

## BIOGRAPHICAL SKETCH

NAME ENDRE MÁTHÉ		POSITION TITLE Professor, Associate professor	
EDUCATION (Begin with baccalaureate or other initial professional education and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE	YEAR CONFERRED	FIELD OF STUDY
<ul style="list-style-type: none"><li>• “Babes – Bolyai” University, Cluj-Napoca, Romania</li><li>• International training course on selected topics of modern biology: Hungarian Academy of Sciences, Szeged - Hungary</li><li>• „Advanced knowledge of radiation protection” training course by the Budapest University of Technology and Economics</li><li>• “Albert Szent-Györgyi” Medical University, Szeged, Hungary</li><li>• University of Dundee, Department of Anatomy and Physiology, Medical Science Institute, CRC Cell Cycle Research Genetics Group, UK</li></ul>	MSc	1987 1990-1991	Biology – Genetics Genetics, Molecular and developmental biology, Biochemistry, Plant physiology Radiation biology
	Ph.D.	1995	
		1997	Biology/ Genetics, Biochemistry, Molecular Biology
	postdoc	1998	Genetics, Biochemistry, Molecular Biology

RESEARCH AND PROFESSIONAL EXPERIENCE: Starting with present position, list, in reverse chronological order, previous relevant employment, experience, and honors. Key personnel includes the principal investigator and any other individuals who participate in the development or execution of the project. Key personnel typically will include all individuals with doctoral or other professional degrees, but in some projects will include individuals at the masters or baccalaureate level provided they contribute in a substantive way to the development or execution of the project. Include present membership on any Federal Government public advisory committee. List, in reverse chronological order, the titles, all authors, and complete references to pertinent publications during the past five years and to representative earlier publications pertinent to this application.

### Research Area and Interests:

My major areas of research interests are: (1) Bioactive compounds of plant origin and their influence on cell cycle and cellular metabolism. (2) Nutrigenetics and genomics of regulations of the cellular nutritional, energetic, redox statuses, xenobiotic and inflammatory responses. (3) Functional foods development for metabolic syndrome patients and healthy ageing. (4) Identification of novel mitotic genes and characterization of their functions. (5) Spatial and temporal coordination of cell division by ubiquitin conjugating enzymes/genes and proteasome assisted protein degradation. (6) Identification of nuclear transport, chromatin and microtubule components encoding genes, and characterization of their functions.

### Previous Employment and Professional Experience:

2015-present: Associate Professor (tenured), University of Debrecen-Hungary, Faculty of Agricultural and Food Sciences and Environmental Management, Institute of Food Technology, Nutrigenetics and Genomics Research Group.

Research interests: bioactive compounds of plant origin and their influence on cell cycle and cellular metabolism. Nutrigenetics and genomics of regulations of the cellular nutritional, energetic, redox statuses, xenobiotic and inflammatory responses. Functional foods development for metabolic syndrome patients and healthy ageing.

2012-2014: Professor (tenured), “Vasile Goldis” Western University of Arad-Romania, Dean of the Faculty of Natural Sciences, Engineering and Informatics and Department of Medicine, Pharmacy and Medical Dentistry

Research interests: bioactive compounds of plant origin and their influence on cell cycle and cellular metabolism. Nutrigenetics and genomics of regulations of the cellular nutritional, energetic, redox statuses, xenobiotic and inflammatory responses. Metabolic syndrome etiology.

2004-2011: Professor, (tenured), University College of Nyiregyhaza-Hungary/vice-chancellor for research and strategic affairs, Agricultural and Molecular Research Institute/ institute director 2007/2011,

Research interests: bioactive compounds of plant origin and their influence on cell cycle and cellular metabolism. Nutrigenetics and genomics of regulations of the cellular nutritional, energetic, redox statuses, xenobiotic and inflammatory responses. Fruits-vegetable and dietary fibre –dairy products based functional food development

1999-2003: senior research fellow, University of Cambridge-UK, Department of Genetics, Cancer Research UK Cell Cycle Research Genetics Group

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Research interests: spatial and temporal coordination of cell division by ubiquitin conjugating enzymes/genes and proteasome assisted protein degradation. Identification of nuclear transport, chromatin and microtubule components encoding genes, and characterization of their functions.

