ANNUAL REPORT
2022

CANSEARCH
fondation de recherche
contre le cancer de l'enfant

Chairman's editorial

In 2011, under the impetus and vision of Professor Marc Ansari, the CANSEARCH Foundation was created with the strong conviction of building a world where all children can grow up without worrying about their future. It's an ambitious project, but one that is crucial if the words paediatric cancer are to become synonymous with a cure.

So much progress has been made. A decade of innovative research, major advances and concrete results. From 4 researchers in 2011, the research platform now has more than 30, recruited for their expertise from the 4 corners of the world, active in more than 30 studies in different fields, in close collaboration with the University Hospitals of Geneva (HUG) and the University of Geneva (UNIGE).

CANSEARCH also means supporting programmes for the long-term follow-up of children and adolescents who have had cancer. CANSEARCH is also creating paediatric palliative care, a form of comfort care that is still all too often indispensable in Geneva and Switzerland.

In just a few decades, advances in research have made it possible to achieve a cure rate of over 85%. Cases that were hopeless just 5 years ago now benefit from long-lasting effective treatments. It is to cope with the growing number of sick children and not to forget the 15% of children who cannot be saved that the Foundation fights every day. Thanks to CANSEARCH, Geneva has become a centre of excellence in Switzerland, Europe and the rest of the world.

Eleven years of effort and progress are the fruit of hard work by close-knit teams. This adventure for life has only been made possible thanks to the trust and support of our generous and loyal donors, volunteers and partners. It is with hope and ambition intact that the Foundation has plunged into its second decade of existence. This world of progress, this lasting impact on our children's future, is something we believe in today even more than we did yesterday, so let's have faith in research and remain united, so that life can go on.

Sébastien Joliat,
Chairman of the Foundation Board

A word from the Founder, Professor Marc Ansari

The paediatric oncology revolution: from progress to hope

Professor Marc Ansari
Responsible for the Paediatric Oncology and Haematology Unit at the HUG and Director of the CANSEARCH research platform in paediatric oncology and haematology at the UNIGE.

This Summer, during my daily visits to patients at the hospital, I was struck by sheer number of them - more than fifteen, aged between 1 month and 18 years. Suddenly, we were faced with an increase in cases. We had to adapt by making more beds available to accommodate them all. Unfortunately, childhood cancer is on the increase, as confirmed by statistics from the Swiss Federal Office of Public Health. More than 350 new cases are diagnosed each year in Switzerland. Cancer remains a disease that kills our children all too often in the 21st century. As for the survivors, some suffer severe toxicity secondary to their treatment: heart failure, kidney failure, hearing loss, infertility, cancers secondary to the treatment of the first cancer.

Paradoxically, there is every reason to be hopeful. The impressive therapeutic advances of the last forty years have already resulted in over 85% of young patients in our country being cured. Oncology has made more progress in 30 years than in 2000! A real revolution in precision oncology and immunotherapy is underway, linked to advances in technology, information technology and bioengineering. What's more, this boom in paediatric oncology has developed like no other branch of medicine.

CANSEARCH and its research platform have contributed to these tremendous advances in precision medicine. With the individualisation of treatment established for each child, we can determine, before starting treatment, who is at risk of recurrence and who will develop toxicities, thanks to the genetics of each individual. This enables us to anticipate whether the standard treatment needs to be modified. Today, chemotherapy is no longer calculated solely on the basis of the child's weight or body surface area. We are working to dose it according to the child's genetics, to improve his or her chances of survival while reducing the toxicity of the treatments. To this end, we have just launched the BuGenes study, the first randomised prospective paediatric pharmaco genomics trial in Europe and Canada, in which chemotherapy doses are administered according to the personalised genetics of each child. The first patients to benefit are currently in Geneva. The great victory of the CANSEARCH research platform lies in its direct impact on children's lives, sometimes even in real time.

After all these years of unwavering commitment to children and their families suffering from cancer in Geneva, it's time to acknowledge what has been achieved under the banner of CANSEARCH and its loyal partners. I'd like to thank all those who support, from near and far, the families affected, who are propelled into a marathon without ever having had any training. At that moment when life turns upside down and teaches you in 10 days what in 50 years we sometimes still struggle to understand: courage, strength, lucidity... only possible in resilience, giving up, defencelessness... So I want to pay tribute to the parents, the siblings and the superheroes, the children.

Even though paediatric cancers strike relentlessly, every day, "the best way to achieve the impossible

is to believe it's possible! And remission is possible. Every year, we cure many more children thanks to our donors, thanks to our teams, thanks to CANSEARCH. A foundation that grows stronger every year, a real success story that we have built together, with all of you. You've clearly become involved in the happiness of present and future generations! CANSEARCH is a foundation for children, so that they can live longer, for them, with you, so that they can keep hope alive... A huge thank you for your support.

Painting created by the children of the paediatric oncology unit for Professor Ansari.

" I feel like time is slipping away from me like sand through my fingers "

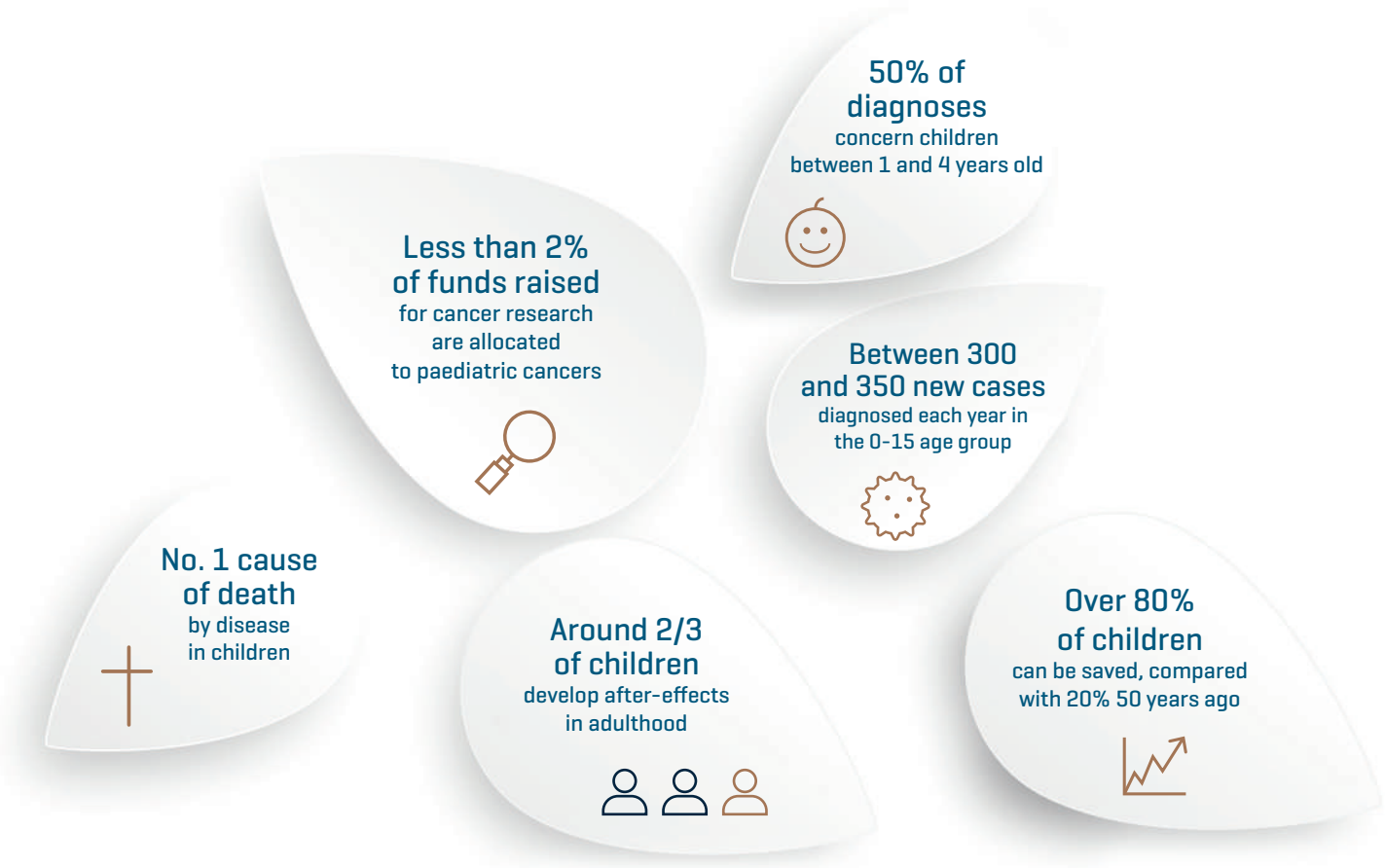
a 16-year-old teenager, now deceased.

