

## Curriculum Vitae

### Personal Data

Name: Mauro DELORENZI  
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Date of birth: 09.03.1960  
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### Current Appointments

Since 2013 Group Leader, **Ludwig Center for Cancer Research** and Department of Oncology, University of Lausanne  
Since 2003 Group Leader at SIB **Swiss Institute of Bioinformatics** (Head Bioinformatics Core Facility).

### Education & Training

**Masters**  
1985 Diploma in Molecular Biology, University Zurich, Switzerland  
1997 Diploma for Teaching (Hoeheres Lehrahmt, Biology and Mathematics), University Zurich, Switzerland  
2000 Diploma in Mathematics/Statistics, University Zurich, Switzerland  
1990 **Doctor of Philosophy**, University Zurich, Switzerland  
1999-2002 **Postdoctoral Training:** research fellow (1999-2000), Bioinformatics Research Officer (2000-2002), group of Terry Speed, The Walter and Eliza Hall Institute for Medical Research (WEHI), Melbourne, Australia.  
2002-2003 **Postdoctoral Training:** Postdoctoral Researcher, NCCR Molecular Oncology, Swiss Institute for Exp. Cancer Research (ISREC), Lausanne, Switzerland.

### Other Positions

2003 - 2007 Group Leader (chercheur associé), NCCR Molecular Oncology, Swiss Institute for Exp. Cancer Research (ISREC) and Head of the Bioinformatics Core Facility at Swiss Institute of Bioinformatics (SIB), Lausanne, Switzerland.  
1990 - 1999 Teacher for Mathematics, Biology and Physics, Liceo Artistico (and other schools), Zurich, Switzerland.

### Main Research Interests

- Application of statistical and computational analysis methods to data from high throughput genomic technologies in as bioinformatics partner in collaborative molecular and translational medical research projects

- Molecular Heterogeneity of Cancer: Subtypes, Pathway activation patterns
- Biomarker discovery and validation methodology, particularly for gene expression signatures and for any marker with prognostic or treatment-prediction power
- Development / implementation / testing and comparison of computational methods in data analysis, meta-analysis, data mining, classification and prediction, for example developed the use of internal spikes for ChIP-seq data calibration
- Mathematical modeling applied to biological sequence analysis and classification, particularly hidden Markov models

#### Project Funding (selection)

- Co-Principal investigator, COLTHERES project ("Modelling and predicting sensitivity to targeted therapies in colorectal cancer") consortium, Collaborative Research Project Grant, EU Framework Programme VII, 2011-2014.
- Co-Principal investigator, P-MEDICINE project (" From data sharing and integration via VPH models to personalized medicine") consortium, Collaborative Research Project Grant, EU Framework Programme VII, 2011-2015.
- SNF project ("Exploring clinical and molecular heterogeneity of colon cancer with the intention to define clinically useful subtypes", 2011-2014), second PI (first PI: Dr A Roth)
- SystemsX project ("CycliX", 2009-2013/14), Transcription regulatory networks of three interconnecting cycles, co- PI (first PI: Dr N Hernandez)

#### Roles as scientific expert

- Associate Editor for the journal "Annals of Oncology"
- Reviewer /statistical reviewer for scientific journals: Annals of Oncology, Biochimica et Biophysica Acta, Bioinformatics, BMC Cancer, Gastroenterology, Gut, Genome Biology, J Clin Oncol, Molecular Medicine, Nature, OncoImmunology, PNAS, PLOS One, Trends in Genetics.
- Reviewer for funding organizations: Swiss Cancer League, Swiss National Foundation, SystemsX.ch, Foundation against Cancer Belgium, WELBIO (BE), COMET (AUT).
- Member of several Ph.D. thesis committees in Switzerland and abroad
- Workpackage leader and member of the Biotechnology committee of the TRANSBIG consortium.
- Workpackage leader of the FP7 consortia: ACGT, COLTHERES, P-MEDICINE.

