



Curriculum Vitae

Personal information **Attila Sebe**

Work experience

1. Employer: Paul-Ehrlich-Institut
 - Start date: 02/2018
 - End date:
 - Position: Clinical Assessor for AMTPs, Senior Scientist
 - Activities:
 - Country: Germany
2. Employer: Paul-Ehrlich-Institut
 - Start date: 09/2012
 - End date: 01/2018
 - Position: Postdoctoral Research Fellow
 - Activities:
 - Country: Germany
3. Employer: Semmelweis University
 - Start date: 07/2011
 - End date: 08/2012
 - Position: Assistant Professor Research
 - Activities:
 - Country: Hungary
4. Employer: Hungarian Academy of Sciences- Semmelweis University
 - Start date: 07/2009
 - End date: 06/2011
 - Position: Assistant Professor Research
 - Activities:
 - Country: Hungary
5. Employer: Semmelweis University
 - Start date: 03/2009
 - End date: 06/2009
 - Position: Assistant Professor Research
 - Activities:
 - Country: Hungary
6. Employer: St. Michael's Hospital, University of Toronto
 - Start date: 10/2005
 - End date: 03/2006
 - Position: Postdoctoral Research Fellow
 - Activities:
 - Country: Canada
7. Employer: GenoID Ltd.
 - Start date: 02/2003
 - End date: 03/2009
 - Position: Scientist
 - Activities:
 - Country: Hungary
8. Employer: Semmelweis University
 - Start date: 10/2002
 - End date: 12/2007
 - Position: PhD student
 - Activities:
 - Country: Hungary

Education and training

1. Subject: PhD
 - Start date: 10/2002
 - End date: 12/2007
 - Qualification: PhD
 - Organisation: Semmelweis University
 - Country: Hungary
2. Subject: MD
 - Start date: 10/1996
 - End date: 09/2002
 - Qualification: Medical Doctor
 - Organisation: University of Medicine and Pharmacy Tirgu Mures
 - Country: Romania

Additional information

Publications

1. Terebessy T, Masszi A, Fintha A, **Sebe A**, Huszár T, Rosivall L, Mucsi I. Angiotensin II activates the human renin promoter in an in vitro model: the role of c-Jun-N-terminal kinase. *Nephrol Dial Transplant.* 2004 Sep;19(9):2184-91.