" I just wanted to write to you for adding years to my life and life to my years. "

a teenage cancer survivor today.

Key figures

Data on childhood and adolescent cancer (0-19 years)



Institutional film, scan the QR Code:

The concrete results of research

More than 1,500 children in Geneva, Switzerland and around the world are benefiting from our research

An increase in the survival rate of children receiving haematopoietic stem cell transplants from 62% to 85% since the platform opened

A reduction in secondary mortality due to treatment toxicity in children receiving stem cell transplants from 18.5% in 2007 to 3.5% today in Geneva

More than 30 active researchers, laboratory technicians, clinical research assistants, study coordinators and students

273 scientific articles published and 307 abstracts presented at international and national conferences since 2011

A contribution to open science through participation in activities with post-compulsory students for their final year work, publications of all our research results in open access journals and repositories, creation of the Geneva Biobank in Paediatric Oncology and Haematology (BaHOP) and links with the Swiss Childhood Cancer Registry and the Paediatric Tumour Biobank in Paediatric Oncology and Haematology (SPHO), which will be accessible to all researchers from 2022.

More than 70 medical centres around the world with whom we collaborate and whose patients we include in our individualised therapy studies (in particular for childhood leukaemia and paediatric liver cancer)

Opening of the first international randomised study in Europe on individualised prescription according to the genetics of each child receiving Busulfan-based chemotherapy (Bugenes study).

10 institutional and competitive grants obtained (in particular from the Swiss National Science Foundation, the Swiss Cancer League and the European Horizon 2020 programme)

8 research areas: pharmacogenomics and individualised therapy, neuroblastoma, liver tumours, haematopoietic stem cell transplantation, brain tumours, haematology, biobank infrastructure and genetic risks of post-treatment complications

Creation of the first national germline DNA biobank for children with cancer at the HUG, and certification by the Swiss Biobanking Platform.

More than 30 active research projects, including a project in India

More than 20 affiliations with national or international organisations, including the EPFL, the Hôpital Sainte-Justine in Canada and the Institute of Social and Preventive Medicine in Berne

Major affiliations and collaborations at national and international level, with various positions held on the committees of various organisations and medical associations ("European Blood and Marrow Transplantation group", "European Society of Individualised Therapy and Pharmacogenetics", "Swiss Society of Toxicology and Clinical Pharmacology", "Swiss Group of Pharmacogenomics and Individualised Therapy", SIOPEL "International Society of Paediatric Oncology for Liver Cancer", etc.).

Invitated to participate in numerous scientific conferences.

Finance and presentation of accounts

On behalf of the CANSEARCH Foundation, I am delighted to report that our financial health is strong! Thanks to your support and that of many other donors, we have been able to continue our mission to fight paediatric cancer and improve the quality of life of children affected by this disease. Thanks to your continued support, we have been able to achieve many important goals over the past year, including funding exciting research projects and setting up support programmes for families affected by paediatric cancer.

The CANSEARCH Foundation has a very conservative financial approach. We attach great importance to the prudent management of our financial resources, ensuring that every franc is invested responsibly to maximise its impact on research and support for our young patients.

We have put in place rigorous financial policies to ensure the Foundation's long-term financial stability, by limiting risks and maintaining a solid financial reserve. We are proud to say that our financial approach has been successful and has enabled us to remain financially stable and sustainable, and we understand that the trust of our donors is essential to support our work. We therefore want to assure you that we will continue to manage our resources prudently and responsibly in order to maximise our impact and ensure the long-term sustainability of the Foundation.

Our accounts are audited in accordance with the provisions of art. 727a of the Swiss Code of Obligations.

Phil Lenz
Treasurer of the Foundation Board

Income statement for the year 2022

	2022 CHF	2021 CHF
Income	**3 603 416**	**4 099 019**
Dons collectés	3 560 682	4 060 969
Dons collectés en nature	30 734	23 051
Subventions et aides financières, Ville de Genève	12 000	15 000
Direct expenses	**2 112 086**	**1 567 563**
Frais de laboratoire	148 875	147 380
Frais de personnel & autres frais pour la recherche	1 702 247	1 361 541
Dons et soutiens à la recherche	35 132	43 020
Initiatives 2.0	222 323	-
Amortissement du matériel	3 507	15 622
PROFIT FROM OPERATIONS	**1 491 331**	**2 531 456**
General and administration expenses	**839 065**	**349 003**
Frais évènementiels	508 396	13 360
Frais du personnel administratif	193 586	180 255
Honoraires comité scientifique	10 276	10 276
Frais des locaux administratifs	33 288	24 560
Frais généraux d'administration	70 477	104 075
Honoraires	23 044	16 478
EARNINGS BEFORE INTERESTS AND TAXES (EBIT)	**652 265**	**2 182 452**
Financial result	**-13 565**	**-434**
Frais bancaires	-10 829	-882
Autres produits financiers	166	60
Résultat sur variations de change	-2 901	388
EARNINGS BEFORE FUND AFFECTATION	**638 701**	**2 182 018**
Funds contributions	**638 701**	**2 182 018**
Attributions au fonds affectés à la recherche	552 326	2 197 642
Attributions au fonds pour amort. du matériel de recherche	86 375	-
./. Dissolutions au fonds pour amort. du matériel de recherche	-	-2
./. Utilisations des fonds	-	-15 622
NET PROFIT	**0**	**0**

The Board, Committees and Team

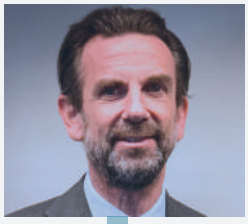
The activities of the CANSEARCH Foundation are carried out by many people, most of whom give their time on a voluntary basis. They offer us their expertise and enable us to achieve our objectives.

In October 2022, Mrs Patricia Legler, General Secretary for five years, decided to take on new professional challenges. We would like to thank her warmly for her work on behalf of CANSEARCH.

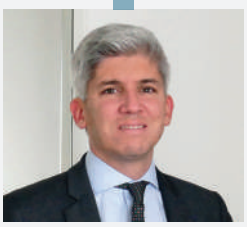
Founder

PROF. MARC ANSARI,
Head of the Paediatric Oncology and Haematology Unit at the HUG and Director of the CANSEARCH paediatric oncology and haematology research platform at the UNIGE.

