

CURRICULUM VITAE: MASSIMILIANO MAZZONE

First name, LAST NAME: Massimiliano, MAZZONE
Place and Date of Birth: Torino, March 5th, 1979
Nationality: Italian
Institute: Center for Cancer Biology, VIB, KU Leuven
Address: Campus Gasthuisberg, Herestraat 49, B-3000 Leuven (BE)
Phone: +32.16.37 32 13
Fax: +32.16.37.25.85
Orcid: 0000-0001-8824-4015
E-mail: massimiliano.mazzone@kuleuven.vib.be
Websites: <https://mazzonelab.sites.vib.be/en>



PERSONAL STATEMENT

Initially focusing on vascular biology, my research led to the discovery of a new endothelial cell phenotype during the perfusion of hypoxic tissues (Mazzone et al., Cell, 2009; Leite de Oliveira et al., Cancer Cell, 2012; Ehling et al, Circulation Res, 2019). Thereafter, my team has mainly studied the response of inflammatory cells to hypoxia (or to a cytokine surge) in order to restore blood flow in cancer and ischemia (Rolny et al., Cancer Cell, 2011; Casazza et al., Cancer Cell, 2013; Takeda et al., Nature, 2011; Hamm et al., EMBO Mol Med, 2013). In parallel, we showed that cancer cells under glucose or oxygen deprivation overcome cell death by remodelling their metabolic and oxygen-sensing machinery (Di Conza et al., Cell Rep, 2017a; Di Conza et al., Cell Rep, 2017b). We have been pioneering the concept that localization and metabolism of tumor-associated macrophages (TAMs) is determinant for their pro-tumoral, angiogenic, immunosuppressive phenotype (Casazza et al., Cancer Cell, 2013; Bieniasz-Krzywiec et al., Cell Metabolism, 2019; Wenes et al., Cell Metabolism, 2016; Palmieri et al., Cell Rep, 2017; Menga et al., EMBO Mol Med, 2020; Menga et al., EMBO Rep, 2021). My team has also contributed to the study of macrophages and endothelial cells at the (pre)-metastatic niche (Celus et al., Cell Reports, 2017; Menga et al., EMBO Mol Med, 2020; Riera-Domingo et al., Science Advances, 2023). Translating our findings, we showed that specific inflammatory fingerprints can be exploited for disease detection and follow-up in cancer patients or can be tackled to improve disease response to targeted therapies (Hamm et al., Gut, 2016; Finisguerra et al., Nature, 2015). Finally, we have transferred our knowledge in cancer to other diseases such as inflammation, infections and tissue regeneration where immune cell responses are important to re-establish homeostasis (Takeda et al., Nature, 2011; Hamm et al., EMBO Mol Med, 2013; Finisguerra et al., Nature, 2015; Shang et al., Nature, 2020; Virga et al., Science Advances, 2021). With all our findings, we made a step forward in the understanding of vessel remodelling, macrophage heterogeneity, and recently, immune suppression/T cell exclusion and immunotherapy resistance (Celus et al., Cancer Immunol Res, 2021; Cappellesso et al., Nature Cancer, 2022; Pinioti et al., Cancer Immunol Res, 2023). The translational aspect and valorization of our work are proven by ongoing clinical trials, two spin-offs, numerous industrial collaborations, drug screening programs, and a diagnostic kit as well as an immunotherapeutic antibody, both licensed to two Belgian companies.

EDUCATION

November 2006 to January 2009:

Postdoctoral Fellow, Vesalius Research Center, VIB, Catholic University of Leuven (KU Leuven), Belgium.

From November 1st, 2002, to February 7th 2007:

PhD in Cell Science and Technology, Division of Molecular Oncology, IRCC, School of Medicine, University of Torino, Italy.

From September 1997 to July 2002:

Master (5-year course) in Medical Biotechnology (full marks and exceptional honors), School of Medicine, University of Torino, Torino, Italy.

From September 1992 to July 1997:

Scientific Lyceum (60/60 first class honors), Institute Marie Curie, Pinerolo, Torino, Italy.

RESEARCH EXPERIENCE & POSITIONS

ACADEMIC POSITIONS

From September 2018 to present:

Full Professor, Department of Oncology, KU Leuven, Leuven, Belgium.

From **January 1st, 2024**, I will be also co-affiliated to the Humanitas (Milano, IT) as Full Professor and Group Leader.

From April 2019 to June 2022:

Full Professor, namely “Professore Straordinario” (Dpt. of Molecular Biotechnology and Health Sciences, Molecular Biotechnology Center, University of Torino, Torino, Italy).

From October 2014 to September 2018:

Tenured, Associate Professor, Department of Oncology, KU Leuven, Leuven, Belgium.

From October 2009 to September 2014:

Assistant Professor (Tenure Track), Department of Oncology, KU Leuven, Leuven, Belgium.

RESEARCH POSITIONS**From October 2009 to present:**

Head of the Laboratory of Tumor Inflammation and Angiogenesis, Center for Cancer Biology, VIB, Leuven, Belgium (Junior Group Leader from March 2009 to September 2014; Group Leader from October 2014 to December 2017; Senior Group Leader from January 2018 to present).

From November 2006 to September 2009:

Postdoctoral Fellow, Vesalius Research Center, VIB-KU Leuven, Belgium.

Topics: oxygen sensors in mouse models of ischemia and cancer, validation of small molecules and antibodies in cancer.

Supervisor: Prof. Peter Carmeliet.

From November 2002 to October 2006:

Ph.D. Student, Division of Molecular Oncology, IRCC, School of Medicine, University of Torino, Italy.

Topics: lentiviral vector-based gene-therapy strategies and validation of blocking antibodies in mouse models of cancer and metastasis, validation of recombinant proteins in mouse models of iatrogenic damage.

Supervisor: Prof. Paolo M. Comoglio.

From September 1999 to July 2002:

Undergraduate Student, Division of Molecular Oncology, IRCC, School of Medicine, University of Torino, Italy.

Topics: lentiviral vector-based gene-therapy strategies in mouse models of cancer and metastasis, study of hypoxia on metastatic behaviour of cancer cells in vitro and in mice.

Supervisor: Prof. Maria Flavia Di Renzo, Dr. Paolo Michieli.

From June to November 1998:

Undergraduate Student, Molecular Biotechnology Center, School of Medicine, University of Torino, Italy.

Topics: generation and screening of transgenic mouse lines lacking for the gene Citron-Kinase (Citron K).

Supervisor: Prof. Guido Tarone, Dr. Ferdinando Di Cunto.

ACADEMIC ACTIVITY

Supervisor experience: training of 12 graduated and 8 enrolled PhD students (of which 3 obtained their Master Diploma at KU Leuven and 17 at different international Universities); 1 enrolled PhD student at the University of Torino (Department of Molecular Biotechnology and Health Sciences, Molecular Biotechnology Center); co-promoter of 4 enrolled PhD students (of which 2 at KU Leuven, 1 from the University of Torino and 1 from the University of San Raffaele Milano); 22 completed and 5 enrolled post-docs (all international); 61 bachelor and master thesis students (of which 19 from KU Leuven and 42 from 25 different international Universities); 15 visiting PhD students, 8 visiting post-docs, 2 visiting Professors. Serving on the thesis committee of 34 PhD students at KU Leuven (national and international) and twice as a President of the committee (chosen by the Rector of KU Leuven). External Jury Member and Advisor of 3 students from the University of Milano (European School of Molecular Medicine); 3 students from the VUB (Flemish University in Brussels); 2 students from ULB (Université Libre de Bruxelles, GIGA Institute and Gosselies Campus) and 1 from UCL (Université Catholique Louvain – Louvain-la-Neuve).

