



DEVweCAN: Cancer Development and Targeted Therapies



DEVweCAN

UNIVERSITE DE LYON

Cancer Development
and Targeted Therapies

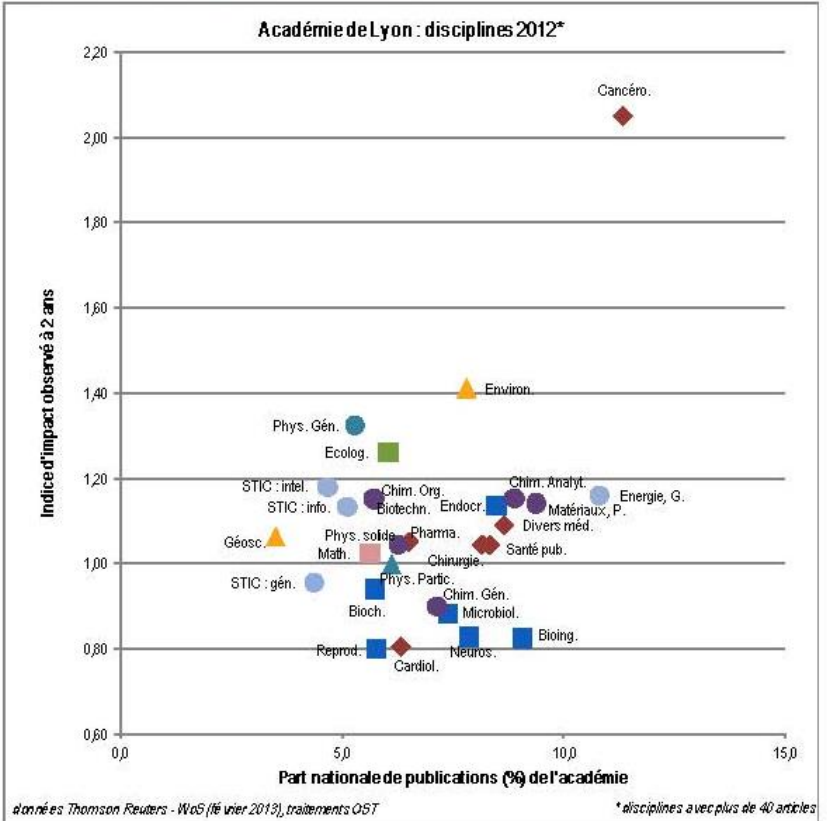


Cancer key figures:

- 13 millions of new cases/annually
- 7 millions death/annually
- 27 millions of patients with cancer
- Projection for 2030 with 17 millions death/annually

- Current therapies show major limitations (only 1 over 2 patients has an important life prolongation)
- Toward personalized therapies (targeted drugs to specific alteration-bearing cancer)
- Thus far, with the exception of the immunotherapies, most of the targeted therapies which are currently under development focus on alteration of proliferative pathways (kinase inhibitors) and show only limited effects (a few months increase of survival)

Figure 25 - Académie de Lyon - publications scientifiques : part nationale (%) de publications scientifiques et indice d'impact observé à 2 ans par discipline (2012) (tableaux 31 et 34) pour les disciplines ayant plus de 40 publications en 2012



- Légende des couleurs**
- Biologie fondamentale
 - Recherche médicale
 - Biologie appliquée - écologie
 - Chimie
 - Physique
 - Sciences de l'univers
 - Sciences pour l'ingénieur
 - Mathématiques

