

## Curriculum Vitae Dr. Velina Bachvarova-Matic

### Personal Data

Title	Dr. rer. nat.
First name	Velina
Name	Bachvarova-Matic
Current position	Postdoctoral researcher
Identifiers/ORCID	0000-0003-3053-8277

### Qualifications and Career

Degree programme	10/2006 – 02/2008, Molecular Biology-Virology, MSc., Sofia University “St. Kliment Ohridski”, Sofia, Bulgaria 10/2002 – 06/2006, Biotechnology, BSc., Sofia University “St. Kliment Ohridski”, Sofia, Bulgaria
Doctorate	2011-2018, Developmental biology/Glycobiology, supervisor: Prof. Dr. Andrea Vortkamp, University of Duisburg-Essen, Germany
Further stages	07/2020-10/2020, Postdoctoral Researcher, IMBIM, Uppsala University, Sweden 02/2018-06/2020, Postdoctoral Researcher, Dept. of Developmental Biology, University of Duisburg-Essen 04/2009-01/2011 Researcher, Institute of Radiochemistry, Helmholtz-Zentrum Dresden–Rossendorf (HZDR) 10/2006-03/2009, Researcher, Institute of Molecular Biology “Roumen Tsanev”, Bulgarian Academy of Sciences, Bulgaria

### Supplementary Career Information

11/2020-08/2022 – parental leave

### Scientific Results

**Bachvarova V**, Dierker T, Esko J, Hoffmann D, Kjellen L, Vortkamp A (2020) Chondrocytes respond to an altered heparan sulfate composition with distinct changes of heparan sulfate structure and increased levels of chondroitin sulfate. *Matrix Biol.* S0945-053X(20)30029-9. doi: 10.1016/j.matbio.2020.03.006.

Severmann AC, Jochmann K, Feller K, **Bachvarova V**, Piombo V, Stange R, Holzer T, Brachvogel B, Esko J, Pap T, Hoffmann D, Vortkamp A (2020) An altered heparan sulfate structure in the articular cartilage protects against osteoarthritis. *Osteoarthritis Cartilage.* 28(7):977-987. doi:10.1016/j.joca.2020.04.002.

Dierker T, **Bachvarova V**, Krause Y, Li JP, Kjellén L, Seidler DG, Vortkamp A (2016) Altered heparan sulfate structure in Glce (-/-) mice leads to increased Hedgehog signaling in endochondral bones. *Matrix Biol.* 49:82-92. doi: 10.1016/j.matbio.2015.06.004.

Bandari S, Exner S, Ortmann C, **Bachvarova V**, Vortkamp A, Grobe K (2015) Sweet on Hedgehogs: regulatory roles of heparan sulfate proteoglycans in Hedgehog-dependent cell proliferation and differentiation. *Curr Protein Pept Sci.* 16(1):66-76. doi: 10.2174/1389203716666150213162649. Review.

Jochmann K\*, **Bachvarova V\***, Vortkamp A (2014) Heparan sulfate as a regulator of endochondral ossification and osteochondroma development. *Matrix Biol.* 34:55-63. doi: 10.1016/j.matbio.2013.11.003. Review. \*equal contribution

Moll H, Lütke L, **Bachvarova V**, Cherkouk A, Selenska-Pobell S, Bernhard G (2014) Interactions of the Mont Terri Opalinus Clay isolate *Sporomusa* sp. MT-2.99 with curium (III) and europium (III). *Geomicrobiology* DOI:10.1080/01490451.2014.889975

Radeva G, Kenarova A, **Bachvarova V**, Flemming K, Popov I, Vassilev D, Selenska-Pobell S (2014) Phylogenetic diversity of archaea and the archaeal ammonia monooxygenase gene in uranium mining-impacted locations in Bulgaria. *Archaea*. 11;2014:196140. doi: 10.1155/2014/196140. eCollection 2014.

Galina Radeva, Anelia Kenarova, **Velina Bachvarova**, Katrin Fleming, Ivan Popov, Dimitar Vassilev, Sonja Selenska-Pobell (2013) Bacterial Diversity at Abandoned Uranium Mining and Milling Sites in Bulgaria as Revealed by 16S rRNA Genetic Diversity Study. *Water Air Soil Pollut* 224, 1748, doi.org:10.1007/s11270-013-1748-1

Lütke L, Moll H, **Bachvarova V**, Selenska-Pobell S, Bernhard G (2013) The U(VI) speciation influenced by a novel *Paenibacillus* isolate from Mont Terri Opalinus clay. *Dalton Trans.* 21;42(19):6979-88. doi: 10.1039/c3dt33032j. PMID: 23508301

Ivanova I, Atanassov I, Lyutskanova D, Stoilova-Disheva M, Tomova I, Dereкова A, Radeva G, **Bachvarova V**, Kambourova M (2010) High Archaeal diversity in Varvara hot spring, Bulgaria. *J. Basic Microbiol.* 2, 163-72