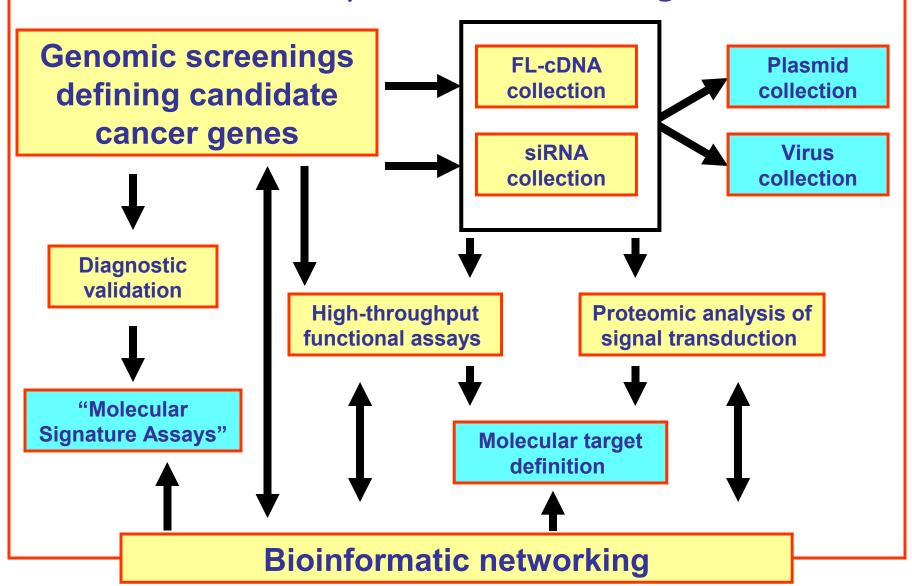
A European Sixth Framework Integrated Project



Translational and Functional Onco-Genomics: from cancer-oriented genomic screenings to new diagnostic tools and improved cancer treatment.

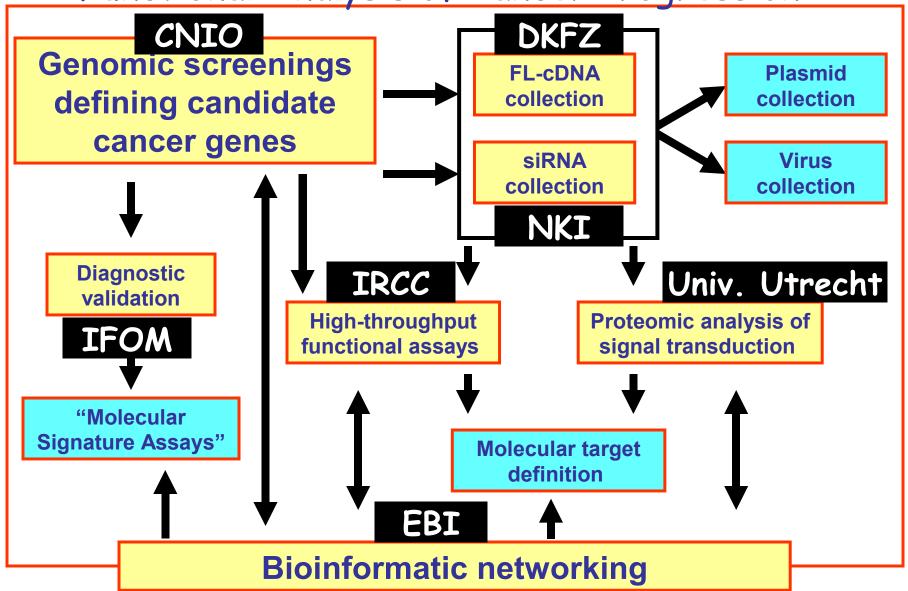
The TRANSFOG Plan for High-Throughput Functional Analysis of Cancer Progression

