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## Unraveling multifaceted roles of Grainyhead-like transcription factor-2 in breast cancer

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## **Stellingen**

Behorende bij het proefschrift

“Unraveling Multifaceted Roles of Grainyhead-like Transcription Factor-2 in Breast Cancer”

1. The dual role of GRHL2 in breast cancer is underscored by the complex gene networks it regulates (this thesis).
2. While GRHL2 has been termed an “epithelial gatekeeper”, altering its expression is not necessarily sufficient to alter the balance between epithelial and mesenchymal states (this thesis).
3. Loss of GRHL2 expression in breast cancer cells affects T cell behavior by triggering enhanced extracellular adenosine production (this thesis).
4. A comprehensive understanding of the distinct GRHL2 actions necessitates not only in vitro co-culture systems that incorporate tumor and immune cells but also integration of these experimental results with patient-derived data to validate their biological relevance (this thesis).
5. EMT programs can vary significantly across different tumors. Consequently, investigating tissue- and subtype-specific gene expression profiles related to EMT in diverse contexts is crucial (based on Brabletz, T. et al, Nature Reviews Cancer, 2018).
6. GRHL2 functions as a Janus-faced entity in tumor progression, alternating between maintaining normal cellular functions and driving malignancy, contingent upon the context (based on He J. et al, Am J Transl Res., 2020).
7. Considering the notable patient responses to immunotherapy and strong immunosuppression mediated by the presence of adenosine, it is essential to develop agents targeting this pathway and explore combination strategies (based on Vigano S. et al, Front Immunol., 2019).
8. Unlocking intratumoral heterogeneity involves understanding how acquired capabilities drive cancer hallmarks. One key mechanism is cellular plasticity, which allows the most proliferative and invasive cells to dominate and promote malignant progression (based on D. Hanahan, Cancer discovery, 2022).
9. Pursuing a PhD demands resilience and perseverance, requiring one to overcome intellectual rigor, prolonged research, and frequent setbacks. This resilience is crucial for navigating challenges and making significant scientific contributions.
10. "Science is the most reliable guide in life for everything, for civilization, for life, and for success. Seeking guidance outside of science and knowledge is foolishness, ignorance, and misguidance." (Gazi Mustafa Kemal Atatürk)

**Bircan Çoban**  
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