# Curriculum Vitae

December, 2020

Abdallah Abu Taha, Uppsala (Sweden) +46 768 003 420 or Bethlehem + 972 592 054 741
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**Profile:** Experienced vascular and tumor biologist specialized in Live-cell Imaging and Quantification of Dynamics, looking for new challenging opportunities to do great science. I would love to let scientists see the hidden spatiotemporal beauty of life that they might have been missing while doing end-point measuring assays.

## Recommendations

Abdullah ABU TAHA comes from Palestine (born in Bethlehem), a difficult area of our "civilized" world. Above his scientific performances, I have been really amazed to see how Abdullah ABU TAHA could develop his personality as a promising student and then a scientist. I do have a lot of respect for such individual developments.

This is without any doubt that I would highly recommend Abdullah ABU TAHA. He is clearly a young, promising scientist who deserves to have a chance in sciences.

If your need further information, please just call me.

Yours sincerely,

Bernard Hoflack, Professor at Biotechnology Center / TU-Dresden (Germany).

Thus, I wish Dr. Taha the very best for scientific future and I strongly and without hesitation recommend him very highly for any research institution, be it an academic or a commercial research entity. I am fully convinced, Dr. Taha will be a great asset to any such institution.

With regards

Rolf Jessberger, Professor and Chairman of the Institute of Physiological Chemistry at TU-Dresden (Germany).

Elisabetta Dejana, Professor and Director at IFOM-IEO Campus (Italy) and Professor at Uppsala University (Sweden).

Abdallah is happy to make himself available for discussions and collaborations. He is also as a rule active in our local seminar series, and raises important and generally interesting points. Clearly, he brings in an intellectual aspect to the discussions.

To have such an experienced and still experimentally active researcher in your immediate environment is precious. I'm therefore happy to enthusiastically recommend him. Please contact me directly if you have further questions.

Sincerely,

Lena Claesson-Welsh, Professor and Principal Investigator at Uppsala University (Sweden).

Abdallah is a dedicated scientist and has the capacity of training young fellows and to transfer to them most of the technological advancements he was able to develop. In my lab his project took some time and effort before giving results but he has now two new papers, one under revision and another one that will be completed shortly. Abdallah, in general, is a nice person generous and collaborative. He does not hesitate to help the others and to share ideas and competences. He also presents his data very well and can easily handle discussion. Overall I would very highly recommend Abdallah for a tenior position.

With my best wishes

Prof. Elisabetta Dejana

## Career Goals:

Establish a vibrant research group focusing on "**Live-cell Imaging and Automated Quantification of Dynamics to Unravel Molecular Mechanisms of Vascular and Tumor Biology"** to shed light on fundamental questions in the field vascular biology. One main focus will be to understand better the molecular dynamics of a vascular disease known as Cerebral Cavernous Malformations (CCM) and to optimize high-quality 3D live-cell imaging in vivo.

## Professional Experience

2015–2019: **Senior Researcher**, Department of Immunology, Genetics and Pathology (IGP), Uppsala University, Uppsala (Sweden). Project topic: Investigating the molecular mechanisms of the genetic disease cerebral cavernous malformations (CCMs).

2012–2015: **Postdoctoral Fellow,** Institute of Anatomy and Vascular Biology, Medical Faculty, Westfälische Wilhelms-Universität-Münster (WWU-Münster), Münster (Germany). Project topic: Dynamic remodeling of the endothelial cell-to-cell junctions.

2006–2007: **Research Assistant,** Orthopedic Tissue Engineering group of Carl Gustav Carus Medical Faculty-Dresden University of Technology, Dresden (Germany). Project topic: Approaching possible clinical applications of periost extract.

2006–2006: **Student Assistant**, Max Plank Institute of Molecular Cell Biology and Genetics (MPI-CBG), Dresden (Germany). Project topic: Cloning and expression of the nuclear import factor "snurportin".