#### Honors

2011 *Leenaards Price*, Lausanne, Switzerland

#### Memberships in Professional Organizations

Member of ASCO (American Society of Clinical Oncology)

## Publication List Mauro DELORENZI 2009-2014

complete publication list: [http:// lausanne.isb-sib.ch/ ~mdeloren/ publications/publists/](http://lausanne.isb-sib.ch/~mdeloren/publications/publists/)

### 1. Peer-reviewed research articles and editorials

#### 2014

Di Narzo AF, Tejpar S, Rossi S, Yan P, Popovici V, Wirapati P, Budinska E, Xie T, Estrella H, Pavlicek A, Mao M, Martin E, Scott W, Bosman F, Roth A, **Delorenzi M**.  
Test of four Colon Cancer Risk-Scores in FFPE Microarray Gene Expression data.  
J Natl Cancer Inst., accepted (August 2014).

Missiaglia E, Jacobs B, D'Ario G, F. Di Narzo AF, Soneson C, Eva Budinska E, Popovici V, Vecchione L, Gerster S, Pu Yan P, Arnaud D. Roth AD, Dirk D, Bosman F, **Delorenzi M**, Tejpar S.  
Distal and proximal colon cancers differ in terms of molecular, pathological and clinical features.  
Ann Oncol. 2014, Jul 23. PMID: 25057166.

Tremblay AM, Missiaglia E, Galli GG, Hettmer S, Urcia R, Carrara M, Judson RN, Thway K, Nadal G, Selve JL, Murray G, Calogero RA, De Bari C, Zammit PS, **Delorenzi M**, Wagers AJ, Shipley J, Wackerhage H, Camargo FD.  
The Hippo Transducer YAP1 Transforms Activated Satellite Cells and Is a Potent Effector of Embryonal Rhabdomyosarcoma Formation.  
Cancer Cell 2014, 26(2):273-87. doi: 10.1016/j.ccr.2014.05.029. PMID: 25087979.

Soneson C, Gerster S, **Delorenzi M**.  
Batch effect confounding leads to strong bias in performance estimates obtained by cross-validation.  
PLoS One 2014, Jun 26. doi: 10.1371/journal.pone.0100335. PMID: 24967636.

Schou JV, Rossi S, Jensen BV, Nielsen DL, Pfeiffer P, Høgdall E, Yilmaz M, Tejpar S, **Delorenzi M**, Kruhøffer M, Johansen JS.  
miR-345 in Metastatic Colorectal Cancer: A Non-Invasive Biomarker for Clinical Outcome in Non-KRAS Mutant Patients Treated with 3rd Line Cetuximab and Irinotecan.  
PLoS One 2014, 9(6):e99886. doi: 10.1371/journal.pone.0099886. eCollection 2014. PMID: 24940606.

Stockinger H, Altenhoff AM, Arnold K, Bairoch A, Bastian F, Bergmann S, Bougueleret L, Bucher P, **Delorenzi M**, Lane L, Mercier PL, Lisacek F, Michielin O, Palagi PM, Rougemont J, Schwede T, Mering CV, Nimwegen EV, Walther D, Xenarios I, Zavolan M, Zdobnov EM, Zoete V, Appel RD.  
Fifteen years SIB Swiss Institute of Bioinformatics: life science databases, tools and support.  
Nucleic Acids Res. 2014, 42(Web Server issue):W436-41. doi: 10.1093/nar/gku380. PMID: 24792157.

Belmont PJ, Budinska E, Jiang P, Sinnamon MJ, Coffee E, Roper J, Xie T, Rejto PA, Derkits S, Sansom OJ, **Delorenzi M**, Tejpar S, Hung KE, Martin ES.  
Cross-species analysis of genetically engineered mouse models of MAPK driven colorectal cancer identifies hallmarks of human disease.  
Dis Model Mech. 2014, Apr 17. PMID 24742783.

Bonhoure N, Bounova G, Bernasconi D, Praz V, Lammers F, Canella D, Willis IM, Herr W, Hernandez N, **Delorenzi M**; (CycliX Consortium).  
Quantifying ChIP-seq data: a spiking method providing an internal reference for sample-to-sample normalization.  
Genome Res. 2014, 24(7):1157-68. PMID 24709819.

Gilardi F, Migliavacca E, Naldi A, Baruchet M, Canella D, Le Martelot G, Guex N, Desvergne B; CycliX Consortium.  
Genome-Wide Analysis of SREBP1 Activity around the Clock Reveals Its Combined Dependency on Nutrient and Circadian Signals.

