

Curriculum vitae Europass

Inserați fotografia



Informații personale

Nume / Prenume **Nichita Norica-Beatrice (Branza-Nichita anterior)**
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Naționalitate(-tăți) romana
Data nașterii 12.04.1970

**Locul de muncă vizat /
Domeniul ocupațional** Conducator doctorat, domeniul Biologie, SCOSAAR

Experiența profesională

Perioada	
2016- prezent	Conducator de doctorat, Domeniul Biologie, SCOSAAR
Funcția sau postul ocupat	7 doctoranzi in diferite stagii de pregatire
Activități și responsabilități principale	Sustinere curs Biologie celulara, organizari activitati Journal club, evaluari proiecte cercetare doctoranzi.
Numele și adresa angajatorului	
Tipul activității sau sectorul de activitate	
2015-2021	Cadru didactic asociat Universitatea POLITEHNICA din București, Facultatea de Știința și Ingineria Materialelor, anul IV Inginerie Medicala, curs „Biologie celulara”
2014-prezent	CSI, Sef Departament Glicoproteine Virale, Institutul de Biochimie al Academiei Romane (IBAR) Coordonarea activității de cercetare a departamentului. Grupul este implicat in studiul morfogenezei HBV si HCV, dezvoltarea de strategii profilactice (vaccinuri) si antivirale investigarea la nivel molecular a interactiei celulei gazda cu HBV/HCV. Coordonare granturi national si internationale.
2011-prezent	Director-adjunct IBAR Activitati de control intern managerial, Registrul rezultatelor cercetarii, organizarea seminarilor IBAR
2004-2014	Cercetator Stiintific gradul II, Sef Departament Glicoproteine Virale, IBAR Coordonarea activității de cercetare a Departamentului de Glicoproteine Virale, coordonare teze master, supervizare teze doctorat, coordonare granturi cercetare internationale si nationale, sustinere de cursuri master Universitatea Bucuresti, Facultatea de Chimie.



2001-2004
Cercetator Stiintific gradul III, IBAR
Coordonare grant international „Wellcome Trust- International Research Development Award”, pe tema plierii glicoproteinelor virusurilor anvelopate, coordonare proiect „United Therapeutics”, pe tema identificarii de compusi cu activitate antivirala si mecanism de actiune.

2000-2001
NATO/Royal Society Postdoctoral Fellow
Universitatea Oxford, Departamentul de Biochimie, Institutul de Glicobiologie
Activitati de cercetare privind dezvoltarea unui model viral surogat (BVDV) pentru studierea HCV in vitro.

1997-1999
Cercetator Stiintific, IBAR si doctorand bursier NATO la Universitatea Oxford, Departamentul de Biochimie, Institutul de Glicobiologie (3 luni/an. Teza de doctorat s-a focusat pe descifrarea mecanismelor moleculare care controleaza plierea proteinelor in RE si intelegerea rolului glucidelor N-legate in acest proces.

1992-1996
Cercetator stagiar (1992-1993), Asistent cercetare stagiar (1993-1994), Asistent cercetare (1994-1997), pozitii detinute la IBAR; Asistent cercetare (bursa PECO), Laboratorul de Chimie Biologica, Universite des Sciences et Technologies, Lille, Franta (1996, 6 luni). Proiectul primit a avut ca subiect clonarea si caracterizarea unor variante mutante derivate de la lactoferina umana; Asistent cercetare (bursa PICS), Centre de Recherches sur les Macromolécules Végétales-CNRS, Université Joseph Fourier, Grenoble, France (1995, 3 luni). Tema de cercetare s-a referit la identificarea unor liganzi specifici lectinei izolate din *Datura innoxia*.

Educație și formare

Perioada
Calificarea / diploma obținută
Disciplinele principale studiate/
competențe profesionale dobândite
Numele și tipul instituției de
învățământ / furnizorul de formare
Nivelul în clasificarea națională sau
internațională

2015
Abilitare conducere doctorat in domeniul Biologie, OM 4718/11.08.2015

2000
Doctorat in Biologie, IBAR, Academia Romana: „Investigarea mecanismului de pliere a tirozinazei, prin mutageneza in situ”

1993-1994
Student TEMPUS, Laboratorul de Oncologie Moleculara, Departamentul de Genetica Umana, Universitatea Catolica Leuven, Belgia. Insiurirea de tehnici avansate de biologie moleculara: clonare, PCR, secventiere si hibridizari de acizi nucleici, screening de biblioteci genetice de cromozomi artificiali si cDNA.