2003–2005: **Research Assistant**, UNESCO Biotechnology Educational and Research Center (BERCEN), Bethlehem (Palestine). Project topic: Developing genetically modified tomato cultivars that are resistant to the viral disease tomato yellow leaf virus (TYLCV).

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## Education and Training

2007–2013: Ph.D. in Molecular Cell Biology - specialization in Vascular Biology **(summa cum laude; Excellent).** Thesis: "Dynamics of endothelial cell junctions". Dresden International Graduate School for Biomedicine and Bioengineering (DIGS-BB) and Max Planck Institute for Molecular Cell Biology and Genetics (CBG), Dresden (Germany).

2005–2007: M.Sc. in Molecular Bioengineering **(Excellent)**. Thesis: "Study of protein-protein interactions involved in membrane trafficking". Biotechnology Center of Dresden University of Technology (BIOTEC), Dresden (Germany).

1999–2003: B.Sc. in Biology (major) and Medical Technology (minor) **(Highest Honor).** Bachelor Project: "Developing tomato cultivar resistant to the viral disease TYLCV" Bethlehem University (BU), Bethlehem (Palestine).

## Scholarships, Honors and Awards

**July 2019**: One of my co-authorship papers was featured in **Faculty 1000 Prime** web site which identifies and highlights key papers in science by experts in the field: Schwartz M: F1000Prime Recommendation of [Malinverno M and Abu Taha et al., Nat Commun 2019 10(1):2761]. In F1000Prime, 31 Jul 2019; 10.3410/f.736057195.793563173

**April 2018**: I was award for best project proposal, Vascular-Biology Retreat 2018. Uppsala University, Uppsala (Sweden).

**Nov 2015**: Won a scholarship from Cell in Motion Cluster (CiM) to participate in the prestigious Mouse Imaging Academy (MIA) which is a training course on state-of-the-art imaging of mice (MRI, PET/ SPECT). (WWU-Münster), Münster (Germany).

**October 2014**: Won an award as a finalist for the highly competitive Young Investigator Award of the German Society for Microcirculation and Vascular Biology (GfMVB), founded and awarded by Servier Deutschland GmbH, Münster (Germany).

**January 2014**: One of my papers was featured in Faculty 1000 Prime web site: Abu Taha, A et al., Mol Biol Cell 2014, 25(2):245-56]. In F1000Prime, 29 Jan 2014; DOI: 10.3410/f.718175596.793490052. F1000Prime.com/718175596#eval793490052

**May 2013**: Ph.D. Grade: 1.0 according to the German system i.e. 4.0 out of 4.0 according to the American system (graduated with summa cum laude).

**July 2009**: GfMVB stipend awardee for the participation in the European Society of Cardiology CBCS/ESC Summer School on Cardiovascular Sciences: 'From Basic Mechanisms to Clinical Application', 05-09 July 2009, European Heart House - Sophia Antipolis (France).

**2008-2010**: CRTD (Center for Regenerative Therapy) Scholarship awardee for pursuing my Ph.D. in Molecular Cell Biology.

**2010**: Dresden International Graduate School for Biomedicine and Bioengineering (DIGS BB), bridging Fellowship for pursuing my Ph.D. in Molecular Cell Biology.

**September 2007**: Graduated with a grade A (Excellent) and nominated as the third best student in the international master Molecular Bioengineering program, at the BIOTEC of Dresden University of Technology.

**Oct 2005**: DAAD (German Academic Exchange Service) scholarship awardee for pursuing my master in the field of Molecular Bioengineering.

**July 2003**: Graduated with the Highest Honor in the Biology Department of **BU**.

## Publications

Peer-Reviewed and In-preparation Articles

- **Abdallah Abu Taha,** Matteo Malinverno**,** Peetra Magnusson and Elisabetta Dejana "CCM3 is a planar polar protein that synchronizes membrane tension with migration and adhesion machinery in endothelial cells" (in preparation).
- **Abdallah Abu Taha,** Roberta Lugano, Matteo Malinverno, Peetra Magnusson, Anna Dimberg and Elisabetta Dejana "Dynamic Analysis of CD93 protein reveals a hidden role for TNT in organelle transfer between the vasculature and the Glioma tumor" (in preparation).
- **Abdallah Abu Taha** and Elisabetta Dejana "Endothelial cell junctions display functional subdomains" (in preparation).

