

# CompensAID: An Automated Detection Tool for Reference Errors

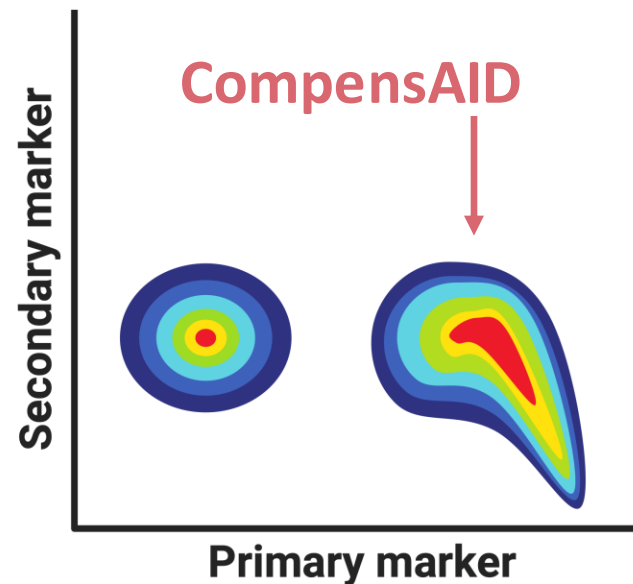
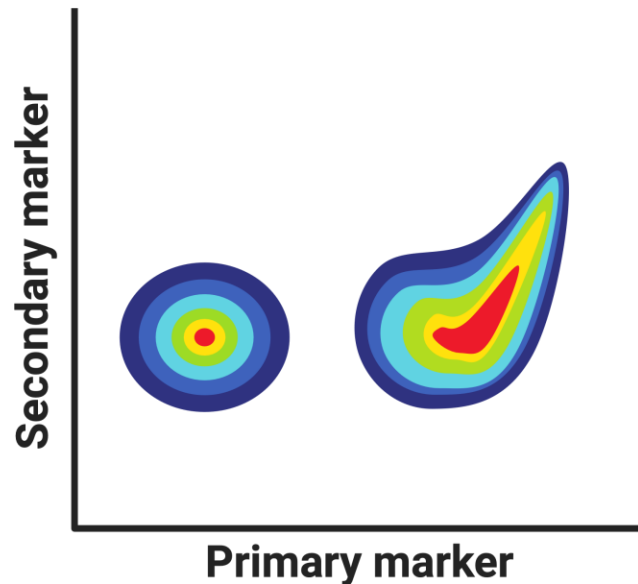
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# Reference errors

- Compensation and unmixing is essential to estimate fluorophore abundance
- **Reference errors** are a well-known source of signal error
- Accurate correction is **critical for reliable downstream analysis**

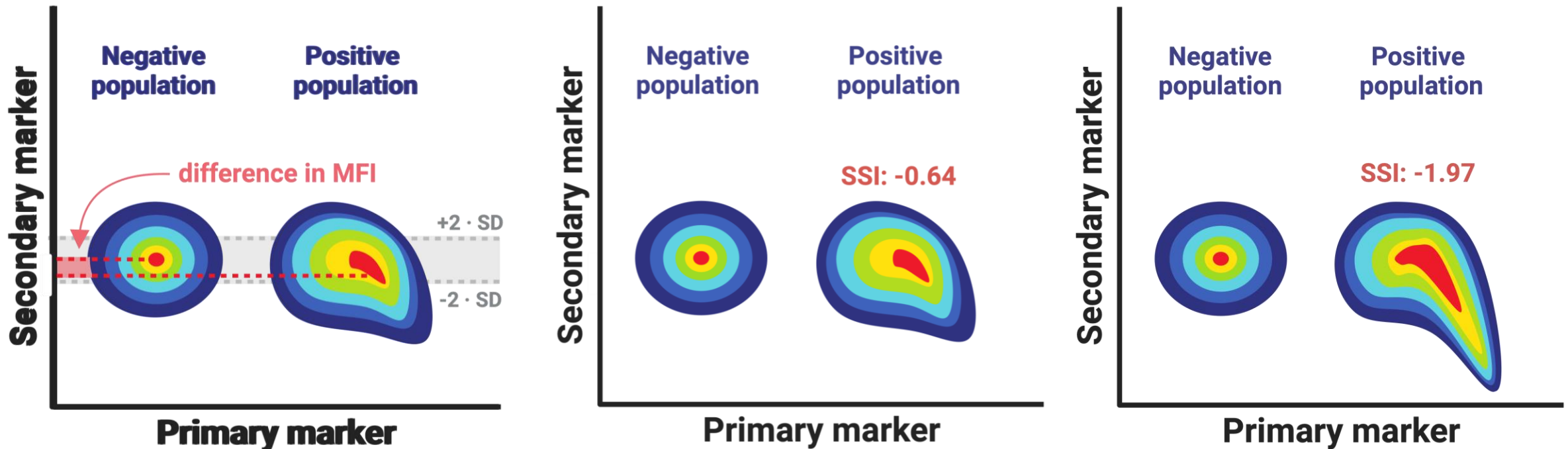


## Also described as:

- Compensation errors
- Unmixing errors
- Overcompensation
- Undercompensation

# Secondary Stain Index (SSI)<sup>1</sup> score

- Quantitative measure to assess skewing of populations
- Flag marker combinations with an **SSI smaller than -1**



<sup>1</sup> Daniels, K. & Gardner, R. Secondary Stain Index. May, 2020. [https://cdn.fccf.aws.mskcc.org/20200504\\_Post\\_it\\_Secondary\\_Stain\\_Index\\_e3d4e8b683.pdf](https://cdn.fccf.aws.mskcc.org/20200504_Post_it_Secondary_Stain_Index_e3d4e8b683.pdf)

# CompensAID

- **Key features:**

- Density-based cutoff detection
- Automated gating on negative and positive populations
- Segmentation of the positive population
- Calculation of the SSI across all marker combinations

- **Take home messages:**

- Need for a fast and robust assessment of reference errors
- High accordance between flow cytometry specialists and CompensAID

**Curious about the tool?**

**Come to the poster!**

# Acknowledgements



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