Members of the Foundation Board

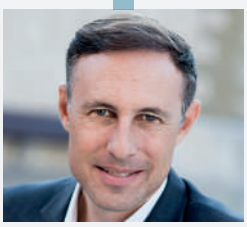


SÉBASTIEN JOLIAT,
Chairman



GUERRIC CANONICA,
Member

PHIL LENZ,
Treasurer

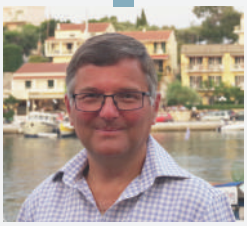


MAURICE MACHENBAUM,
Member

PATRICIA HUBSCHER EICHENBERGER,
Member

Members of the Scientific Committee

PROF. JAKOB PASSWEG,
Chairman



PROF. RODERICK SKINNER

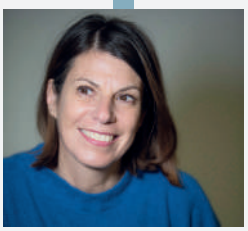
PROF. SYLVAIN BARUCHEL

PROF. URS A. MEYER

General secretariat and office

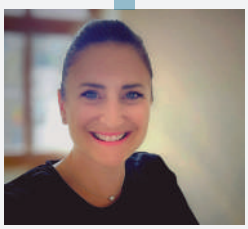
PATRICIA LEGLER, General Secretary (until Sept. 2022)

NURIA BERMUDEZ, Fundraiser (from March 2021 to February 2022)



THANH MAI Administrative and Financial Manager (from November 2022)

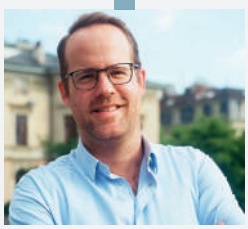
VALÉRIE STECK Interim General Secretary (from Oct. to Dec. 2022 and fixed from January 2023. Valérie already held this position from 2013 to 2017)



Events Organising Committee

STEPHANIE ANSARI

GIAN CLA PINÖSCH



ALIX RIVOIRE Permanent Volunteer

CATHY WINTSCH Permanent Volunteer

Honorary Committee

MAÎTRE ROBERT HENSLER, MARTHA ARGERICH, GUY DEMOLE, LÉONARD GIANADDA, ROMAIN GROSJEAN, CAROLE HUBSCHER, FREDY ET FRANCO KNIE & FAMILIES, BERTRAND LEVRAT, RAYMOND LORETAN, MICHÈLE MAUS, OLIVIER MAUS, PIERRE MOTTU, CLAUDE PICASSO, STAN WAWRINKA, JEAN ZERMATTEN, ZEP.

Every two days in our country, a child learns that he or she has been cured of cancer. Thanks to your generosity and solidarity, we hope one day to be able to say: in Switzerland, every child with cancer knows that he or she will be cured. Every year, thanks to CANSEARCH, medical teams now manage to cure cases that would have been hopeless 5 years ago. CANSEARCH's work is exciting. It is also expensive, very expensive. Thanks to you, thanks to your loyalty, this work is possible. Thank you for being united behind the cause defended by CANSEARCH. The cured children have won their battle, and CANSEARCH's battle continues. Let's all stand united against disease and for research.

ROBERT HENSLER
President of the Honorary Committee

Interview with Maurice Mauchenbaum

Member of the Board of the CANSEARCH Foundation and philanthropy expert

Serial social entrepreneur, Maurice Machenbaum is a founding member of CANSEARCH, Casa Alianza Suisse, WISE philanthropy advisors and the Swiss Philanthropy Foundation. This lawyer is also a philanthropy consultant and an expert in social development and project management. In the course of his brilliant multi-task career, he has worked on almost 300 projects in over 35 countries. He has also served on the Foundation Boards of the World Scout Movement and Médecins du Monde Switzerland. Now that he has been living in Vietnam for a dozen years, this man of the field has decided to take a step back. However, Maurice Machenbaum has remained a faithful member of the CANSEARCH Foundation Board since its creation over ten years ago. Let's take a look at his extraordinary career.

Where did the spark of volunteerism that ignited your passion come from, when you were just a teenager?

Maurice Machenbaum : Nothing was thought through. It was just a combination of circumstances. I may have started with an invitation to join Scouting at the age of 17 (Editor's note: he was Treasurer of the World Scout Committee from 2007 to 2013). Then everything came together when I finished my law degree in 1994 and discovered Casa Alianza. I volunteered 'on the ground' for 12 months in Honduras as a street educator and stayed on to work at the regional office in Costa Rica before founding Casa Alianza Nicaragua. That experience was the catalyst that changed the course of my life. I had studied law, but I didn't want to be a lawyer. I was interested in social work. After working with street children in Latin America, it became my profession...

And the social commitment bug hasn't left you :

M.M : Once again, one meeting followed another... After Casa Alianza I did a Masters in humanitarian action. During that time, I met ICRC officials, and as I was working on a dissertation on child soldiers, they asked me to do some research on the subject. Later, at a conference, I met representatives of Terre des hommes and they were interested in my profile. One thing led to another, and they hired me. (Editor's note: In 2000, he became Programme Director for Latin America and the Caribbean for Terre des hommes Lausanne, Switzerland's largest independent NGO focusing on children). It's like Médecin du Monde: a friend was on their board and invited me to join. It's always a question of networking for me. I've been lucky in that I've never really been actively looking for work. And it was with my friend and partner Etienne Eichenberger that we created WISE, and then the Swiss Philanthropy Foundation.

You are a founding member of CANSEARCH. Why did you become involved in this cause?

I had no particular reason to become interested, even though this cause is close to my heart. I joined Marc Ansari, a school friend, in this venture because I was already familiar with the world of foundations and had some experience to share.

Solidarity is what binds CANSEARCH together...

If you're open-minded enough to get involved in supporting others, you just have to find your own way of contributing... It's a general state of mind that can also be expressed in a very discreet way, with your family, friends or neighbours. Besides, you can't do any project on your own. Humility is essential. CANSEARCH is above all a team. Only together can we achieve great things.

What is your role within CANSEARCH?

It has evolved considerably over the last eleven years. Initially, I played a structuring role because of my experience of foundations and their legal frameworks. At the same time, my experience of dealing with donors was also useful. Today, I offer support and share my perspectives. But I'm not a 'day to day' driver. In any case, it's not easy living in Vietnam. It's also a question of timing. I spent many years setting up a philanthropy consultancy, creating foundations and designing and developing projects in Latin America. Today, I'm in a less operational phase, but one that's moving towards consultancy.

Tell us about a high point in your time with the Foundation?

Recently, just after the emergency fund was set up, a child was in a terrible situation. He was at risk of dying... Treatment was available in Germany, but not recognised by insurance companies in Switzerland. Marc (Ansari) was able to access the treatment, which cost hundreds of thousands of francs. Without knowing whether the insurance companies would reimburse him, the Committee was asked to pay for his treatment. Our unanimous response was a resounding yes. This ability to react immediately when a life is in danger is just magic! What an extraordinary privilege to find funding and solutions so quickly. CANSEARCH is this ability to react on the fly, and not just for long-term research, but also to save lives instantly.

After eleven years in existence, what are the challenges facing CANSEARCH?

As with any foundation, the challenge lies in managing growth. CANSEARCH is recognised, much appreciated and sometimes criticised, which is often a sign of success. Growing and building stable, solid teams is a major challenge. Growth is not just financial. Of course, you must succeed in raising enough funds to support the Foundation's ambitions, but the most important thing is to build up a structure, a solid backbone to support this expansion without hitting a brick wall. CANSEARCH has reached a point of maturity. That's why it is now in the CANSEARCH 2.0 era. After ten years of building, discovering, developing and structuring, it has embarked on a new phase of evolution that has been unfolding for the past year.

What prompted you to set up WISE, a philanthropy consultancy?

It was meeting Etienne Eichenberger, a long-standing friend, that was the trigger. We came from two different worlds, but we had a similar understanding of the gap that existed between these very wealthy potential donors and this jungle of very interesting projects. There was no structure to link the two in an independent and disinterested way. For example, if you're in CANSEARCH, you meet someone, you offer to support CANSEARCH because you want to see your own projects funded. WISE starts with the donor and facilitates links between wealthy individuals and social entrepreneurs. It will listen to the person and determine their interests in order to propose tailor-made projects. It was innovative, exciting and useful to create a start-up from within a large structure. WISE allowed us to create a tailor-made professional activity. At the same time, Etienne and I set up the Swiss Philanthropy Foundation, which has grown enormously - even more than WISE - and distributes tens of millions of dollars a year.

And now what is your line of business?