2019:

- Matteo MalinvernoClaudio Maderna, **Abdallah Abu Taha**, Monica Corada1, Fabrizio Orsenigo, Mariaelena Valentino, Federica Pisati, Carmela Fusco, Paolo Graziano, Monica Giannotta, Qing Cissy Yu, Yi Arial Zeng, Maria Grazia Lampugnani, Peetra Magnusson & Elisabetta Dejana (2019) "Endothelial cell clonal expansion in the development of Cerebral Cavernous Malformations". **Nature Communications**. This paper was featured in Faculty 1000 Prime:
  [Malinverno M and **Abu Taha** et al., **Nat Commun** 2019 10(1):2761]. In F1000Prime, 31 Jul 2019; 10.3410/f.736057195.793563173
- Marco Castro, Bàrbara Laviña, Koji Ando, Alberto Álvarez-Aznar, **Abdallah Abu Taha**, Cord Brakebusch, Elisabetta Dejana, Christer Betsholtz1 & Konstantin Gaengel (2019) "CDC42 deletion elicits cerebral vascular malformations via increased MEKK3-dependent KLF4 expression". **Circulation Research.**

2015:

- Seebach. J, **Abu Taha. A**, Lenk. J, Lindermann. N, Jiang. X, Brinkmann. K, Bogda. S and Schnittler, H-J (2015) "The CellBorderTracker, a novel tool to quantitatively analyze spatiotemporal endothelial junction dynamics at the subcellular level". **Histochemistry and Cell Biology**. Volume 144, Issue 6, pp 517-532.
- Fraccaroli. A, Pitter. B, **Abu Taha. A**, Seebach. J, Stephan. H, Kirsch. J, Ricardo P. Casaroli-Marano, Zahler. S, Pohl.U, Gerhardt. H, S. Schnittler. H-J and Montanez. E (2015). "Endothelial Alpha-Parvin Controls Integrity of Developing Vasculature and Is Required for Maintenance of Cell–Cell Junctions". **Circulation Research**. 117:29-40.

2014:

- **Abu Taha, A**. and H.-J. Schnittler (2014). "Dynamics between actin and the VE-cadherin/catenin complex: Novel aspects of the ARP2/3 complex in regulation of endothelial junctions". **Cell Adhesion & Migration**. 8(2): 125-135.
- **Abu Taha, A**, Taha M, Seebach J, Schnittler H-J. "ARP2/3-mediated junction-associated lamellipodia control VE-cadherin-based cell junction dynamics and maintain monolayer integrity". **Molecular Biology of the Cell**. 2014. This paper was featured in Faculty 1000 Prime:
  [**Abu Taha, A** et al., **Mol Biol Cell** 2014, 25(2):245-56]. In F1000Prime, 29 Jan 2014; DOI: 10.3410/f.718175596.793490052. F1000Prime.com/718175596#eval793490052.
- Schnittler, H., M. Taha, M. Schnittler, **Abu. Taha, A**, N. Lindemann and J. Seebach (2014). "Actin filament dynamics and endothelial cell junctions: the Ying and Yang between stabilization and motion". **Cell and Tissue Research** 355(3): 529-543.

2012:

- Kronstein, R., J. Seebach, S. Großklaus, C. Minten, B. Engelhardt, M. Drab, S. Liebner, Y. Arsenijevic, A. **Abu Taha, A**. Afanasieva, T and H.-J. Schnittler (2012). "Caveolin-1 opens endothelial cell junctions by targeting catenins". **Cardiovascular Research** 93(1): 130-140.