Track record of trainees: four of the post-docs have a position as Assistant Professor and/or group leader (and 2 are also clinical staff members), 5 of the post-docs are project leaders in pharmaceutical companies, 1 of the post-docs is scientific/medical writer in a pharmaceutical company. 5 of the 12 graduated PhD students moved to another European institution with a granted European or national fellowship, 1 is Research Professor in China, 2 moved to industry, 2 are Professor/group leader, 1 is IP Manager.

Mentoring committees for tenure tracks:

- Dr. Ping-Chih Ho, Ludwig Cancer Center, University of Lausanne, CH
- Dr. Saverio Tardito, Beatson Institute, University of Glasgow, UK

Visiting Professorships:

- Dpt. of Biosciences, Biotechnologies & Biopharmaceutics, Bari University, IT (June-July 2019)

Board Memberships of Doctoral Schools:

- Doctoral School in Cancer, University of Leuven, BE (from 2009 till present)
- Doctoral School in Cardiovascular Medicine, University of Leuven, BE (from 2009 till 2017)
- Doctoral School in Molecular Medicine, University of Torino, IT (from 2020 till present)
- Doctoral School in Pharmacology, University of Padua, IT (from 2017 till present)
- Doctoral School in Biochemistry and Molecular Biology - Pegaso PhD of Tuscany, joining the three Universities of Florence, Siena and Pisa, IT (from 2019 to 2020)

Teaching duties in Summer schools:

- CBCS International Summer School on Cardiovascular Sciences, Nice, FR (June 16th-June 20th, 2013)
- CBCS International Summer School on Cardiovascular Sciences, Nice, FR (June 12th- June 16th, 2011)
- ESHRE International Summer School on Cancer, Leuven, BE (September 25th- September 26th, 2009)

Teaching duties in Doctoral schools:

- Immunometabolism, Braga and Porto joined PhD program (May 26th, 2022)
- Cancer Immunity and Inflammation, PhD program in Human Genetics, University of Maastricht (May 13th, 2022)
- Biomedical Congress, KU Leuven, BE (April 23rd, 2013)
- SEMM PhD Course on “Cancer-associated inflammation” at IFOM-IEO, University of Milano, IT (April 2012)
- PhD Course at the School in Cardiovascular Medicine, KU Leuven, BE (March 2012)
- SEMM PhD Course on “Cancer-associated inflammation” at IFOM-IEO, University of Milano, IT (March 2011)
- Molecular and Developmental Genetics PhD Course at KU Leuven, BE (December 2010)
- DIMET PhD Course on “Tumor Microenvironment” at Milano-Bicocca University, Milano, IT (November 2010)
- Oncoforum PhD Course at the School in Cancer, Cancer Institute of Leuven (LKI), BE (May 2010)
- Interuniversity course on Angiogenesis to graduate students (MD) at the University of Brussels, BE (October 2008)

Teaching duties for undergraduate students:

- Course in Genome editing, stem cells, and tissue regeneration, master’s in medical biotechnology, University of Torino, IT (from 2020)
- Course in Oncology, master’s in biomedical science, KU Leuven, BE (from January 2007 to present)
- Course Cardiovascular Biology, Master Biomedical Science, KU Leuven, BE (from October 2011 to September 2017)
- Course in Cell Biology and Human Histology to nursing and physiotherapy undergraduate students, University of Torino, IT (from October 2004 to November 2006)

AWARDS & HONORS

November 2023: ERC Proof-of-Concept

September 2023: FEBS Lecture Award

June 2022: EMBO Keynote Lecture Award

February 2022: ERC Proof-of-Concept

June 2021: EMBO Member

November 2017: ERC Consolidator Grant

August 2016: ERC Proof-of-Concept

December 2015: Foundation AstraZeneca Award

July 2015: Chiara D’Onofrio Award (Senior category) from the Foundation Chiara D’Onofrio and the Italian Association for Biophysics and Molecular Biology (Torino, July 1st)

November 2014: EMBO Young Investigator Award 2014

November 2014: André Vander Stricht-Emile Carpentier

Prize, King Baudouin Foundation (Brussels, November 11th)

August 2012: ERC Starting Grant

May 2012: Foundation Andrea and Libi Lorini Award 2011

September 2010: Prof. Karel-Lodewijk Verleysen Award, Belgian Royal Academy of Medicine

May 2010: Research Council Award 2010, KU Leuven

April 2010: Burgen Award, Academy of Europe

November 2009: Rimoux-Bartier Schenking Award

May 2008: Science Award for the best abstract, 8th ESH conference on angiogenesis (Paris, May 9th-12th)

January 2007: Selected for the FEBS Long-Term Fellowship

December 2006: EMBO Long-Term Fellowship

May 2005: Giulia Colletta Award, Italian Association for Cancer Research (AIRC)

LECTURES

INVITED SPEAKER AT INSTITUTIONAL SEMINAR SERIES

October 2023: Dana-Farber Cancer Immunology Seminar Series, Boston, Massachusetts, US (October 2nd) (online)
July 2023: IPMM lecture series in Molecular Medicine, University of Cologne, Germany (July 13th)
February 2023: MRC Weatherall Institute for Molecular Medicine (WIMM), University of Oxford, UK (February 27th)
February 2023: Biomedical Research Institute (BRI) Ioannina, GR (February 17th) (online)
January 2023: GIGA Institute, Liège, BE (January 19th)
January 2023: Louvain Drug Research Institute, Louvain-la-Neuve, BE (January 16th)
May 2022: Post-graduation course on immunometabolism, School of Medicine, University of Minho, PT (May 19th)
April 2022: Beatson Institute, Glasgow, UK (April 14th)
March 2021: Humanitas Research Hospital, Milan, IT (March 25th)
February 2021: Department of Pharmaceutical and Pharmacological Sciences, University of Padova, IT (February 24th)
November 2020: Keynote Speaker, Symposium on Monocytes & Macrophages, Bordeaux, FR (November 27th)
May 2020: Symposium "Inflammation and Immunity", University of Vienna, AT (May 11th-13th)
March 2020: ICGEB, Trieste, IT (March 23rd)
October 2019: INSERM, Nice, FR (October 28th)
June 2019: CNIO, Madrid, ES (June 14th)
January 2019: First speaker by CRUK MI STAY committee, opening lecture, jointly at Cancer Research UK Manchester Institute and MRC, Manchester, UK (January 17th). Aim of this seminar series is to expose junior scientists in helping them to become exposed to world-class research and to share with them successful career development stories.
December 2018: RCC, Institute for Cancer Research, Candiolo, Torino, IT (December 20th)
December 2018: ReTuBi Final Scientific Symposia, IMM, Lisbon, PT (December 5th-7th)
November 2018: Barts Cancer Institute, London, UK (November 6th)
September 2018: INSERM, University of Bordeaux, FR (September 24th)
July 2018: Dpt. of Research, Diagnosis and Innovative Technologies, Regina Elena Cancer Institute, Rome, IT (July 18th)
May 2018: Lola and John Grace Distinguished Lecture in Cancer Research, ISREC-EPFL, Lausanne, CH (May 24th)
March 2018: iTeos Therapeutics, Gosselies, BE (March 21st)
March 2018: San Raffaele Institute, Milano, IT (March 12th)
February 2018: Stem Cell Institute, KU Leuven, BE (February 19th)
February 2018: Cancer Center Amsterdam (joint AMC and VUmc), Noordwijkerhout, NL (February 15th-16th)
January 2018: University of Padova, Department of Pharmacology, Padova, IT (January 19th)
December 2017: ULB, Campus de Charleroi, Gosselies, BE (December 22nd)
November 2017: GIGA Institute, Cancer Seminars, Liege, BE (November 24th)
July 2017: Keynote lecturer, Mini-Symposium, University of Nantes, FR (July 6th)
February 2017: Novartis, Basel, CH (February 28th)
December 2016: Cancer Research Centre of Lyon, FR (December 9th)
July 2016: University Lausanne, CH (July 29th)
June 2016: Instituto Oncologico Veneto, IRCCS, Padova, IT (June 6th)
May 2016: Master Class Series, PARCC, INSERM, Paris, FR (May 27th)
March 2016: MRC University of Edinburgh, Centre for Inflammation Research, Edinburgh, UK (March 18th)
April 2015: ICVS 2015 Spring Seminar Series, Minho University, Braga, PT (April 16th)
April 2015: IMM (Instituto de Medicina Molecular), Lisbon, PT (April 13th)
December 2014: University of Utrecht, NL (December 12th)
November 2014: University of Groningen, Groningen, NL (November 6th)
October 2014: DFKZ, Heidelberg, DE (October 22nd)
September 2014: PhD Symposium, VUB, Brussels, BE (September 11th-12th)
May 2014: Biocenter, University of Oulu, Oulu, FI (May 27th)
February 2014: University of Sheffield Medical School, Sheffield, UK (February 14th)
January 2014: Netherlands Cancer Institute, NKI, Amsterdam, NL (January 17th)
August 2013: Regeneron Pharmaceuticals, Tarrytown, New York, USA (August 2nd)
May 2013: MRC Research Centre, University of Cambridge, UK (May 7th)
April 2013: Cancer Research Institute IRCC, Candiolo, Torino, IT (April 22nd)

