

## Curriculum vitae

**Erik Vassella**

**Prof. Dr. pharm.**

**Institute of Pathology, University of Bern, Murtenstrasse 31, 3008 Bern, Switzerland**

**Clinical Genomics Lab, Inselspital Bern, Freiburgstrasse, 3010 Bern, Switzerland**

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Date of birth: April 8, 1964

Place of birth: Bern, Switzerland

Place of origin: Poschiavo, GR

Nationality: Swiss

Marital status: married

Children: Leoluca, 1995, Leandro, 1997

### Positions

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Since 2019	Head of the molecular pathology laboratory, Clinical Genomics Lab, Inselspital Bern.
Since 2004	Research group leader, Institute of Pathology, University of Bern.
2004-2018	Head of the molecular pathology laboratory, Institute of Pathology, University of Bern
2001-2004	Research group leader, Institute of Cell Biology, University of Bern, Switzerland.
1997-2001	Research Fellow and project leader, Institute of Cell Biology, University of Bern.
1994-1997	Research Fellow, Max-Planck-Institut für Biochemie, Martinsried, Germany.
1993-1994	Postdoctoral position at the Institute of Cell Biology, University of Bern.

### Institutional tasks

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Head Molecular diagnostics: NGS, Methylation, Pyrosequencing, Sanger Sequencing, PCR data analysis, writing medical reports, development of new assays, attending tumor boards etc. (50%)

Research group leader (2 Ph.D. students, 1 Master student, 1 MD student, 1 Postdoc, 1 Technician) in the field of cancer research (glioblastoma and lung cancer) (40%)

Lecturer (coordinator Master program in Life Sciences) (10%)

### Education and Academic appointments

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Nov-Dec 2018	Mini-sabbatical, Weill Cornell Medicine, New York, USA.
Since 2014	Associate Professor, Institute of Pathology, University of Bern
April 2005	Habilitation (Privatdozent für Molekular- und Zellbiologie), University of Bern.
1989-1993	Ph.D. student at the Institute of Cell Biology, University of Bern
October 1988	Final exams in Pharmacy (Staatsexamen)
1983-1988	Undergraduate studies in Pharmacy, University of Bern
1979-1983	Gymnasium Neufeld, Bern, Matura Type C

### Awards

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Hans-Sigrist habilitation fellowship.

### External funding

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- Schweizerischer Nationalfonds No 31003A\_175656 "Role of PP2A phosphatase and miR-19b in DNA damage response and temozolomide / radiotherapy resistance of glioblastoma tumours": CHF 408'509 (2018-2022)
- SAKK 75/08 (Co-Applicant): Comprehensive mutational analysis of esophageal carcinomas for prediction of response to neoadjuvant treatment with radiochemotherapy with or without

cetuximab

- Schweizerischer Nationalfonds R'Equip No 316030\_164097 (Co-Applicant) "Nanoparticle Tracking Analysis using NanoSight NS300 Instrument" (2015): 73'000CHF
- Bernische Krebsliga (Co-Applicant) "Molecular characterization of adenosquamous carcinoma of the lung as a prime model of tumour heterogeneity": 70'000 CHF
- Stiftung klinisch-experimentelle Tumorforschung Bern (Co-Applicant) "A pilot study on clonal evolution in colorectal cancer.": 53'000 CHF
- Swiss Cancer League No KFS.2826-08-2011 "Role of microRNAs in regulating EGFR signalling and cytotoxicity induced by receptor tyrosine kinase inhibitors in non-small cell lung cancer": CHF 204'400 (2012-2015)
- Schweizerischer Nationalfonds No 138129 "Analysis of microRNAs implicated in the regulation of NF- $\kappa$ B and MGMT pathways for their role in conferring apoptosis and chemoresistance of glioma tumours": CHF 290'066 (2012-2015)
- Bernische Krebsliga "Role of microRNAs located at regions which are frequently deleted in oligodendrogliomas for their role in conferring chemoresistance, proliferation and apoptosis of glioma tumours": Sfr. 60'000 (2010-2011)
- Schweizerischer Nationalfonds No 3100A0-118039 "Role of microRNAs in tumourigenesis and chemoresistance in lung cancer and gliomas": CHF 197'000 (2008-2011)
- Hans Sigrist Habilitations-Förderungsstipendium (2002- 2004).
- Schweizerischer Nationalfonds No 31-64900.01 "Identification of signaling components mediating the differentiation of African trypanosomes": CHF 211'000 (2001-2005)