1998: Postdoctoral fellow, University of Dundee-UK, Department of Anatomy and Physiology, Medical Science Institute, CRC Cell Cycle Research Genetics Group.

Research interests: Identification of nuclear transport, chromatin and microtubule components encoding genes, and characterization of their functions

1993-1997: junior research fellow (tenured), “Albert Szent-Györgyi” Medical University, Szeged-Hungary,

Research interests: Study of meiotic and mitotic cell divisions during *Drosophila* oogenesis and early embryogenesis by identification of novel genes.

1990 – 1993: Hungarian Academy of Sciences, Biological Research form Szeged, Institute of Genetics, Szeged.

Research interests: Examining the cytoskeleton and chromatin genes of *Drosophila* with genetic, cell and developmental biology, biochemistry and molecular methods using dominant female sterile mutations.

### Scholarships

1990: UNESCO scholarship, Hungarian Academy of Sciences, Biological Research Center from Szeged (research),

1991: “Albert Szent-Györgyi” American - Hungarian Foundation scholarship (research)

### Synergistic Activities

23 research grants: principal investigator (13 grants), collaborator (10 grants)

6 research meetings organization

Hungarian Genetical Society – member of the Presidential Committee

Editorial board member of 3 research journals

### Honors and Awards

Recipient of the “János Bolyai” Hungarian Academy of Sciences Research Fellowship

Recipient of “Daniel Fehér” Award, Hungarian Professors World Council

### Membership or Services in Professional Organizations

Member of the Hungarian Genetical Society

Non-academician member of the public body of the Hungarian Academy of Sciences

Hungarian Biological Society

British Society of Cell Biology, UK

British Genetical Society, UK

Romanian Association of Cell Biology

### Selected Recent Publications

#### Journal Articles:

- Pisoschi AM, Pop A, Georgescu C, Turcuş V, Olah NK, **Mathe E.** (2018). An overview of natural antimicrobials role in food. Eur J Med Chem.; 143:922-935.
- Vigh, S., Cziáky, Z., Sinka, L. T., Pribac, C., Moş, L., Turcuş, V., Gálné Remenyik, J. and **Máthé, E.** (2017). Analysis of phytoconstituent profile of fenugreek - *Trigonella foenum-graecum* L. - seed extracts. Stud. Univ. Babes-Bolyai Chem., 145-166, 2017. ISSN: 1224-7154.
- 30). Vigh, S., Cziáky, Z., Sinka, L. T., Pribac, C., Moş, L., Turcuş, V., Gálné Remenyik, J. and **Máthé, E.** (2017). Comparative chemomapping of phytoconstituents from different extracts of globe artichoke - *Cynara scolymus* L. Stud. Univ. Babes-Bolyai Chem., 125-143, 2017. ISSN: 1224-7154.
- Vigh Sz., Zsvér-Vadas Zs., Pribac C., Mos L., Cziáky Z., Czapár M., Mihali C.V., Turcus V., Remenyik J. and **Máthé E.** (2016). Fenugreek (*Trigonella foenum-graecum* L.) extracts are inducing dose-dependent hormetic response and cytotoxic effects in case of human breast cancer cell lines. Studia Universitatis „Vasile Goldiş”. 26(4): 435-448.
- Vigh Sz., Zsvér-Vadas Zs., Pribac C., Mos L., Cziáky Z., Czapár M., Mihali C.V., Turcus V. and **Máthé E.** (2016). Artichoke (*Cynara scolymus* L.) extracts are showing concentration-dependent hormetic and cytotoxic effects on breast cancer cell lines. Studia Universitatis „Vasile Goldiş”. 26(4): 423-433.