PLoS Genet. 2014, 10(3):e1004155. doi: 10.1371/journal.pgen.1004155.

## 2013

Popovici V, Budinska E, Bosman FT, Tejpar S, Roth AD, **Delorenzi M**.

Context-dependent interpretation of the prognostic value of BRAF and KRAS mutations in colorectal cancer. *BMC Cancer* 2013 231(1):63-76. PMID: 24073892. doi: 10.1186/1471-2407-13-439.

Budinska E, Popovici V, Tejpar S, D'Ario G, Lapique N, Sikora KO, Di Narzo AF, Yan P, Hodgson JG, Weinrich S, Bosman F, Roth A, **Delorenzi M**.

Gene expression patterns unveil a new level of molecular heterogeneity in colorectal cancer. *J Pathol.* 2013 231(1):63-76. doi: 10.1002/path.4212. PMID: 23836465

Soneson C, **Delorenzi M**.

A comparison of methods for differential expression analysis of RNA-seq data.

*BMC Bioinformatics* 2013, 14:91(1-18). PMID: 23497356; doi: 10.1186/1471-2105-14-91

Ivanov KI, Agalarov Y, Valmu L, Samuilova O, Liebl J, Houhou N, Maby-El Hajjami H, Norrmén C, Jaquet M, Miura N, Zangger N, Ylä-Herttua S, **Delorenzi M**, Petrova TV.

Phosphorylation regulates FOXC2-mediated transcription in lymphatic endothelial cells. *Mol Cell Biol.* 2013. PMID: 23878394

De Vriendt V, De Roock W, Di Narzo AF, Tian S, Biesmans B, Jacobs B, Budinska E, Sagaert X, Rossi S, D'Ario G, **Delorenzi M**, Simon I, Vecchione L, Tejpar S.

DUSP 4 expression identifies a subset of colorectal cancer tumors that differ in MAPK activation, regardless of the genotype.

*Biomarkers*, 2013. PMID: 23875912

## 2012

Roth AD+, **Delorenzi M**+, Tejpar S+, Yan Pu, Klingbiel D, Fiocca R, d'Ario G, Cisar L, Labianca R, Cunningham D, Nordlinger B, Bosman F, Van Cutsem E. (+ **co-first authors**).

Integrated analysis of molecular and clinical prognostic factors in stage II/III colon cancer. *J Natl Cancer Inst.* 2012, 104:1635-46. PMID: 23104212.

Rossi S, Di Narzo AF, Mestdagh P, Jacobs B, Bosman FT, Gustavsson B, Majoie B, Roth A, Vandesompele J, Rigoutsos I, **Delorenzi M**, Tejpar S.

microRNAs in colon cancer: a roadmap for discovery.

*FEBS Lett.* 2012, 586:3000-7. PMID: 23166923.

S. Tian, P. Roepman, V. Popovici, M. Michaut, I. Majewski, R. Salazar, C. Santos, R. Rosenberg, U. Nitsche, W.E. Mesker, S. Bruin, S. Tejpar, M. Delorenzi, R. Bernards, I. Simon.

A robust genomic signature for detection of colorectal cancer patients with microsatellite instability phenotype and high mutation frequency.

*Journal of Pathology* 2012, 228: 586-595. PMID: 22926706.

Le Martelot G, Canella D, Symul L, Migliavacca E, Gilardi F, Liechti R, Martin O, Harshman K, **Delorenzi M**, Desvergne B, Herr W, Deplancke B, Schibler U, Rougemont J, Guex N, Hernandez N, Naef F; the CycliX consortium.

Genome-Wide RNA Polymerase II Profiles and RNA Accumulation Reveal Kinetics of Transcription and Associated Epigenetic Changes During Diurnal Cycles.

*PLoS Biol.* 2012, e1001442. PMID: 23209382.

Xie T, D' Ario G, Lamb JR, Martin E, Wang K, Tejpar S, **Delorenzi M**, Bosman FT, Roth AD, Yan P, Bougel S, Di Narzo AF, Popovici V, Budinská E, Mao M, Weinrich SL, Rejto PA, Hodgson JG.