Conference Contributions (Abstracts/ Posters and Talks)

- Elisabetta Dejana, Matteo Malinverno and **Abdallah Abu Taha,** Transcriptional regulation of the brain microvasculature, The 20th International Vascular Biology Meeting 2018 (IVBM2018), June 3-7, 2018 Helsinki, (Finland). Part of my data was presented during Prof. Dejana's Talk.
- **Abdallah Abu Taha,** Roberta Lugano, Matteo Malinverno, Peetra Magnusson, Anna Dimberg and Elisabetta Dejana "Dynamic Analysis of CD93 protein reveals a hidden role for TNT in organelle

transfer between the vasculature and the Glioma tumor", Vascular-Biology Retreat 2018, Uppsala University, Uppsala (Sweden).

- **Abdallah Abu Taha,** Matteo Malinverno**,** Peetra Magnusson and Elisabetta Dejana "Dynamic Analysis of The Endothelial Cell-to-Cell Junctions' Remodelling to Unravel the Molecular Mechanisms of Cerebral Cavernous Malformations (CCM)", Milano-Uppsala Vascular-Biology Retreat 2017, Uppsala University, Uppsala (Sweden).
- Muna Taha, **Abdallah Abu Taha,** Jochen Seebach and Hans Schnittler. "Epithelial Protein Lost In Neoplasm' (EPLIN) isoforms regulate adherence junction dynamics and integrity of endothelial cells". 3rd Joint Meeting of the GfMVB and the SSMVR, September30–October 02, 2014, Münster (Germany).
- Muna Taha, **Abdallah Abu Taha** and Hans Schnittler. "Dynamics of Epithelial Protein Lost In Neoplasm (EPLIN) isoforms in adherens junction regulation of endothelial cells". Acta Pysioloica (Abstract book of the 93rd Annual Meeting of the German Physiological Society, 13-15 March 2014, Mainz (Germany).
- **Abdallah Abu Taha,** Muna Jochen Seebach and Hans Schnittler. "ARP2/3 complex controls endothelial junction integrity". The 17th International Vascular Biology Meeting, 06-02 May 2012, Wiesbaden (Germany).
- Jochen Seebach, Hans Mädler, **Abdallah Abu Taha**, Maria Odenthal-Schnittler, Alexander Mogenstern, Boris Flach, Hans-Dieter Klenk, Hans Schnittler. "Shear stress modulates endothelial cell behaviour under inflamatory conditions". Infection of the endothelium symposium, 2009, Dresden (Germany).
- Romy Kronstein, Hans Mädler, **Abdallah Abu Taha**, Jochen Seebach H. J. Schnittler. "Disseminated intravascular coagulation: Molecular mechanism how thrombin targets endothelial cell junctions". Infection of the endothelium symposium, 2009, Dresden (Germany).
- **Abdallah Abu Taha**. "Challenges, Problems and Opportunities of scientific Research in MENA Region". German-Middle East International Conference (Sciences and Humanities Bridging Cultures)". Organized by the Berlin-Brandenburg Academy of Sciences and Humanities in cooperation with the Alexander von Humboldt Foundation and the German Academic Exchange Service (DAAD), Amman (Jordan).
- **Abdallah Abu Taha**, Jochen Seebach, Romy Kronstein and Hans J. Schnittler. "Endocytosis of VE-Cadherin is induced by cleavage of its extracellular domain in HUVECs". European Journal of Cell Biology (Abstracts book of the 1st Joint **Congress of the Swiss and German Societies of Cell Biology**, March 24 – 27, 2009, Konstanz (Germany).
- **Abdallah Abu Taha**, Romy Kronstein, Julia Schäfer, Jochen Seebach and Hans Scnittler. "Junction regulation of endothelial cells by endocytotic processes", CRTD summer conference, 06 June 2008, Dresden (Germany).
- Romy Kronstein, **Abdallah Abu Taha**, Jochen Seebach, Sylvia Großklaus and Hans Schnittler. "Role of eps15 in caveolin-1-mediated endocytosis of β-catenin after thrombin stimulation". Summer conference, Dresden, Germany, CRTD summer conference, 06 June 2008 Dresden (Germany).

