ICGEB International Centre for Genetic Engineering and Biotechnology

Curriculum vitae

Group Leader,
Biotechnology Development

International Centre for Genetic Engineering and Biotechnology

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NATASA SKOKO

Education

Faculty of Biological Science, University of Belgrade, Belgrade, Serbia, PhD in Molecular Biology and Biochemistry, 2006
Faculty of Biological Science, University of Belgrade, MSc in Molecular Biology and Biochemistry, 2002
Faculty of Biological Science, University of Belgrade, BSc in Molecular Biology and Physiology, 1999

Career History

Since 2018, Head of Biotech Development Unit, ICGEB, Trieste, Italy
2006-2017, Research Scientist, Biotechnology Development Group, ICGEB, Trieste, Italy.
2003-2005, Research Fellow, Molecular Pathology Group, ICGEB, Trieste, Italy

Scientific Activity

Research focuses on the development of technologies for the production of biopharmaceuticals such as Erythropoietin, Interferon alpha, Interferon beta, GCSF, Insulin, Growth Hormone using three main expression systems bacteria, yeast and mammalian cells. Activities cover the most comprenhensive breadth of activities in bioprocessing such as upstream, downstream operations and quality control analysis following European Pharmacopoeia monographs. Further interest has been focused at improving biopharmaceutical properties of protein therapeutics by polymer-protein conjugation in order to develop long-lasting counterparts such as PEGylated Erythropoietin, PEGylated Interferons, PEGylated GCSF and long-lasting Insulins. Current research is on the development of soluble TNF receptor fusion protein, Etanercept and antibody fragment Certolizumab pegol. Another line of research interest includes screening of miRNAs able to enhance production of recombinant proteins of pharmaceutical interest in CHO cells.

Dr. Skoko works in close collaboration with the industrial sector by coordinating the transfer of know-how for the production of biopharmaceuticals to industry with aim to increase local pharmaceutical industries capacities in emerging markets. Activity is mainly funded through technology transfer agreements with private companies and public institutions worldwide. From 2018 the Unit's activity is strengthen through the funding from Friuli Venezia Giulia Region for the upgrade of the laboratory.

She participates in revision of scientific manuscripts for international journals in the field of biotechnology and regularly participates at meetings worldwide.

Teaching Activity

Training of industrial partners' employees in house and further assistance in their own premises.
Organiser of the International Workshop in the field of biosimilars and new biotechnological drugs, May 2018

Selected Publications

Polez S., Origi D., Zahariev S., Guarnaccia C., Tisminetzky S. G., Skoko N., Baralle M. (2016) "A simplifiedand efficient process for insulin production in Pichia pastoris", PLos One, 11(12), doi: 10.1371/journal.pone.0167207.

Cragnaz L, Klima R, Skoko N, Budini M, Feiguin F and Baralle F.E. (2014) "Aggregate formation prevents dTDP-43 neurotoxicity in the Drosophila melanogaster eye" Neurobiology of Disease, doi: 10.1016/j.nbd.2014.04.009.

Menvielle J. P, Safini N, Tisminetzky S.G. and Skoko N. (2013) "Dual role of dextran sulphate 5000 Da as anti-apoptotic and pro-autophagy agent", Mol Biotechnology, 54(2): 711-720.

De Conti, Skoko N, Buratti E and Baralle M. (2012) "Complexities of 5' splice site definition", RNA Biology, 9(6): 911-923.

Skoko Natasa, Baralle Marco, Tisminetzky Sergio and Buratti Emanuele (2011) "InTRONs in Biotech", Review, Mol Biotechnol, 48(3): 290-297.

Gurramkonda C., Polez S., Skoko N., Adnan A., Gäbel T., Chugh D., Swaminathan S., Khanna N., Tisminetzky S. and Rinas U. (2010) "Application of simple fed-batch technique to high-level secretory production of Insulin precursor using Pichia pastoris with subsequent purification and conversion to human insulin." Microbial Cell Factories, 9:31.

Zago P, Baralle M, Ayala YM, Skoko N, Zacchigna S, Buratti E, Tisminetzky S (2009) "Improving human interferon-beta production in mammalian cell lines by insertion of an intronic sequence within its naturally uninterrupted gene", Biotechnol Appl Biochem., 52(3),191-198.

Skoko, N., Baralle, M., Buratti, E. and Baralle, F.E. (2008) "The pathological splicing mutation c.6792C > G in NF1 exon 37 causes a change of tenancy between antagonistic splicing factors", FEBS Letters, 582(15): 2231–2236.

Skoko, N., Vujović, J., Savić, M., Papić, N., Vasiljević and Ljubijankić, G. (2005) "Construction of Saccharomyces cerevisiae strain FAV20 useful in detection of immunosuppressants produced by soil actinomycetes", Journal of Microbiological Methods, 61 (1): 137-140.

Skoko, N., Argamante, B., Kovačević-Grujičić, N., Tisminetzky, S., Glišin, V. and Ljubijankić, G. (2003) "Expression and characterization of human interferon-beta1 in the methylotrophic yeast Pichia pastoris", Biotechnol. Appl. Biochem, 38(3): 257-265.