1988-1993
Licenta in Biochimie
Universitatea Bucuresti, Facultatea de Biochimie
Sef de promotie

1984-1988
Bacalureat Stiintele naturii/real
Colegiul „Vasile Alecsandri” Bacau
Sef de promotie

Aptitudini și competențe personale

Limba(l) maternă(e) Romana
Limba(l) străină(e) cunoscută(e) Engleza fluent (vorbit, citit, scris), Franceza foarte bine (vorbit, scris, citit), rusa satisfăcător (citat, scris)

Competențe științifice

Biologie celulară și moleculară, **virusologie moleculară**, proteine eucariote și virale: biosinteza, glicozilare, pliere, degradare, trafic intracelular, secreție, prezentare antigen, **dezvoltare de vaccinuri**, morfologie virală; identificare de compuși cu activitate antivirală, mecanism de acțiune; tehnologia ADN recombinat

Competențe ca expert evaluator

Granturi
Peer-review
Teze de doctorat internaționale

2021-prezent
Expert evaluator FNRS Belgia
2016 – prezent
Expert evaluator Comisia Europeană, Marie Curie Fellowships, EIC Pathfinder
2007- prezent
Evaluare implementare granturi în competiții naționale (IDEI, TE, PD)
2014-2015
Expert evaluator proiecte USA-Israel Binational Science Foundation
2004- prezent
Evaluare pentru jurnale internaționale (peer-reviewer): Nature Communications, Scientific reports, Hepatology, Autophagy, PlosOne, Gene, Trends in Biotechnology, Journal of Cellular and Molecular Medicine, Frontiers Microbiology, Molecular Biology Reports, Antiviral Research, Virology, Liver International, Biomolecules, Current HIV Research, Proteome Science, Melanoma Research, Journal of Gastroenterology and Hepatology, Bioorganic and Medicinal Chemistry, etc.
2023
PhD External Examiner Universitatea Oxford, Co-examiner: Prof. Justin Benesch, candidat PhD student Fergus Bremner
2021
PhD External Examiner Universitatea Oxford, Co-examiner: Prof. Mark Wormald, candidat PhD student Juli Brun
2019
PhD External Examiner Universitatea Oxford, Co-examiner: Prof. Bridget Wills, candidat PhD student Nilanka Perera
2014
PhD External Examiner Universitatea Oxford, Co-examiner: Prof. Sir Andrew Mc. Michael, candidat PhD student Simon Spiro.

Competențe ca expert în comisii naționale

2020- 2022
Membru al Consiliului Național al Cercetării Științifice (CNCS), Președinte al Comisiei de Biologie a CNCS
2016-2020
Vicepreședinte al Comisiei de Biologie și Biochimie a Consiliului Național de Atestare a Titlurilor, Diplomelor și Certificatelor Universitare (CNATDCU)
2006-2015
Secretar Științific al Societății Române de Biochimie și Biologie Moleculară (SRBBM)
2011- 2013
Membru al Consiliului Național al Cercetării Științifice (CNCS), Președinte al Comisiei de Biologie a CNCS
2011-2013
Membru al Comisiei de Biologie și Biochimie a CNATDCU

Informații suplimentare

Referințe: Professor Raymond Dwek, Universitatea Oxford (raymond.dwek@exeter.ox.ac.uk)

Wt

**Indicatori i
scientometrici**

Indice Hirsh: 25, conform WOS; search for: AUTHOR: (Nichita N*) OR AUTHOR: (Branza-Nichita N*) OR
AUTHOR: (Branza N*); Indice Hirsh 30, conform Google Scholar.

