

Curriculum Vitae

Name Judit Hodrea

Personal Born: April 11, 1978, Arad, Romania
Sex: Female
Citizenship: Romanian

Languages English: fluent
Hungarian: fluent (native)
Romanian: fluent (second language)

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EDUCATION

2007 – present University of Debrecen, Debrecen, Hungary
Department of Biochemistry and Molecular Biology
Ph.D. student

2005 – 2006 University of Babes-Bolyai, Cluj-Napoca, Romania
Faculty of Chemistry and Chemical Engineering, Department of Chemistry
Achieved M.Sc. in Chemistry

2001 – 2005 University of Babes-Bolyai, Cluj-Napoca, Romania
Faculty of Chemistry and Chemical Engineering
Achieved B.Sc. in Chemistry

1996 – 1999 Christiana Nursing College, Arad, Romania
General Medical Assistant

1996 Graduated from Csiky-Gergely Theoretical High School, Arad, Romania
Specialisation in Mathematics and Physics

PROFESSIONAL APPOINTMENTS

2007 – present Ph.D. student in the Apoptosis Research Group
Department of Biochemistry and Molecular Biology, University of Debrecen

2005 – 2006 DOMUSMED Humanitarian Organization, Cluj-Napoca, Romania. Home nursing

2000 – 2001 County Clinical Hospital, Arad, Romania
Assistant Nurse in Operating Room, Orthopedic Department

SCIENTIFIC EXPERIENCE

Cell culture techniques

- attached and floating cell culturing, cell freezing
- human primary cell isolation from peripheral blood: monocytes, neutrophil granulocytes, PBL
- human monocytes differentiation to macrophages, to immature and mature dendritic cells

Immunology techniques

- functional assays with human primary cells: phagocytosis with apoptotic neutrophils or beads, T cell polarization (ELISPOT), cytokine release determination (ELISA), neutralization assay
- direct and indirect labeling for cell surface proteins, immunofluorescence staining, apoptosis detection.

Other techniques

- Flow-cytometry, Western blotting, RNA isolation, cytospin, enzyme activity measurement, gene silencing (electroporation)

SCIENTIFIC ACTIVITIES

Oral presentations

- 4th Molecular Cell and Immune Biology Winter School. Galyatető, Hungary, January 11 – 14, 2011. *Molecular mechanisms in glucocorticoid induced upregulation of apoptotic cell phagocytosis in dendritic cells.*
- 3rd Molecular Cell and Immunobiology Winter School. Mariazell, Austria, January 7 – 10, 2010. *Transglutaminase 2 is expressed and active on the surface of human monocyte-derived dendritic cells and macrophages.*
- A Magyar Biokémiai Egyesület 2010. évi Vándorgyűlése. Budapest, Hungary, August 25 – 28, 2010. *Glükokortikoid hatásra történő apopto-fagocitózis növekedés mechanizmusa humán dendritikus sejtekben.*
- 2nd Molecular Cell and Immune Biology Winter School. Krompachy, Slovakia, January 5 – 8, 2009. *Is there any TG2 on the surface of human macrophages and dendritic cells?*
- Marie Curie Research Training Networks – work report. Rome, Italy, February 8 – 9, 2009.
- 1st Molecular Cell and Immune Biology Winter School. Krompachy, Slovakia, January 9 – 12, 2008. *Is TG2 present on the surface of macrophages and dendritic cells?*
- XI. Nemzetközi Vegyészkonferencia (11th International Conference of Chemistry), Cluj-Napoca, Romania, November 11 – 13, 2005. *Cr(VI) ionok eltávolítása bioszorpció útján Na-algináttal immobilizált Saccharomyces cerevisiae sejtekkel.*

Poster presentations

- 35th FEBS Congress. Sweden, Gothenburg, June 26 – July 1, 2010.
Hodrea J., Majai G., Zahuczky G., Nagy J., Fésüs L. *Glucocorticoid induced upregulation of apoptotic cell phagocytosis in human dendritic cells.*
- Gordon Research Conference: Transglutaminases In Human Disease Processes. Davidson, NC, United States of America, July 7 – 23, 2010.
Hodrea J., Demény M.A., Majai G., Sarang Z., Korponay-Szabó I.R., Fésüs L. *Transglutaminase 2 is expressed and active on the surface of human monocyte-derived dendritic cells and macrophages.*
- 15th International Summer School on Immunology. Immune System: Genes, Receptors and Regulation. Hvar, Croatia, September 1 – 5, 2009.

