

Improving new drug development for children and adolescents: The **ACCELERATE** initiative

Gilles Vassal

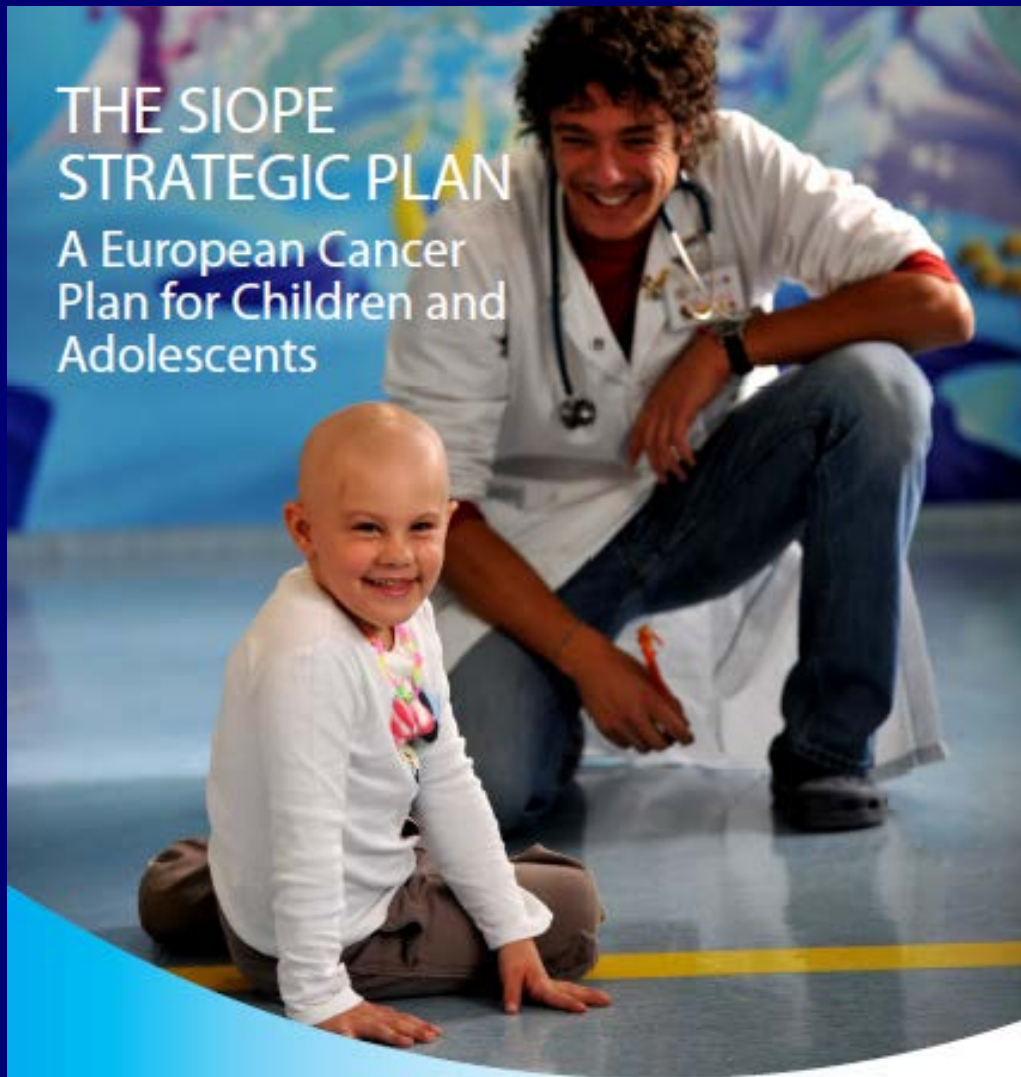
Gustave Roussy, Villejuif



June 3rd, 2016

THE SIOPE STRATEGIC PLAN

A European Cancer
Plan for Children and
Adolescents



SIOPE
SIOPE Europe
the European Society for Paediatric Oncology

http://www.siope.eu/SIOPE_StrategicPlan2015/

SIOPE Strategic Plan; The 7 objectives

1. Innovative therapies
2. Precision medicine
3. Knowledge on biology
4. Equal access
5. Teenager and young adults
6. Quality of survivorship
7. Causes of pediatric cancers

http://www.siope.eu/SIOPE_StrategicPlan2015/

New oncology drug development for children and adolescents

- Status in 2015
 - A significant change of the environment, thanks to the EU pediatric regulation (2007)
80 PIPs for a malignant indication
 - But we are very far from addressing the needs:
 - ≈ Less than 1 in 10 children with a non curable relapse malignancy has access to an innovative therapy in Europe