2. Antus B, **Sebe A**, Fillinger J, Jeney C, Horvath I. Effects of blockade of the renin-angiotensin and endothelin systems on experimental bronchiolitis obliterans. *J Heart Lung Transplant*. 2006 Nov;25(11):1324-9.
3. Antus B, Fillinger J, **Sebe A**, Jeney C, Soltesz I, Horvath I. No gender difference in development of obliterative airway disease in rat tracheal allografts. *Exp Mol Pathol*. 2006 Dec;81(3):235-8.
4. Fan L*, **Sebe A***, Péterfi Z, Masszi A, Thirone AC, Rotstein OD, Nakano H, McCulloch CA, Szászi K, Mucsi I, Kapus A. *- equal contribution Cell contact-dependent regulation of epithelial-myofibroblast transition via the rho-rho kinase-phospho-myosin pathway. *Mol Biol Cell*. 2007 Mar;18(3):1083-97.
5. Jeney C, Takács T, **Sebe A**, Schaff Z. Detection and typing of 46 genital human papillomaviruses by the L1F/L1R primer system based multiplex PCR and hybridization. *J Virol Methods*. 2007 Mar;140(1-2):32-42.
6. Fintha A, **Sebe A**, Masszi A, Terebessy T, Huszár T, Rosivall L, Mucsi I. Angiotensin II activates plasminogen activator inhibitor-I promoter in renal tubular epithelial cells via the AT1 receptor. *Acta Physiol Hung*. 2007 Mar;94(1-2):19-30.
7. **Sebe A**, Masszi A, Zulys M, Yeung T, Speight P, Rotstein OD, Nakano H, Mucsi I, Szászi K, Kapus A, Rac, PAK and p38 regulate cell contact-dependent nuclear translocation of myocardin-related transcription factor. *FEBS Lett*. 2008 Jan 23;582(2):291-8.
8. Takács T, Jeney C, Kovács L, Mózes J, Benczik M, **Sebe A**. Molecular beacon-based real-time PCR method for detection of 15 high-risk and 5 low-risk HPV types. *J Virol Methods*. 2008 Apr;149(1):153-62.
9. **Sebe A**, Leivonen SK, Fintha A, Masszi A, Rosivall L, Kähäri VM, Mucsi I. Transforming growth factor-beta-induced alpha-smooth muscle cell actin expression in renal proximal tubular cells is regulated by p38beta mitogen-activated protein kinase, extracellular signal-regulated protein kinase1,2 and the Smad signalling during epithelial-myofibroblast transdifferentiation. *Nephrol Dial Transplant*. 2008 May;23(5):1537-45.
10. Antus B, Fillinger J, **Sebe A**, Jeney C, Horvath I. Late treatment with angiotensin-converting enzyme inhibitors plus endothelin receptor antagonists ameliorates rat tracheal allograft rejection. *Transpl Int*. 2008 Aug;21(8):801-7.
11. **Sebe A**, Erdei Z, Varga K, Bodor C, Mucsi I, Rosivall L. Cdc42 regulates myocardin-related transcription factor nuclear shuttling and alpha-smooth muscle actin promoter activity during renal tubular epithelial-mesenchymal transition. *Nephron Exp Nephrol*. 2010;114(3):e117-25.
12. Szebényi K, Erdei Z, Péntek A, **Sebe A**, Orbán TI, Sarkadi B, Apáti A. Human pluripotent stem cells in pharmacological and toxicological screening: new perspectives for personalized medicine. *Pers Med*. 2011 May; 8(3): 347-364.
13. Bodor C, Nagy JP, Végh B, Németh A, Jenei A, MirzaHosseini S, **Sebe A**, Rosivall L. Angiotensin II increases the permeability and PV-1 expression of endothelial cells. *Am J Physiol Cell Physiol*. 2012 Jan;302(1):C267-76.
14. Fintha A, Gasparics A, Fang L, Erdei Z, Hamar P, Mózes MM, Kökény G, Rosivall L, **Sebe A**. Characterization and Role of SCAI during Renal Fibrosis and Epithelial-to-Mesenchymal Transition. *Am J Pathol*. 2013 Feb;182(2):388-400.
15. Grabundzija I*, Wang J*, **Sebe A***, Erdei Z, Kajdi R, Devaraj A, Steinemann D, Szuhai K, Stein U, Cantz T, Schambach A, Baum C, Izsvák Z, Sarkadi B, Ivics Z. *- equal contribution Sleeping Beauty transposon-based system for cellular reprogramming and targeted gene insertion in induced pluripotent stem cells. *Nucleic Acids Res*. 2013 Feb 1;41(3):1829-47.
16. Krizbai IA, Gasparics Á, Nagyószai P, Fazakas C, Molnár J, Wilhelm I, Bencs R, Rosivall L, **Sebe A**. Endothelial-mesenchymal transition of brain endothelial cells: possible role during metastatic extravasation. *PLoS One*. 2015 Mar 5;10(3):e0119655.
17. Klawitter S, Fuchs NV, Upton KR, Muñoz-Lopez M, Shukla R, Wang J, Garcia-Cañadas M, Lopez-Ruiz C, Gerhardt DJ, **Sebe A**, Grabundzija I, Merkert S, Gerdes P, Pulgarin JA, Bock A, Held U, Witthuhn A, Haase A, Sarkadi B, Löwer J, Wolvetang EJ, Martin U, Ivics Z, Izsvák Z, Garcia-Perez JL, Faulkner GJ, Schumann GG. Reprogramming triggers endogenous L1 and Alu retrotransposition in human induced pluripotent stem cells. *Nat Commun*. 2016 Jan 8;7:10286.
18. **Sebe A**, Ivics Z. Reprogramming of Human Fibroblasts to Induced Pluripotent Stem Cells with Sleeping Beauty Transposon-Based Stable Gene Delivery. *Methods Mol Biol*. 2016;1400:419-27.
19. Friedel T, Jung-Klawitter S, **Sebe A**, Schenk F, Modlich U, Ivics Z, Schumann GG, Buchholz CJ, Schneider IC. CD30 Receptor-Targeted Lentiviral Vectors for Human Induced Pluripotent Stem Cell-Specific Gene Modification. *Stem Cells Dev*. 2016 May 1;25(9):729-39.
20. Gasparics Á, Rosivall L, Krizbai IA, **Sebe A**. When the endothelium scores an own goal: endothelial cells actively augment metastatic extravasation through endothelial-mesenchymal transition. *Am J Physiol Heart Circ Physiol*. 2016 May 1;310(9):H1055-63.
21. Voigt F, Wiedemann L, Zuliani C, Querques I, **Sebe A**, Mátés L, Izsvák Z, Ivics Z, Barabas O. Sleeping Beauty transposase structure allows rational design of hyperactive variants for genetic engineering. *Nat Commun*. 2016 Mar 30;7:11126.
22. Varga N, Mózes J, Keegan H, White C, Kelly L, Pilkington L, Benczik M, Zsuzsanna S, Sobel G, Koiss R, Babarczy E, Nyíri M, Kovács L, **Sebe A**, Kaltenecker B, Géresi A, Kocsis A, O'Leary J, Martin CM, Jeney C. The Value of a Novel Panel of Cervical Cancer Biomarkers for Triage of HPV Positive Patients and for Detecting Disease Progression. *Pathol Oncol Res*. 2017 Apr;23(2):295-305.
23. Jung-Klawitter S, Blau N, **Sebe A**, Ebersold J, Göhring G, Opladen T. Generation of an iPSC line from a patient with tyrosine hydroxylase (TH) deficiency: TH-1 iPSC *Stem Cell Res*. 2016 Oct 26;17(3):580-583.
24. Winterhoff BJ, Maile M, Mitra AK, **Sebe A**, Bazzaro M, Geller MA, Abrahante JE, Klein M, Hellweg R, Mullany SA, Beckman K, Daniel J, Starr TK. Single cell sequencing reveals heterogeneity within ovarian cancer epithelium and cancer associated stromal cells. *Gynecol Oncol*. 2017 Mar;144(3):598-606.
25. Thumann G, Harmening N, Prat-Souteyrand C, Marie C, Pastor M, **Sebe A**, Miskey C, Hurst LD, Diarra S, Kropp M, Walter P, Scherman D, Ivics Z, Izsvák Z, Johnen S. Engineering of PEDF-Expressing Primary Pigment Epithelial Cells by the SB Transposon System Delivered by pFAR4 Plasmids. *Molecular Therapy - Nucleic Acids*. 2017 Mar 17;6:302-314.
26. Gasparics Á, **Sebe A**. MRTFs- master regulators of EMT. *Dev Dyn*. 2018 Mar;247(3):396-404.
27. Gasparics Á, Kökény G, Fintha A, Bencs R, Mózes MM, Ágoston EI, Buday A, Ivics Z, Hamar P, Györfy B, Rosivall L, **Sebe A**. Alterations in SCAI Expression during Cell Plasticity, Fibrosis and Cancer. *Pathol Oncol Res*. 2018 Jul;24(3):641-651.
28. Cullmann K, Blokland KEC, **Sebe A**, Schenk F, Ivics Z, Heinz N, Modlich U. Sustained and regulated gene expression by Tet-inducible "all-in-one" retroviral vectors containing the HNRPA2B1-CBX3 UCOE@. *Biomaterials*. 2019 Feb;192:486-499.