Talks and Invited Talks

- **Abdallah Abu Taha**, Muna Taha, Jochen Seebach, Maik Olfert and Hans Schnittler. "Junction Associated Intermittent Lamellipodia, JAIL, are targets for thrombin and shear stress induced endothelial junction dynamics and barrier function", 3rd Joint Meeting of the German Society for Microcirculation and Vascular Biology (GfMVB) and the Swiss Society for Microcirculation and Vascular Research (SSMVR). September30-02 October 2014, Münster (Germany).
- **Abdallah Abu Taha**, Muna Taha, Jochen Seebach, Maik Olfert and Hans Schnittler. "Junction Associated Intermittent Lamellipodia, JAIL, are targets for thrombin and shear stress induced endothelial junction dynamics and barrier function", 3rd Joint Meeting of the German Society for Microcirculation and Vascular Biology (GfMVB) and the Swiss Society for Microcirculation and Vascular Research (SSMVR). September30-02 October 2014, Münster (Germany).
- **Abdallah Abu Taha**, Muna Taha, Jochen Seebach and Hans Schnittler. "Dynamics of VE-cadherin-based endothelial cell junctions: a novel role for ARP2/3 complex in cell junction regulation". 4th Münster Immunology Meeting, 15 November 2013. Max Planck Institute for Molecular Biomedicine, Münster (Germany).

- **Abdallah Abu Taha**, Jochen Seebach, Muna Taha and Hans Schnittler. "Dynamics of the endothelium-investigated by life cell imaging". 1st UKE Light Microscopy Symposium, February 05-07, 2013 Hamburg (Germany) (**invited speaker**).
- **Abdallah Abu Taha**. "Dynamic remodeling of endothelial cell junctions, Mannheim". Joint Meeting of the GfMVB and The Young Investigator Forum Dutch Society for Endothelial Biology (DEBS) Society for Microcirculation and Vascular Biology (MiVaB), September 27-29, 2012, Heidelberg (Germany) (**invited speaker**).

## Teaching and Workshops Activities

- Participated in teaching General Biology and Plant Physiology lab section course for Bachelor students at BU (2004 and 2005).
- Participated in teaching a molecular biology course (Advanced Topics in Molecular Biology) for Master students at the WWU-Münster (2012 and 2013).
- Participated in teaching Histology course for medical students at the WWU-Münster (2013 and 2014).
- Organized the workshop entitled: "Protein dynamics in endothelium". This workshop provided theoretical and practical guidance to live-cell imaging on cultured endothelium using spinning disk microscopy and automated quantification of protein dynamics, 3rd Joint Meeting of the GfMVB and the SSMVR, September 30–October 02, 2014, Münster (Germany).

## Professional Memberships

Member of the German Society for Microcirculation and Vascular Biology (GfMVB).

Member of the European Society for Microcirculation (ESM).

Applied to a Membership for the Swedish Association of University Teachers (SULF).

## M.Sc and Ph.D Students Supervision

M.Sc. Thesis Supervision

- Muna Taha, "Characterization of EPLIN Function at the Endothelial Cell Junctions", 2010.
- Irene Hofer, "Structured Illumination Microscopy OF VE-cadherin-Based Endothelial Cell-to-Cell Adhesions", 2013.
- Maik Olfert, "Investigation of Actin-Cytoskeleton Dynamic and Regulation by Live-cell imaging", 2013.

Ph.D. Thesis Supervision

- Muna Taha, "EPLIN isoforms affect the regulation of endothelial cell junctions", 2015.