Articole ISI in extenso: 60

Citări (WOS): total: 1700 ; citari (Google Scholar): total 2520

Factorul de impact însumat al lucrărilor publicate: > 200

Capitole carti: 4

Brevete Internationale: 3

Anexe

Lista Publicatiilor, granturi de cercetare ca director de proiect

20.02.2024

Wot

Norica-Beatrice Nichita- Full list of publications

a) Book chapters

1. „Production of Chimeric Hepatitis B Virus Surface Antigens in Mammalian Cells”. Authors: Dobrica Mihaela-Olivia, Catalin Lazar and **Norica Nichita**. *Methods in Molecular Biology*, Blaine Pfeifer and Andrew Hill (eds.). Springer Science. ISBN: 978-1-0716-0794-7. Vol. 2183, 83-94, Series Title: Vaccine Delivery Technology: Methods and Protocols) (2021)
2. “Antiviral Activity of Lactoferrin: From Basic Research to Medical Applications”. Authors: Paula E Florian, Catalin Lazar, **Norica Nichita** and Anca Roseanu, Nova Science Publishing (NY, USA), ISBN 971-1-63117-221-2, Chapter 3, 205-246 (2014)
3. “Using proteomics to unravel the mysterious steps of the HBV life-cycle”. Authors: **Norica Branza-Nichita**, Catalina Petrareanu, Catalin Lazar, Izabela Sokolowska and Costel C. Darie. *Advancements of Mass Spectrometry in Biomedical Research*, Alisa G. Woods & Costel C. Darie (eds). Series Title: Advances in Experimental Medicine and Biology, Springer Science, ISBN: 978-3-319-06067-5 (Print), Chapter 22, 453-481 (2014)
4. “Caveolae-Dependent Endocytosis in Viral Infection”. Authors: **Norica Branza-Nichita**, Alina Macovei and Catalin Lazar. *Molecular Regulation of Endocytosis*. Brian Ceresa (ed), Intech, ISBN 978-953-51-0662-3, 155-182. DOI: 10.5772/48538 (2012).

b) Peer-reviewed papers in international journals

1. Pantazica AM, van Eerde A, Dobrica MO, Caras I, Ionescu I, Costache A, Tucureanu C, HSteen H, Lazar C, Haldal I, Haugslie S, Onu A, Stavaru C, **Nichita N***, Liu Clarke J . “The “humanized” N-glycosylation pathway in CRISPR/Cas9-edited *Nicotiana benthamiana* significantly enhances the immunogenicity of a S/preS1 Hepatitis B Virus antigen and the virus-neutralizing antibody response in vaccinated mice”. *Plant Biotechnology Journal*, 21:1176–1190 (2023)
2. Hang Su, André van Eerde, Espen Rimstad, Ralph Bock, **Norica Nichita**, Igor A Yakovlev, Jihong Liu Clarke . “Plant-made vaccines against viral diseases in humans and farm animals”, *Frontiers in Plant Science* (14:1170815), doi: 10.3389/fpls.2023.1170815 (2023).
3. Pantazica A-M, Dobrica MO, Lazar C, Scurtu C, Tucureanu C, Caras I, Ionescu I, Costache A, Onu A, Liu Clarke J, Stavaru C, **Branza-Nichita N***. “Efficient cellular and humoral immune response and production of virus-neutralizing antibodies by the Hepatitis B Virus S/preS116-42 antigen”. *Frontiers in Immunology*, 13:941243 (2022).
4. Popescu MA, Patriche D, Dobrica MO, Pantazica AM, Flintoaca Alexandru PR, Rouillé Y, Popescu CI, **Branza-Nichita N***. “Sac1 phosphatidylinositol 4-phosphate phosphatase is a novel host cell factor regulating Hepatitis B Virus particles assembly and release”. *FEBS Journal*, 289 (23): 7486-7499 (2022).
5. Bucataru I, Dragomir I, Asandei A, Pantazica A-M, Ghionescu A, **Branza-Nichita N**, Park Y, Tudor Luchian T . Probing the Hepatitis B Virus E-Antigen with a Nanopore Sensor Based on Collisional Events Analysis. *Biosensors*, 596(12):1-15 (2022).
6. Pantazica, A.-M.M.; Cucos, L.-M.; Stavaru, C.; Clarke, J.-L.; **Branza-Nichita, N**. Challenges and Prospects of Plant-Derived Oral Vaccines against Hepatitis B and C Viruses. *Plants*, 10, 2037. <https://doi.org/10.3390/plants10102037> (2021)
7. Dobrica MO, van Eerde A, Tucureanu C, Onu A, Paruch I, Caras I, Vlase E, Steen H, Haugslie S, Alonzi D, Zitzmann N, Bock R, Dubuisson J, Popescu CI, Stavaru C, Liu-Clarke J, **Branza-Nichita N***. Hepatitis C virus E2 envelope glycoprotein produced in *Nicotiana benthamiana* triggers humoral

response with virus-neutralizing activity in vaccinated mice *Plant Biotechnology Journal*, 19: 2027–2039. <https://doi.org/10.1111/pbi.13631> (2021).