May 2012: "Vascular Differentiation" Lecture series, DKFZ, Heidelberg, DE (May 29th)
April 2012: San Donato Institute, Milano, IT (April 17th)
December 2011: IFOM-FIRC Institute of Molecular Oncology, Milano, IT (December 16th)
June 2011: DMBR Seminars, University of Ghent, Ghent, BE (June 16th)
March 2011: Center for Molecular Biotechnology, Torino, IT (March 28th)
December 2010: Cancer Research UK, Lincoln's Inn Fields, London, UK (December 7th)
November 2010: San Raffaele Scientific Institute, Milano, IT (November 19th)
October 2010: Institute of Molecular Medicine, CNR, Rome, IT (October 27th)
October 2010: IFOM-FIRC Institute of Molecular Oncology, Milano, IT (October 26th)
October 2010: Cancer Research Institute IRCC, Candiolo, Torino, IT (October 25th)
April 2010: Institute of Genetics and Biophysics, CNR, Naples, IT (April 19th)
November 2009: Lecture on "Angiogenesis: from the bench side perspective", Bordet Institute, Brussels, BE
September 2009: Lecture on "Invasion and metastasis" at the ESHRE School, Leuven, BE
February 2009: Cornell University, New York, USA
September 2008: Erasmus Medical Center, Dpt. of Neurology, Rotterdam, NL
October 2008: Lecture on 'Angiogenesis and inhibitors', University of Brussels, Brussels, BE
April 2006: PhD thesis dissertation, Dpt. for Transgene Technology and Gene Therapy, VIB, KU Leuven, B
April 2006: PhD thesis dissertation, Vesalius Research Center, KU Leuven, BE
April 2006: PhD thesis dissertation, Dpt. of Molecular Genetics, NKI, Amsterdam, NL
April 2006: PhD thesis dissertation, Dpt. of Dev. Biol. and Stem Cell Res., Hubrecht Institute, Utrecht, NL

NATIONAL CONFERENCES

November 2022: Invited Speaker, Annual Meeting Oncode Institute, Amsterdam, NL (November 3rd-4th)
July 2019: Invited Speaker, Metabolism meets function – MBC, Torino, IT (July 19th)
September 2014: Invited speaker, Interuniversity PhD Symposium, VUB, Brussels, BE (September 11th-12th)
April 2013: Invited speaker, Biomedical Conference, KU Leuven, BE (April 23rd)
February 2013: Invited speaker, VIB seminars annual meeting, Blankenberge, BE (February 7th)
September 2012: Invited speaker, SCIL Seminars, Stem Cell Institute, KU Leuven, BE (September 19th)
May 2011: Invited speaker, VIB Science Club, Leuven, BE (May 2nd)
February 2011: Invited speaker, Belgian Association for Cancer Research Annual Meeting, Liège, BE
May 2010: Keynote lecture at the Oncoforum, Doctoral School Cancer, Cancer Institute of Leuven, BE (May 27th)
January 2010: Invited speaker, Belgian Association for Cancer Research Annual meeting, Leuven, BE (January 21st)

INTERNATIONAL CONFERENCES

April 2025: Invited Speaker, Metabolic Physiology Meeting, Hilton Head Island, South Carolina, US
October 2024: Invited Speaker, 46th Symposium on Hormones and Cell Regulation, Strasbourg, FR (October 9th-12th)
April 2024: Invited Speaker, 9th International conference of the International Cancer Microenvironment Society (ICMS), Heidelberg, DE (11th-14th April)
December 2023: Invited Speaker, French Dendritic Cell Society Meeting, Bordeaux, FR (December 7th-8th)
November 2023: Invited Speaker, Metabolism and Cancer, Nice, FR (November 22nd-24th)
September 2023: Invited Speaker, 9th International Aegean Conference on Tumor Microenvironment and Cellular Stress, Kalamata, GR (September 17th-22nd)
September 2023: Keynote Speaker, Italian Society of Biochemistry Annual Meeting, Florence, IT (September 7th-9th)
July 2023: Invited Speaker, Metabolism Meets Function 2023, Bari, Italy (July 21st)
July 2023: Invited Speaker, FEBS Conference, Tours, FR (July 8th-12th)
June 2023: Invited Speaker, EACR Annual Congress 2023, Torino, IT (12th-15th June)
April 2023: Invited Speaker, 3rd TRIO conference, Comprehensive Cancer Center, Vienna, AT (April 27th-28th) (online)
April 2023: Invited Speaker, Keystone Conference on Myeloid cells, Snowbird, Utah, USA (April 16th-20th)
November 2022: French Society of Immunology Meeting, Nice, FR (November 22nd-24th)
October 2022: Keynote Speaker, Cancer Metabolism, EACR, Bilbao, Spain (October 11th – 13th)
September 2022: Invited Speaker, International Conference on Cancer Vaccination, Torino, IT (Sept 26th-28th)
September 2022: Invited Speaker, 12th Chinese Society of Clinical Oncology, Shanghai PDAC Symposium (Sep 17th)
July 2022: Invited Speaker, Cancer and Metabolism Conference, Francis Crick Institute, London, UK (July 17th-19th)
June 2022: Invited Speaker, Molecular Biotechnology Center (MBC), Torino, IT (June 27th-30th, 2022)
June 2022: Invited Speaker, Gordon Research Conference, Castelldefels, ES (June 27th)
June 2022: Invited Speaker, Society on Sarcopenia, Cachexia and Wasting Disorders (SCWD), Lisbon, PT (June 24th-26th)
June 2022: Invited Speaker, Recent insights into Immuno-Oncology, VIB, Leuven, BE (June 16th-17th)

May 2022: EVBO webinar plenary talk (May 2nd)

February 2022: Invited Speaker, CABIMER International Conference 2022, Seville, ES (February 23rd-25th)

December 2021: Invited Speaker, French Dendritic Cell Society, Paris, FR (December 16th-17th)

December 2021: Invited Speaker, ESMO Immuno-Oncology Congress 2021, Geneva, CH (December 8th-11th)

November 2021: Invited Speaker, EMBO Conference, Sitges, Barcelona, ES (November 29th – December 1st)

November 2021: Keynote Speaker, Symposium on macrophages in physiopathology, Bordeaux, FR (November 26th)

November 2021: Invited Speaker, AICC Annual Conference: Cancer Metabolism, Torino, IT (November 22nd-24th)

November 2021: Invited Speaker, VII International Symposium on Translational Oncology and Clinical Research, Barretos, BR (hybrid event) (November 5th-6th)

October 2021: Invited Speaker, CSHL conference “Biology of Cancer: Microenvironment & Metastasis”, Cold Spring Harbor, USA (virtual) (October 16th-19th)