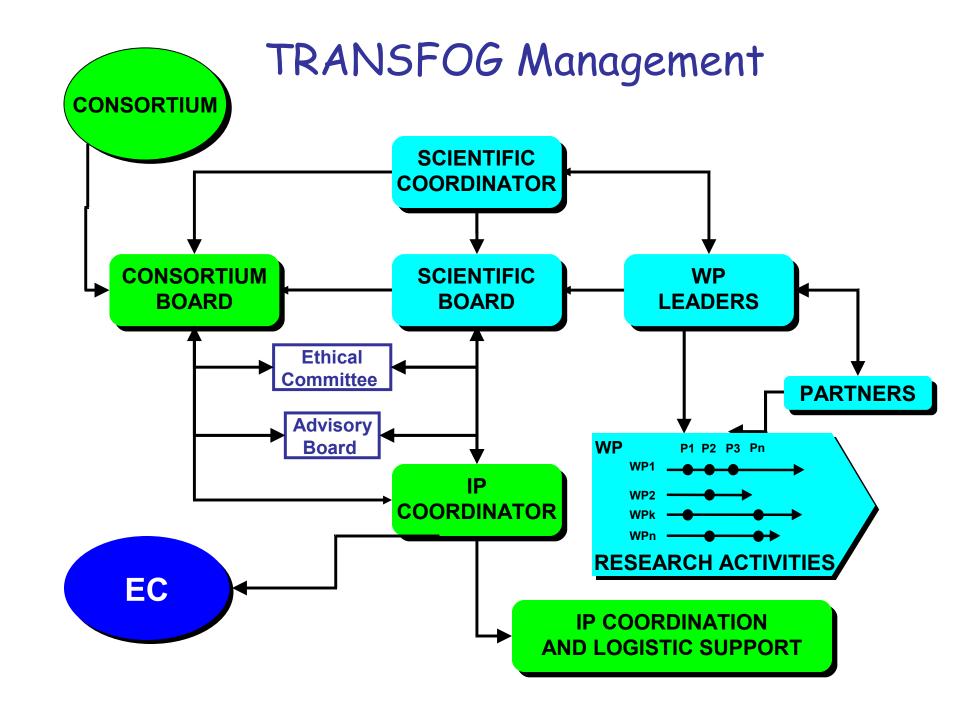


Participants

Partner	Organisation Name (short name)	Scientific Team Leader	
P1 (Admin. Coordinator)	Organization of European Cancer Institutes (OECI)	Guy Storme	
P2 (Scient. Coordinator)	Institute for Cancer Research and Treatment (IRCC)	Enzo Medico, Paolo Comoglio	
P3	Spanish National Cancer Institute (CNIO)	Mariano Barbacid	
P4	German Cancer Research Center (DKFZ)	Annemarie Poustka	
P5	Netherlands Cancer Institute (NKI)	Rene Bernards	
P6	University Medical Center Utrecht (UMCU)	Johannes L. Bos	
P7	FIRC Institute of Molecular Oncology (IFOM)	Marco Pierotti	
P8	European Molecular Biology Laboratory (EBI)	Rolf Apweiler	
P9	Biomed. Sciences Research Centre "Alexander Fleming" (Fleming)	George Panayotou	
P10	Friedrich Miescher Institute for Biomedical Research (FMI)	Nancy Hynes	
P11	Agendia BV (Agendia)	Bernhard Sixt	
P12	University of Innsbruck Institute of Pathophysiology (IPP)	Stephan Geley	
P13	Karolinska Institute (KI)	Edvard Smith	
P14	Ludwig Institute for Cancer Research - UCL Branch (LICR-UCL)	Anne Ridley	
P15	Ludwig Institute for Cancer Research –Uppsala Branch (LICR-UPP)	Carl-Henrik Heldin	
P16	National Interuniversity Consortium Laboratory (LNCIB)	Claudio Schneider	
P17	Max-Delbrueck-Center for Molecular Medicine (MDC)	Walter Birchmeier	
P18	The Weizmann Institute of Science (WIS)	Yosef Yarden	