### **Supervision of master, Ph.D. and MD students and Postdocs**

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Myriam Wankell, Ingrid Müller, Andreas Güttinger, Claudia Schwab, Nora Bandi, Samuel Zbinden, Corinne Boss, Fabienne Weiss, Stefan Hemmig, Kurt Wyler, Astrid Glück, Ulrich Baumann, Elena Bondarenko, Jonas Heim, Debora Domenicali, Sabine Morand, Stephanie Langsch, Elham Kashani, Fabienne Berger, Bushra Fakher, Jonas Heim, Faezeh Padehban, Lisa Perrig, Carmen Trefny, Nicole Wirth, Alexander Zulliger, Elia Rossini, Huijuan Wang, Dr. Lena Sokol, Dr. Massimo Maiolo, Dr. Philipp Zens

### **Teaching**

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- Molekularbiologie. Vorlesung für Studierende der Zellbiol., Mikrobiol., Immunol. und Bioch. (6 hrs)
- Histologie und Allgemeine Pathologie. (2 hrs)
- Omics. Vorlesung „role of microRNAs in cancer“. (2 hrs)
- Spezialtechniken Pathologie. Vorlesung für Humanmediziner (2 hrs)
- Coordinator Master Program in Molecular Life Sciences: Molecular Pathology (master and graduate school). (28 hrs)

### **Reviewer of scientific journals and grant agencies**

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Journals: FEBS letters, Apoptosis, BMC Cancer, Mol. Microbiol. Cancer Letters, British J Cancer, Cancer Res., Int. J. Cancer, J. translational med, J. Exp. Clin. Cancer Res., Cell Death Disease, Cell Death Differentiation, Oncogene, etc

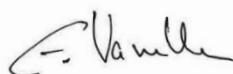
Grants: Wellcome Trust, Swiss Cancer League, Swiss National Science Foundation etc

### **Memberships and Associations**

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Swiss Society of Pathology, Swiss Society of Molecular Pathology, Association of Molecular Pathology, American Association of Cancer Research

Bern 23.12.2022



Erik Vassella

## List of publications (since 2017)

Total: 4612 citations, h-index 36, i10-index 57  
Since 2017: 1792 citations, h-index 22, i10-index 41  
<https://scholar.google.ch/citations>

### Peer-reviewed publications

Marinoni I, Wiederkeher A, Wiedmer T, Pantasis S, Di Domenico A, Frank R, **Vassella E**, Schmitt A, Perren A. Hypo-methylation mediates chromosomal instability in pancreatic NET. **Endocr Relat Cancer**. 2017;24:137-146. PMID: 28115389 (IF 5.7)

Karamitopoulou E, Haemmig S, Baumgartner U., Schlup C., Wartenberg M., **Vassella E**. "MicroRNA dysregulation in the tumor microenvironment influences the phenotype of pancreatic cancer". **Mod. Pathol**. 2017. 30:1116-1125. PMID: 28548126 (IF 7.8)

Sartori E., Langer R., **Vassella E.**, Hewer E., Schucht P., Zlobec I., Berezowska S. "Low co-expression of epidermal growth factor receptor and its chaperone heat shock protein 90 is associated with worse prognosis in primary glioblastoma, IDH-wildtype". **Oncol. Rep**. 2017;38:2394-2400. . PMID: 28765916 (IF 3.7)

Trippel M, Imboden S, Papadia A, Mueller MD, Mertineit N, Härmä K, Nicolae A, **Vassella E**, Rau TT. "Intestinal differentiated mucinous adenocarcinoma of the endometrium with sporadic MSI high status: a case report." **Diagn Pathol** 2017;12:39. PMID: 28494767 (IF 2.3)