## Computer Skills and Languages

- Good command of office suite (word, excel, power point).
- Good command of photo-editing software (like Image J and Photoshop), SPSS 9.0 for Windows, SQL, Pymol (structural viewer tool for bioinformatics) and Python script language for bioinformatics.
- Familiar with many bioinformatics online available tools.
- Using the "CellBorderTracker" which is a novel tool to quantitatively analyze spatiotemporal endothelial junction dynamics at the subcellular level.
- English and Arabic: Fluent in speaking, reading and writing.
- German: B1 to B2 Level

## Bench Techniques

Molecular Biology and Biochemistry

- Isolation and analysis of DNA and RNA (bacteria, tissue and cells), synthesis of cDNA from RNA samples, PCR (conventional, overlapping, and duplex), gel electrophoresis, restriction digestion, molecular cloning, eukaryotic cells' transfection using siRNA and expression vectors, gene transduction using adeno and lentiviral gene transfer systems, ELIZA, western blotting, yeast two-hybrid system, co-Immune precipitation, pull-down assays using tagged recombinant proteins, hands on Hybridoma and cell lines culture for recombinant protein and antibody production, antibody labeling, lipid rafts isolations, cellular fractionation and micropatterning of surfaces.

Cell Biology

- Routine cell culture of cell lines, immortalization of primary cells to generate cell lines, isolation, culture and transduction (lenti and adenoviral) of human vascular endothelial cells (HUVEC), isolation of osteoblasts and osteoclasts from human bone, isolation of different leukocytes' subsets from blood samples, cell purification using magnetic microbeads, spheroids and organoids culture and manipulation, microfluidics.

Microscopy and Histology

- Immunofluorescence staining, antigen retrieval procedures, conventional and confocal microscopy, Structural Illumination Microscopy (SIM), PALM Microscopy, extensive experience with Live-cell imaging using spinning disk microscopy and other setups.
- Advanced Fluorescence techniques: fluorescence recovery after photobleaching (FRAP), Förster or fluorescence resonance energy transfer (FRET).
- Immunostaining of cryo- and ordinary tissue sections, in addition to ordinary staining techniques.

Mouse, Animal Handling and Others

- Basic knowledge of mouse work including I/P and I/V mouse injection, staining of the vasculature of the mouse, retina dissection and staining, cryo-sectioning of the mouse organs, etc.
- Impedance spectroscopy and determination of trans endothelial or epithelial resistance (TER), Transmigration assays, wound healing assays and Genetic mixed culture assays.

## References

- Prof. Elisabetta Dejana, Full Professor of general pathology at the Department of Biosciences, University of Milan, Milan (Italy), Professor of vascular biology at the Department of Immunology, Genetics and Pathology (IGP), Uppsala University, Uppsala (Sweden), and director of tumor angiogenesis research unit at IFOM, IFOM-IEO Campus, Milan (Italy). elisabetta.dejana@ifom.eu or elisabetta.dejana@igp.uu.se (Tel +39 02 574303234/372).
- Prof. Lena Claesson-Welsh, Professor of medical biochemistry and the principal investigator heading a research group in vascular biology at the Department of Immunology, Genetics and Pathology (IGP), Uppsala University, Uppsala (Sweden). lena.welsh@igp.uu.se (Tel +46 70 167 9260).
- Prof. Bernard Hoflack, Professor of proteomics and research group leader at Biotechnology center/TU-Dresden, Dresden (Germany). bernard.hoflack@biotec.tu-dresden.de (Tel: +4935146340235).
- Prof. Henning Morawietz, Professor of endothelial biology and microcirculation at Carl Gustav Carus, Medical faculty of Dresden University of Technology, Dresden (Germany). henning.morawietz@tu-dresden.de (Tel: + 493 514 586 625).
- Prof. Rolf Jessberger, Professor of biochemistry and chairman of the Institute of Physiological Chemistry at Carl Gustav Carus, Medical faculty of Dresden University of Technology, Dresden (Germany). rolf.jessberger@tu-dresden.de (Tel: +493514586446).
- Prof. Adnan Shqueir Dean of Research at Bethlehem University, Bethlehem (Palestine). ashqueir@bethlehem.edu (Tel: +972227412412).

**Recommendation letters are attached below**