The TRANSFOG Plan for High-Throughput Functional Analysis of Cancer Progression





TRANSFOG Management

www.altaweb.eu



Project Phases

- Phase I (2005): Initial set-up of experimental procedures for systematic cancer gene functional analysis and clinical validation; establishment of standards and tools for data sharing and mining.
- Phase II (2006-2007): Systematic gene functional analysis and diagnostic validation of new cancer molecular signatures.
- Phase III (2008): collection of results, dissemination of technologies and deliverables to the European cancer research community and cancer hospitals. Exploitation of the achieved results, mainly as new cancer diagnosis tools and screening targets for new cancer drug discovery.

Cell-based screenings

Partner	Screening model			
IRCC	Microarray analysis of genes regulated by HGF, EGF and semaphorins in normal and neoplastic, human and mouse cells.			
UMCU	Microarray analysis of tumour cell lines after stimulation or inhibition of the Ras, the Akt/PKB and Wnt pathway.			
LICR-UCL	Proteomic analysis of ErbB-2-dependent changes in protein expression in immortalized human mammary luminal epithelial cells (HuMLECs)			
LICR-UPP	Microarray analysis (Affychips) of PDGF- or TGFbeta-stimulated normal and cancer cells.			
LNCIB	Microarray analysis of tumour cell lines after stimulation or inhibition of the p53 and beta-catenin pathways.			
WIS	Gene expression profiling of Erb-B negative feedback loops driven by Erb-B negative regulators in human cancer cell lines.			

Target gene functional analysis in cell-based systems

Partner	Functional assay			
IRCC	Scattering, angiogenesis, morphogenesis, transformation and invasion of cultured epithelial and endothelial cells.			
CNIO	Epigenetic functions (DNA methylation levels).			
NKI	Escape from senescence.			
UMCU	Reporter gene expression responsive to the Ras, PKB/Akt and Wnt pathways.			
FMI	Mammary tissue function: proliferation, migration, and differentiation.			
IPP	Apoptosis assays in neopastic cells			
KI	Growth and apoptosis in neoplastic cell lines			
LICR-UCL	Cell migration, cell-cell adhesion and transmigration of cancer cells across endothelial cells.			
LICR-UPP	PDGF and TGF-beta signaling in cell growth, chemotaxis, actin reorganization, and invasiveness.			
LNCIB	Apoptosis, proliferation, cell cycle, morphology, motility, adhesion.			
WIS	Negative regulation of ErbB RTK signaling, proliferation and survival; modulation of ErbB2 stability.			

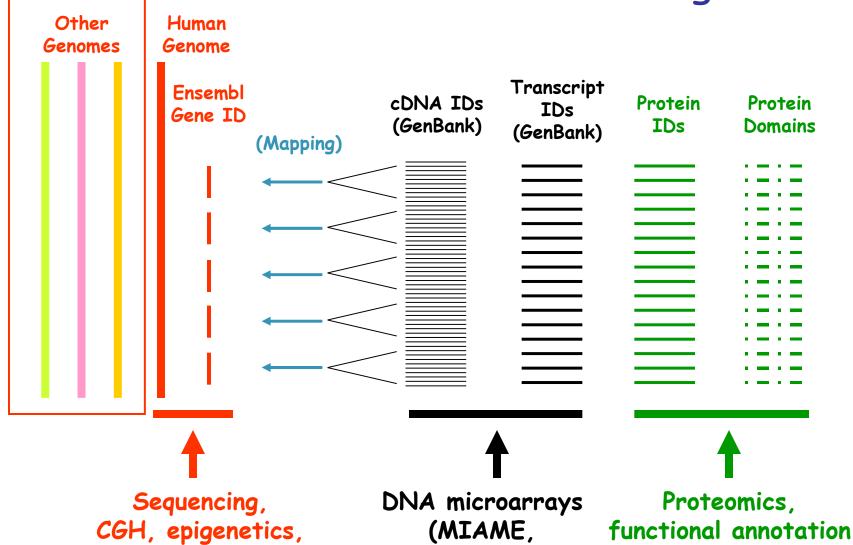
Target gene validation in in vivo systems