October 2021: Invited Speaker, XIX Virtual NIBIT Meeting (Italian network for cancer biotherapy and immunotherapy) “Cancer immunity and immunotherapy beyond COVID-19” (virtual) (October 14th-15th)

October 2021: Invited Speaker, 7th MetNet International Annual Meeting: “Multifaceted Metabolism in Human Disease, Barcelona, ES (October 8th)

October 2021: Invited Speaker, ADELIS conference: ‘Metabolism in cancer: from reprogramming to therapeutic vulnerability’, Paris, FR (October 6th-7th)

September 2021: Invited Speaker, Italian Society of Cell Biology (ABCD) 2021, virtual event (September 15th)

July 2021: Keynote Speaker, 6th EU-CardioRNA COST Action Meeting, virtual event (July 5th – 7th)

June 2021: Invited Speaker, ISHR-ES-2021, Torino, IT – virtual event (June 29th – July 1st)

June 2021: Invited Speaker, ‘Metabolism Meets Function: The multifaceted role of Metabolism in cancer’ (University of Florence), virtual event (June 14th)

November 2020: Invited Speaker, AICC Annual Conference: Dissecting metabolic circuitries in cancer cells and microenvironment, Torino, IT (November 23rd-24th)

September 2020: Invited Speaker, “Cancer Biology: from Basic to Translational Research”, Lisbon, PT (September 25th)

July 2020: Invited Speaker, 36th ISHR European Section Meeting, University of Torino, IT (June 30th -July 3rd)

July 2020: Invited speaker, third edition on ‘Metabolism meets function’, Florence, IT (July 20th)

June 2020: Invited Speaker, “Endothelial Cell Phenotypes in Health and Disease” Gordon Research Conference (GRC), Castelldefels, ES (June 28th -July 3rd)

January 2020: Invited speaker, Keystone on “Hypoxia: Molecules, Mechanisms and Disease”, Keystone, Colorado, US (January 19th – 24th)

October 2019: Invited Speaker, ISCaM, “Metabolism in cancer”, Braga, PT (October 17th -19th)

September 2019: Invited Speaker, ESMO Annual Conference, Barcelona, ES (September 27th – October 1st)

May 2019: Invited Speaker, EMBO Workshop, “Neural guidance molecules in development and disease”, Baveno, IT (May 25th-28th)

May 2019: Invited speaker, *Nature* Conference on “Tumor adaptation to stress”, Weizmann Institute of Science, Rehovot, IL (May 13th-16th).

March 2019: Invited speaker and Session Chair, Keystone Symposia on “Cancer Metastasis: The Role of Metabolism, Immunity and the Microenvironment”, Firenze, IT (March 15th-20th)

November 2018: Keynote speaker, ABCD Conference: Signal Transduction in Cancer, MBC, University of Torino, IT (November 22nd -24th)

November 2018: Invited speaker, “The German Society for Microcirculation and Vascular Biology” and “The Netherlands Vascular Biology Organizations”, Amsterdam, NL (November 21st-23rd)

October 2018: Invited Speaker, ISCaM, Metabolic Adaptations & Targets in Cancer, Bratislava, SI (October 17th -20th)

July 2018: Invited speaker, Mini-Symposium on Metabolism (4 international speakers), Bari University, IT (July 20th)

July 2018: Invited speaker, Beatson Conference on Tumor Microenvironment, Glasgow, UK (July 1st-4th)

February 2018: Invited speaker, EMBO sectorial meeting on Immunology, Belem, Lisbon, PT (February 22nd-23rd)

September 2017: Invited speaker, 25th ECDO Euroconference on apoptosis, topic on Cell death and immunity in disease, Leuven, BE (September 27th-29th)

June 2017: Invited speaker, 7th International Conference on Tumor Microenvironment and Angiogenesis, Centro Stefano Franscini, Monte Verità, Ascona, CH (June 25th-28th)

June 2017: Invited speaker, 4th International Congress of Translational Research in Human Nutrition, Clermont-Ferrand, FR (June 22nd-23rd)

June 2017: Invited speaker, BACR Conference on Tumour Microenvironment: from Basic Science to Novel Therapies, Nottingham, UK (June 14th-16th)

May 2017: Invited speaker, European Society for Clinical Investigation, Genova, IT (May 16th-18th)

March 2017: Invited speaker, 4th Meeting of Translational Immunology, Palermo, IT (March 27th-29th)

October 2016: Invited speaker, international society of cancer metabolism, Brussels, BE (October 26th-28th)

October 2016: Invited speaker, 2nd symposium on tumor microenvironment, Frankfurt, DE (October 13th-14th)

September 2016: LKI Symposium on Tumor immunology and Immunotherapy, Leuven, BE (September 12th-14th)

May 2016: Invited speaker, EU Life meeting, Vienna, AT (May 12th -13th)

April 2016: Keynote speaker, Meeting for hematology and oncology, University of Bonn, DE (April 15th-17th)

January 2016: Invited speaker, Symposium on Angiogenesis and Cancer, IDIBELL, Barcelona, ES (January 22nd)

January 2016: Invited speaker, AACR Special Conference on The Function of Tumor Microenvironment in Cancer Progression, San Diego, CA, USA (January 7th-10th)

October 2015: Invited speaker and discussion leader, International Symposium on Metastatic CRC, Heidelberg, DE (October 29th-30th)

September 2015: Invited speaker, DKFZ-ZMBH Alliance meeting, Heidelberg, DE (September 27th-30th)

September 2015: Invited speaker, Fondazione IBSA, Immune Symposium, Lugano, CH (September 26th)

September 2015: Invited speaker and discussion leader, VIB international conference on Metabolism, Leuven, BE (September 8th-10th)

July 2015: Keynote speaker, SIBBM Conference "From Genomes to Functions", Torino, IT (July 1st-3rd)

May 2015: Invited speaker, 12th meeting of the French Neuroscience Society, Montpellier, FR (May 19th-22nd)

May 2015: Invited speaker, 6th Conference on Tumor Microenvironment, Monte Verità, CH (May 17th-20th)

May 2015: Invited speaker, Keystone Symposium on Hypoxia, Dublin, IE (May 12th-17th)

May 2015: Invited speaker, ConsePOC International Meeting, Madrid, ES (May 4th)

April 2015: Co-organizer of the parallel session on tumor microenvironment and discussion leader, AACR Annual Meeting, Philadelphia, PA, USA (April 18th-22nd)

March 2015: Invited speaker, AACR Special Conference on Angiogenesis, Orlando, USA (March 5th-8th)

October 2014: Invited speaker, TIMCC Symposium on Tumor Microenvironment, Bonn, DE (October 22nd)

October 2014: Invited speaker, ETH Symposium on Angiogenesis and Inflammation, Zurich, CH (October 8th)

September 2014: Invited speaker, Biology & Treatment of Metastatic Cancer, El Jadida, MA (September 23rd-26th)

April 2014: Keynote speaker, French Angiogenesis Society Meeting, Chamonix, FR (April 2nd-4th)

March 2014: Invited speaker and discussion leader, Keystone Symposium on Angiogenesis, Whistler, British Columbia, CA (March 16th-21st)

February 2014: Invited speaker, AACR Special Conference on Cellular Heterogeneity in the Tumor Microenvironment, San Diego, CA, USA (February 26th-March 1st)

November 2013: Invited speaker, Symposium KFO 210, Marburg, DE (November 11th-12th)

October 2013: Invited speaker, Louis-Jeantet Symposium, Geneve, CH (October 23rd)

September 2013: Invited speaker, ESC Conference, Amsterdam, NL (August 31st-September 4th)

August 2013: Invited speaker, Gordon Conference (GRC), Newport, Rhode Island, USA (August 4th-9th)

July 2013: Invited speaker, Beatson Conference on Tumor Stroma, Glasgow, UK (June 7th-10th)