Cancer = 1st cause of death by disease >1 year

Multistakeholder Paediatric Oncology Platform

To improve new oncology drug development for children

December 2013



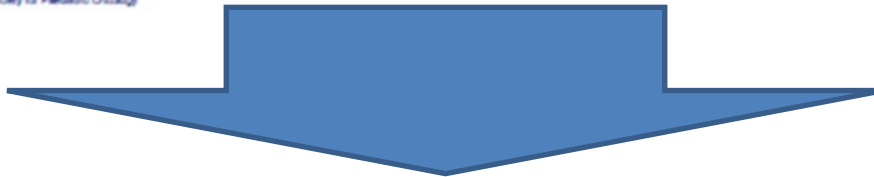
Creating a unique, multi-stakeholder Paediatric Oncology Platform to improve drug development for children and adolescents with cancer

[Eur J Cancer 2015;51:218.](#)



Gilles Vassal^{a,*}, Raphaël Rousseau^b, Patricia Blanc^c, Lucas Moreno^d, Gerlind Bode^e, Stefan Schwoch^f, Martin Schrappe^g, Jeffrey Skolnik^h, Lothar Bergmanⁱ, Mary Brigid Bradley-Garelik^j, Vaskar Saha^k, Andy Pearson^l, Heinz Zwierzina^m

Academia,
Industry,
Parents,
Regulatory Bodies



ACCELERATE
INNOVATION FOR CHILDREN AND ADOLESCENTS WITH CANCER

April 2016

www.accelerate-platform.eu (April 30th, 2016)

ASSISTANCE PUBLIQUE HÔPITAUX DE PARIS

dkfz.

TetraLogic PHARMACEUTICALS



UZA Kennis / Ervaring / Zorg



ICR The Institute of Cancer Research

Childhood Cancer International

Genentech

GUSTAVE ROUSSY CANCER CAMPUS GRAND PARIS



UniversitätsKlinikum Heidelberg



NOVARTIS

Create for Chloë foundation



AstraZeneca



KIDS V CANCER

Lilly

EUROPEAN MEDICINES AGENCY SCIENCE MEDICINES HEALTH

The Royal Marsden NHS Foundation Trust

UNITE 2 CURE



afmps agence fédérale des médicaments et des produits de santé

Bristol-Myers Squibb



UNIVERSITY OF BIRMINGHAM



aPODD

Pfizer

IMAGINE FOR Margo Children without CANCER

Boehringer Ingelheim

gsk

GlaxoSmithKline

INSTITUT NATIONAL DU CANCER

Bethany's Wish



Se battre comme un lion!



Find out more ▾

Get involved ▾

Prominent Supporters

Wall of Support

Organizations ▾

Sign the petition

News ▾

Translations



WHY UNITE₂CURE
CHILDHOOD CANCER?

HOW TO CHANGE
THE SYSTEM

SIGN THE PETITION!

www.unite2cure.org

Multistakeholder Paediatric Oncology Platform

- **WP1: New strategies for improved development of oncology drugs for children and adolescent**

lead : Andy Pearson, ITCC

- **WP2: New incentives for specific pediatric drug development and drug repositioning**

lead : Patricia Blanc, Imagine for Margo

- **WP3: Implementation of long-term follow up measures of children and adolescents receiving new anticancer drugs**

lead : Raphaël Rousseau, Genentech/Roche

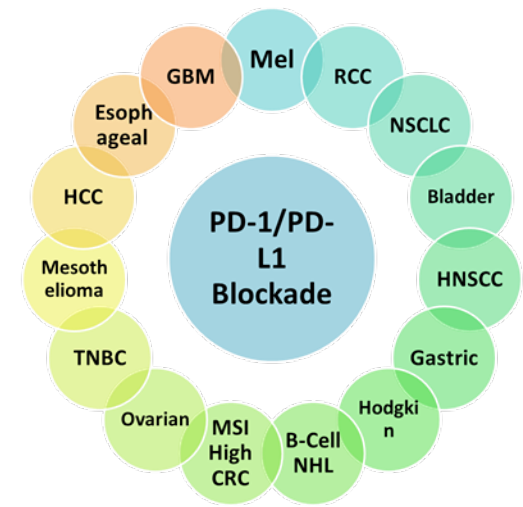


Why to improve the regulatory environment?

