

1. Personal information

Name and surname: Alexandru BABEȘ

Date and place of birth: January the 27th 1971, Bucharest, Romania

Present academic position: Professor of Physiology and Neurobiology, Department of Anatomy, Physiology and Biophysics, Faculty of Biology, University of Bucharest.

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2. Education

2002	Postdoctoral research associate, Cambridge University, Department of Pharmacology, Cambridge, UK
1997-2002	PhD “Summa cum laude”, Faculty of Biology, University of Bucharest, Romania
1996-1997	MSc in Neurobiology, Faculty of Biology, University of Bucharest, Romania
1990-1995	BSc in Physics, Faculty of Physics, University of Bucharest, Romania
1985-1989	Baccalaureate, ‘Gheorghe Lazăr’, High School, Bucharest, Romania.

3. Professional experience

since 2005 Group leader (Sensory Neurophysiology) at the Department of Anatomy, Physiology and Biophysics, Faculty of Biology, University of Bucharest. Our group studies the cellular and molecular mechanisms involved in sensory transduction of thermal and painful stimuli by specialized groups of mammalian peripheral neurons.

2006 Postdoctoral Alexander von Humboldt research fellow – Institute of Physiology and Pathophysiology, Erlangen/Nuremberg University, Erlangen, Germany. The main aim of the research was the involvement of Nav1.8 sodium channels in the sensitivity to cold and painful stimuli in mammals.

2003, 2005 FEBS fellow and invited scientist at the Instituto de Neurociencias, Universidad Miguel Hernandez de Alicante, Spain. The investigation was focused on the alteration of thermal sensitivity induced by peripheral inflammation of the cornea.

2000, 2001 Research associate at the Sobell Department of the Institute of Neurology, University College London, UK. The research project was focused on the modulation of the biophysical properties and level of expression of the capsaicin receptor TRPV1 by nerve growth factor (NGF).

1997–2000 (3-6 months/year) DAAD (Deutscher Akademischer Austauschdienst) fellow and invited scientist at the Max Planck Institute for Biophysics, Frankfurt/Main, Germany. We studied the biophysical properties of the Na, K – ATPase purified and reconstituted into artificial membranes.

1995 (3 months) TEMPUS fellow at INSERM, Unite 299, Hopital de Bicetre, Institut de Pathologie Cellulaire, Le Kremlin Bicetre, Paris, France. We investigated the biophysical properties of chemically modified hemoglobins.

4. Ten selected publications

1. Manolache, A., Selescu, T., Maier, G.L., Mentel, M., Ionescu, A.E., Neacsu, C., **Babes, A.***, Szedlacsek, S.E.* (2020) “Regulation of TRPM8 channel activity by Src-mediated tyrosine phosphorylation”, *Journal of Cellular Physiology*, **235(6)**:5192-5203. IF = 4,52 (* corresponding authors)