29. Schumann GG, Fuchs NV, Tristán-Ramos P, **Sebe A**, Ivics Z, Heras SR. The impact of transposable element activity on therapeutically relevant human stem cells. *Mob DNA*. 2019 Mar 9;10:9.
30. Fintha A, Gasparics Á, Rosivall L, **Sebe A**. Therapeutic Targeting of Fibrotic Epithelial-Mesenchymal Transition- An Outstanding Challenge. *Front Pharmacol*. 2019 Apr 18;10:388.
31. Hernandez M, Recalde S, Garcia-Garcia L, Bezunartea J, Miskey C, Johnen S, Diarra S, **Sebe A**, Rodriguez-Madoz JR, Pouillot S, Marie C, Izsvák Z, Scherman D, Kropp M, Prosper F, Thumann G, Ivics Z, Garcia-Layana A, Fernandez-Robredo P. Preclinical evaluation of a cell-based gene therapy using the Sleeping Beauty transposon system in choroidal neovascularisation *Molecular Therapy-Methods & Clinical Development*, 2019 Nov 9;15:403-417.
32. Kesselring L, Miskey C, Zuliani C, Querques I, Kapitonov V, Laukó A, Fehér A, Palazzo A, Diem T, Lustig J, **Sebe A**, Wang Y, Dinnyés A, Izsvák Z, Barabas O, Ivics Z. A single amino acid switch converts the Sleeping Beauty transposase into an efficient unidirectional excisionase with utility in stem cell reprogramming. *Nucleic Acids Res*. 2020 Jan 10;48(1):316-331.
33. **Sebe A**, Anliker B, Rau J, Renner M. Genetisch modifizierte regulatorische T-Zellen: Therapiekonzepte und ihr regulatorischer Rahmen *Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz*. 2020 Nov;63(11):1403-1411.
34. Anliker B, Childs L, Rau J, Renner M, Schüle S, Schuessler-Lenz M, **Sebe A**. Regulatory Considerations for Clinical Trial Applications with CRISPR-Based Medicinal Products. *CRISPR J*. 2022 Jun;5(3):364-376.
35. Miskey C, Botezatu L, Temiz NA, Gogol-Doring A, Bartha A, Györfy B, Largaespada DA, Ivics Z, **Sebe A**. In Vitro Insertional Mutagenesis Screen Identifies Novel Genes Driving Breast Cancer Metastasis. *Mol Cancer Res*. 2022 Oct 4;20(10):1502-1515.
36. Gasparics Á, **Sebe A**. Forward Genetic Screens as Tools to Investigate Role and Mechanisms of EMT in Cancer. *Cancers (Basel)*. 2022 Nov 30;14(23):5928.

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