June 2013: CBCS International Summer School on Cardiovascular Sciences, Nice, FR (June 16th-20th)

June 2013: Invited speaker and discussion leader, 5th International Conference on Tumor Microenvironment and Angiogenesis, Monte Verità, Ascona, CH (June 2nd-5th)

October 2012: Invited speaker and discussion leader, FEBS meeting on Angiogenesis, Capri, IT (October 14th-17th)

September 2012: Invited speaker, Conference Italian Society of Biochem. Mol. Biol., Chieti, IT (September 26th-29th)

September 2012: Invited speaker, Annual Meeting of the European Macrophage and Dendritic Cell Society, Debrecen, HU (September 1st-3rd)

July 2012: Invited speaker, CELL Symposium on Angiogenesis, Metabolism, Cancer, Leuven, BE (July 6th-8th)

April 2012: Invited speaker, Hypoxianet 2012, Nantes, FR (April 4th)

January 2012: Invited speaker, IV International J Folkman Conference, Rome, IT (January 13th-14th)

August 2011: Invited speaker, Gordon Conference (GRC), Newport, Rhode Island, USA (August 21st-26th)

August 2011: Invited speaker and discussion leader, "Endothelial Heterogeneity in Disease" Gordon-Kenan Research Seminar (GRS), Salve Regina University, Newport, Rhode Island, USA (August 20th-21st)

June 2011: Invited speaker, CBCS Summer School on Cardiovascular Sciences Nice, FR (June 12th-16th)

October 2010: Invited speaker, HypoxiaNet 2010, UCD, Dublin, IE (October 7th-8th)

March 2010: Invited speaker, European Physiological Society Symposium, UCD, Dublin, IE (March 22nd)

March 2010: Invited speaker, AICR Annual Meeting, Galway, IE (March 3rd-6th)

May 2008: Invited speaker, 8th ESH conference on angiogenesis, Paris, FR (May 9th-12th)

February 2008: Invited speaker, 'International Symposium: Advances in Translational Research of Cardiovascular Diseases', Madrid, ES (February 14th-15th)

May 2005: Invited speaker, VI Conference of Molecular Oncology, Positano, IT

PERSONAL RESEARCH GRANTS

NATIONAL GRANTS

- May 2023:** King Baudouin Foundation/Funds Maaiké Lars Trees research grant (€ 200 000) for the project 'Targeting the CDA/P2Y6 axis to overcome immunosuppression and favor response to immune checkpoint inhibitors in pancreatic cancer' (2023-J1140800-231586)
- December 2022:** 4-year research grant (€ 520 000) from FWO for the project G082323N: 'Tackling tumor immunosuppression by reprogramming eicosanoid metabolism and signalling in the tumor microenvironment.'
- May 2022:** 4-year FWO-SBO/E grant (€ 2 599 689 total), with J. Swinnen (PI), J. Van Ginderachter, C. Scott, J. Hendriks (co-PI's) for the project 'LipoMacs: functional Lipidomics to unlock Macrophage-mediated therapy.' (S001623N)
- May 2022:** Advanced technology equipment funding from Foundation against Cancer for BD Imaging Cell Sorter – BD Cell View Technology™ - € 885 720 (ATE-2022/1877)
- January 2022:** EOS grant with J. Van Ginderachter, P. Close, and F. Fuks, where I function as the **spokesperson** (overall budget: € 3 842 105 spread in 4 years to the entire consortium, of which € 1 051 000 for my lab).
- October 2021:** 5-year Methusalem grant from the Flemish government with the role of co-promoter (€ 45 000 per year)
- September 2021:** Credit (€ 57 000) from KanGO! Fund (50%) and the Duchenne Parent Project Belgium - 'Hope for Duchenne' – (50%), to study GLUD1 genetic and pharmacologic inhibition in the context of DMD.
- September 2021:** MIUR Italian Ministry for Research (€ 56 000), together with Prof. Taverna, as promoters in a proposal on miR regulation in monocytes/macrophages in COVID-19 patients
- September 2021:** Credit (€ 20 000) from the Rondou fund for Duchenne research, for the project 'Genetic targeting and pharmacological inhibition of macrophage-specific GLUD1 as potential treatment option for Duchenne muscular dystrophy (DMD)'.
- September 2021:** C3 KU Leuven Research grant (€ 337 000) on the role of the metabolite transporter SLC4A4 in pancreatic cancer cells in promoting immune escape and resistance to immunotherapy.
- January 2021:** 4-year grant (€ 542 000) from the Belgian Foundation against Cancer for the project 2020-1372: 'Arachidonic acid metabolism, a cross point between bad and good macrophages in cancer'.
- January 2019:** 4-year research grant (€ 400 000) from FWO for the project G0A7419N: 'Harnessing the pyrimidine salvaging pathway to foster anti-tumor immunity and sensitize tumors to immune checkpoint blockade'.
- January 2019:** 4-year research grant (€ 509 500) from FWO for the project G0A8219: 'Exploring the role of PlexinA4 in cytotoxic T cells: insights for anti-tumor immune response & cancer immunotherapy'.
- January 2018:** 4-year research grant from FWO-SBO project (ZL3C3602) with a primary economic finality aimed at the transfer to existing companies; total € 1 999 749 of which € 400 583 for my laboratory; project title: Validation and druggability development of macrophage-specific targets in the tumor microenvironment (MATATUM).
- January 2017:** 4-year research grant (€ 515 000) from FWO for the project G0D1617N: 'Exploring the role of TRAIL pathway in the tumor stroma: implications for cancer progression and drug resistance'.
- January 2017:** 4-year research grant (€ 305 116) from FWO for the project G0D1717N: 'Metabolism following function or function following metabolism: a study of AMPK in tumor-associated macrophages'
- January 2016:** 30-month research grant (€ 229 000) from the Flemish Association against Cancer (VLK) for the project 419.052.173: 'PHD1 as potential candidate for drug resistance in colorectal cancer'.
- January 2015:** 4-year research grant (€ 200 000) from the Belgian Association against Cancer for the project 2014-186: 'A monocyte signature for monitoring disease relapse and response to chemotherapy in colorectal cancer patients.'
- January 2015:** 4-year grant (€ 354 600) from the Belgian Association against Cancer for the project 2014-197: 'Exploring the metabolic pathways driving tumor-associated macrophage polarization and their influence on tumor progression'.
- January 2015:** 4-year research grant (€ 292 000) from FWO for the project G066515N: 'Exploring the metabolic pathways driving tumor-associated macrophage polarization and their influence on tumor progression'.
- January 2015:** 4-year research grant (€ 400 000) from FWO for the project G087615N: 'Podoplanin: the missing link between breast cancer and lymphatic?'.
- January 2015:** Credit (€ 30 000) from FWO for the project 1501215N: 'Mir-210 at the crossroad of M2 and M1 macrophage polarization: relevance for sepsis and cancer'.
- November 2014:** André Vander Stricht-Emile Carpentier Prize (€ 40 000).
- October 2014:** 8-year Methusalem grant from the Flemish government with the role of co-promoter (€ 75 000 per year)
- September 2014:** 4-year research grant (€ 450 000) from the Vlaamse Liga tegen Kanker for the project: 'A monocyte signature for monitoring disease relapse in colorectal cancer patients.'
- January 2013:** 4-year research grant (€ 200 000) from FWO for the project G083613N: 'Inhibiting FIH as a potential anti-angiogenic treatment'.

January 2012: 4-year research grant (€ 200 000) from FWO for the project G068612N: 'Unravelling new molecular pathways in the oxygen sensing machinery'.

January 2011: 4-year research grant (€ 200 000) from FWO for the project G079311N10: 'Peripheral blood monocytes as predictive biomarkers in colorectal cancer'.