A comprehensive characterization of genome-wide copy number aberrations in colorectal cancer reveals novel oncogenes and patterns of alterations.

PLoS One, 2012, 7:e42001. doi: 10.1371/journal.pone.0042001.

Sartore-Bianchi A, **Delorenzi M**, Gagnon-Kugler T, Rousseau C, Batist G.  
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Expert Rev Anticancer Ther. 2012, 12:877-79. PMID: 22845402.

Popovici V, Budinská E, Tejpar S, Weinrich S, Estrella H, Hodgson G, T. Xie T, Van Cutsem E, Bosman F, Roth A, **Delorenzi M**.  
Identification of a poor prognosis BRAF-mutant-like population of colon cancer patients.  
J Clin Oncol, 2012, 30:1288-95. PMID: 22393095.

Bady P, Sciuscio D, Diserens AC, Bloch J, van den Bent MJ, Marosi C, Dietrich PY, Weller M, Mariani L, Heppner FL, McDonald DR, Lacombe D, Stupp R, **Delorenzi M**, Hegi ME.  
MGMT methylation analysis of glioblastoma on the Infinium methylation BeadChip identifies two distinct CpG regions associated with gene silencing and outcome, yielding a prediction model for comparisons across datasets, tumor grades, and CIMP-status.  
Acta Neuropathol. 2012, Jul 19. PMID: 22810491.

Bady P, Diserens AC, Castella V, Kalt S, Heinimann K, Hamou MF, **Delorenzi M**, Hegi ME.  
DNA fingerprinting of glioma cell lines and considerations on similarity measurements.  
Neuro Oncol. 2012, 14:701-11. PMID: 22570425.

Christensen J, El-Gebali S, Natoli M, Sengstag T, **Delorenzi M**, Bentz S, Bouzourene H, Rumbo M, Felsani A, Siissalo S, Hirvonen J, Vila MR, Saletti P, Aguet M, Anderle P.  
Defining new criteria for selection of cell-based intestinal models using publicly available databases.  
BMC Genomics, 2012, 3013:274. PMID: 22726358.

Anghel SI, Correa-Rochal R, Budinska E, Boliganl KF, Abraham S, Colombetti S, Fontao L, Mariotti A, Rimoldi D, Ghanem GE, Fisher DE, Lévy F, **Delorenzi M**, Pigué V.  
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Missiaglia E, Williamson D, Chisholm J, Wirapati P, Pierron G, Petel F, Concordet JP, T. Thway K, Oberlin O, Pritchard-Jones K, Delattre O, **Delorenzi M**, Shipley J.  
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J Clin Oncol, 2012, 30:1670-77. PMID: 22454413.

Canella D+, Bernasconi D+, Gilardi F, LeMartelot G, Migliavacca E, Praz V, Cousin P, **Delorenzi M**§, Hernandez N§ (and the CycliX consortium, § corresponding authors, + co-first authors).  
A Multiplicity of Factors Contributes to Selective RNA polymerase III occupancy of a Subset of RNA polymerase III Genes in Mouse Liver.  
Genome Res. 2012, 22: 666-680. PMID: 22287103.

Desmedt C, Majjjaj S, Kheddoumi N, Singhal SK, Haibe-Kains B, El Ouriaghli F, Chaboteaux C, Michiels S, Lallemand F, Journe F, Duvillier H, Loi S, Quackenbush J, Dekoninck S, Blanpain C, Lagneaux L, Houhou N, **Delorenzi M**, Larsimont D, Piccart M, Sotiriou C.  
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Clin Cancer Res, 2012, 15:1004-1014. PMID: 22235100.

Zaric J, Joseph JM, Tercier S, Sengstag T, Ponsonnet L, **Delorenzi M**, Rüegg C.  
Identification of MAGI1 as a tumor-suppressor protein induced by cyclooxygenase-2 inhibitors in colorectal cancer cells.  
Oncogene, 2012, 31:48-59. PMID: 21666716.

Carrascosa C, Obula RG, Missiaglia E, Lehr HA, **Delorenzi M**, Frattini M, Rüegg C, Mariotti A.

