

## DR. VALENTIN-FLORIAN RAUCA

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valentin.rauca@tum.de



## EDUCATION

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- Oct. 2016 – July 2020**    **PHD DEGREE IN INTEGRATIVE BIOLOGY**  
Babes-Bolyai University, Faculty of Biology and Geology,  
Cluj-Napoca, Romania  
**Doctoral thesis topic:**  
“Exploiting the therapeutic potential of oxidative stress modulators in melanoma”
- Oct. 2014 – July 2016**    **MASTER DEGREE IN MOLECULAR BIOTECHNOLOGY**  
Babes-Bolyai University, Faculty of Biology and Geology,  
Cluj-Napoca, Romania  
**Master thesis topic:**  
“Re-education of protumoral macrophages by the combined administration of simvastatin and DMXAA *in vitro*”
- March 2015 – July 2015**    **ERASMUS STUDENT MOBILITY FOR STUDIES (SMS) PROGRAM**  
Regensburg University, Faculty of Biology and Preclinical Medicine,  
Germany
- RNA Biology
  - Structure Determination of Membrane Proteins
  - Molecular Mechanisms of Development
- Oct. 2011 – July 2014**    **UNIVERSITY DEGREE IN BIOLOGY**  
Babes-Bolyai University, Faculty of Biology and Geology,  
Cluj-Napoca, Romania  
**Bachelor thesis topic:**  
“*In vitro* cytotoxicity of simvastatin on B16.F10 murine melanoma cells under hypoxic conditions”

## PROFESSIONAL EXPERIENCE

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- Nov 2019. – present**    **KLINIK UND POLIKLINIK FÜR DERMATOLOGIE UND ALLERGOLOGIE (AM BIEDERSTEIN)**  
Technische Universität, Klinikum rechts der Isar,  
München, Germany  
**Position:** Postdoctoral researcher – P17: Impact of aberrant immune signaling in melanoma mast cell networks on melanoma progression and metastasis – DFG Collaborative Research Centres Programme (project leader Dr. Tilo Biedermann)
- Oct. 2017 – Oct. 2019**    **DEPARTMENT OF MOLECULAR BIOLOGY AND BIOTECHNOLOGY**  
Babes-Bolyai University, Faculty of Biology and Geology,  
Cluj-Napoca, Romania

**Position:** Research assistant – Tumor intercellular communication tools – inspiration for future tumor-targeted therapies (ID: PN-III-P4-ID-PCE-2016-0342) (project leader Dr. Manuela Banciu)

**March – Oct.2017**     **DEPARTMENT OF PHARMACOGNOSY**  
Iuliu Hatieganu University of Medicine and Pharmacy, Faculty Of Pharmacy, Cluj Napoca, Romania  
**Position:** Research assistant - Phytochemical research and evaluation of the anti-inflammatory, antioxidant and antitumoral potential of some indigenous species of Ajuga" (ID: PN-II-RU-TE-2014-4-1247) (project leader Dr. Anca Toiu)

**Oct. 2015 – Oct. 2017**     **DEPARTMENT OF MOLECULAR BIOLOGY AND BIOTECHNOLOGY**  
Babes-Bolyai University, Faculty of Biology and Geology, Cluj-Napoca, Romania  
**Position:** Research assistant - Re-education of protumoral macrophages, premise for future combined targeted cancer therapies (Research Grant – Young Research Teams - PN-IIRU-TE-2014-4) (project leader Dr. Manuela Banciu)

**August 2015 – Oct. 2015**     **RESEARCH CENTRE FOR FUNCTIONAL GENOMICS, BIOMEDICINE AND TRANSLATIONAL MEDICINE**  
Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania  
▪ Cell cultures  
▪ Processing biological samples  
**Position :** Laboratory internship

**June 2015 – Aug. 2015**     **DEPARTMENT OF BIOPHYSICS AND BIOCHEMISTRY**  
Regensburg University, Faculty of Biology and Preclinical Medicine, Germany  
▪ Membrane protein expression and purification, protein quality control  
**Position:** Volunteer

**2013 – 2015**     **INSTITUTE FOR INTERDISCIPLINARY RESEARCH IN BIO-NANO SCIENCES**  
Babes-Bolyai University, Cluj-Napoca, Romania  
▪ Cell cultures  
▪ Protein quality control  
**Position:** Volunteer

## **TEACHING EXPERIENCE**

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**April 2022**     **Immunology Crash Course 2022, RTG2668, Abbas (Edition 10)**  
Chapter 18 & 19 - Immunity to Tumors and Hypersensitivity Disorders  
Technical University of Munich, Germany  
▪ Lecture

