Zlatko Trajanoski

Biographical sketch

Zlatko Trajanoski is a professor for bioinformatics at the Division of Bioinformatics, Biocenter, Medical University of Innsbruck, Austria. Research in his laboratory focuses on deciphering tumour–immune cell interaction using computational approaches and developing analytical tools for precision immune-oncology. His work was instrumental for the elucidation of the role of the adaptive immune system in human colorectal cancer and has led to the development of a novel immune score for the stratification of patients. His recent work focuses on the identification of mechanisms of intrinsic and acquired resistance to immunotherapy in colorectal cancer using combined experimental/computational approaches.

Curriculum vitae

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Place of Birth:	Skopje, Macedonia
Date of Birth:	February 2, 1964
Nationality:	Austrian
Acad. Degree:	Univ. Prof. Dipl.-Ing. Dr. techn. (Ph.D)

Education

1978 - 1982	High school, Skopje, Macedonia
1984 - 1990	Undergraduate studies, Graz University of Technology, Graz, Austria (biomedical engineering)
1990 - 1995	Ph.D. study in biomedical engineering, Graz University of Technology, Graz, Austria

Career History

1990 - 1992	Research Associate, Institute for Biomedical Engineering, Graz University of Technology, Graz, Austria
1997 - 1998	Postdoc, Department of Internal Medicine, Yale University, New Haven, CT/USA
1999	Tenure, (Habilitation, Venia Docendi) in "Biomedical Engineering"
2000 - 2001	Visiting Scientist, The Institute for Genomir Research (TIGR),

	Rockville, MD/USA and National Institutes of Health, Bethesda, MD/USA
2001 - 2003	Associate Professor, Institute for Biomedical Engineering, University of Technology, Graz, Austria
2003 - 2010	Full Professor for Bioinformatics and Head, Institute Genomics and Bioinformatics, University of Technology, Graz, Austria.
Since 2010	Full Professor for Bioinformatics and Head, Division for Bioinformatics, Medical University of Innsbruck, Austria

Publications	130 Publications (>670 impact points; average impact: 8,26). > 50 invited talks Total number of citations: >10.700 (web of knowledge) h-index: 38 (web of knowledge)
Research Interests	Bioinformatics and computational biology, mathematical modeling, transcriptional regulation, cancer immunology, tumor-immune cell interaction

Funds obtained (most important ones)

ERC advanced grant, EPIC (Enabling Precision Immuno-oncology in colorectal cancer)	2.460.500	EU	2018-2023
Horizon2020, APERIM (Advanced bioinformatics tools for personalized cancer immunotherapy) (coordinator Z. Trajanoski)	500.000	EU	2015-2018
Doktoratskolleg (W11), Molecular Cell Biology and Oncology 3rd & 4rd funding period	207.400 & 205.000	FWF, Med. Uni. Innsbruck	2012-2018
SFB021 (F2117), Cell proliferation and cell death in tumors	365.000	FWF	2011-2013
GEN-AU Bioinformatics Integration Network, (Coordinator Z. Trajanoski)	2.300.000	bm:wfw	2002-2012
Christian Doppler Society, Christian Doppler Laboratory for Genomics and Bioinformatics	2.800.000	CDG	2002-2009

Zlatko Trajanoski; 10 most important publications

1. Efremova M, Rieder D, Klepsch V, Charoentong P, Finotello F, Hackl H, Hermann-Kleiter N, Löwer M, Baier G, Krogsdam AM, **Trajanoski Z**. Targeting immune checkpoints potentiates immunoediting and changes the dynamics of tumor evolution. **Nat Commun**. 2018. 9:32
2. Charoentong P*, Finotello F*, Angelova M*, Mayer C, Efremova M, Rieder D, Hackl H, **Trajanoski Z**. Pan-cancer immunogenomic analyses reveal genotype-immunophenotype relationships and predictors of response to checkpoint blockade. **Cell Rep**. 2017. 18:248-262
3. Hackl H*, Charoentong P*, Finotello F*, **Trajanoski Z**. Computational genomics tools for dissecting tumor-immune cell interactions. **Nat Rev Genet**. 2016. 17:441-458
4. Angelova M, Charoentong P, Hackl H, Fischer M, Snajder R, Krogsdam AM, Waldner MJ, Bindea G, Mlecnik B, Galon J, **Trajanoski Z**. Characterization of the immunophenotypes and the antigenomes reveal distinct tumor escape mechanisms and novel targets for immunotherapy of colorectal cancers. **Genome Biol**. 2015. 16:64
5. Bindea G, Mlecnik B, Tosolini M, Kirilovsky A, Waldner M, Obenauf AC, Angell H, Frederiksen T, Lafontaine L, Berger A, Bruneval P, Fridman WH, Becker C, Speicher MR, **Trajanoski Z**, Galon J. Spatio-temporal dynamics of intratumoral cells reveal the immune landscape in human cancer. **Immunity**. 2013. 39:782-795
6. Prokesch A, Bogner-Strauss JG, Hackl H, Rieder D, Neuhold C, Walenta E, Krogsdam A, Scheideler M, Papak C, Wong WC, Vinson C, Eisenhaber F, **Trajanoski Z**. Arxes: retrotransposed genes required for adipogenesis. **Nucleic Acids Res**. 2011. 39(8):3224-39.
7. Pabinger S, Dander A, Fischer M, Snajder R, Sperk M, Efremova M, Krabichler B, Speicher MR, Zschocke J, **Trajanoski Z**. A Survey of tools for variant analysis of next-generation genome sequencing data. **Brief Bioinform**. 2014. 15:256-278.
8. Galon J, Costes A, Sanchez-Cabo F, Kirilovsky A, Mlecnik B, Lagorce-Pages C, Tosolini M, Camus M, Berger A, Wind P, Zinzindohoue F, Bruneval P, Cugnenc PH, **Trajanoski Z**, Fridman WH, Pages F. Type, density, and location of immune cells within human colorectal tumors predict clinical outcome. **Science**. 2006. 313(5795):1960-4.
9. Hackl H, Burkard TR, Sturn A, Rubio R, Schleiffer A, Tian S, Quackenbush J, Eisenhaber F, **Trajanoski Z**. Molecular processes during fat cell development revealed by gene expression profiling and functional annotation. **Genome Biol**. 2005. 6(13):R108.
10. Pages F, Berger A, Camus M, Sanchez-Cabo F, Costes A, Molidor R, Mlecnik B, Kirilovsky A, Nilsson M, Damotte D, Meatchi T, Bruneval P, Cugnenc PH, **Trajanoski Z**, Fridman WH, Galon J. Effector memory T cells, early metastasis, and survival in colorectal cancer. **N Engl J Med**. 2005. 353(25):2654-66.