Malla B, Zaugg, K, **Vassella E**, Aebersold DM, Dal Pra A. "Exosomes and Exosomal microRNAs in Prostate Cancer Radiotherapy". **Int. J. Rad. Oncol, Biol, Physics**. 2017. 98:982-995. . PMID: 28721912 (IF 6.9)

Hewer E, Prebil N, Berezowska S, Gutt-Will M, Schucht P, Dettmer MS, **Vassella E**. „Diagnostic implications of TERT promoter mutation status in diffuse gliomas in a routine clinical setting." **Virchows Arch**. 2017, 471:641-49. PMID: 28823044 (IF 3.6)

Amer W, Toth C, **Vassella E**, Meinrath J, Koitzsch U, Arens A, Huang J, Eischeid H, Adam A, Buettner R, Scheel A, Schaefer SC, Odenthal M. Evolution analysis of heterogeneous non-small cell lung carcinoma by ultra-deep sequencing of the mitochondrial genome. **Sci Rep**. 2017, 7:11069. PMID: 28894165 (IF 4.4)

Baumgartner U, Berger F, Hashemi Gheinani A, Burgener SS, Monastyrskaya K, **Vassella E**. miR-19b enhances proliferation and apoptosis resistance via the EGFR signaling pathway by targeting PP2A and BIM in non-small cell lung cancer. **Mol Cancer** 2018, 17:44. PMID: 29455644 (IF 25.5)

Gheinani AH, Vögeli M, Baumgartner U, **Vassella E**, Draeger A, Burkhard FC, Monastyrskaya K. Improved isolation strategies to increase the yield and purity of human urinary exosomes for biomarker discovery. **Sci Rep**. 2018, 8:3945. PMID: 29500443 (IF 4.4)

Wartenberg M, Cibir S, Zlobec I, **Vassella E**, Eppenberger-Castori S, Terracciano L, Eichmann MD, Worni M, Gloor B, Perren A, Karamitopoulou E. Integrated Genomic and Immunophenotypic Classification of Pancreatic Cancer Reveals Three Distinct Subtypes with Prognostic/Predictive Significance. **Clin Cancer Res**. 2018, 15;24:4444-4454. PMID: 29661773 (IF 12.5)

Zhong Q, Wagner U, Kurt H, Molinari F, Cathomas G, Komminoth P, Barman-Aksözen J, Schneider-Yin X, Rey JP, **Vassella E**, Rogel U, Diebold J, McKee T, Jochum W, Kashofer K, Hofman P, Zischka M, Moch H, Rechsteiner M, Wild PJ. Multi-laboratory proficiency testing of

clinical cancer genomic profiling by next-generation sequencing. **Pathol Res Pract**. 2018, 214:957-963. PMID: 29807778 (IF 3.3)

Koeck I, Hashemi Gheinani A, Baumgartner U, **Vassella E**, Bruggmann R, Burkhard FC, Monastyrskaya K. Tumor Necrosis Factor- $\alpha$  Initiates miRNA-mRNA Signaling Cascades in Obstruction-Induced Bladder Dysfunction. **Am J Pathol**. 2018, 188:1847-1864. PMID: 29920227 (IF 4.3)

Liang SQ, Bühler ED, Berezowska S, Marti TM, Xu D, Froment L, Yang H, Hall SRR, **Vassella E**, Yang Z, Kocher GJ, Amrein MA, Riether C, Ochsenbein AF, Schmid RA, Peng RW. mTOR mediates a mechanism of resistance to chemotherapy and defines a rational combination strategy to treat KRAS-mutant lung cancer. **Oncogene**. 2019, 38:622-636. PMID: 30171261 (IF 9.9)

Hewer E, Phour J, Gutt-Will M, Schucht P, Dettmer MS, **Vassella E**. TERT Promoter Mutation Analysis to Distinguish Glioma From Gliosis. **J Neuropathol Exp Neurol**. 2020; 79:430-436. PMID: 32068851 (IF 3.6)

Hewer E, Banz Y, Knecht U, Dettmer MS, **Vassella E**. Seminal vesicle carcinoma presenting with malignant ascites. **Diagn Cytopathol**. 2020; 48:785-786. PMID: 32352654 (IF 0.4)