January 2011: Credit (€ 10 000) from FWO for the project 1505611N00: 'Unravelling new molecular pathways in the oxygen sensing machinery'.

December 2010: 4-year research grant (€ 140 000) from the Belgian Association against Cancer for the project 2010-198: 'Peripheral blood monocytes as predictive biomarkers in colorectal cancer'.

December 2010: 2-year research grant (€ 140 000) from the Belgian Association against Cancer for the project 2010-169: 'Unravelling new molecular pathways in the oxygen sensing machinery'.

January 2010: 4-year research grant (€ 320 000) from FWO for the project G.0726.10N: 'Endothelial phalanx cells in therapeutic angiogenesis'.

January 2010: 4-year research grant (€ 82 000) from FWO for the project G071810N: 'PHD2 oxygen sensor: novel and promising target for the optimization of chemo and radiotherapy'.

January 2010: Credit (€ 20 000) from FWO for the project 1520410N: 'PHD2 oxygen sensor: novel and promising target for the optimization of chemo and radiotherapy'.

INTERNATIONAL GRANTS

November 2023: 1-year ERC Proof-of-Concept (€ 150 000) for the project "Targeting eicosanoid metabolism to overcome tumor immunosuppression". Acronym: EicoMet. Seal of excellence: the application was recognized as a high-quality project proposal in a highly competitive evaluation process.

February 2022: 1-year ERC Proof-of-Concept (€ 150 000) for the project: "Targeting bicarbonate transport as a first-in-class therapeutic strategy to promote CD8⁺ T fitness and enhance cancer immunotherapy". Acronym: BasicFit. Note from the ERC President: "This year's Proof of Concept Grant call had a very large number of applications, and the evaluation panel was impressed with the generally high quality of the proposals received".

July 2020: 3-year AFM-Telethon grant (€ 200 000) for the project: "GLUD1 as a potential target in Muscular Dystrophy". From October 2020 to September 2023.

November 2017: 5-year ERC Consolidator Grant (€ 2 000 000) for the project ImmunoFit (773208): 'Harnessing tumor metabolism to overcome immunosuppression'. From July 1st, 2018, to March 31st 2024 (extension due to COVID).

September 2017: 3-year MSCA-ITN grant, Horizon 2020 (META-CAN) (€ 452.920 as co-PI): "Targeting the metabolism-immune system connections in Cancer".

November 2016: 1-year ERC Proof-of-Concept (€ 150 000) for the project: "A comparative clinical study of a stool-based versus a blood-based screening test for early detection of CRC."

May 2016: 3-year ERANET grant (€ 300 000 per participant) for the project OxyUC: "The impact of hypoxia on inflammation and tumorigenesis in Ulcerative Colitis." Consortium with Prof. Cormac Taylor (UCD, Dublin, Ireland), Dr. Martin Shneider (University Hospital Heidelberg, Germany), Prof. Jochen Prehn (Royal College of Surgeons, Dublin, Ireland).

June 2013: 3-year research grant (€ 237 000) from the Association for International Cancer Research (AICR) for the project: 'Podoplanin: the missing link between macrophages and lymphatic metastasis in breast cancer?'.

November 2012: 5-year ERC Starting Grant - Starter Category (€ 1 500 000) for the project OxyMO (308459): 'Oxygen sensing in macrophages: implications for cancer and ischemia'. From December 2012 to November 2017.

July 2012: Credit (€ 25 000) from the European Society of Cardiology for the project: 'Regulation of post-ischemic angiogenesis and reperfusion injury by PHD2 and WNT/beta catenin pathways.'

INDUSTRIAL FUNDING AND TECH TRANSFER

February 2022: iTEOS Therapeutics, 2-year investment on findings from my lab, drug discovery/validation (€ 1 500 000)

September 2021: VLAIO research grant with Montis Biosciences as an academic partner (€ 250 000)

March 2021: Credit (€ 60 000) from Oncurious for a preclinical study.

July 2019: Funds from Droia (€ 540 868) in favor of Montis Biosciences, to evaluate macrophages and endothelial cells interactions in the immunosuppressive tumor environment.

April 2018: Seed capital (€ 150 000) from V-BIO Ventures, 1 year grant for grounding foundation of a new spin-off.

January 2018: VLAIO research grant with CoBioRes, external service fee up to 200 000 €.

January 2018: VLAIO research grant (total € 1 798 992 of which € 541 358 for my laboratory) with J&J Belgium, Janssen Pharmaceutica, grant number HBC.2016.0883: "Targeting immunosuppressive mechanisms in cancer". From February 2018 to February 2020.

June 2017: VLAIO research grant (total € 1 122 754 of which € 168 583 for my laboratory) with Octimet, grant number HBC. 201.03657: "Combination Therapies for treatment of Resistant Tumours". From 1/06/2017 to 31/05/2019.

January 2017: Funds from DNA Lytics (€ 250 000) for the development of the Monomark test (Colonokit™).

December 2016: Funds from Merus (€ 440 000) to evaluate the in vivo effect of MET and EGFR biclonal antibodies.

November 2016: Funds from Octimet (€ 100 000) for the preclinical validation of OMO-1 (MET and OCT-2 inhibitor).

January 2016: 24-month grant (€ 12 500) from AstraZeneca Foundation (EXJ-MMWDVC-O3200).

August 2015: Funds from Droia (€ 84 000) for the pre-clinical evaluation of ITPP on tumor oxygenation and cancer progression in breast cancer mouse models.

June 2015: Funds from Merus (€ 107 000) to evaluate the in vitro effect of MET and EGFR biclonal antibodies.

May 2014: Funds from CoBioRes nv (€ 37 500) to evaluate the PhAc-ALGP-technology in breast cancer.

January 2014: Funds from Boehringer Ingelheim (€ 120 000) for a biomarker analysis on plasma samples from CRC patients in relation to antiangiogenic treatments (Folfox + Avastin versus Folfox + Nintedanib; phase I/II study).

August 2013- May 2017: FFMI extensions (€ 300 000) for the development of the Monomark signature.

January 2011: Unique selected 3-year research grant (€ 345 000) from the Foundation Fournier-Majoie for the Innovation (FFMI) for the project: 'Peripheral blood monocytes as predictive biomarkers in colorectal cancer'.