Partner	Experimental model		
CNIO	Creation of genetically modified mice (transgenic, knock-out, knock-in)		
FMI	Mouse mammary gland reconstitution		
LICR-UCL	Parameters of cancer progression in Drosophila cells		
MDC	Assays in lower organism systems (Drosophila and zebrafish)		
LICR-UPP	PDGFR-based tumor model in mice		

Tumour-based screenings

Partner	Screening model		
CNIO	Microarray, CGH and epigenetic analysis focussed on metastatic progression of breast, lung and colon cancer.		
IFOM	Microarray analysis in breast and lung cancer, in particular to identify those NO tumours that have a higher risk of metastasising.		
Agendia	Gene expression profiling of colon cancer using 25,000 human oligonucleotide microarrays.		
LNCIB	cDNA microarray analysis of colon cancer samples, with a specific focus on signaling pathways (FGF and TGFB, invasive ovarian cancer) and hereditary background		
MDC	Affychips on colon cancer: a) metastatic and non-metastatic primary tumours, b) metastatic primary tumours and their metastases, and c) metastases to different target organs.		

Data Standardization and Integration



MAGE-ML)

(GO, interactions,

GeneMAPP, ProSite)

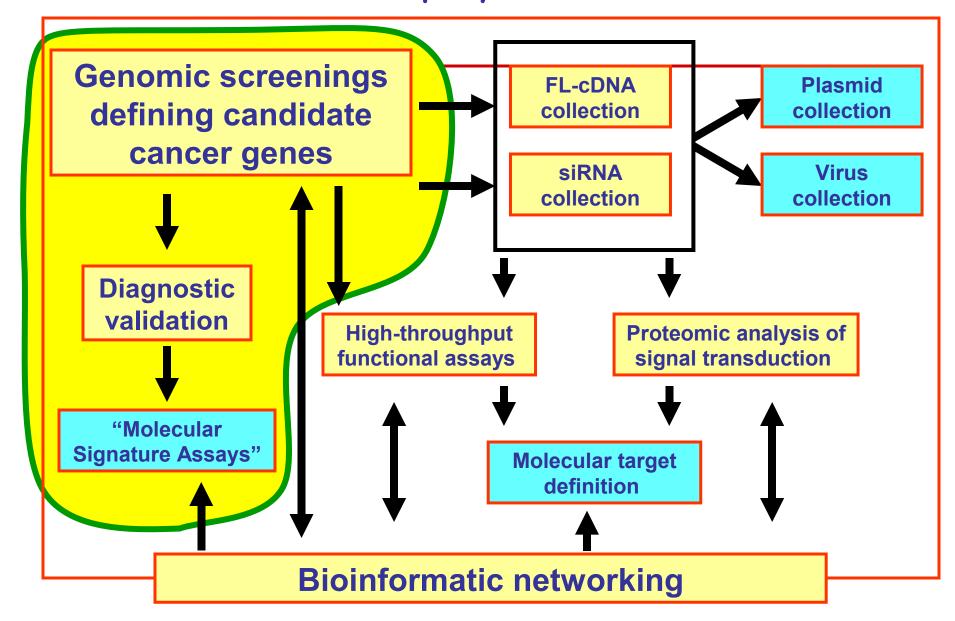
computational analysis

Human Genome

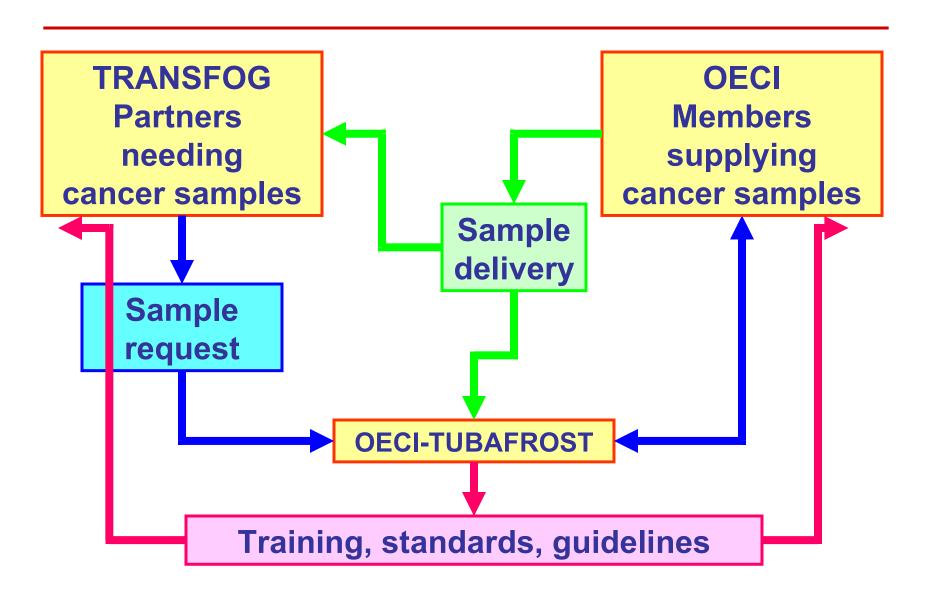
Transfog Annotation Layers

Ensembl Gene ID		
Explored in Microarray experiment X		
Explored in Microarray experiment Y		
Screening Result X		
Screening Result Y		
Screening Result Z		
siRNA available		
LOF assay X performed LOF assay X results		
"Raw" FL-cDNA available		
Gateway FL-cDNA available		
GOF assay X performed GOF assay X results		

OECI members can play a role in TRANSFOG



A proposed frame for interaction



TRANSFOG Workshop: Validation of the Diagnostic Potential of Cancer Genomic Signatures