In my fifties, things change. I never necessarily thought I'd be working until I retired. After travelling the world, always on the move, I feel a certain exhaustion. Once I've made sure that the structures I've created work independently, I'm comfortable retiring. My philosophy is inspired somewhat by Asia, where life is divided into three phases: the first third of life is spent learning, going to school or university; the second third is spent being active, creating, having a job and a family; and finally the third part of life is spent passing on the legacy. This vision speaks volumes to me. My aim wasn't to reach the twilight of my life working non-stop. I want to enjoy different aspects of life and be able to look back at any moment and say that I'm satisfied with what I've achieved, with my life...

CANSEARCH research projects and their progress in 2022

Individualised therapy, a global pharmacogenomics project

Individualised therapy - in which variations in dosage are assessed using pharmacogenomics - makes it possible to improve the efficacy of drugs, reduce their toxicity and reduce the risk of relapse.

Pharmacogenomics (PG) is the science that examines individual genetic variations and uses this knowledge to predict whether a patient will respond favourably, poorly or not at all to a drug. In oncology, it has been shown that 20% of patients do not respond to standard treatment. Therapeutic agents used in cancer chemotherapy are ideally suited to PG studies, as they are often administered at doses that produce severe toxicity with a highly variable inter-individual response. Therapeutic agents used in chemotherapy must therefore be administered at optimal doses to obtain the best effect. Short- and long-term toxicity affects over 40% of cancer patients and can be life-threatening or permanently disabling.

Pharmacogenomics research, particularly in relation to the therapeutic agent Busulfan, is a key area of focus for the CANSEARCH research platform, and the basis for numerous research projects and studies. For some treatments, pharmacogenomics (PG) is already a reality.

BuPGPK global study

The BuPGPK study makes it possible to personalise Busulfan-based chemotherapy treatments prior to haematopoietic stem cell transplantation for an optimal therapeutic response.

Busulfan (Bu) is a chemotherapy drug that is administered prior to haematopoietic stem cell transplantation (HSCT) in children. Bu is part of what is known as the myeloablative conditioning regimen, which consists of destroying the diseased marrow. Bu has a sensitive therapeutic window, meaning that the difference between its effective dose and its toxic dose is small. It is therefore necessary, once administered, to set up therapeutic monitoring of this drug in order to adjust its concentration to obtain an optimal therapeutic response.

It is hypothesised that differences in a patient's inherited genetic profiles of drug metabolism proteins and DNA repair proteins are one of the factors that could affect Bu efficacy. In order to identify new candidate genes linked to Bu toxicity, genomics and transcriptomics could be applied to Bu pharmacogenomics. At the same time, in silico analysis of the gene expression of proteins involved in specific functional designalisation processes induced by Bu could also be used to identify target genes. In addition, the functional genetic variants of these identified genes could be used as markers to predict the response to Bu in a personalised manner in order to obtain a therapeutic benefit.

This study involves gathering clinical, pharmacokinetic and genetic information from children who have undergone stem cell transplantation, following a conditioning regimen that includes Bu. The aim is to identify new candidate genes by transcriptomic analysis, sequence the exome/entire genome, and carry out in vitro analyses to study in greater detail the functionality of variants of these new candidate genes. Analyses of the transcriptome and cytotoxicity of Bu are under way in order to identify new candidate genes.

FORUM & EXPOS studies, ALL SCTpedFORUM 2012

The FORUM ancillary study aims to identify genetic variants in patients with acute lymphoblastic leukaemia (ALL) in order to individualise treatment and improve response, efficacy and reduce associated toxicities.

The main ALL SCTped FORUM study, which began in April 2013, focuses on acute lymphoblastic leukaemia (ALL). Patients with high-risk or relapsed ALL have a poor prognosis. The primary objective of this study is to demonstrate that non-irradiation conditioning with intravenous fludarabine (Flu), thiotepa (Thio) and busulfan (Bu) or FluThio plus treosulfan (Treo) results in non-inferior event-free survival (EFS) compared to total body irradiation (TBI) conditioning in children over 4 years of age after hematopoietic stem cell transplantation from an identical or matched donor. As part of this study, our research platform proposed a complementary study of the pharmacogenomics (PG) and pharmacokinetics (PK) of the chemotherapy and radiotherapy drugs used in the trial.

In 2022, 1,374 patients were enrolled in the main trial, and we received 429 biological samples in Geneva.

DNA extraction and DNA quality assessment were performed on 366 samples up to June 2021. A total of 354 samples meeting the quality and quantity requirements were sent for whole-genome sequencing, without the use of a pre-amplification process, to the Genome Center, Campus Biotech, University of Geneva. A preliminary pharmacokinetic description of the patients receiving Bu has been presented at the study investigators' meetings every year since 2019 until now. Since the publication of the first clinical trial results, clinical data have been shared with our platform for genotype-association analysis and pharmacokinetic associations.

EXPOS study

The aim of the EXPOS study is to identify genetic variants in children undergoing chemotherapy following haematopoietic stem cell transplantation, to personalise the therapy, improve its efficacy and limit complications.

We hypothesise that certain genetic markers selected based on the in vitro transcriptomic and cytotoxicity (IC50) profiles of chemotherapeutic agents (Bu, Treo) and TBI used in HSCT will reveal unique and compound-specific underlying mechanisms that are potentially responsible for the complications and reduced efficacy of therapy in children undergoing haematopoietic stem cell transplantation. The aim of the EXPOS study is therefore to identify the genetic markers that determine response to chemotherapy treatments and that are associated with complications linked to treatment toxicity and relapse in paediatric patients undergoing HSCT (stem cell transplantation).

MYECHILD 01 study

The MyeChild 01 pharmacogenomics sub-study aims to identify genetic risk factors in patients with childhood myeloid leukaemia (AML) in order to personalise their treatment and thus improve response, efficacy of the anti-leukaemic effect and also reduce treatment-related toxicities.

Although childhood myeloid leukaemia (CML) is a rare disease in children and adolescents, it is nevertheless a major cause of cancer mortality in children, mainly due to relapse. MyeChild 01 is a prospective clinical trial that builds on the experience of previous international trials to test a number of therapeutic strategies that may improve outcomes. Its objectives are to:

1) Retrospectively and prospectively validate known genetic risk variants that modify the efficacy and/or toxicity of treatment regimens used in children diagnosed with AML in the Myechild 01 study.
2) Identify new genetic markers of treatment response by conducting a targeted exploratory study using whole genome sequencing and germline transcriptome from saliva or buccal samples. Identifying these genetic risk factors would make it possible to personalise AML treatment, thereby improving results and the efficacy of the anti-leukaemic effect, as well as reducing treatment-related toxicities.

Recruitment for the MyeChild 01 study began in April 2016 and will run until June 2022, with a total of 720 participants recruited from the 6 partner countries (United Kingdom, Australia, New Zealand, France, Ireland and Switzerland). The contract between the CANSEARCH research platform and the study sponsor was signed in June 2020, enabling the retrospective recovery of samples (saliva or buccal swabs) from participants registered with laboratories or biobanks. A total of 514 patients have agreed to take part in the pharmacogenomic substudy.

We plan to carry out a statistical analysis combining two types of independent data: in vitro data obtained in our laboratory and clinical data from whole genome sequencing of AML patients to identify the risk of relapse and complications linked to toxicity.

BUGENES study

The ultimate aim of the BuGenes study is to include personalised pharmacogenetic recommendations in future international treatment protocols. These new recommendations will take into account the genetic differences of young patients in order to reduce the toxicity of treatments and increase their effectiveness. The result will be truly personalised chemotherapy based on the unique genetics of each child.

The aim of the study was to compare two ways of determining the first dose of Busulfan (BU) during packaging, based on : 1) current clinical practice, i.e. the patient's age, sex and weight, and 2) pharmacogenomics (PG), i.e. the patient's age, sex and weight, including the patient's genetic criteria for the GSTA1 gene. To our knowledge, BUGENES is the first prospective pharmacogenetic study of children in oncology in Europe! It is the first dose prediction study to compare the role of incorporating a genetic marker in dose prescription in children. Another innovative aspect is the inclusion of a second chemotherapeutic agent, Fludarabine (Flu), in the prediction of Busulfan clearance. The results of this study are intended to modify the drug's current labelling by incorporating the first pharmacogenetic recommendation for Busulfan dosing in children, while considering its drug interaction with Fludarabine. Finally, if validated, these personalised doses could guarantee more uniform exposure to the drug throughout the days of administration.