8. Dobrica MO, Lazar C, **Branza-Nichita N***. N-Glycosylation and N-Glycan Processing in HBV Biology and Pathogenesis. *Cells*, 9, 1404; doi:10.3390/cells9061404 (2020).

9. Dobrica MO, Lazar C, Paruch L, van Eerde A, Liu-Clarke J, Tucureanu C, Caras I, Ciulean S, Onu A, Tofan V, Branzan A, Urban S, Stavaru C, **Branza-Nichita N***. Oral administration of a chimeric Hepatitis B Virus S/preS1 antigen produced in lettuce triggers infection neutralizing antibodies in mice. *Vaccine* 36, (38), 5789–5795 (2018).

10. Liu Clarke J, Paruch L, Dobrica MO, Caras I, Tucureanu C, Onu A, Ciulean S, Stavaru C, Eerde A, Wang Y, Steen H, Haugslie S, Petrareanu C, Lazar C, Popescu CI, Bock R, Dubuisson J and **Branza-Nichita N***. „Lettuce-produced hepatitis C virus E1E2 heterodimer triggers immune responses in mice and antibody production after oral vaccination”. *Plant Biotechnology Journal* 15, 1611-1621 (2017).

11. Dobrica MO, Lazar C, Paruch L, Skomedal H, Steen H, Haugslie S, Tucureanu C, Caras I, Onu A, Ciulean S, Branzan A, Liu Clarke J, Stavaru C, **Branza-Nichita N***. „A novel chimeric Hepatitis B virus S/preS1 antigen produced in mammalian and plant cells elicits stronger humoral and cellular immune response than the standard vaccine-constituent, S protein”. *Antiviral Research*, 144, 256-265 (2017).

12. Lazar, C, Uta, M, Petrescu, SM, **Branza-Nichita, N***. „Novel function of the endoplasmic reticulum degradation-enhancing alpha-mannosidase-like proteins in the human hepatitis B virus life cycle, mediated by the middle envelope protein”. *Cell. Microbiol.*, 19, e12653, DOI: 10.1111/cmi.12653 (2017)

13. Uta M, Sima LE, Hoffmann P, Dinca V, **Branza-Nichita N***. „Development of a DsRed-expressing HepaRG cell line for real-time monitoring of hepatocyte-like cell differentiation by fluorescence imaging, with application in screening of novel geometric microstructured cell growth substrates”. *Biomed Microdevices* 19, DOI: 10.1007/s10544-016-0146-z (2017).

14. Florian P, Rouille Y, Ruta S, **Nichita N**, Roseanu A. „Recent advances in human viruses imaging studies”. *Journal of Basic Microbiology*, DOI: 10.1002/jobm.201500575 (2016).

15. Carja G, Grosu EF, Petrareanu C, **Nichita N** „Self-assemblies of plasmonic gold/layered double hydroxides with highly efficient antiviral effect against the hepatitis B virus.”, *Nano. Res.*, 8, 3512-3523 (2015)

16. Lazar C, Uta M, **Branza-Nichita N***. „Modulation of the unfolded protein response by the human hepatitis B virus”. *Frontiers Microbiology* 2014;5:433. doi: 10.3389/fmicb.2014.00433. eCollection (2014).

