

# Integration of an Established Cohort into a Biobank: A Collaborative Success Story in Leukaemia Research

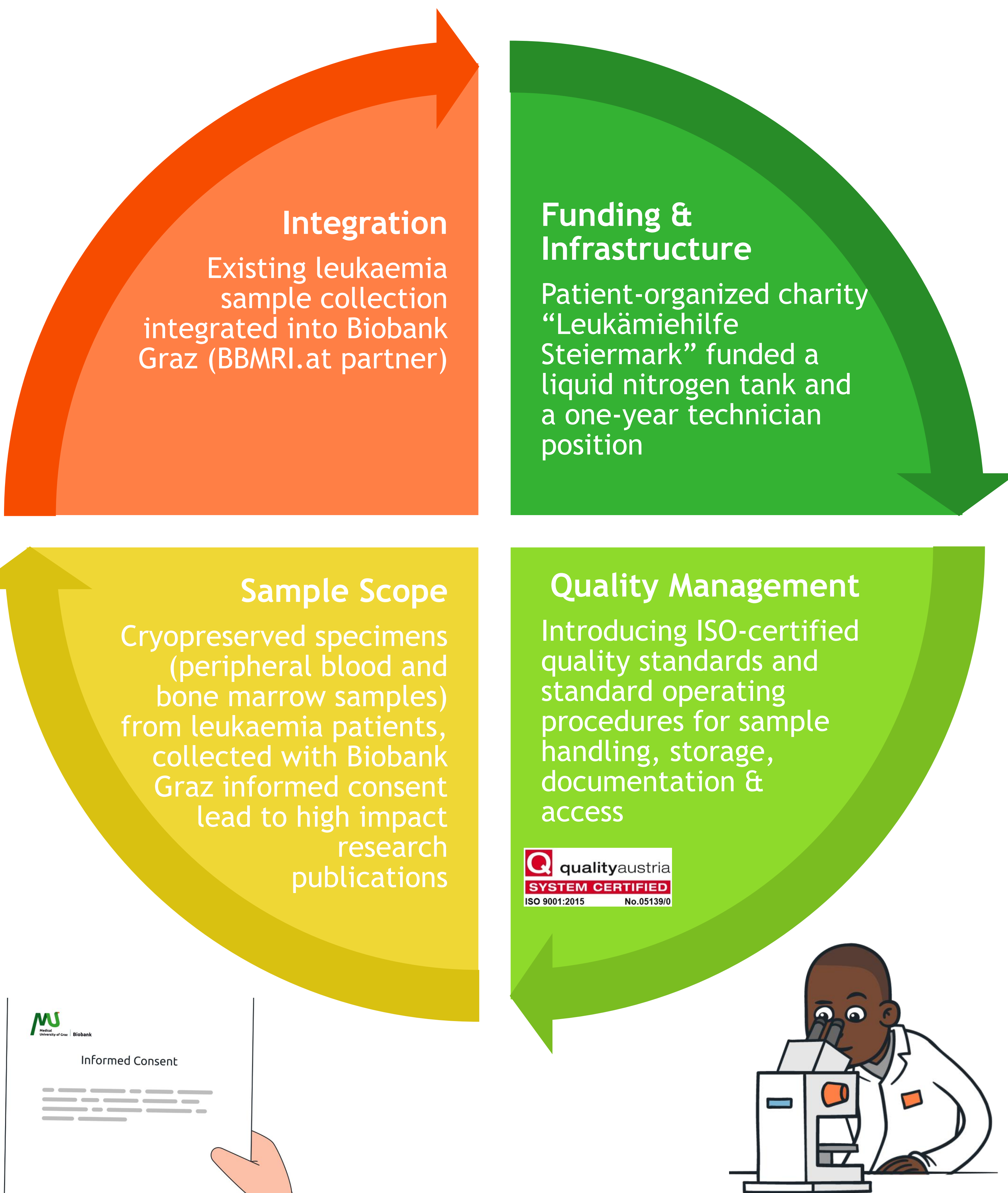
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## INTRODUCTION & BACKGROUND

Since 1995, the Clinical Division of Haematology has been engaged in leukaemia biobanking, preserving viable blood and bone marrow samples from leukaemia patients in liquid nitrogen for future research. This resource is essential for studying leukaemia's underlying mechanisms and developing new therapies. While cell culture and animal models provide important insights and help to decipher fundamental mechanisms, the examination of patient tissue remains essential to confirm findings and translating them into clinical applications. While initially research-focused, the biobank's role has progressively expanded into clinical routine, supporting therapy monitoring, diagnostic development and family/genetic analyses.

## MATERIAL & METHODS



## RESULTS

This collaboration led to a unique, high-quality **biospecimen resource** combining the Division of Haematology's long-standing clinical collections with the Biobank infrastructure. The **leukaemia cohort** expands Biobank's Graz portfolio with a comprehensive collection managed according to **ISO-certified procedures**, thereby ensuring improved sample quality, traceability and accessibility. Together, these improvements increase the **visibility and attractiveness** of both partners for national and **international research collaborations**.

The project also demonstrated that targeted external support - such as **charity funded equipment and personnel** - can catalyse essential collaborations.



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## CONCLUSION

The successful integration of the leukaemia biobank highlights the importance of collaboration among clinicians, biobanks, and patients. This model enhances the quality and applicability of biobanked samples, advancing leukaemia research and improving therapy development. Furthermore this cohort already resulted in multiple high impact publications, including: (1) Roman-Trufero et al., Clinical Cancer Research, 2026; (2) Höckendorf U et al., Science Translational Medicine, 2025; (3) Ulz P et al., Nature Communications, 2019; (4) Caraffini V et al., Blood, 2018; and (5) Zebisch A et al., Leukemia, 2012. These findings emphasize biobanking's crucial role in clinical settings and its increasing impact on treatment decisions and research initiatives. Ultimately, the project demonstrates that active involvement of the public and patient-organized charities can substantially improve the feasibility and implementation of infrastructural improvements within universities.