

Save Children's Lives Through Cancer Research

Advancing precision medicine through
groundbreaking research

A new technology for childhood cancer research: Nanopore Sequencing. It enables us to learn as much as possible about a child's cancer from a very small tumor sample in order to pave the way for more precise diagnostics and personalized treatments.

When a child develops cancer, every piece of information that helps us better understand the disease matters. Every tumor is unique. **The more precisely we understand what defines a tumor, the more effectively we can investigate which treatment is the best option for a child.** At St. Anna Children's Cancer Research Institute, we are therefore establishing the groundbreaking new technology Nanopore Sequencing.

In many cases, several different tests are needed to capture the complex characteristics of a tumor. **This innovative technology can extract an exceptional amount of information from just one single tumor sample at the same time.** It reveals changes within the genome and provides much more insights into how a tumor is biologically structured and regulated. Another major advantage is its ability to identify complex genetic alterations that are often difficult to detect using conventional methods. In childhood cancers, such information can be crucial for **gaining a deeper understanding of a tumor** and ultimately improving diagnosis, treatment decisions, and outcomes for young patients.

Speed and time also play an important role. The data can be analyzed while the sequencing process is still underway, allowing researchers to build a comprehensive molecular profile of a tumor in significantly less time.

Lara, former cancer patient



Why is this research so important for children with cancer?

In childhood cancer, every piece of information matters, and every single sample is precious, as childhood cancers are rare diseases. At the same time, researchers often have access to only very small amounts of tumor tissue. This makes it all the more important to extract as much information as possible from every available sample, and that is exactly where this project comes in. Our goal is also to bring these research findings step by step closer to clinical application, **so that even more children can benefit in the future from highly targeted cancer therapies tailored to their individual disease.**

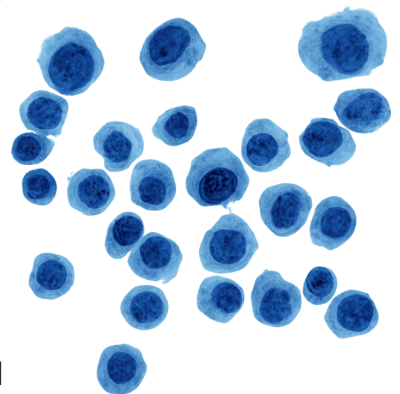
What your support can achieve

With your support, we can establish a groundbreaking technology and carry out **comprehensive analyses of tumor samples from children with cancer.**

>> 1 tumor sample analysis costs USD 1,190*

Every sample counts and provides valuable research findings.

Your support not only lays the foundation for these in-depth analyses, but also helps establish an innovative research technology that has the potential to benefit many more children with cancer in the future.



Our impact

Budget: USD 83,300 at least

1 Establishing a key technology for childhood cancer research

We are creating the scientific and technical foundation needed to use Nanopore Sequencing as a powerful tool for childhood cancer research in the long term.

2 Comprehensively analyzing tumor samples

An initial cohort of 70 to 100 tumor samples will form a valuable dataset, helping researchers gain a deeper molecular understanding of childhood cancers.

3 Maximizing knowledge from every precious sample

Instead of conducting multiple separate tests, Nanopore Sequencing allows us to investigate different types of tumor alterations within a single integrated analysis. This is particularly important in childhood cancer, where only very small amounts of tumor tissue are often available.

*Basis: calculation dated 15 September 2026

4 Revealing hidden changes within tumors

This innovative technology enables us to detect complex genetic alterations that are often difficult to identify using conventional methods. By uncovering these hidden changes, we can gain a more detailed understanding of what drives a tumor and what makes it different from others.

5 Research today for the treatments of tomorrow

Through this project, we are building the scientific foundation to explore how Nanopore Sequencing can be used to benefit children with cancer in the future. We are developing the necessary workflows, validating the quality and reliability of the results, and generating valuable research data that will help pave the way for future clinical applications.

"With your donation, you are investing in a technology that can unlock more knowledge from every tumor sample and help us achieve our goal of understanding childhood cancer more precisely, paving the way for treatments that are increasingly tailored to the individual needs of each child with cancer."



Assoc. Prof. Dr. Eleni Tomazou
Scientific Director

About

St. Anna Children's Cancer Research Institute was founded in 1988 with a clear purpose: **to improve the chances of survival for children with cancer through dedicated research.** Our close connection to clinical practice allows us to translate important questions from everyday patient care into research projects and to develop new scientific insights with the needs of children with cancer at their core.

Childhood cancers differ significantly from adult cancers and therefore require their own research approaches tailored specifically to young patients.

To continue advancing this vital work, we rely heavily on charitable support. **St. Anna Children's Cancer Research Institute is funded largely through private donations** and holds the Austrian Seal of Quality for Non-Profit Organizations (Spendengütesiegel). Every contribution helps us drive forward innovative research, deepen our understanding of childhood cancer, and open new pathways toward better treatments and cures for children affected by cancer.

Notes

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*Until the day childhood
cancer is curable.*



St. Anna Kinderkrebsforschung
CHILDREN'S CANCER RESEARCH INSTITUTE



Research gives children a future

Through science, St. Anna Children's Cancer Research Institute creates new hope: hope for better treatments, higher cure rates, and a future in which more children can overcome cancer and go on to live healthy lives.

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