The BuGenes study received approval from the Geneva Cantonal Commission on Ethics in Human Research in April 2021 for the Swiss sites of Geneva, Basel and Bern. Recruitment of DNA samples from children and adolescents began in June 2021 in Geneva and in October 2021 in Basel and Bern. Since then, 7 patients have been enrolled in Geneva and 2 in the hybrid Basel/Berne centre, and the study is set to expand internationally to include patients from medical centres in Canada, France, Italy and Denmark. Approvals are currently being sought from the relevant regulatory authorities to allow the study to begin at these sites.

GECCOS project – BISKIDS

Genetic risks of complications in children with cancer in Switzerland. The GECCOS project aims to improve knowledge of the genetic risks (affecting the germline) of developing complications in children with cancer, and to personalise their care during acute treatment and follow-up.

The aim of the GECCOS (Genetic risks for Childhood Cancer Complications in Switzerland) project is to identify genetic variants which may favour the development of complications in children who have had cancer. It focuses on three main complications in childhood cancer survivors in Switzerland (CCS), for which genetic predictors have not yet been fully identified: 1) pulmonary dysfunction, associated with various chemotherapy treatments and radiotherapy to the chest, which leads to higher hospitalisation rates and increased mortality; 2) hearing loss due to platinum chemotherapy. Even this mild form of hearing loss affects the long-term health and quality of life of patients with SCC; 3) second primary neoplasms, associated with various chemotherapies and exposure to radiotherapy, which contribute to excess mortality and significant morbidity. Other complications, such as cardiac toxicity, will be studied later.

The identification of genetic markers for each surviving cancer patient will enable us to predict the risk of developing complications and to anticipate personalised management in terms of treatment and follow-up. We will thus have high-quality phenotypic and genotypic data on a very well described Swiss population.

Samples and germline genetic data from the same patients will be obtained from the Geneva Paediatric Haematology and Oncology Biobank (BaHOP) via its associated BISKIDS section (germline DNA biobank for childhood cancer and blood disorders). Association studies between genetic variants and clinical data of interest will be carried out using a candidate gene based either on hypotheses or on a hypothesis-free approach at exome or genome level. All significant associations will be replicated in independent cohorts.

Germline DNA biobanking for children's cancer and blood disorders?

To date, BISKIDS has collected 530 germline DNA samples nationwide, starting in September 2019. A secure interface has been set up to link the samples and clinical data together and will be integrated into the Swiss National Science Foundation's (SNSF) national linkage project. All the clinical data from 202 patients with hearing loss has been screened to carry out an initial genotype-phenotype analysis using a candidate gene approach in those patients for whom we have coded audiograms and germline DNA. In addition, as part of a pilot international collaboration with France, we have also sequenced 12 patients with a second thyroid cancer. These data will soon be analysed.

Study BU-CY-B

The BuCyBu study will determine whether the order of administration of Busulfan versus cyclophosphamide plays a role in treatment toxicity and efficacy in patients undergoing haematopoietic cell transplantation.

Busulfan (Bu) and cyclophosphamide (Cy) are two chemotherapy drugs frequently used as myeloablative treatment prior to allogeneic haematopoietic cell transplantation (allo-HCT). Retrospective studies have shown that the order of administration of cyclophosphamide (Cy), before or after busulfan (Bu), has an impact on the outcome of transplantation.

In this context, the Bu-Cy-Bu study aims to investigate the benefit of changing the order of Cy administration. Genetic variants altering the function or regulation of genes encoding the GSTA1, GSTM1, GSTT1 and MGTM proteins could have an impact on the clinical outcome of Busulfan conditioning. The clinical association of genetic variants previously reported in paediatric patients may also have similar predictive utility in adult patients.

In this randomised trial, samples will be collected from patients in the different groups at the end of Bu or Cy administration, in order to explore biomarkers associated with clinical outcome, and in particular liver toxicity. We would also like to collect DNA before conditioning to analyse the association of GSTA1 genetic variants with the clearance of Busulfan. Other genetic variants that have been associated in our paediatric cohorts will also be tested for their association with clinical outcomes.

The results will form the basis of further large-scale studies (retrospective/prospective) to assess the

usefulness of these genetic markers for clinical outcomes. If the results are confirmed, they could then be implemented as part of risk stratification during patient conditioning.

PopPK study

The PopPK study will develop a model for calculating the personalised dose of Busulfan received by patients prior to haematopoietic stem cell transplantation, in order to increase treatment efficacy, reduce Bu-related toxicities and increase survival rates.

Our group has recently identified two sources of inter-individual variability that significantly influence certain pharmacokinetic parameters of Busulfan (Bu): 1) variants in the GSTA1 gene, genetic biomarkers; 2) the drug interaction of Bu with fludarabine (Flu). These factors are responsible for a degree of inequality between patients in terms of toxicity and event-free survival after haematopoietic stem cell transplantation (HSCT).

The PopPK study aims, firstly, to develop a model that will make it possible to accurately calculate, on an individualised basis, Bu doses for each patient (children and adolescents) prior to HSCT, and to obtain optimal therapeutic efficacy from the start of the conditioning treatment. Secondly, the potential effect of Flu on the function or expression of GST enzymes will be studied in silico and in vitro to understand the mechanism of the drug interaction between Flu and Bu observed in the clinical setting.

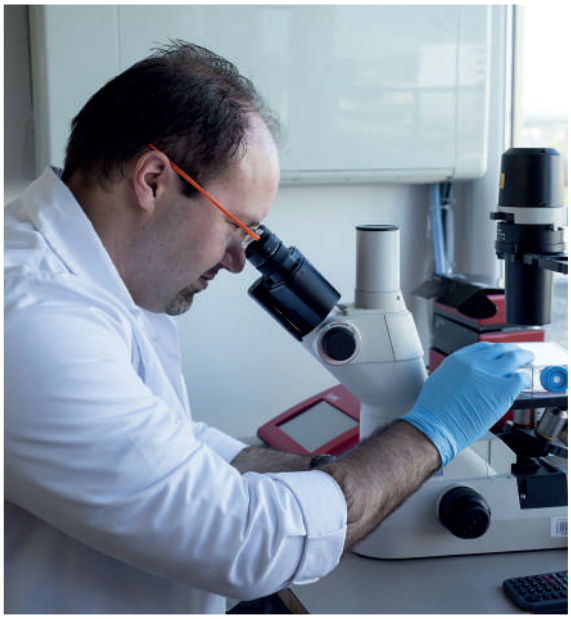
A multicentre paediatric PopPK model was developed, including metabolic groups of patients based on the GSTA1 gene, the presence of Flu, the day of administration, the patient's age and real body weight. A total of 402 patients were included in the study. Patients were randomised into two groups: one dedicated to model building (302 patients); the other to external model validation (100 patients). The new PopPK model performed better than most previous models in recommending the earliest doses predicted to achieve the AUC target exposure (a measure of the amount and time a drug spends in the body), with more than 80% of predicted AUCs within the therapeutic window. Further analyses are ongoing.

CoLApSOS study

The CoLApSOS study will reduce the risk of developing sinusoidal obstruction syndrome following post-conditioning haematopoietic stem cell transplantation, as well as increasing patient survival rates.

Sinusoidal obstruction syndrome (SOS) is a particular form of liver injury that specifically affects the cells lining the inside of the vessels. SOS is potentially fatal and occurs mainly, if not solely, after exposure to drugs or toxins. In fact, HSCT and other risk factors favour hepatic endothelial lesions, as does the activation of innate immunity, and more specifically that of the complement system.