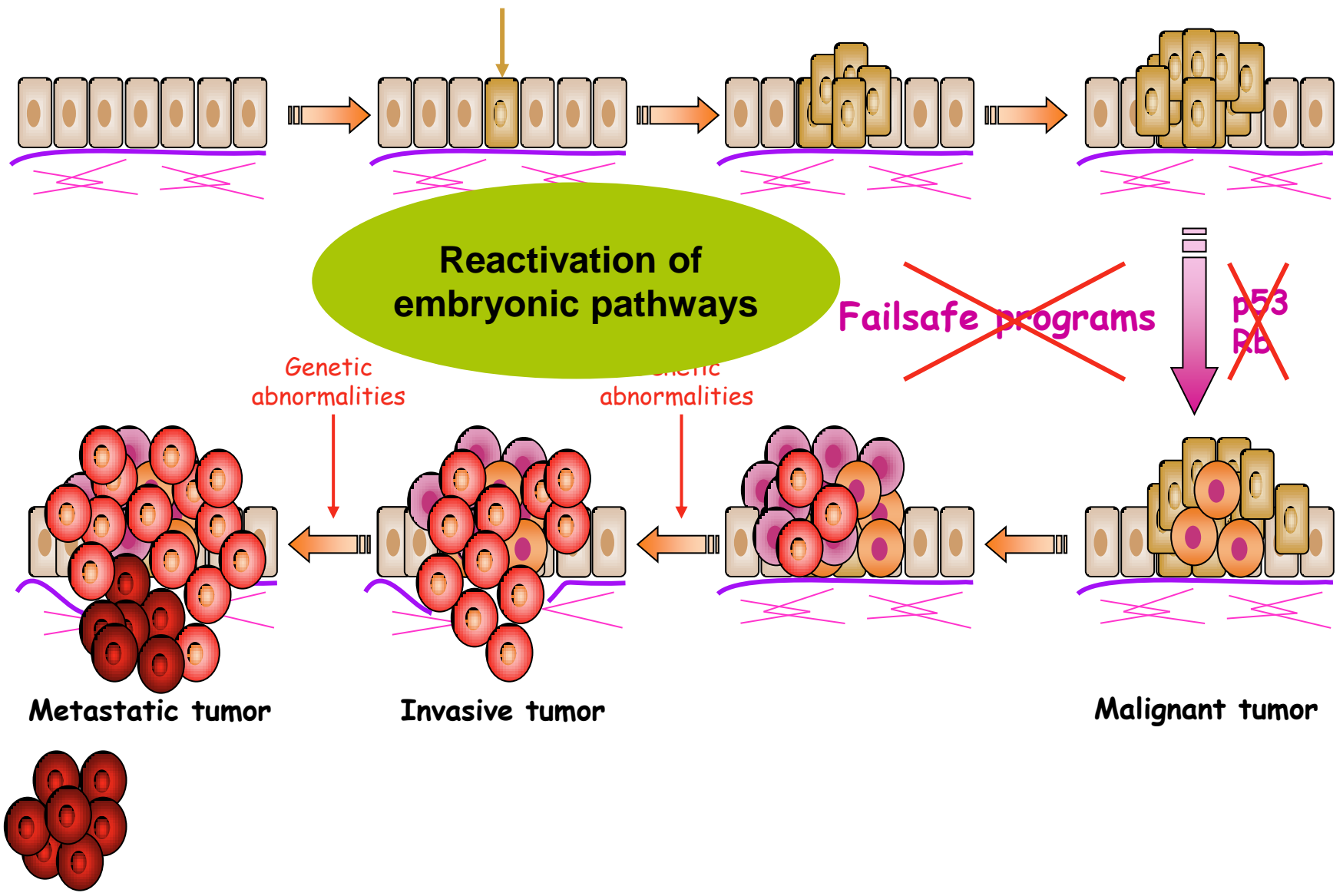


INDICATEURS DE PRODUCTION SCIENTIFIQUE ET TECHNOLOGIQUE ET DE PARTICIPATION AU 7ÈME PCRD DE LA RÉGION RHÔNE-ALPES

INDICATEURS DE PRODUCTION SCIENTIFIQUE ET TECHNOLOGIQUE DE L'ACADÉMIE DE LYON

Rapport final OST mai 2014

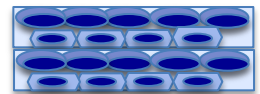
DEVweCAN scientific focus



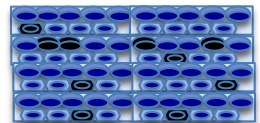
A project focused on three main aspects



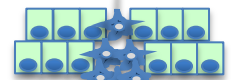
Self renewal/proliferation



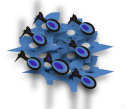
Differentiation



Senescence/apoptosis



Organogenesis



Cell migration

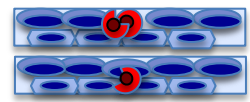


EMT

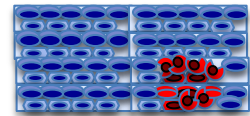
Immune tolerance



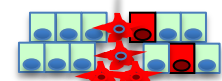
Proliferation



Differentiation



Senescence/apoptosis



EMT

Metastasis

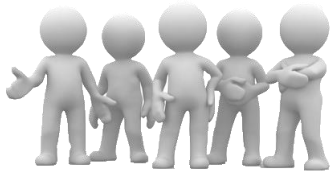
Immune surveillance



Invasion



What is DEVweCAN?