- There are **unjustified Class waivers**
 - Example : Crizotinib class waived
- There are **unfeasible PIPs**
 - Example : Vemurafenib PIP EMA/193393/2011
- There are **many drugs in the same class** for rare indications
- There are **delays** in starting pediatric developments

- Delays in starting pediatric developments

The PD1 inhibitors



		2008	2009	2010	2011	2012	2013	2014	2015	
Nivolumab	Adults	Yellow bar							●	●
	Children							★	Blue bar	
Pembrolizumab	Adults				Yellow bar			●	●	
	Children							★	Blue bar	

● Marketing autorisation in melanoma US

● Marketing autorisation in melanoma EU

★ Approved Pediatric Investigation Plan

Start pediatric Trials In EU



Proposals

1. Pediatric development should be based on drug **mechanism of action** instead of adult indication
2. **Prioritisation** should be set up to choose compounds to be evaluated or not in children
 - Based on MOA, needs, feasibility
 - Using stonger biological and preclinical data
 - Done through multistakeholder forum
3. **New incentives and rewards**
4. **Reduce time to start pediatric development**



ELSEVIER

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.ejancer.com



Current Perspective

Implementation of mechanism of action biology-driven early drug development for children with cancer



Andrew D.J. Pearson ^{a,*},¹, Ralf Herold ^b, Raphaël Rousseau ^c,
Chris Copland ^d, Brigid Bradley-Garelik ^e, Debbie Binner ^f,
Renaud Capdeville ^g, Hubert Caron ^{h,i}, Jacqueline Carleer ^j,
Louis Chesler ^k, Birgit Geogerger ^l, Pamela Kearns ^m, Lynley Marshall ⁿ,
Stefan M. Pfister ^o, Gudrun Schleiermacher ^p, Jeffrey Skolnik ^q,
Cesare Spadoni ^r, Jaroslav Sterba ^{s,t}, Hendrick van den Berg ^b,
Martina Uttenreuther-Fischer ^u, Olaf Witt ^v, Koen Norga ^w, Gilles Vassal ^x
on behalf of Members of Working Group 1 of the Paediatric Platform of
ACCELERATE²



Pediatric Preclinical POC Platform

Target
Actionability
Reviews



In Silico
Target
Patterns



Preclinical
Model
Development



10 Diseases
400 PDX
>20 GEMM

Molecule POC
Testing



Data Reporting
& Molecule
Determinations



Regulatory
Preclin
Consensus



'Mechanism-of-Action' ← 'match' → **'Pediatric Tumor Drivers'**

in preclinical pediatric models

- Preclinical POC testing
- Informs rational decisions for clinical trials
- Potential to clarify regulatory requirements

Cause of children with cancer

Champions in the Parliament



Glenis Willmott, Françoise Grossetête, Alojz Peterle

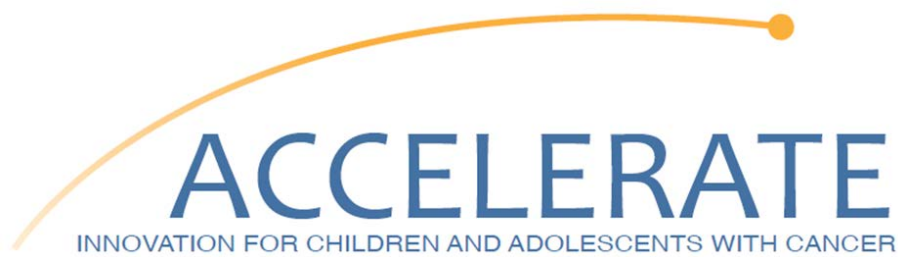


**Resolution of the EU Parliament
To be voted in September 2016**

How to change limited access?

- Improve the Regulation
- Change the mindset
 - Move pediatric drug development from regulatory compliance only into R&D
 - Work together
 - Facilitate referral
- Invest in specific pediatric drug development





Annual Conference

February 22- 23, 2016

BRUSSELS

- Present successful pediatric development plans
- Discuss the 10 years report and the study on the economic impact of the regulation
- Share results of the pilot projects
- Develop a global vision with the US and Japan



Innovative Therapies
for Children with Cancer

