experience

---

2022 - 2023	<b>M.H.Sc. Medical Genomics Program</b> Guest lecturer	<i>University of Toronto</i>
2021	<b>Canadian Bioinformatics Workshop: RNA-seq</b> Teaching Assistant	<i>Bioinformatics Canada</i>
2021	<b>Canadian Bioinformatics Workshop: Cancer Analysis</b> Teaching Assistant	<i>Bioinformatics Canada</i>
2016 - 2018	<b>M.Res. Cancer Biology (Cancer Informatics Stream)</b> Demonstrator	<i>Imperial College London</i>

## Mentoring

---

2022	<b>Gabriela Tanumihardja</b> , M.H.Sc. Medical Genomics Program, University of Toronto	<i>Toronto, Canada</i>
2021	<b>Veronika Kovaničová</b> , B.Sc. Human Genetics, Charles University	<i>Prague, Czech Republic</i>
2021	<b>Ana Portillo</b> , Ph.D. candidate, McMaster University	<i>Hamilton, ON, Canada</i>
2019	<b>Areeba Patel</b> , M.Res. Cancer Biology, Imperial College London	<i>London, U.K.</i>
2017	<b>Andrew Scarborough</b> , B.Sc. Human and Medical Science, University of Westminster	<i>London, U.K.</i>
2016	<b>Sejal Versani</b> , M.Res. Cancer Biology, Imperial College London	<i>London, U.K.</i>

## Outreach, Media, & Professional Development

---

### SERVICE AND OUTREACH

2020	<b>Skype-A-Scientist</b> , Speaker	
2019	<b>Skype-A-Scientist</b> , Speaker	
	<b>The Know Show</b> , Live interview	<i>Toronto, ON, Canada</i>
	<b>Science is a Drag</b> , Live scientific demonstrator	<i>Toronto, ON, Canada</i>
2018	<b>Good days and difficult days: Imperial staff on mental health</b> , Recorded interview	<i>London, U.K.</i>
	<b>International Women's Day Panel, Nicholas Breakspear R.C. School</b> , Speaker	<i>St. Albans, U.K.</i>
2016	<b>Imperial Festival, Imperial College London</b> , Demonstrator	<i>London, U.K.</i>

### MEDIA

2021	<b>The Globe and Mail</b> , Print interview "‘Identity labour’ may keep women of colour from returning to the office"
2021	<b>Nature</b> , Print interview "Pandemic burnout is rampant in academia"
2020	<b>The Washington Post</b> , Print interview "A scientist's viral tweet called Elon Musk 'Space Karen' — as a way to defend science"
2019	<b>The Guardian</b> , Print interview "‘The Brexitodus is under way’: meet the Brits leaving the UK"
2018	<b>The National, CBC</b> , TV interview "What could Brexit mean for science?" <b>BBC World News, BBC</b> , TV interview Comment on the Chinese Olympic Committee's decision to incorporate DNA sequencing into their athlete selection for the 2022 Winter Olympics. <b>Bloomberg News, BNN Bloomberg</b> , Print interview "Brexit Begins to Bite as Workers Turn to Voting With Their Feet"

## DEVELOPMENT

**Integrating Sex & Gender in Health Research**, 2021. Three CIHR courses designed to educate researchers on how to integrate sex and gender into their research. Course 1: Sex and Gender in Biomedical Research. Course 2: Sex and Gender in Primary Data Collection with Human Participants. Course 3: Sex and Gender in the Analysis of Secondary Data from Human Participants.

**Introduction to LGBT and Providing Culturally Competent Services**, 2020. An online course created by UHN. The course covered LGBT+ myths and misconceptions, the history of LGBT+ Rights in Canada, how to discuss sexual orientation and gender identification, and how to respectfully communicate with LGBT+ people in a healthcare setting. This course improved my professional communication skills, and helped me consider sex and gender in my research.

**Software Carpentry**, 2018. A two day workshop hosted by the Research Computing Service, Imperial College London. We covered basic research computing skills with the Unix shell, git, and Python. This course improved my program design, version control, data management, and task automation.

**Making the Most of Your Postdoc**, 2018. A three day residential course hosted by the Postdoctoral and Fellows Development Centre, Imperial College London. I learned what makes a successful postdoc and developed a personalised strategy to transition to research independence.

**Analysing Single-Cell Sequencing Data**, 2018. A seminar I organised for the Imperial College Division of Cancer Bioinformatics Network. We learned how single-cell sequencing is conducted, biological and technical considerations in analysis, and examined a bioinformatics pipeline for single-cell RNA-seq.

**Bash Shell Scripting**, 2018. A workshop hosted by the Research Computing Service, Imperial College London. We covered considerations when using the command line in research and the basics of shell scripting.

**Introduction to Supervising PhD Students**, 2018. A course hosted by the Educational Development Unit, Imperial College London. We covered the College's research degree milestones, how to support student mental health, and how to troubleshoot common problems.