Gathers 11 A+ AERES-scored teams in the field of Cancer and Embryonic Development located in the East of Lyon

Gathers 5 main academic laboratories implicated in the cancer-embryonic development fields in Lyon



Gathers 5+1 academic, scientific and clinical institution:



Team Members



Cancérologie de
 ux, Equipe « Echap
 , Equ
 Caux
 quip
 Equi
 him,



traitements



Centre de Gén
 omonte, Equipe « Strepting Vir et instabilité centromériqu
 Castellini, Equipe « Neuro-développement et signaux de gui



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- **145 publications** since 2011,

- Castet et al., **Nature**, 2012 -> DCC as a tumor suppressor
- Caramel et al., **Cancer Cell**, 2013 ->Embryonic EMT-inducer and melanoma
- Lucino et al., **Cancer Cell**, 2013 ->PlexinD1 as a novel Dependence receptor
- Ichim et al., **Mol Cell**, 2013 ->TrkC killing via Cobra
- Puisieux et al., **Nature Cell Biol**, 2014 ->Embryonic EMT and tumor progression
- Chen et al., **Nature Comm**, 2015 ->STAT3 and pluripotency
- Aksoy et al., **Nature Comm**, 2014 ->Klf4/5 in meso/endoderm ES differentiation
- Ozmadenci et al., **Nature Comm**, 2015 -> netrin-1 and pluripotency/IPS
- Delloye-Bourgeois et al., **Nat Neuroscience**, 2015 ->PlexinA1 and guidance
- Arbeille et al., **Nature Comm**, 2015 -> Sema3b and neuroepithelial division
- Reuten et al., **Nature Comm**, 2016-> structure netrin-4 and cancer metastases
- Grandin et al., **Cancer Cell**, 2016 -> structure netrin-1 and preclinic on netrin-1 mAb

- **21 patents** since 2011 and 3 licences to Pharmas

- Eurosarc and Lyric coordination
- Scientific honors:



4 DEVweCAN members



1 nomination at the
National Academy of Sciences
in 2013

- 2 ERC programs: Dr Mehlen (Advanced) and Dr. Castellani (Consolidator)



- Several European projects (leader): HERMIONE-2man FP7, TUMADOR FP7, ITN BONE-NET and ITN TURBO, Individual Fellowship VIRLAT

EMT target
(drug discovery by C3D)

Netrin-1 mAb entering
Q4 2016 (Netris Pharma)

ProFiLER
2500 patients included

ion of cancer
gression
coFactory)

ProFileR

and discovery → Clinical trials

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ANSM
L'Agence nationale de sécurité du médicament et des produits de santé

**AUTORISATION D'ESSAI CLINIQUE
DE MEDICAMENT A USAGE HUMAIN**

Nombre de pages : 1
(incluant la page de garde)

Envoi par Télécopie Date :

Identifiants de l'essai clinique					
Titre	NP137 - An open-label, First In Human, Phase I trial aiming to evaluate the safety, pharmacokinetics, and clinical activity of a humanized monoclonal antibody targeting netrin-1 (NP137) in patients with metastatic advanced solid tumors Etude de Phase I, de première administration à l'homme, en ouvert, visant évaluer la tolérance, le profil pharmacocinétique et l'activité anti-tumorale d'un anticorps monoclonal humanisé ciblant la nétrine-1 (NP137) chez des patients atteints de tumeurs solides à un stade avancé ou métastatique				
Promoteur	CENTRE LEON BERARD	Ref. CPP			
Ref. Promoteur	ET15-098 (NP137)	N° EudraCT	2015-003907-11	Ref. ANSM	160609A-12
Expéditeur			Destinataire (demandeur : nom / société / tél.)		
ANSM / Direction des médicaments en oncologie, hématologie, immunologie et néphrologie Pôle Oncologie solide Dossier suivi par : ANNICK NJONGA Tél : 33 (0) 1 55 87 34 97 / 34 63 - Fax : 33 (0) 1 55 87 34 52 Mél : aec-osseiscliniques@ansm.sante.fr			Gwenaelle GARNIER CENTRE LEON BERARD 33(0)4 26 55 68 24		
			Fax : 04 7 8 78 27 15		
CPP destinataire en copie		Sud-Est IV (Lyon CRLCC)		Fax : 4.78.78.28.58	
INCA destinataire en copie				Fax : 01 41 10 14 45	