- Tarek-Tilistyák, J., Román, M., Jekő, J. and **Máthé, E.**, (2014). Short-term storability of oil seed and walnut cake - microbiological aspect. *Acta Alimentaria*, 43(4): 632-639
- Tarek-Tilistyák, J., Agocs, J., Lukács, M., Dobróné-Tóth, M., Román, M., Dinya, Z., Jekő, J., and **Máthé, E.** (2014). Novel Breads Fortified Through Oil Seed And Nut Cakes. *Acta Alimentaria*, 43(3): 444-451.
- Țifrea, A., Țiță, O., **Máthé, E.**, Ketney, O. (2013). Physicochemical parameters of probiotic yoghurt with bioactive natural products from sea buckthorn. *Acta Universitatis Cibiniensis Series E: FOOD TECHNOLOGY* Vol. XVII (1): 27-38.
- C.G. Pribac, C. Craciun, T. Szoke-Nagy, I. Simeoni, C. Lang, C. Rosioru, M. Czapár, **E. Máthé**, L. Mos A. Ardelean (2011). Comparative ultrastructural study of pancreatic beta cells from diabetic rats treated with fenugreek seed flour or ganoderma flour. *Annals of RSCB*, vol. XVI(1), 62-80.
- C.G. Pribac, C. Craciun, C. Rosioru, A. Ardelean, M. Czapár, **E. Máthé**, I. Simeoni, A. Covaci, C. Avram, S. Damian, L. Mos (2011). Experimental studies of fenugreek seed treatment on rats intoxicated with ethanol. *Studia Universitas "Vasile Goldiș"*, Life Science series, Vol. 21 supp. 1., 13-22.
- C.G. Pribac, A. Ardelean, C. Craciun, C. Puica, C. Rosioru, A. Covaci, C. Avram, S. Damian, **E. Máthé**, M. Czapár, L. Paiusan, L. Mos, C. Cotoraci, (2011). Structural study on the effect of *Trigonella foenum graecum* seeds on rats' kidneys. *Studia Universitas "Vasile Goldiș"*, Life Science series, Vol. 21(2), 269-274.
- M. Czapár, R. Domina, Sz. Víg, **E. Máthé**, C.G. Pribac, L. Mos, S. Damian, V. Turcus, A. Covaci, C. Cotoraci, L. Paiusan (2010). Effects of some plant extracts on various tumor cell lines. *Studia Universitas "Vasile Goldiș"*, Life Science series, Vol. 20 (1), supp. 1., 29-35.
- A. Ardelean, C.G. Pribac, A. Hermenean, M. Czapár, **E. Máthé**, L. Mos, C. Cotoraci, O. Bulzan, C. Craciun, (2010). Cytostatic and cytotoxic effects of *Trigonella foenum graecum* (fenugreek) seed extract. *Studia Universitas "Vasile Goldiș"*, Life Science series, Vol. 20 (1), 25-29.
- Henriett N. Uhrin, **Endre Máthé**, Zoltán Dinya, Csaba Varga, Sándor Vágvolgyi. (2008). Analysis of vitamin E isomers and phytosterols in different Hungarian oil seed samples, *Cereal Research Communication*, Vol 26, 531-535.
- Crevel, G., **Máthé, E.**, and Cotterill, S. (2005). The Drosophila cdc16/18 protein has functions in both early and late S phase in Drosophila S2 cells. *J. Cell Science* 118, 2451-2459.
- **Máthé, E.**, Kraft, C., Giet, R., Deák, P., Peters, J-M., and Glover, D.M. (2004). Vihar – the centrosome associated E2-C homologue of Drosophila, required for the spatio-temporal proteolysis of Cyclin B, itself undergoes destruction-box dependent cyclical degradation. *Current Biology* 14(19), 1723-33.
- Inoue, Y., Savoian, M.S., Suzuki, T., **Máthé, E.**, Yamamoto, M. and Glover, D.M. (2004). Mutations in orbit/mast, the Drosophila orthologue of CLASP, reveal that the central spindle is comprised of two microtubule populations; those that initiate cleavage and those that propagate furrow ingression. *J. Cell Biol.* 166(1), 49-60.
- **Máthé, E.** (2004). RASSF1A, the new guardian of mitosis. *Nat. Genet.* 36(2), 117-118.
- Mason, D.A., **Máthé, E.**, Fleming, R.J. and Goldfarb, D. (2003). The Drosophila melanogaster importin- $\alpha$ 3 locus encodes an essential gene required for the development of both larval and adult tissues. *Genetics* 165(4), 1943-1958.
- **Máthé, E.**, Inoue, Y., Palframan, W., Brown, G. and Glover, D.M. (2003). ORBIT, the CLASP ortholog of Drosophila, is required for asymmetric stem cell and cystocyte divisions and development of polarised microtubule network that interconnects oocyte and nurse cell during oogenesis. *Development* 130, 901-915.
- Minestrini, G., **Máthé, E.** and Glover, D.M. (2002). Domains of the Pavarotti kinesin-like protein that direct its subcellular distribution: effects of mis-localisation on the tubulin and actin cytoskeleton during Drosophila oogenesis. *J. Cell Sci.* 115, 725-736.
- Kuhfittig, S., Szabad, J., Schotta, G., Hoffmann, J., **Máthé, E.** and Reuter, G. (2001). PitkinD, a novel gain-of-function enhancer of position-effect variegation, affects chromatin regulation during oogenesis and early embryogenesis in Drosophila. *Genetics* 157, 1227-1244.
- Lippai, M., Tirián, L., Boros, I., Mihály, J., Erdélyi, M., Belec, I., **Máthé, E.**, Posfai, J., Nagy, A., Udvardy, A., Eforsyni, P., Görlich, D. and Szabad, J. (2000) The Ketel gene encodes a Drosophila homologue of Importin- $\alpha$ . *Genetics*, 156, 1889-1900.
- **Máthé, E.**, Bates, H., Huikeshoven, H., Deák, P., Glover, D.M. and Cotterill, S. (2000) Importin- $\alpha$ 3 is

