



TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO

ID CODE 6358

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at **AREA SCIENTIFICO-DISCIPLINARE DELLE SCIENZE MEDICHE**

Scientist- in - charge: **_Prof. Vitale Giovanni**

DOTT. ING. ILONA MAGDA RYBINSKA

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	RYBINSKA
Name	ILONA MAGDA

PRESENT OCCUPATION

Appointment	Structure
POST DOC	IEO (Istituto Europeo Oncologia) - Milano

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree	Biotechnology	Wroclaw University of Environmental and Life Sciences	2010
Specialization			
PhD	Medical biology	Wroclaw Medical University	2013

REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	Association	City
2012	European Society of Cardiology (ESC)	Wroclaw (PL)
2018	Società Italiana Cancerologia (SIC)	Milano (IT)



FOREIGN LANGUAGES

Languages	level of knowledge
English	Full working proficiency
Polish	Mother tongue
Italian	Advanced

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2013	PhD thesis with honours from Wroclaw Medical University
2022	Post-doctoral Fellowship 2022. Fondazione Umberto Veronesi: The role of adipocytes in triple negative breast cancer.
2023	Post-doctoral Fellowship 2023. Fondazione Umberto Veronesi: The Cancer Associated Adipocytes predestine triple negative breast cancers to ferroptosis.

TRAINING OR RESEARCH ACTIVITY

<p>RESEARCH EXPERIENCE April 2017 to date Post Doc fellow at National Cancer Institute of Milan (INT) (Fondazione IRCCS Istituto Nazionale dei Tumori, Milan, Italy). Molecular Targeting Unit. Scientific activity: Study of the vicious crosstalk between breast cancer cells and adipocytes with the particular focus on the role of iron metabolism in tumor progression.</p> <p>Post-doctoral Fellowship 2022 Fondazione Umberto Veronesi: The role of adipocytes in triple negative breast cancer. https://www.fondazioneveronesi.it/ricerca/i-nostri-ricercatori/ilona-rybinska</p> <p>March 2014 - March 2017 Post Doc fellow at: a) University of Milan, Italy. Department of Clinical and General Pathology. Scientific activity: Work on newly designed oral iron chelators for human diseases characterized by systemic iron accumulations. b) University of Zurich (UTH), Switzerland. Institute Veterinary Physiology Scientific activity: Study of the role of endogenous myoglobin in breast cancer resistance to anthracyclines.</p> <p>September 2010 - November 2013 Researcher in WROVASC - Integrated Center of Cardiovascular Medicine (Wroclaw, Poland). Scientific activity Study of changes in iron metabolism during natural story of chronic heart failure.</p> <p>February 2010- July 2010 Internship at Department of Plant Production, Gent University (Belgium).</p> <p>September 2008 - February 2009 Internship at Ludwik Hirshfeld Institute of Immunology and Experimental Therapy</p>
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Polish Academy of Sciences (Wroclaw, Poland)

EDUCATION AND TRAINING

July 2020

State examination for Biologist (section A). University of Insubria (Varese, Italy).

December 2013

PhD Program: Wroclaw Medical University, Faculty of Postgraduate Medical Training, Department of Heart Disease (Poland): Italian Equivalence decree dated 26/11/2019 from MIUR (Ministry of Instruction, University and Research)

July 2010

2nd Level degree - Biotechnology, Wroclaw University of Environmental and Life Sciences (Poland) - Final degree mark: 110 out of 110. Italian Equivalence decree dated 09/04/2017 from University of Milan

February-2009

1st Level degree - Degree in Biotechnology Wroclaw University of Environmental and Life Sciences (Poland). Italian Equivalence decree dated 09/04/2017 from University of Milan.

RECENT TRAINING/COURSES

- LEGISLAZIONE NAZIONALE ED ETICA LIVELLO 1, MODULI 1 E 2, DM 5 AGOSTO 2021. IZSLER BRESCIA
- BIOLOGIA E GESTIONE DEGLI ANIMALI DA LABORATORIO, MODULI 3.1, 4, 5, 6.1, 7. DM 5 AGOSTO 2021 RODITORI E LAGOMORFI. IZSLER BRESCIA
- ETICA E CONCESSIONE DEI PROGETTI, MODULI 9, 10, 11, DM 5 AGOSTO 2021. IZSLER BRESCIA
- XENOTRAPIANTI E MODELLI ANIMALI IN ONCOLOGIA
- RICONOSCIMENTO E GESTIONE DEL DOLORE NEGLI ANIMALI DA LABORATORIO. IZSLER BRESCIA
- BASIC PRINCIPLES OF ANAESTHESIA, ANALGESIA AND MICRO-SURGERY IN THE MOUSE-FONDAZIONE IRCCS ISTITUTO NAZIONALE DEI TUMORI MILANO.
- INTRODUCTION TO R AND RSTUDIO-XENSTATS, POLAND