June 17, 2007 Danish Cancer Society Room 4.1 - Strandboulevarden 49 Agenda

09:00 Get together and welcome by Marco Pierotti and Enzo Medico

09:15 Peter Riegman (Erasmus-MC, Rotterdam): Possible interactions between TRANSFOG and TuBaFrost

09:35 Enzo Medico (IRCC, Candiolo): From cell-based models to clinically relevant gene expression signatures

10:10 Marco Pierotti (IFOM, Milano): Validation of prognostic and predictive signatures in breast cancer

10:50 Ryan Van Laar (Agendia, Amsterdam): Whole genome expression profiling of CRC and development of a clinically useful prognostic test

11:30 Coffee Break

11:45 Josef Jarden (Weizmann, Tel Aviv): Negative feedback regulators of growth factor signaling affecting breast cancer metastasis.

12:25 Miguel Angel Piris (CNIO, Madrid): Definition and validation of molecular cancer signatures at CNIO

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TRANSFOG

TRANSslational and Functional Onco-Genomics





■ Home

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- Consortium

 Public Documents

 News and events

 Publications



Welcome to the TRANSFOG website

The TRANSFOG project aims at the systematic identification and functional characterization of novel cancer genes with high potential diagnostic and therapeutic value in breast, colon and lung cancer. The TRANSFOG Partners will bring together world recognised competences and resources to reach the following, integrated research objectives



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 June 2007
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Event: WP4-5 workshop

Location & date: INNSBRUCK, 14-17/03/2007

Develped and maintained by MEDINFO - DIST

Comments on the web

Updated: 10 May 2007

Comments on the contents

Thank You!



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