The aim of this study was to identify the clinical factors and biomarkers associated with a higher risk of SOS in children undergoing haematopoietic stem cell transplantation after conditioning with Busulfan. These data could therefore influence the choice of conditioning by doctors but could also serve as a tool for identifying patients who might benefit from specific prophylaxis or preventive treatment. In addition, the present study may increase our knowledge of the pathophysiology of SOS, particularly regarding the regulation of the early inflammatory response associated with the conditioning regimen.



INDALL study

Evaluation of molecular and pharmacogenetic markers in relation to the toxicity and clinical response of acute lymphoblastic leukaemia treatment in children in India. By analysing specific genetic variants in Geneva, the INDALL study is making it possible to identify young Indian patients with ALL who are more susceptible to toxicity associated with chemotherapy treatment, in order to provide them with personalised treatment and thus increase their chances of survival.

Over the last five decades, the survival rate of children with acute lymphoblastic leukaemia (ALL) has improved considerably, from 20% to 80-90%. However, this improvement is limited to developed countries, which account for 20% of children with cancers such as ALL. The remaining 80% are in low- and middle-income countries, such as India, and do not always benefit from therapeutic advances. The survival rate of children with ALL in India is between 30% and 70%, mainly due to toxicities associated with chemotherapy treatment, such as infections, but also to lack of access to standard care, unavailability of appropriate supportive therapies and discontinuation of treatment.

The aim of this multicentre study is to identify in Indian children with ALL: 1) the genetic predisposition to toxicities associated with early chemotherapy treatment; 2) somatic genetic markers associated with the efficacy of corticosteroid therapy in patients undergoing the standardised treatment protocol. Specific genetic variations have recently been identified as crucial in determining toxicity and response to the treatment used to manage ALL.

Bibank infrastructure

BaHOP Geneva Pediatric Biobank for Research in Hematology and Oncology

The development of a national and international network of biobanks is vital for research. The BaHOP makes it possible to store high-quality biological samples in a highly regulated and secure facility, which can be used for research in paediatric onco-haematology at national or international level to improve knowledge in this field.

Registries linked to biobanks are essential in the development of cancer research, generating a high-quality resource with clinical annotation of relevant biological samples. Founded in 2016, the Geneva Paediatric Onco-Haematology Research Bank (BaHOP) was created to promote research to improve prevention, diagnosis and therapy in the field of paediatric oncology, haematology and immunology.

BaHOP is made up of : 1) the international division, dedicated to the collection and storage of samples and associated clinical data from patients enrolled in pharmacogenomics-related sub-studies; 2) the local division, which collects clinical data and biological material from patients treated in the HUG onco-haematology unit; 3) the national division with BISKIDS, created in 2018, to collect germline DNA from all Swiss children who have survived cancer and link these biological samples to their respective clinical data managed by the Childhood Cancer Research Group (GRC) of the Institute of Social and Preventive Medicine (ISPM) at the University of Bern.

To date, we have collected over 8,000 aliquots of individual samples from more than 2,200 patients. Clinical data are centralised in our Biobank Information Management System (BIMS) for patients treated at the UOHP of the HUG and for patients enrolled in sub-studies of international clinical trials. For patients included in the BISKIDS project, clinical data collection is centralised at the ISPM at the University of Bern.

BAHOP has been awarded the SBP Vita label and the NORMA label for efficient sample management has been obtained. Accreditation by the Swiss Biobank Platform (SBP) has enabled BAHOP to be listed in the SBP biobankSQAN directory. In addition, thanks to the SBP's collaboration with the European Biobanking and Biomolecular Resources Research Infrastructure - European Research Infrastructure Consortium for Biobanking (BBMRI-ERIC), the BaHOP is currently listed in the international BBMRI directory. Last year, members of the biobank also took an active part in various conferences, either by submitting a poster or giving oral presentations. BaHOP is currently supporting four research projects (including the GECCOS study), three of them with local resources and one international project with resources collected by the BISKIDS collection.

Neuroblastoma project

The Neuroblastoma project aims to improve our knowledge of the functioning of cellular signalling pathways within neuroblastoma tumour cells and to identify the key factors in order to gain a better understanding of the aggressive behaviour of this disease and develop better therapeutic strategies.

Neuroblastoma (NB) is the most common extracranial solid tumour in infants, accounting for 8-10% of all paediatric cancers. The behaviour of this tumour is highly variable, ranging from spontaneous regression to highly aggressive, metastatic forms that are resistant to all therapies. The prognosis for these NBs with a high risk of relapse is very poor, with a survival rate of around 40%, despite very intensive multimodal treatment.

It has become clear that improving cancer treatment will require the use of several chemotherapies acting in synergy to effectively eradicate tumour cells while preventing the development of resistance and minimising the side-effects of treatment. Clinical trials on patients with NB are underway to study the efficacy of combining different inhibitors to treat NB. Our preliminary results to date suggest that PRIMA-1MET is affected by RAS-MAPK andAKT-mTOR signalling, demonstrating a synergistic action with PRIMA-1MET.

RELIVE - Project on childhood liver tumours

The RELIVE project aims to identify the most promising treatments for improving the prognosis of children with refractory or recurrent liver tumours, as well as setting up scientific studies to optimise understanding and management of this cancer.

RELIVE

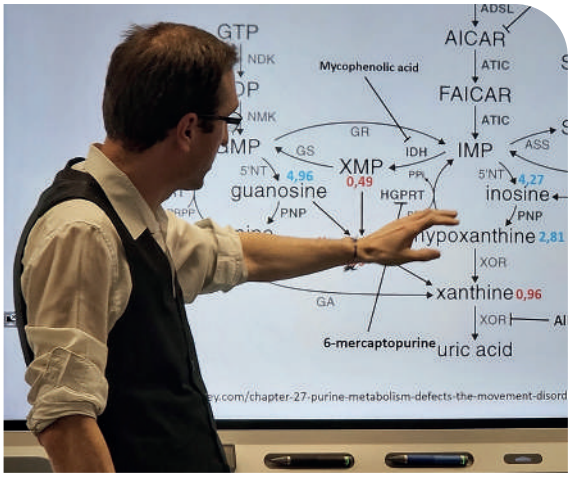
The aim of this international multicentre registry is to collect data on the health of children with refractory or recurrent liver tumours who have unsatisfactory long-term results with current treatments. RELIVE is therefore seeking to identify the most promising therapeutic approaches, with the ultimate aim of developing a clinical trial testing these approaches. Thanks to the support of the CANSEARCH Foundation, the RELIVE liver cancer research project has undergone some interesting and important developments.

Childhood liver cancer is an extremely rare disease, accounting for 1% of childhood cancers, with an excellent survival prognosis. Relapse of this cancer is also extremely rare, but an international collaborative study is needed to gather information that will give us a better understanding of how to treat these relapses, which currently have a very poor prognosis.

The International Registry of Relapsed Childhood Liver Cancer (RELIVE - https://relive-international.net), sponsored by the HUG and fully funded by the CANSEARCH Foundation, was created by Professor Marc Ansari, and a database developed at the Geneva University Hospitals (HUG) is available in a test version and a production version. RELIVE is already open in the USA, Canada, Europe, Australia, New Zealand and Japan. Steps are currently being taken to open the study in ten other countries. More than 50 patients have already been registered worldwide, with the aim of registering more than 200 children across the globe. RELIVE has been presented at the International Society of Paediatric Oncology for Liver Cancer (SIOPEL) congresses in 2021 and March 2022, and at the Children's Oncology Group (COG) in the USA in 2021.

CANSEARCH has been involved in this rare area for many years, having also co-sponsored the CHILTERN (PHITT) International Childhood Liver Cancer Meeting in Geneva in 2019. Following the retirement of the international head of the study of childhood cancer in Europe (PHITT) - Professor Bruce Morland - Professor Marc Ansari has been selected to take over this prestigious post.

In 2022, for the first time, the HUG will centralise the international coordination of all childhood liver cancers (new and relapsing). The CANSEARCH Foundation is proud of this development, which will have a significant scientific impact both in Geneva and internationally for these childhood cancers, which are still all too often forgotten in the 21st century.