PATENTS AND SCIENCE TRANSLATION

- "PHD2 inhibition for blood vessel normalization, and uses thereof"; Mazzone M, and Carmeliet P; filed on 20 January 2010; published as WO 2010/084134.
- "Induction/monitoring of arteriogenesis using SDF1 and PDGFB or inhibition of PHD2"; Mazzone M, and Carmeliet P; filed on 30 March 2011; published as WO2011/121036.
- "Monocyte biomarkers for cancer detection"; Mazzone M; filed on 28 January 2013; published as WO2013/110817.
- "Modulating transendothelial migration and recruitment of granulocytes by modulating c-Met pathway"; Mazzone M, and Finisguerra V; filed on 31 August 2012 (US 61/695,952; published as WO 2014/033298).
- "PP2A subunits in DNA repair and implications for cancer"; Sablina A, Mazzone M, and Di Conza G; filed on 18 February 2013; published as WO2013/121042.
- "Means and methods to treat inflammatory diseases"; Mazzone M, and Henze A-T; filed on 4 October 2016 (EP 16192213.3; published as WO 2018/065390).
- "Glutamine dehydrogenase inhibitors for use in muscle regeneration"; Mazzone M, and Shang M; filed on 9 June 2017 and 12 February 2018 (EP 17175210.8; EP 17175210.8; published as WO 2018/224636).
- "Glutamine synthetase inhibitors in cancer"; Mazzone M, Castegna A, Palmieri E, and Menga A; filed on 20 July 2017 (GB 1711709.4.).
- "Podoplanin-positive macrophages"; Mazzone M, and Bieniasz-Krzywiec P; filed on 26 October 2017 (EP 17198684.7; published as WO 2019/081714).
- "CD8+ T cells lacking plexins and their application in cancer treatment"; Mazzone M, Oliveira A, and Celus W; filed on 28 May 2019 (EP 19176939.7; published as WO 2020/239934).
- "Cancer treatment by targeting Plexins in the immune compartment"; Mazzone M, Oliveira A, and Celus W; filed on 28 May 2019 (EP 19176944.7; published as WO 2020/239945).
- "PLXA4 – Circulating biomarker for anti-tumor therapy"; Mazzone M, Oliveira A, and Celus W; filed on 24 September 2020 (EP 20198184.2)
- "Combination of P2RY6 inhibitors and immune checkpoint inhibitors"; Mazzone M; filed on 24 September 2020 (GB 2015082.7).
- "A novel activity of Tacrolimus in preventing muscle atrophy and cancer cachexia"; Porporato P, Mina E, Rausch V, Mazzone M; filed by the University of Torino on 11 January 2021.
- "Inhibition of SLC4A4 in the treatment of cancer"; Mazzone M, Cappellesso F, Virga F; filed on 17 February 2021 (EP 21157705.1).
- "Hematopoietic Prostaglandin Synthase (HPGDS) inhibition for treating cancer"; Mazzone M, Trotta R; filed on 16 November 2023 (EP23210278.0)
- "Inhibition of Prostaglandin D2 Receptor 1 as means for treating cancer"; Mazzone M, Trotta R; filed on 16 November 2023 (EP23210284.8)
- "Inhibition of Prostaglandin D2 Receptor 2 as means for treating cancer"; Mazzone M, Trotta R; filed on 16 November 2023 (EP23210290.5)
- Outlicense of an anti-phospho-PHD2 S125 (Di Conza et al., Cell Reports, 2017) to Merck Millipore, # MABC1612.

- Outlicense of the Monomark signature (WO2013/110817 and Hamm et al., Gut, 2015) to DNA Lytics (Louvain-la-Neuve, Belgium) as Colonokit™.
- Generation of anti-Neuropilin-1 antibodies with VIB Drug Discovery and Fair Journey Biologics (Porto, Portugal).
- Screening and validation of Glutamine Synthase inhibitors in collaboration with the Korea Research Institute of Chemical Technology (KRICT).
- Screening and validation of GLUD1 small molecule inhibitors with CD3 at KU Leuven.
- Screening and validation of anti-SLC4A4 nanobodies and IP6K3 inhibitors with VIB Drug Discovery Sciences.
- Screening and validation of anti-PlexinA4 nanobodies and antibodies together with Oncurious.
- Preclinical validation of new metabolic drugs in the immune oncology field, in collaboration with iTEOS

SPINOFF BIOTECH COMPANIES

- Scientific Founder of the oncology company **Oncurious** (September 1st, 2017)
- Scientific Founder with **Droia** of **Montis Biosciences**, working on tumor-associated macrophage and endothelial cell interactions (July 19th, 2019)
- Seed capital for the foundation of a **third spin-off**, **ImmunoFit**, in the field of immune cell adaptation to the tumor microenvironment (May 1st, 2019)

SCIENTIFIC SERVICE

- Editorial Board Member of: *Journal of Molecular Medicine & Therapeutics*; *Cancer Research*; *Journal of Tumor Molecular & Cellular Oncology*; *Cytokines and Soluble Mediators in Immunity*; *Immunometabolism*; *Genes & Immunity*.
- Guest Editor special issues: *Molecular Aspects of Medicine* (2011); *Immunometabolism* (2020); *Frontiers in Immunology* (2020); *International Journal of Molecular Sciences* (2022).
- From February 2022, Associate Editor of the British Journal of Cancer (Nature Publishing group).
- Scientific Advisor of Review Commons (an EMBO and ASAPbio initiative)
- Reviewer for the following journals (~40/year): Clin Cancer Res, Cancer Res, Nature, Nat Genet, Nat Biotechnol, Nat Cell Biol, Nat Commun, Nat Rev Canc, Science, Sci Immunol, Science Translational Medicine, Cancer Cell, Cell Metab, Cell Rep, Mol Cell, J Clin Invest, J Exp Med, EMBO J, EMBO Mol Med, Blood, PNAS, Plos Biol, Faseb J, Scientific Reports, Oncogene, Circulation, Cancer Immunology Research, ...
- From June 2022, part of the evaluation panel of the SNSF Consolidator Grants (Swiss National Science Foundation)
- Member of the LS4 panel, PRIN 2022, and PRIN 2022 PNRR, Ministry for University and Research, Italy
- Reviewer for the following granting agencies: FWO, IWT (BE), MIUR (IT), DFG (DE), Raine Medical Research Foundation ID League (CH); NWO, KWF (NL); FCT (PT); ERC (EU).
- Advisory boards: Sanofi-Aventis; Merck; Montis Biosciences; Metaptys; CoBioRes; OctiMet; DeuterOncology
- AACR, EACR, ESMO and EMBO Member
- Member of the Executive Board of the Leuven Cancer Center (LKI)
- Cancer UK advisory panel member
- Consultant for the Italian Ministry for University and Research
- Member of the boards of the PhD program in Cancer and of the PhD program in Cardiovascular Medicine, KU Leuven
- Internal Advisory Panel member, Department of Oncology, KU Leuven
- User Committee Member, KU Leuven FACS Core, and Steering Committee VIB FACS Core
- Member of the scientific board of Stichting tegen kanker – Belgian Association against Cancer (2016 – 2021)
- Mentoring committee, Tenure Track Program (Ludwig Cancer Center and CRUK)
- Member of the European Academy for Tumor Immunology (EATI)

ORGANIZATION OF INTERNATIONAL CONFERENCES

- Co-Organizer of the Forbeck Cancer Forum on immune tumor microenvironment, California, March 2024 (with Prof. Sara Zanivan)
- Co-Organizer of the 8th annual meeting of the International Society of Cancer Metabolism (ISCaM), Molecular Biotechnology Center (MBC), Torino, IT (June 27th-30th, 2022)
- Co-Organizer VIB Conference on ImmunoOncology, Leuven, BE 2022 (June 16th-17th) and 2024 (June 30th-31st)
- Co-Organizer VIB Training on Organoids, Leuven, BE (May 25th, 2022)
- Scientific Committee of the ESMO Immuno-Oncology Congress, Geneva, CH (December 8th-11th, 2021)

- Organizer METACAN Training Conference (MSCA-ITN, Horizon 2020) on “Mouse models, organoids and large data analysis”, Leuven, BE (September 23rd-27th, 2019)
- Organizer VIB Conference on Metabolism in Cancer and Stromal Cells (November 26th-27th, 2018) in Leuven (BE)
- Scientific Committee, 4th International Congress of Translational Research in Human Nutrition, topic on nutrition and cancer, Clermont-Ferrand, FR (June 22nd-23rd, 2017)
- Organizer VIB Symposium on Cell Metabolism, Leuven, BE (September 6th, 2016)
- Co-organizer parallel session on tumor microenvironment, AACR, Philadelphia, PA (April 18th-22nd, 2015)

RESEARCH ACTIVITY

- Developed lentiviral vector-based antagonists and antibodies against HGF/MET signalling in the context of cancer.
- Identified the role of MET in neutrophils during inflammation and cancer.
- Identified possible mechanisms of resistance to chemotherapy and anti-angiogenic drugs.
- Studied PHD2 in endothelial cells and macrophages using cancer and ischemia mouse models.
- Characterized post-translational modifications of PHD2 and the PHD2 interactome.
- Studied the effect of macrophage polarization, metabolism and localization on tumor immunity, angiogenesis, metastasis and response to chemotherapy.
- Studied new immunotherapeutic strategies and combination treatments to foster anti-cancer immunity, *ad hoc* licensed to Oncurios
- Developed a monocyte-based test for colorectal cancer diagnosis, licensed to DNA Lytics (Colonokit™)
- Drug repurposing of anti-cancer drugs in the muscle regeneration field
- Studied the metabolic cross-talks defining the tumor immune landscape and usable as new immunotherapeutic targets.

