

# Zhijian Li

Broad Institute of MIT and Harvard  
415 Main St, Cambridge, MA 02142, USA  
Phone: +1-617-251-8024  
Email: lizhijia@broadinstitute.org  
Web: <https://lzj1769.github.io/>

---

## Positions

2022 - present    Postdoc, Broad Institute of MIT and Harvard, USA

## Education

2016 - 2022    Ph.D., Computer Science, RWTH Aachen University, Germany  
2014 - 2016    M.Sc., Computer Science, Central China Normal University, China  
2008 - 2012    B.S., Computer Science and Technology, Jilin University, China

## Awards

2022    Outstanding Self-financed Students Abroad, China Scholarship Council  
2021    Poster Award of e: Med Meeting on Systems Medicine 2021, Germany  
2016    Outstanding Master Thesis, Central China Normal University  
2015    National Scholarship of China

## Presentations

2021    Flash Talk & Poster Presentation, e:Med Meeting on Systems Medicine 2021, Germany  
2020    Regular Talk, ECCB 2020  
2020    Poster Presentation, ISMB 2020  
2019    Poster Presentation, ISMB/ECCB 2019  
2018    Poster Presentation, RECOMB 2018

## Memberships

2018 -    Member, International Society for Computational Biology (ISCB)

## Publications

# Co-first authors; \* Co-corresponding authors

### First/co-first author papers

7. **Z Li**, J Nagai, C Kuppe, R Kramann, I G Costa. scMEGA: Single-cell Multiomic Enhancer-based Gene Regulatory Network Inference. **Bioinformatics Advances** (2022).
6. **Z Li**<sup>#</sup>, C C Kuo<sup>#</sup>, F Ticconi, M Shaigan, E G Gusmao, M Allhoff, M Manolov, M Zenke, I G Costa. RGT: a toolbox for the integrative analysis of high throughput regulatory genomics data. **BMC Bioinformatics** (2022). (Submitted)
5. C Kuppe<sup>#</sup>, **Z Li**<sup>#</sup>, R T Levinson<sup>#</sup>, P B Mompel<sup>#</sup>, T Lu, R Flores, M Halder, M Cheng, X Zhang, R K Schneider, R Thadhani, S Hayat, K Lim, I G Costa<sup>\*</sup>, J S Rodriguez<sup>\*</sup>, R Kramann<sup>\*</sup>. Integrative single-cell multi-omics analysis reveals traits associated with early heart failure. **Nature Genetics** (2022). (Under review)
4. C Kuppe<sup>#</sup>, R O R Flores<sup>#</sup>, **Z Li**<sup>#</sup>, S Hayat, R T Levinson, X Liao, M T Hannani, J Tanevski, F Wünnemann, J S Nagai, M Halder, D Schumacher, S Menzel, G Schäfer, K Hoeft, M Cheng, S Ziegler, X Zhang, F Peisker, N Kaesler, T Saritas, Y Xu, A Kassner, J Gummert, M Morshuis, J Amrute, R J A Veltrop, P Boor, K Klingel, L W Van Laake, A Vink, R M Hoogenboezem, E M J Bindels, L Schurgers, S Sattler, D Schapiro, R K Schneider, K Lavine, H Milting<sup>\*</sup>, I G Costa<sup>\*</sup>, J Saez-Rodriguez<sup>\*</sup> and R Kramann<sup>\*</sup>. Spatial multi-omic map of human myocardial infarction. **Nature** (2022).
3. **Z Li**<sup>#</sup>, C Kuppe<sup>#</sup>, S Ziegler, M Cheng, N Kabgani, S Menzel, M Zenke, R Kramann<sup>\*</sup>, I G Costa<sup>\*</sup>. Chromatin-accessibility estimation of single-cell ATAC-seq data with scOpen. **Nature Communications** (2021).
2. **Z Li**, M H Schulz, T Look, M Begemann, M Zenke, I G Costa. Identification of transcription factor binding sites using ATAC-seq. **Genome Biology** (2019).
1. **Z Li**, J Guo, S Yang. Improving the JADE Algorithm by Clustering Successful Parameters. **International Journal of Wireless and Mobile Computing** (2016).