PROJECT ACTIVITY

Year	Project
2009	MAPPING OF THE ENLARGED TETRAD MUTANT ET1 - GHENT UNIVERSITY
2010-2013	EVALUATION OF SELECTED PARAMETERS OF IRON STATUS MEASURED IN BLOOD, LIVER AND HEART OF PIGS WITH TACHYCARDIA-INDUCED CHRONIC SYSTOLIC HEART FAILURE-WROVASC
2014	DISORDINI DELLA REGOLAZIONE DI EPCIDINA E DELL'OMEOSTASI DEL FERRO: MECCANISMI, DIAGNOSI E TRATTAMENTI INNOVATIVI - ASSEGNO RICERCA TIPO B (UNIMI)



2015-2017	ROLE OF ENDOGENOUS MYOGLOBIN IN TUMOR SENSITIVITY TO DOXORUBICIN (UNIVERSITA' DI ZURIGO)
2017-2023	RUOLO DEGLI ADIPOCITI NELLA PROGRESSIONE DEL TUMORE DELLA MAMMELLA
2022	THE CLINICAL IMPACT OF THE CROSS-TALK BETWEEN TUMOR CELLS AND ADIPOCYTES IN TNBC PATIENTS - BORSA DI STUDIO UMBERTO VERONESI

PATENTS

Patent

CONGRESSES AND SEMINARS

Date	Title	Place
2011	Hepcidin and hemojuvelin expression in left ventricle and liver in male pigs with tachycardia- induced cardiomyopathy. Heart Failure Congress 2011	<u>Göteborg, Sweden</u>
2011	Expression of genes involved in iron metabolism and level in left ventricle and liver in male pigs with tachycardia-induced cardiomyopathy. Heart Failure Congress 2011	<u>Göteborg, Sweden</u>
2011	Inactive MMP9 is present in complexes of MMP9-NGAL-TIMP1 in male pigs with tachycardia-induced cardiomyopathy. Heart Failure Congress 2011	<u>Göteborg, Sweden</u>
2013	High soluble transferrin receptor in patients with systolic heart failure: A measure of iron deficiency and strong predictor of mortality. Heart Failure Congress 2013	Lisbon - Portugal



2016	Role of endogenous myoglobin in tumor sensitivity to DOX. XIXth International conference on "Oxygen binding and sensing proteins"	Hamburg - Germany
2018	Breast cancer-adipocytes crosstalk as promoter of cancer progression. 60th Annual Meeting of the Italian Cancer Society (SIC)	Milan - Italy
2019	Crosstalk between cancer cells and adipocytes in breast cancer progression. Keyston Symposia	Canada
2021	Obesity: From Cell to Patient Keyston Symposia	Virtual congress
2021	Adipocyte dedifferentiation is induced by SAA1 and is associated with triple negative breast cancer aggressiveness EACR 2021	Virtual congress
2022	Iron as a central player in the crosstalk between cancer associated adipocytes and triple negative breast cancers. SIC 62nd annual Meeting of the Italian Cancer Society	Venice - Italy

PUBLICATIONS

BOOKS
<p>Ilona Rybinska, Gaetano Cairo, Chapter Eight - Mutual Cross Talk Between Iron Homeostasis and Erythropoiesis, Editor(s): Gerald Litwack, Vitamins and Hormones, Academic Press, Volume 105, 2017, Pages 143-160, ISSN 0083-6729, ISBN 9780128122655, https://doi.org/10.1016/bs.vh.2017.01.001.</p> <p>(https://www.sciencedirect.com/science/article/pii/S0083672917300018)</p>