Hodrea J., Majai G., Zahuczky G., Nagy J., Fésüs L. *Glucocorticoid induced upregulation of apoptotic cell phagocytosis in human dendritic cells.*

- X. Nemzetközi Vegyészkonferencia (10th International Conference of Chemistry). Cluj-Napoca, Romania, November 12 – 14, 2004.

Pénzes. Á., **Hodrea J.**, Kilár F., Majdik K. *Immobilizációs módszerek alkalmazása Saccharomyces cerevisiae sejtek esetében.* Awarded 2nd prize.

- IX. Nemzetközi Vegyészkonferencia (9th International Conference of Chemistry). Cluj-Napoca, Romania, November 14 – 16, 2003.

Hodrea J., Kilár F., Majdik K. *Aminosav-észter származékok sztereoszelektív elválasztása transferrinnel.*

- VIII. Nemzetközi Vegyészkonferencia (8th International Conference of Chemistry). Cluj-Napoca, Romania, November 15 – 17, 2002.

Hodrea J., Majdik K. *Enantiomértöbbség meghatározás.*

OTHER CONFERENCES AND COURSES

- Marie Curie Training Course on Immunology & Related Techniques. Tampere, Finland, August 25 – 28, 2009.
- Marie Curie Training Course: Phage Display Technologies and Genomics, Gene Array, Gene Silencing Technologies. Debrecen, Hungary, August 25 – 29, 2008.
- Marie Curie Training Course: Protein Modeling. Birmingham, United Kingdom, March 31 – April 2, 2008.
- 9th International Conference on Transglutaminases and Protein Crosslinking. Morocco, Marrakech, September 1 – 4, 2007.
- Marie Curie Training Course on Proteomics. Rome, Italy, July 31 – August 4, 2007.
- “Students for Students”, Student Scientific Communication Session. Cluj-Napoca, Romania, 2004.
- 9th International Conference of Circular Dichroism in Chemistry and Life Sciences. Budapest, Hungary, August 31 – September 4, 2003.
- Ceepus Summer School. Cluj-Napoca, Romania, 2003.

PUBLICATIONS

- **Hodrea J.**, Majai G., Doro Z., Zahuczky G., Pap A., Rajnavölgyi É., Fésüs L. The glucocorticoid dexamethasone programs human dendritic cells for enhanced phagocytosis of apoptotic cells and inflammatory response. *J. Leukoc. Biol.* Accepted for publication. IF: 4.626
- **Hodrea J.**, Demény M.A., Majai G., Sarang Z., Korponay-Szabó I.R., Fésüs L. Transglutaminase 2 is expressed and active on the surface of human monocyte-derived dendritic cells and macrophages. *Immunol Lett.* 2010: 130(1-2):74-81. IF: 2.511
- Majai G., Gogolák P., Ambrus C., Vereb G., **Hodrea J.**, Fésüs L., Rajnavölgyi E. PPAR γ modulated inflammatory response of human dendritic cell subsets to engulfed apoptotic neutrophils. *J. Leukoc Biol.* 2010: 88(5):981-991. IF: 4.626
- Petrovski G., Ayna G., Májai G., **Hodrea J.**, Benkő S., Mádi A., Fésüs L. Phagocytosis of cells dying through autophagy induces inflammasome activation and IL-1 β release in human macrophages. *Autophagy.* 2011: 7 (3):321-330. IF: 6.643
- Takátsy A., **Hodrea J.**, Majdik C., Irimie F. D., Kilár F. Role of Chemical Structure in Molecular Recognition by Transferrin. *J. Mol. Recognit.* 2006: 19: 1–5. IF: 3.794

Total impact factor: 22,2

Total citations: 5

FELLOWSHIPS

- 2007 - 2009 Marie Curie Research Training Network fellow at the University of Debrecen, Debrecen, Hungary
- 2003 3-month Ceepus Scholarship at the University of Pécs, Faculty of Medicine, Institute of Bioanalysis, Pécs, Hungary

MEMBERSHIPS

- 2008 - present Hungarian Biochemical Society
- 2002 - 2006 Erdélyi Magyar Műszaki Társaság (EMT)
- 2005 Member of Chemists' Association Hungary

VOLUNTEER

- 2002 - 2006 Genezius Student Association: program coordinator for Christian conferences, camps, Bible study groups. Cluj-Napoca, Romania