MAJOR SCIENTIFIC COLLABORATIONS

Angiogenesis and cancer invasion: L. Claesson-Welsh, E. Dejana (SE), K. Alitalo (FI), H. Gerhardt (DE), M. Simons (US), D. Hanahan (CH), O. Sansom (UK), D. Taverna, L. Tamagnone, G. Serini (IT). **Clinics:** H. Prenen, B. Topal, S. Tejpar, A. D’Hoore, A. Smeets, G. Floris, X. Sagaert, T. Roskams, M.F. Bosisio, A. Hendlisz (BE), F. Loupakis, G. Gasparini (IT), T. Tueting, M. Schneider, T. Schmidt, S. Schölch, J. Weitz (DE). **Hypoxia:** M. Ivan (US), C. Taylor (IE), P.J. Ratcliffe, P. Maxwell, M. Whyte (UK). **Immunometabolism:** S. Kaech (US), H. Ping-Chih, P. Romero (CH). **Immunity:** M. De Palma, G. Coukos (CH), G. Matteoli, P. Agostinis, G. Bergers, J. Van Ginderachter, A. Liston, B. Vanden Eynde, P. Coulie (BE), A. Mantovani (IT), M. Hoelzel (DE), C. Lewis (UK), Z. Granot (IL). **Metabolism:** P. Carmeliet, S. Fendt, B. Ghesquière, J. Swinnen, G. Bommer (BE), C. Muñoz-Pinedo, J. Aragonés-Lopez (ES), S. Zanivan (UK), C. Frezza (DE), A. Castegna (IT). **Epigenetics:** P. Close, B. Thienpont, J. Cools (BE). **Imaging:** S. Soenen, C. Scheele (BE) Bioinformatics: D. Lambrechts, S. Aerts, C. Marine, F. Fuks (BE), R. DasGupta (SG).

SCIENTIFIC PRODUCTIVITY

- 165 articles in peer-reviewed journals, of which 130 research papers (5 as first author and **29 as senior author, 26 as corresponding author**), 24 reviews (3 as first author and 13 as last author, of which 13 as corresponding author) and 13 editorials/commentaries (5 as first author of which 3 as corresponding author, 8 as last and corresponding author of which 1 as only author); 3 book chapters; 18 patents (of which 2 licensed to Belgian spin-off industries)
- Cumulative impact factor: 2241.63
- Cumulative impact factor of first / senior / corresponding author research papers: 508.03
- Average impact factor of first or senior corresponding author research papers: 15.39
- Cumulative citations index (ISI web of science): 16674
- Cumulative citation index of first / senior / corresponding author research papers (ISI web of science): 4021
- H index: 62 (ISI Web of Science)

LIST OF PUBLICATIONS

*Equally contributing first author / Equally contributing senior author; #Corresponding Author; IF Impact Factor publication year; C Citations (no self-citations)

PUBLISHED

1. Watts E, Willison J, Arienti S, Sadiku P, Coelho P, Sanchez-Garcia M, Zhang A, Murphy F, Dickinson R, Mirchandani A, Morrison T, Lewi A, Vermaelen W, Ghesquière B, Carmeliet P, **Mazzone M**, Maxwell P, Pugh C, Dockrell D, Whyte M, Walmsley S. (2023). Differential roles for the oxygen sensing enzymes PHD1 and PHD3 in the regulation of neutrophil metabolism and function. *Wellcome Open Research*, 2023, 8:569 doi: 10.12688/wellcomeopenres.19915.1 (awaiting peer review)
2. Pinioti S, Sharma H, Flerin NC, Yu Q, Tzoumpa A, Truso Cafarello S, De Bousser E, Callewaert N, Oldenhove G, Schlenner S, Thienpont B, Garg AD, Di Matteo M, **Mazzone M**[#]. A metabolic gene survey pinpoints fucosylation as a key pathway underlying the suppressive function of regulatory T-cells in cancer. *Cancer Immunology Research (in print)* (2023). IF=10.1
3. Phan QT, Solis NV, Cravener MV, Swidergall M, Lin J, Huang MY, Liu H, Singh S, Ibrahim AS, **Mazzone M**, Mitchell AP, Filler SG. *Candida albicans* stimulates the formation of a multireceptor complex that mediates epithelial cell invasion during oropharyngeal infection. *PLOS Pathogens*, 19(8):e1011579. doi: 10.1371/journal.ppat.1011579 (Online ahead of print) (2023). IF=6.7
4. Riera-Domingo C, Leite-Gomes E, Charatsidou I, Zhao P, Carrà G, Cappellesso F, Mourao L, De Schepper M, Liu D, Serneels J, Alameh M-G, Shuvaev V, Geukens T, Isnaldi E, Prenen H, Weissman D, Muzykantov VR, Soenen S, Desmedt C, Scheele CLGJ, Sablina A, Di Matteo M, Martín-Pérez R, **Mazzone M**[#]. Breast tumors interfere with endothelial TRAIL at the pre-metastatic niche to promote cancer cell seeding. *Sci Adv*. 9(12):eadd5028 (online ahead of print). (2023) IF=13.6; C=1
5. Iwata R, Casimir P, Erkol E, Boubakar L, Planque M, Gallego Lopez IM, Ditkowska M, Gaspariunaite V, Beckers S, Remans D, Vints K, Vandekerke A, Poovathingal S, Bird M, Corthout N, Vermeersch P, Carpentier S, Davie K, **Mazzone M**, Gounko NV, Aerts S, Ghesquière B, Fendt S-M, Vanderhaeghen, P. Mitochondria Metabolism sets the species-specific tempo of neuronal development. *Science*, 379(6632):553-+. (2023). IF=56.9; C=21
6. Orso F, Virga F, Dettori D, Dalmaso A, Paradzik M, Savino A, Pomatto MAC, Quirico L, Cucinelli S, Coco M, Mareschi K, Fagioli F, Salmena L, Camussi G, Provero P, Poli V, **Mazzone M**, Pandolfo PP, Taverna D. Stroma-derived miR-214 coordinates tumor dissemination. *J Exp Clin Canc Res*, 42(1):20 doi: 0.1186/s13046-022-02553-5 (2023). IF=11.3; C=2
7. Altea-Manzano P, Doglioni G, Liu Y, Cuadros AM, Nolan E, Fernandez-Garcia J, Wu Q, Montagne A, Planque M, Laue KJ, Cidre-Aranaz F, Liu W, Marin-Bejar O, Van Elsen J, Vermeire I, Broekaert D, Demeyer S, Spotbeen X, Alkan HF, Demicco M, Rabas N, Riera-Domingo C, Richard F, Geukens T, De Scchepper M, Leduc S, Hatse S, Lambrechts Y, Kay EJ, Lilla S, Alekseenko A, Geldhof V, Boeckx B, de la Calle Arregio C, Floris G, Swinnen J, Marine J-C, Lambrechts D, Pelechano V, Mazzone M, Zanivan S, Cools J, Wildiers H, Baud V, Grünewald TGP, Ben-David U, Desmedt C, Malanchi I, Fendt S-M. A palmitate-rich metastatic niche enables metastasis growth via p65 acetylation resulting in pro-metastatic NF- κ B signaling. *Nature Cancer*, 4(3):344-+ (2023). IF=22.7; C=14
8. Bisilliat Donnet C, Acolty V, Azouz A, Taquin A, Henin C, Trusso Cafarello S, Denanglaire S, **Mazzone M**, Oldenhove G, Leo O, Goriely S, Moser M. PHD2 constrains the anti-tumor CD8⁺ T cell activity. *Cancer Immunol Res*, 11(3):339-350 (2022). IF=10.1; C=1
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