### Contributed papers

11. E.F Brandt, T.H Wirtz, **Z Li**, M.M Ibrahim, P Fischer, A Beckers, A Flabhove, I.G Costa, R Kramann, E.P.C van der Vorst, C Liedtke, H Sahin, C Trautwein, M.L Berres. CXCR3-expressing macrophages regulate angiogenesis, tumor cell proliferation and immune evasion in hepatocellular carcinoma. (2022) (Submitted).
10. K Ohl, J Hriczko, S Schulz, T Look, T Goodarzi, S.H Subramanyam, T Clarner, M Scheld, M Kipp, E Verjans, S Böll, I.G Costa, **Z Li**, L Gan, B Denecke, A Schippers, S Floess, J Huehn, E Schmitt, T Bopp, R Beyaert, B Lambrecht, M Zenke, N Wagner, K Tenbrock. Foxp3-specific deletion of CREB generates Th2 biased ST-2 positive regulatory T-cells with enhanced IL-10 production and suppressive capacity. (2022) (Submitted).

9. D Schumacher<sup>#</sup>, M Cheng<sup>#</sup>, C Kuppe, E M Bindels, R K Schneider, **Z Li**, I G Costa\*, R Kramann\*. Single Nucleus ATAC Sequencing Reveals Epigenomic Regulation After Myocardial Infarction. (2022) (Submitted).
8. H Xu, **Z Li**, C C Kuo, K Götz, T Look, MAS de Toledo, K Seré, I G Costa and M Zenke. A lncRNA identifies IRF8 enhancer in feedback control of DC development. **eLife** (2022). (Under review)
7. Y Xu<sup>#</sup>, C Kuppe<sup>#</sup>, JP Patón, S Hayat, J Kranz, A T Abdallah, J Nagai, **Z Li**, F Peisker, T Saritas, M Halder, S Menzel, K Hoeft, A Kenter, H Kim, C van Roeyen, M Lehrke, J Moellmann, T Speer, E M Buhl, R Hoogenboezem, P Boor, J Jansen, C Knopp, I Kurth, B Smeets, E Bindels, M Reinders, C Baan, J Gribnau, E Hoorn, J Steffens, T Huber, I G Costa, J Floege, R K Schneider, J Saez-Rodriguez, B S. Freedman\* and R Kramann\*. Adult human kidney organoids originate from CD24+ cells and represent an advanced model for adult polycystic kidney disease. **Nature Genetics** (2022).
6. M Cheng, **Z Li**, I G Costa. MOJITOO: a fast and universal method for integration of multi-modal single cell data. **Bioinformatics** (2022).
5. S Heller, **Z Li**, Q Lin, R Geusz, M Breunig, M Hohwieler, X Zhang, G Nair, T Seufferlein, M Hebrok, M Sander, C Julier, A Kleger\*, I G Costa\*. Transcriptional changes and the role of ONECUT1 in hPSC pancreatic differentiation. **Communications Biology** (2021).
4. A Philippi<sup>#</sup>, S Heller<sup>#</sup>, I G Costa<sup>#</sup>, V Senée<sup>#</sup>, M Breunig, **Z Li**, G Kwon, R Russell, A Illing, Q Lin, M Hohwieler, A Degavre, P Zalloua, S Liebau, M Schuster, J Krumm, X Zhang, R Geusz, J.R Benthuyzen, A Wang, J Chiou, K Gaulton, H Neubauer, E Simon, T Klein, M Wagner, G Nair, C Besse, C Dandine-Roulland, R Olaso, J Deleuze, B Kuster, M Hebrok, T Seufferlein, M Sander, B.O Boehm, F Oswald, M Nicolino\*, C Julier\*, A Kleger\*. Mutations and variants of ONECUT1 in diabetes. **Nature Medicine** (2021).
3. J Guo, **Z Li**, S Yang. Accelerating differential evolution based on a subset-to-subset survivor selection operator. **Soft Computing** (2019).
2. J Guo, W Xie, **Z Li**. Enhancing JADE utilizing distance of best solutions. **Computer Engineering and Design** (2018).
1. J Guo, **Z Li**, W Xie, H Wang. Dissipative differential evolution with self-adaptive control parameters. **IEEE Congress on Evolutionary Computation** (2015).