**2017 – 2019**     **Biochemistry I and II Practical Courses, Babes-Bolyai University, Cluj-Napoca, Romania**

I coordinated the research activity of secondary school student Andreea Cret – Silver Medal In Life Science for Romania at The 24th International Conference of Young Scientists in Stuttgart Germany 2017 – “The Antitumor Activity of the Simvastatin and DMXAA on the Co-Culture of B16.F10 Melanoma Cells and Macrophages”

I coordinated 6 bachelor theses: "Targeting tumor angiogenesis via DMXAA-loaded long circulating liposomes" by student Naftan Daria; "The effect of DMXAA-loaded long circulating liposomes on murine melanoma inflammatory cytokines in vivo" by student Stef Anda; "Study of the antitumor efficacy of liposomes with DMXAA based therapy on B16.F10 murine melanoma in vivo" by student Pop Adriana-loana; "Effects of simvastatin and DMXAA on the angiogenic ability of B16.F10 murine melanoma cells co-cultured with macrophages" by student Coltau Catalin; "The in vitro effects of Simvastatin and DMXAA on the invasive capacity of B16.F10 murine melanoma cells" by student Hreanean Alin; "Assesment of the cytotoxic effect of liposome-based combined therapy with simvastatin and DMXAA, perspective for targeted cancer therapy" by student Bulgar Catalin.

## RELATED EXPERIENCE

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**2019-present** Member of Posch-Lab – ([www.posch-lab.com](http://www.posch-lab.com)) - team focused on skin cancer biology and inflammatory skin diseases

**Current projects:**

Aberrant Immune Signals in TME

The role of senescence-escape in early melanoma development

Blocking STK19 in NRAS mutant melanoma

**2014-present** Member - Romanian Society of Biochemistry and Molecular Biology

## CONFERENCES AND CERTIFICATES

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**Oral presentation** Valentin-Florian Rauca, Caterina Iuliano, Susanne Kaesler, Christian Posch, Tilo Biedermann. **Impact of aberrant immune signaling in melanoma mast cell networks on melanoma progression and metastasis.** CRC 1335 Retreat 12-13 October, 2020 Munich, Germany (Online)

**Oral presentation** Valentin-Florian Rauca, Laura Pătraș, Lavinia Lupuț, Alina Sesărman, Emilia Licărete, Vlad Toma, Augustin C. Moț, Manuela Banciu. **Combination therapy of the liposome-encapsulated agents Simvastatin and DMXXA affects major mechanisms of murine melanoma development and progression.** The 24<sup>th</sup> World Congress on Advances in Oncology and 24<sup>th</sup> International Symposium on Molecular Medicine, 10-12<sup>th</sup> of October, 2019, Mystras, Sparta, Greece. Book of abstracts: Journal of Molecular Medicine, volume 44, supplement 1, 219, 2019

**Oral presentation** Valentin-Florian Rauca, Emilia Licarete, Alina Sesarman, Lavinia Luput, Laura Patras, Manuela Banciu – **Enhanced antitumor efficacy induced by the coadministration of Simvastatin and DMXAA on an *in vitro* melanoma inflammation model** at The Annual International Conference of the Romanian Society of Biochemistry and Molecular Biology, 8<sup>th</sup>-9<sup>th</sup> June 2017 Timisoara, Romania.  
Abstract published in NEW FRONT. CHEM, Volume 26, Nr.2  
ISSN 2393-2171; ISSN-L 2393-2171

**Moderator** International Conference of Molecular Biology – Current Aspects and Prospects 6<sup>th</sup> -8<sup>th</sup> of November 2015, Cluj-Napoca, Romania  
Keynote speaker: Sir Richard Timothy Hunt, Nobel Prize Winner.

**Certificate Laboratory Animal Science Course Certificate** – EU function A with Focus on Mice and Rats, former FELASA Category B. The course content corresponds to the recommendations of the **Federation of European Laboratory Animal Science Association (FELASA)** for the training and education of persons participating in the performance of animal experiments. Centre for Preclinical Research at the Klinikum rechts der Isar of the Technical University (TUM) of Munich.

## **LANGUAGES**

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English	fluent (C1 level- Certified by Alpha Center- CECRL- 2014)
German	intermediate (B1 level- Intensivsprachkurs für Programmstudierende- Zentrum für Sprache und Kommunikation – Universität Regensburg)
Romanian	mother tongue

## **REFERENCES**

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Christian Posch	PhD. Priv.Doz. Dr. Med. Univ. Head of Dermato-Oncology Technical University of Munich, Department of Dermatology and Allergy Germany: <a href="mailto:christian.posch@tum.de">christian.posch@tum.de</a>
Manuela Banciu	Professor, Department of Molecular Biology and Biotechnology Faculty of Biology and Geology, Babes-Bolyai University, Cluj-Napoca, Romania: <a href="mailto:manuela.banciu@ubbcluj.ro">manuela.banciu@ubbcluj.ro</a>