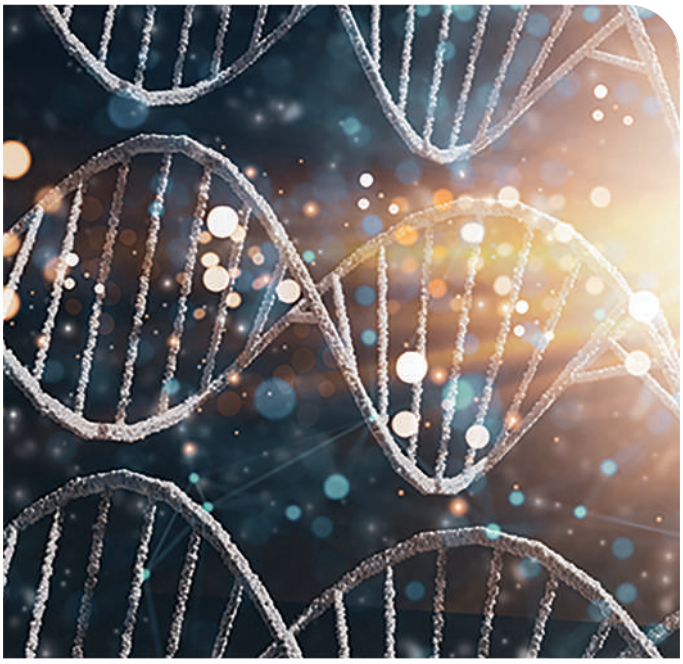


HGG project - on childhood brain tumours

The international registry of high-grade gliomas in children aims to improve knowledge of this rare disease in order to improve patient management and survival rates.

Even today, this disease has a survival rate of 20% after 3 years. The creation of an international registry of high-grade gliomas in children is therefore very important and will be carried out by the working group of the Society of Paediatric Oncology and Haematology (GPOH; Switzerland, Germany and Austria) and that of the European centres linked to paediatric HGG/DIPG (SIOP Europe Paediatric HGG working group). The aim of the HGG project is to systematically collect epidemiological, clinical and molecular data from young children with HGG in order to significantly improve knowledge of childhood HGG.

Our preliminary analyses have confirmed that young children with HGG do better than their older counterparts. Systematic collection of data on this rare patient population is currently necessary and urgent in order to acquire knowledge on the frequency of the disease, on specific histopathological subgroups and on the frequency of specific molecular alterations. This will help to improve the management of these patients in the future.



EPFL GVHD project - Transplantation of haematopoietic stem cells

The aim of the GVHD project, in collaboration with EPFL, is to limit the occurrence of graft-versus-host disease in cancer patients who have undergone allograft haematopoietic stem cell transplantation, by high-throughput sequencing of these patients' immune cells. The aim is to identify biomarkers for early detection of GvHD disease, treatment-related complications and monitoring of response to treatment, to improve response and, consequently, patient survival rates.

Acute graft-versus-host disease (aGvHD) is a formidable complication of allogeneic haematopoietic stem cell transplantation (allo-HCT), affecting one to two-thirds of patients depending on host and transplantation factors. Its pathophysiology is essentially attributed to rejection of host tissues.

Its rapid onset, coupled with uncertainties about its progression to serious and potentially fatal problems, poses diagnostic challenges for clinicians. These clinico-pathological features lead to the progressive use of broad-spectrum immunosuppressive treatment with a fall in secondary infectious complications. As almost half of patients die in this context, current research is focusing on the development of predictive biomarkers, with a view to early diagnosis and targeted immune modulation.

RNA sequencing at the cell level (scRNA-seq) offers the possibility of dissecting the immunological pathways involved in systemic immune responses. This high-throughput technology makes it possible to analyse gene expression at the level of a single cell, and is ideal for discovering new cellular players and new pathways involved in pathological processes.

The aim of this pilot study, carried out in collaboration with the EPFL, is to explore the immunological pathways involved in the development of GVHD and the evolution of immune cell populations over time in haematopoietic stem cell (HSC) allograft recipients, using data from RNA sequencing of peripheral blood mononuclear cells from patients with a history of GVHD and patients who received a HSC transplant without GVHD as a control group. Using statistical analysis of the transcriptomic data from these patients' cells, we will dissect at high resolution the immunological pathways involved in the pathogenesis of GvHD. Crucial variables will also include retrospective analysis of patient characteristics, blood counts, inflammatory markers and chemistry, treatments administered and measurements of circulating drugs, the course of GvHD and its outcome.

The CANSEARCH 2.0 initiatives

After 11 years of experience, the CANSEARCH Foundation wished to extend its support, still in accordance with its articles of association, to other aspects of paediatric oncology and haematology, but outside the work carried out in accordance with the CANSEARCH research platform. And so the new CANSEARCH 2.0 initiatives were born.

The CANSEARCH Research Grant

This grant is offered to researchers from all over Switzerland in fields related to paediatric oncology and haematology. It is awarded every two years, with projects being analysed by the Scientific Committee of the Swiss League Against Cancer. Our CANSEARCH scientific committee then selects the best project. In 2022, this grant was awarded to a collaborative project in French-speaking Switzerland on premature infants, namely the "Double-blind, non-inferiority, randomised controlled study evaluating the impact of alternating iron replacement (4x/week) or daily replacement on haemoglobin levels at 6 months in premature infants", led by Prof. Pfister and Dr Carlhan-Ledermann.

The survivors' grant

Survival rates for children affected by cancer in Switzerland continue to improve year on year, reaching over 85% overall for all types of childhood cancer. Unfortunately, for paediatric cancer survivors, this positive development is offset by a host of side effects. In this context, specialised medical monitoring is necessary. 4 years ago, thanks to private funding, a long-term survivor follow-up consultation service was set up at the HUG, with the appointment of a doctor specialising in this field. This post is essential and the Foundation is helping to fund the salaries relating to this consultation.

The CANHELP fund

The CANHELP fund supports the families of children with cancer and, more specifically, is an emergency fund to ensure that all patients in the Paediatric Oncology and Haematology Unit at the HUG have access to treatment and medication, which is sometimes too expensive and difficult for the institution to finance. Certain treatments are not always available in Geneva, and young patients must be sent elsewhere in Switzerland or abroad. This fund has also been used to help Ukrainian children suffering from cancer, who arrived in Switzerland because of the war. Thanks to the CANSEARCH Foundation, the teams in the Paediatric Oncology and Haematology Unit were able to adapt and deal with this emergency. CANSEARCH financed the salary of a nurse at HUG in the UOHP. The unit had to rapidly increase its nursing staff to accommodate the Ukrainian children.

Talent Management scholarships

CANSEARCH is launching a talent management programme by establishing several scholarships for researchers: 1) the Canmove mobility scholarship to study abroad and return to share expertise. 2) The Visiting Doctor scholarship to attract foreign researchers to Geneva. Dranny Gonzales is a researcher at Harvard University in the field of drug profiling (individualised therapy), and she will be joining the CANSEARCH research platform at the beginning of October 2023. 3) Fellowship to develop the young generation of future doctors at UOHP.

A look back at 2022

Publications and advances

Publications, awards and invitations to international conferences are all signs of recognition of the progress of our work in 2022, and attest that the CANSEARCH platform's research is extremely promising. But the Foundation is also growing thanks to the actions of loyal patrons and volunteers who are committed to our cause. In collaboration with CANSEARCH, they help to raise the Foundation's profile among an ever wider public, while at the same time raising precious funds to accomplish its mission.

CParticipation in conferences and publications allows CANSEARCH researchers to present the progress of their projects and to exchange ideas. After publishing in the New England Journal of Medicine in 2018, our platform has just published a study on brain tumours in the prestigious journal Nature.