17. Rocha L, Paius C-M, Luca-Raicu A, Resmerita E, Rusu A, Moleavin I-A, Hamel M, **Branza-Nichita N***, Hurduc N. “Azobenzene based polymers as photoactive supports and micellar structures for applications in biology.”, *J.Photochem.Photobiol.*, 291, 16-25 (2014)

18. Hurduc N, Donose BC, Macovei A, Paius C, Ibanescu C, Scutaru D, Hamel M, **Branza-Nichita N***, Rocha L. „Direct observation of athermal photofluidisation in azo-polymer films.”, *Soft Matter.*, 10(26), 4640-4647 (2014)

19. Rowe IA, Galsinh SK, Wilson GK, Parker R, Durant S, Lazar C, **Branza-Nichita N**, Bicknell R, Adams DH, Balfe P, McKeating JA. “Paracrine signals from liver sinusoidal endothelium regulate hepatitis C virus replication”, *Hepatology*, 59 (2): 375-384 (2014)

20. Petrareanu C, Macovei A, Sokolowska I, Woods AG, Lazar C, Radu GL, Darie CC and **Branza-Nichita N***. „Comparative Proteomics Reveals Novel Components at the Plasma Membrane of

47. **N.Branza-Nichita**, G. Negroiu, A.J. Petrescu, E. Garman, F.M. Platt, M.R. Wormald, R.A.Dwek, S.M. Petrescu, "Mutations at Critical N-Glycosylation Sites Reduce Tyrosinase Activity by Altering Folding and Quality Control", *J. Biol. Chem.*, 275, 8169 (2000).
48. Petrescu S.M., **N.Branza-Nichita**, Negroiu G., Petrescu A.J., Dwek R.A., "Tyrosinase and Glycoprotein Folding: Roles of Chaperones That Recognize Glycans", *Biochemistry*, 39, 5229-5237 (2000).
49. **N.Branza-Nichita**, A.J. Petrescu, R.A.Dwek, M.R. Wormald, F.M. Platt, S.M. Petrescu, "Tyrosinase Folding and Copper Loading in vivo: "A crucial Role for Calnexin and α -Glucosidase II", *Biochem. Biophys. Res. Commun.*, 261, 720 (1999).
50. Sallmann F., S.B. Descamps, F. Pattus, V. Salmon, **N. Branza**, G. Spik, D. Legrand, "Porins OmpC and PhoE of Escherichia coli as Specific Cell-surface Targets of Human Lactoferrin", *J. Biol. Chem.*, 274, 16107 (1999).
51. Negroiu G., **N.Branza- Nichita**, A.J. Petrescu, R.A. Dwek, S.M. Petrescu, "Protein specific N-glycosylation of tyrosinase and TRP-1 in B16 F1 mouse melanoma cells", *Biochemical J.*, 344, 659 (1999).
52. Negroiu G., **N.Branza- Nichita**, G.E. Costin, H. Titu, A.J. Petrescu, R.A.Dwek, S.M. Petrescu, "Investigation of the intracellular transport of tyrosinase and Tyrosinase Related Protein (TRP-1).The effect of the ER- glucosidases inhibition", *Cell. Mol. Biol.*, 45, 7 (1999).
53. Petrescu S, **N. Branza-Nichita**, M.N. Lazar, A.J. Petrescu, C. Motas, "Immunoaffinity Chromatography on Antibodies Immobilized on Nitrocellulose Powder", *Anal. Biochem.*, 229, 299 (1995).

c) International Grants as project director

- 2019-2024 **EEA Research Programme**: "Next Generation Viral Hepatitis B and C vaccine development in plants and algae using advanced biotechnological tools" (SmartVac). **Eur 1.500.000**
- 2014-2017 **EEA Research Programme**: "Development of a cost effective Romania-Norway joint plant-based technology platform for production of vaccines against Human Hepatitis viruses B (HBV) and C (HCV)" (GreenVac). **Eur 1.121.000,00**
- 2004-2007 **Collaborative Research Initiative Grant, Wellcome Trust**: "Mechanism of antiviral activity of iminosugar derivatives against Hepatitis B virus". **£ 94.750**
- 2001-2004 **International Research Development Award, Wellcome Trust**: "Effect of α -glucosidase inhibitors on the morphogenesis of enveloped viruses". **£ 85.560**
- 2010-2011 **United Therapeutics Grant**: "Development of liposome-incorporated iminosugars, as antivirals against HBV", **£ 10.000**
- 2004-2005 **United Therapeutics Grant**: "Screening of antiviral drugs using BVDV as a model for HCV", **£ 10.000**

20.02.2024