Di Domenico A, Pipinikas CP, Maire RS, Bräutigam K, Simillion C, Dettmer MS, **Vassella E**, Thirlwell C, Perren A, Marinoni I. Epigenetic landscape of pancreatic neuroendocrine tumours reveals distinct cells of origin and means of tumour progression. **Commun Biol**. 2020; 3:740. PMID: 33288854 (IF 5.5)

Yang Z, Liang SQ, Saliakoura M, Yang H, **Vassella E**, Konstantinidou G, Tschan MP, Hegedüs B, Zhao L, Gao Y, Xu D, Deng H, Marti TM, Kocher GJ, Wang W, Schmid RA, Peng RW. Synergistic effects of FGFR1 and PLK1 inhibitors target a metabolic liability in KRAS-mutant cancer. **EMBO Mol Med**. 2021. PMID: 34369083 (IF 12.1)

**Vassella E**, Kashani E, Zens P, Kündig A, Fung C, Scherz A, Herrmann E, Ermis E, Schmid R.A. Mutational profiles of primary pulmonary adenocarcinoma and paired brain metastases disclose the importance of KRAS mutations. **European J Cancer**, 2021. PMID: 34781171 (IF 9.1)

H. Moch, G. Cathomas, M. Frattini, W. Jochum, **E. Vassella**, L. de Leval, J. Diebold, C. Britschgi, T. McKee, L. Bubendorf. Use of Diagnostic Algorithms for NTRK Fusion-Positive Tumors in Pathology Institutes in Switzerland. MINI REVIEW: NTRK fusion-positive tumors. In: Healthbook TIMES oncology Hematology, Vol. 1, Issue 7, 2021

Häni L, Kopicic M, Branca M, Schütz A, Murek M, Söll N, **Vassella E**, Raabe A, Hewer E, Schucht P. Quantitative Analysis of the MGMT Methylation Status of Glioblastomas in Light of the 2021 WHO Classification. **Cancers**, 2022;14:3149. PMID: 35804921.

Guse K, Hagemann N, Thiele L, Remlinger J, Salmen A, Hoepner R, Keller I, Meyer P, Grandgirard D, Leib SL, **Vassella E**, Locatelli G, Hermann DM, Chan A. CNS Antigen-Specific Neuroinflammation Attenuates Ischemic Stroke With Involvement of Polarized Myeloid Cells. **Neurol Neuroimmunol Neuroinflamm**. 2022:e1168. PMID: 35676093.

Rodriguez-Calero A, Gallon J, Akhoundova D, Maletti S, Ferguson A, Cyrta J, Amstutz U, Garofoli A, Paradiso V, Tomlins SA, Hewer E, Genitsch V, Fleischmann A, **Vassella E**, Rushing EJ, Grobholz R, Fischer I, Jochum W, Cathomas G, Osunkoya AO, Bubendorf L, Moch H, Thalmann G, Ng CKY, Gillissen S, Piscuoglio S, Rubin MA. Alterations in homologous recombination repair genes in prostate cancer brain metastases.

Nat Commun. 2022;13:2400. PMID: 35504881

Kashani E, Schnidrig D, Hashemi Gheinani A, Ninck MS, Zens P, Maragkou T, Baumgartner U, Schucht P, Rättsch G, Rubin MA, SOCIBP consortium, Berezowska S, Ng CKY and **Vassella E**. Integrated longitudinal analysis of adult grade 4 diffuse gliomas with long-term relapse interval revealed upregulation of TGF- $\beta$  signaling in recurrent tumors. Neuro Oncol. 2022;noac220. Online ahead of print. PMID: 36124685

Kashani E, **Vassella E**. Pleiotropy of PP2A Phosphatases in Cancer with a Focus on Glioblastoma IDH Wildtype. Cancers. 2022;14:5227. PMID: 36358647.

Kündig A, Zens P, Fung C, Scherz A, Cerciello F, Herrmann E, Ermis E, Schmid RA, **Vassella E**, Berezowska S. Programmed Death-Ligand 1 Expression in Lung Cancer and Paired Brain Metastases-a Single-Center Study in 190 Patients. JTO Clin Res Rep. 2022;3:100413. PMID: 36275910