2. Babes, R.M., Selescu, T., Domocos, D., **Babes, A.** (2017) “The anthelmintic drug praziquantel is a selective agonist of the sensory transient receptor potential melastatin type 8 channel”, *Toxicology and applied pharmacology*, **336**:55-65. IF = 3,79
3. **Babes, A.***, Ciotu, C.I.*, Hoffmann, T., Kichko, T.I., Selescu, T., Neacsu, C., Sauer, S.K., Reeh, P.W., Fischer, M.J.M. (2017) “Photosensitization of TRPA1 and TRPV1 by 7-dehydrocholesterol: implications for the Smith-Lemli-Opitz syndrome”, *Pain*, **158(12)**:2475-86. IF = 5,45 (* equal contribution)
4. Kistner, K.*, Siklosi, N.*, **Babes, A.***, Khalil, M., Selescu, T., Zimmermann, K., Wirtz, S., Becker, C., Neurath, M.F., Reeh, P.W., Engel, M.A. (2016) “Systemic desensitization through TRPA1 channels by capsaizepine and mustard oil - a novel strategy against inflammation and pain”, *Scientific Reports*, **6**:28621. IF = 5,58 (* equal contribution)
5. **Babes, A.**, Sauer, S.K., Moparthi, L., Kichko, T.I., Neacsu, C., Namer, B., Filipovic, M., Zygmunt, P.M., Reeh, P.W., Fischer, M.J. (2016), “Photosensitization in Porphyrias and Photodynamic Therapy Involves TRPA1 and TRPV1”, *Journal of Neuroscience*, **36(19)**:5264-78. IF = 6,34
6. Eberhardt, M., Dux, M., Namer, B., Miljkovic, J., Cordasic, N., Will, C., Kichko, T.I., de la Roche, J., Fischer, M., Suárez, S.A., Bikiel, D., Dorsch, K., Leffler, A., **Babes, A.**, Lampert, A., Lennerz, J.K., Jacobi, J., Martí, M.A., Doctorovich, F., Högestätt, E.D., Zygmunt, P.M., Ivanovic-Burmazovic, I., Messlinger, K., Reeh, P., Filipovic, M.R. (2014), “H2S and NO cooperatively regulate vascular tone by activating a neuroendocrine HNO-TRPA1-CGRP signalling pathway”, *Nature Communications*, **5**: 4381. IF: 11,47
7. Selescu, T., Ciobanu, A. C., Dobre, C., Reid, G., **Babes, A.** (2013), “Camphor activates and sensitizes transient receptor potential melastatin 8 (TRPM8) to cooling and icilin”, *Chemical Senses*, **38(7)**: 563-575. IF: 3,16
8. **Babes, A.**, Fischer, M. J., Filipovic, M., Engel, M. A., Flonta, M. L., Reeh, P. W. (2013), “The anti-diabetic drug glibenclamide is an agonist of the transient receptor potential Ankyrin 1 (TRPA1) ion channel”, *European Journal of Pharmacology*, **704(1-3)**: 15-22. IF: 2,53
9. Bierhaus, A., Fleming, T., Stoyanov, S., Leffler, A., **Babes, A.**, Neacsu, C., Sauer, S. K., Eberhardt, M., Schnölzer, M., Lasischka, F., Neuhuber, W. L., Kichko, T. I., Konrade, I., Elvert, R., Mier, W., Pirags, V., Lukic, I. K., Morcos, M., Dehmer, T., Rabbani, N., Thornalley, P.J., Edelstein, D., Nau, C., Forbes, J., Humpert, P. M., Schwaninger, M., Ziegler, D., Stern, D. M., Cooper, M. E., Haberkorn, U., Brownlee, M., Reeh, P. W., Nawroth, P. P. (2012), “Methylglyoxal modification of Nav1.8 facilitates nociceptive neuron firing and causes hyperalgesia in diabetic neuropathy”, *Nature Medicine*, **18(6)**: 926-933. IF: 27,36
10. Zimmermann, K., Leffler, A., **Babes, A.**, Cendan, C. M., Carr, R. W., Kobayashi, J., Nau, C., Wood, J. N., Reeh, P. (2007), “Sensory neuron sodium channel Nav1.8 is essential for pain at low temperatures”, *Nature*, **447**:855-859. IF = 41,46

5. Awards

1. 2019. The “Friedrich Wilhelm Bessel” research award of the Alexander von Humboldt Foundation.
2. 2018. The “Nicolae Simionescu” prize of the Romanian Academy of Sciences.
2. 2017. The Great Prize of the Senate of the University of Bucharest for the most prestigious scientific publication.
3. 2016. The IASP (International Association for the Study of Pain) Prize for Excellence in Pain Research and Management in Developing Countries.
4. 2009. The “Luigi Galvani” prize of the Bioelectrochemical Society for outstanding contributions to electrochemistry.
5. 2002. The “In hic signo vinces” prize of CNCSIS (Romanian National Research Council).

6. Other academic activities

1. Organizer of the symposium “Recent advances in nociceptive signaling: focus on temperature-, acid- and light-induced pain”. FENS Regional Meeting, Pecs, Hungary, September 20-23, 2017
2. Expert evaluator for the Marie Curie Actions programme of the European Commission 2011-2019.
3. President of CNCS (Romanian National Research Council) 2011-2013.
4. Organizer of the international PENS (Program of European Neuroscience Schools) workshop “Mechano-transduction and nociception”, Bucharest, 2007.
5. Reviewer for Neuroscience, Nature protocols, Journal of the Peripheral Nervous System, Molecular and Cellular Neuroscience, Journal of Neurophysiology, British Journal of Pharmacology, Molecular Pain, Pflüger’s Archiv, International Journal for Parasitology, European Journal of Pharmacology, European Journal of Pain