MFG-E8/lactadherin regulates cyclins D1/D3 expression and enhances the tumorigenic potential of mammary epithelial cells.  
Oncogene, 2012, 31:1521-32. PMID: 21841820.

## 2011

Tejpar S, Saridaki Z, **Delorenzi M**, Bosman F, Roth AD.  
Microsatellite Instability, Prognosis and Drug Sensitivity of Stage II and III Colorectal Cancer: More Complexity to the Puzzle.  
J Natl Cancer Inst. 2011, 103:841-844 (editorial). PMID: 21597023.

Rossi S, Christ-Neumann M, Rüping S, Buffa F, Wegener D, McVie G, Coveney P, Graf N, **Delorenzi M**.  
p-Medicine: From data sharing and integration via VPH models to personalized medicine.  
Ecancermedicalsecience 2011;5:218. Epub 2011 Aug 17. PMID: 22276060

Lambiv WL, Vassallo I, **Delorenzi M**, Shay T, Diserens AC, Misra A, Feuerstein B, Murat A, Migliavacca E, Hamou MF, Sciuscio D, Burger R, Domany E, Stupp R, Hegi ME.  
The Wnt inhibitory factor 1 (WIF1) is targeted in glioblastoma and has a tumor suppressing function potentially by induction of senescence.  
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Popovici V, Budinská E, **Delorenzi M**.  
Rgtsp: a generalized top scoring pairs package for class prediction.  
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Planche A, Bacac M, Provero P, Fusco C, **Delorenzi M**, Stehle JC, Stamenkovic I.  
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PLoS One, 2011, 6:e18640 2011, 75:133-145. PMID 21611158

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Mol Cancer Ther. 2011, 10(6):1102-12. PMID: 21471286.

Wirapati P, Forner K, Delgado-Vega A, Alarcón-Riquelme M, **Delorenzi M**, Wojcik J.  
Detecting Epistasis with Restricted Response Patterns in Pairs of Biallelic Loci.  
Ann Hum Genet. 2011, 75:133-145. PMID 21118193.

## 2010

Berger F, De Meulder B, Gaigneaux A, Depiereux S, Bareke E, Pierre M, De Hertogh B, **Delorenzi M**, Depiereux E.  
Functional analysis: evaluation of response intensities--tailoring ANOVA for lists of expression subsets.  
BMC Bioinformatics 2010, 13:510. PMID: 20942918.

Roth AD, Tejpar S, **Delorenzi M**, Pu Y, Fiocca R, Klingbiel D, Dietrich D, Biesmans B, Bodoky G, Barone C, Aranda E, Nordlinger B, Cisar L, Labianca R, Cunningham D, Van Cutsem E, Bosman F.  
Prognostic role of KRAS and BRAF in stage II and III resected colon cancer. Results of the translational study on the PETACC-3 - EORTC 40993 - SAKK 60-00 trial.  
J Clin Oncol. 2010, 28:466-474. PMID: 20008640.

De Roock W, Claes B, Bernasconi D, De Schutter J, Biesmans B, Fountzilias G, Kalogeras KT, Kotoula V, Papamichael D, Laurent-Puig P, Penault-Llorca F, Rougier P, Vincenzi B, Santini D, Tonini G, Cappuzzo F, Frattini M, Molinari F, Saletti P, De Dosso S, Martini M, Bardelli A, Siena S, Sartore-Bianchi A, Taberero J, Macarulla T, Di Fiore F, Gangloff AO, Ciardiello F, Pfeiffer P, Qvortrup C, Hansen TP, Van Cutsem E, Piessevaux H, Lambrechts D, **Delorenzi M**, Tejpar S.

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Prognostic and predictive biomarkers in resected colon cancer: current status and future perspectives for integrating genomics into biomarker discovery.  
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MAQC Consortium (Shi L, ... , Popovici V, ..., **Delorenzi M**, ..., Wolfinger RD).  
The MicroArray Quality Control (MAQC)-II study of common practices for the development and validation of microarray-based predictive models.  
*Nat Biotechnol.* 2010, 82:827-38. PMID: 20676074.

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## 2009

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## 2008

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BMC Medical Genomics, 2008,1:9. PMID: 18423048

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