Vu le code de la santé publique et notamment ses articles L. 1123-8, L. 1123-12 et vu le dossier de demande d'autorisation d'essai clinique adressé à l'Agence nationale de sécurité du médicament et des produits de santé (ANSM);



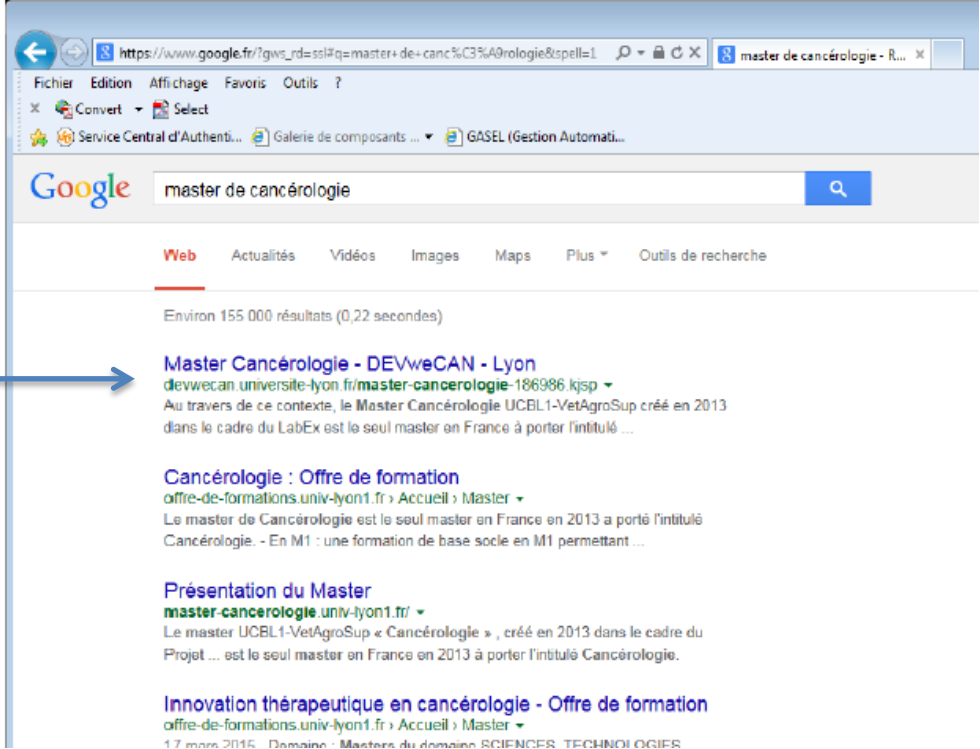


National environment...

The **only** master in France with the two years program **entirely** dedicated to cancer

Launched in september 2013

First rank on google out of 155 000



Education: the Oncology Master's program



Master labelled "Master Université de Lyon" awarded by its HEI members (universities and top engineering schools)

Courses:
Biology of cancer
Animal models
Translational Medicine,
Epidemiology,
Bioinformatics,
Economics,
Human sciences

Opened in
2013

M1 Oncology

Program taught in English

International symposium training in M2



Opened in
2014

M2 Research and Oncology

M2 Omics in Oncology

M2 Therapeutic Innovation

Opened in
2014

Opening in
2016





In 2012 and 2015



BIOVISION Le Forum Mondial des Sciences de la Vie

In 2013 and 2015



In 2013 and 2015

DEVweCAN

April 2015





« When patients meet research... » in 2013 and 2015, co-organized with Charities



4 Coffee-debates « Une dose de science dans votre verre! » in 2014



« The knowledge meeting » in 2014



Thank you for your attention!