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required at multiple stages of *Drosophila* development and has a stage specific role in the completion of oogenesis. *Dev. Biol.* 223, 307-322.

- **Máthé, E.**, Boros, I., Jósavay, K., Kaijun L., Puro, J., Kaufman, T. C. and Szabad, J. (1998). The Tomaj mutant alleles of  $\alpha$ Tubulin67C reveal a requirement for the encoded maternal specific tubulin isoform in the sperm aster, the cleavage spindle apparatus and neurogenesis during embryonic development in *Drosophila*. *J. Cell Sci.* 111, 887-896.
- Cserpán, I., **Máthé, E.**, Patthy, A., Udvardy, A. (1997). Characterization of *Drosophila* phosphorylation dependent nuclear localization signal binding protein. *Biochem. J.* 328, 821-826.
- Erdélyi, M., **Máthé, E.** and Szabad, J. (1997). Genetic and developmental analysis of mutant Ketel alleles that identify the *Drosophila* importin- $\alpha$  homologue. *Acta Biol. Hung.* 48, 323-338.
- Szabad, J., **Máthé, E.** and Puro, J. (1995). Horka, a dominant mutation of *Drosophila*, induces nondisjunction and through paternal effect, chromosome loss and genetic mosaics. *Genetics* 139, 1585-1599.

#### **Refereed Book Chapters:**

- **Máthé, E.**, Oláh, C., Sandra, S. (2016). The eukaryotic cell and analysis of cytoskeleton. Soft-laser therapy I-II. San-Ergonómia Kft., Budapest, ISBN 978-963-12-5068-8
  - Ardelean, G., Ardelean, D.I., Avram, E., Béres, I., Béres, M., Csabai, J., Forgó, I., Györkös, I., Juhász, S., Kondor, A., Lenti, I., **Máthé, E.**, Nagy, Z., Neagu, O., Negrean, G., Sikolya, L., Tóth, Cs., Vágvolgyi, S., Wilhelm, A. (2012). Survey of natural resources in the flood area of river Tisza's tributaries for sustainable landscape usage (Ardelean, G. și Lenti, I. eds). Vasile Goldiș University Press, Ro, ISBN 978-973-664-588-4.
  - **Máthé, E.** (2004). Immunocytological analysis of oogenesis. *Methods Mol. Biol.* **247**, *Drosophila* Cytogenetics Protocols (Henderson, D.P. eds.), Humana Press Inc., USA., pg 89-127.
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