CANSEARCH has sponsored the international congress of the European Society of Pediatric Liver Tumours (SIOPEL) during the congress of the International Society of Pediatric Oncology (SIOP) in Barcelona in September 2022, as well as that of the European Society of Pharmacogenomics and Individualised Therapy (ESPT) in Belgrade in October 2022. An Indo-Swiss symposium on the "Implementation of pharmacogenomics" was organised in JIPMER, Puducherry in India by researchers from the CANSEARCH platform.

First paediatric CAR-T Cell symposium at the HUG

Thanks to the support of the CANSEARCH Foundation, the 1st Paediatric CAR-T Cell Symposium was held at the HUG on 13 May 2022. More than 100 participants were present online or in the room to gain a better understanding of this highly innovative immunotherapy treatment. The world's youngest child with leukaemia to benefit from the kymriah treatment was treated in the Paediatric Onco-haematology Unit at the HUG. (This child has resumed a completely normal life and schooling.) The medical expertise developed in this context has enabled the Unit to obtain scientific accreditation, making it currently the only hospital centre authorised to offer this type of treatment.

Distinction: Sven Strebel, MPharm, PhD student

Sven holds a master's degree in pharmacy from ETH Zurich, as well as a Swiss federal diploma in pharmacy. He has been a member of the CANSEARCH research platform in paediatric oncology and haematology at the University of Geneva since November 2019. He is doing his PhD at the ISPM in Bern under the supervision of Prof. Claudia Kuehni and Prof. Ansari. He is working on clinical epidemiology at the Institute of Social and Preventive Medicine at the University of Bern and is collaborating with other researchers in the CANSEARCH team. It was in this context that Sven won 1st prize for best oral presentation at the Swiss Paediatrics Society Translational Session for his presentation of the results of his doctorate.

Dr Sven Strebel

The Research Platform

Moving

The CANSEARCH research platform in paediatric oncology and haematology at the UNIGE has moved from the emblematic "Tulipe" building opposite the paediatric hospital to the Centre de Médecine Universitaire (CMU) in November 2022. This new, larger space will be able to accommodate our growing research teams, while remaining close to the hospital. New recruits to the platform include Dr Isabelle Dupanloup, a specialist in bioinformatics and biostatistics, and Aurore Britan-Wood, a clinical research assistant and biologist (PhD) who coordinates several of our international clinical studies. Yvonne Gloor, PhD in molecular biology, has also joined us.

Actions

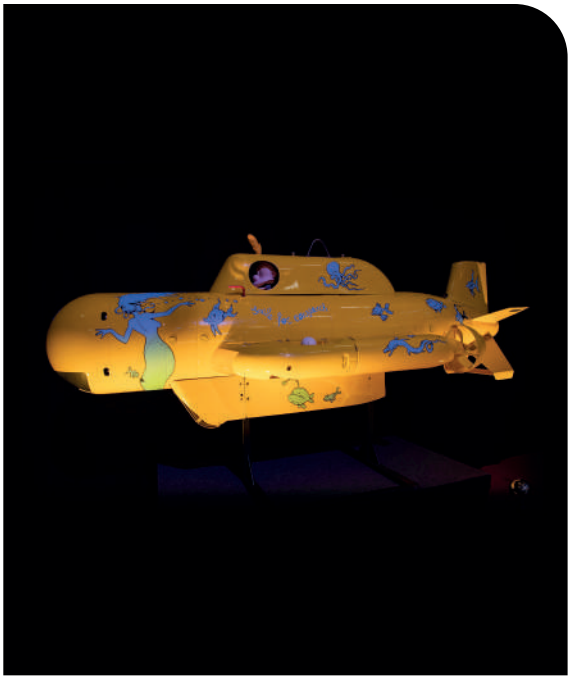
CANDO Action Groups

The CANSEARCH Foundation benefits from the support of several action groups set up by individuals loyal to the Foundation. Under this model, benefactors canvass their support to raise awareness and funds to finance research on the CANSEARCH platform. There are no initiatives too small; each CANDO contributes directly to our efforts to support research and our initiatives. For the year 2022, more than CHF157,000 has been raised. To launch its CANDO, an action group contacts the CANSEARCH secretariat, which if necessary provides administrative support, validates the documents presenting the Foundation and then links up with the database, website and social networks. The events initiated by the action group can be open to the general public or targeted according to the action or the geographical area, according to desires and aspirations... Here are some fine examples of the CANDOs that were of great support to us and that marked the year 2022:

The Smile for CANSEARCH submarine

In a former life, Smile was a remote-controlled submarine that explored the depths of the oceans. Thanks to the passion of two friends, it has resurfaced to advance medical research and support children with cancer. Convoyed from its former British home port to Geneva, this funny little yellow submarine was entrusted to the talent of ZEP to be completely redecorated and become Smile. Now with Captain Titeuf at the helm and a hull completely repainted and generously illustrated by the artist, Smile is ready to set off on an expedition in support of sick children.

The C2C4Cancer bike race was run by employees of Bristol Myers Squibb, a biopharmaceutical company and member of the UICC (Union for International Cancer Control), in aid of CANSEARCH. No less than USD 28,000 was raised and donated to the Foundation. At the same time, it provided an opportunity to present CANSEARCH's mission to employees of the UICC and Bristol Myers Squibb.



After an absence of two years, the Race for Gift charity race was held again in Geneva on Sunday 22 May 2022. Motivated by a remarkable enthusiasm, many participants - whether solo, with their families, as part of a company or with friends - walked or ran 5 to 10km in support of medical research into paediatric cancers. This magnificent sporting drive, combined with the generosity of the many participants, enabled us to win the prize for the biggest fund-raiser: CHF 55,000, which went to the CANHELP fund.

The 2nd CANGOLF tournament at Bonmont Golf Club took place on 12 June 2022, thanks to the support of Banque Bordier & Cie as main sponsor. The tournament brought together our loyal golf enthusiasts, but it also introduced new competitors to our cause and invited them to donate. Nearly 100 players helped raise CHF 16,000.

CANART. This event is particularly touching given the age and generosity of its initiator. Maya, a young artist, wished to support the CANSEARCH Foundation by presenting her work "Figures, Things in Space" at her first exhibition at the PACE gallery. Thanks to her talent and her big heart, this budding patron raised CHF 41,000. This amount will be entirely dedicated to CANSEARCH's paediatric onco-haematology research.

Street art at Jazz à la plage. This live performance by two Geneva-based graffiti artists, Jazi Graffiti and Tones, took place on 13 August as part of the Jazz à la plage festival in Hermance. The aim was to raise awareness of childhood cancer among a younger audience. The event even included a family street art workshop. Young and old were able to create a collective work of art in support of sick children.

CANYOGA at the Usine. . A yoga master class was organised at the Usine Sport club, with half the proceeds going to the Foundation. The aim was to combine business with pleasure, cultivate well-being and promote research into paediatric cancers.

Our benefactors often act alone, like the sponsor Paley Architectes. Touched by CANSEARCH's work, they organised a **CANGOLF Junior**, a tournament for young golfers on 5 November at the Bossey golf club.

A group of friends worked for researchers and children on behalf of CANSEARCH, organising a CANCHRISTMAS at the Vandoeuvres Christmas Market. Together, with love and generosity, they made wreaths in aid of the Foundation.

A huge thank you to everyone who got involved in these initiatives and who are making a real contribution to advancing scientific research.

CANSEARCH's 10th anniversary party

The long-awaited CANSEARCH evening was finally able to take place on 22 September at the Geneva Arena, after the restrictions imposed by the pandemic. As is the case every other year, the event was a huge success, attracting over 1,000 guests. Ten unique lots were offered at the traditional auction, including the famous CANSEARCH submarine customised by ZEP, a linocut by Picasso, and attractive tombola prizes that raised CHF 1,800,000. The evening was full of emotion, from smiles to tears, with highlights such as the moving testimony of teenagers from the Paediatric Onco-haematology Unit at the HUG. Thanks to every guest, the organisers, the speakers and above all the generous sponsors, the evening was a resounding success, inspiring hope in research.

To relive the highlights, scan the QR code

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