PUBLICATIONS

1. Rybinska I, Mangano N, Tagliabue E, Triulzi T. Cancer-Associated Adipocytes in Breast Cancer: Causes and Consequences. *Int J Mol Sci.* 2021 Apr 6;22(7):3775. doi: 10.3390/ijms22073775. PMID: 33917351; PMCID: PMC8038661. (IF 5.923)
2. Piccotti F, Rybinska I, Scoccia E, Morasso C, Ricciardi A, Signati L, Triulzi T, Corsi F, Truffi M. Lipofilling in Breast Oncological Surgery: A Safe Opportunity or Risk for Cancer Recurrence? *Int J Mol Sci.* 2021 Apr 3;22(7):3737. doi: 10.3390/ijms22073737. PMID: 33916703; PMCID: PMC8038405. (IF 5.923)
3. Zacharski M, Tomaszek A, Kiczak L, Ugorski M, Bania J, Paławska U, Rybinska I, Jankowska EA, Janiszewski A, Ponikowski P. Catabolic/Anabolic Imbalance Is Accompanied by Changes of Left Ventricular Steroid Nuclear Receptor Expression in Tachycardia-Induced Systolic Heart Failure in Male Pigs. *J Card Fail.* 2021 Jun;27(6):682-692. doi: 10.1016/j.cardfail.2020.12.024. Epub 2021 Jan 12. PMID: 33450412. (IF 5.712)
4. Rybinska I, Agresti R, Trapani A, Tagliabue E, Triulzi T. Adipocytes in Breast Cancer, the Thick and the Thin. *Cells.* 2020;9(3):560. Published 2020 Feb 27. doi:10.3390/cells9030560 (IF 6.6)
5. Rybinska I, Sandri M, Bianchi F, et al. Extracellular Matrix Features Discriminate Aggressive HER2-Positive Breast Cancer Patients Who Benefit from Trastuzumab Treatment. *Cells.* 2020;9(2):434. Published 2020 Feb 13. doi:10.3390/cells9020434 (IF 6.6)
6. Agresti R, Triulzi T, Sasso M, et al. Wound Healing Fluid Reflects the Inflammatory Nature and Aggressiveness of Breast Tumors. *Cells.* 2019;8(2):181. Published 2019 Feb 19. doi:10.3390/cells8020181 (IF 6.6)
7. Kiczak L, Walecka-Zacharska E, Bania J, et al. Anti-inflammatory properties and expression in selected organs of canine interleukin-1B splice variant 1. *Vet Immunol Immunopathol.* 2015;167(3-4):91-95. doi:10.1016/j.vetimm.2015.07.007 Format (IF 2.046)
8. Gammella E, Recalcatti S, Rybinska I, Buratti P, Cairo G. Iron-induced damage in cardiomyopathy: oxidative-dependent and independent mechanisms. *Oxid Med Cell Longev.* 2015;2015:230182. doi:10.1155/2015/230182 (IF 6.543)
9. Jankowska EA, Wojtas K, Kasztura M, et al. Bone marrow iron depletion is common in patients with coronary artery disease. *Int J Cardiol.* 2015;182:517-522. doi:10.1016/j.ijcard.2014.10.006 (IF 3.229)
10. Buratti P, Gammella E, Rybinska I, Cairo G, Recalcatti S. Recent Advances in Iron Metabolism: Relevance for Health, Exercise, and Performance. *Med Sci Sports Exerc.* 2015;47(8):1596-1604. doi:10.1249/MSS.0000000000000593 (IF 4.029)
11. Kiczak L, Tomaszek A, Bania J, et al. Matrix metalloproteinase 9/neutrophil gelatinase associated lipocalin/tissue inhibitor of metalloproteinases type 1 complexes are localized within cardiomyocytes and serve as a reservoir of active metalloproteinase in porcine female myocardium. *J Physiol Pharmacol.* 2014;65(3):365-375. (IF 3.011)

Articles: last published Gen-2024

Rybinska, Ilona; Mangano, Nunzia; Romero-Cordoba, Sandra; Regondi, Viola; Ciravolo, Valentina; De Cecco, Loris; Maffioli, Elisa; Paolini, Biagio; Bianchi, Francesca; Sfondrini, Lucia; Tedeschi, Gabriella; Agresti, Roberto; Tagliabue, Elda; Triulzi, Tiziana: "SAA1-dependent reprogramming of adipocytes by tumor cells is associated with triple negative breast cancer aggressiveness" (**International Journal of Cancer - Manuscript IJC-23-0183**)



Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

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Place and date: Legnano, 05/02/2024