

# Nicholas J. Bradshaw

**Puno ime:** Doc. dr. sc. Nicholas James Bradshaw  
**Datum rođenja:** 5. listopada 1983. **Državljanstvo:** Britansko  
**Organizacija:** Odjel za biotehnologiju, Sveučilište u Rijeci, Hrvatska  
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**Jezici:** Engleski (*izvorni govornik*), njemački (*napredni*), hrvatski (*osnovni*), francuski (*osnovni*)  
**Obiteljski:** Oženjen s dvoje djece (rođeni 2008. i 2011. godine)

## Akademski poslovi

- 2017.- **Docent**  
*Odjel za biotehnologiju, Sveučilište u Rijeci, Hrvatska*
- 2014.-2017. **Postdoktorand („Wissenschaftlicher Mitarbeiter“)**  
Laboratorij prof. Carstena Kortha  
*Odjel za neuropatologiju, Sveučilište „Heinrich Heine“ u Düsseldorfu, Njemačka*
- 2011.-2014. **Znanstveni suradnik Zaklade „Alexander von Humboldt“**  
**(„Forschungstipendiat der Alexander von Humboldt-Stiftung“)**  
Laboratorij prof. Carstena Kortha  
*Odjel za neuropatologiju, Sveučilište „Heinrich Heine“ u Düsseldorfu, Njemačka*
- 2009.-2011. **Postdoktorand („Postdoctoral Research Associate“)**  
*Centar za prevođenje i kemijsku biologiju i Institut za genomiku i molekularnu medicinu, Sveučilište u Edinburghu, Velika Britanija*  
Laboratoriji prof. Porteousa, prof. Walkinshawa i prof. Barlowa
- 2008.-2009. **Asistent („Research Associate“)**  
Laboratorij dr. Kirsty Millara i prof. Davida Porteousa  
*Institut za genomiku i molekularnu medicinu, Sveučilište u Edinburghu, Velika Britanija*

## Industrijski poslovi

- 2017.- **Ravnatelj („Geschäftsführer“)**  
**Osnivački partner („Gründungsgesellschafter“)**  
*EdRiDus Biomedical GmbH, Düsseldorf, Njemačka*

## Obrazovanje

- 2005.-2009.     **PhD**, Sveučilište u Edinburghu, *Velika Britanija*  
“NDE1 in the DISC1 pathway: Interactions of schizophrenia-related proteins”  
Mentori: dr. J. Kirsty Millar i prof. David J. Porteous
- 2002.-2005.     **BSc (Hons)**, Sveučilište u Durhumu, *Velika Britanija*  
Prirodne znanosti (biologija s fizikom)

## Publikacije

- NJ Bradshaw**, SV Trossbach, S Köber, I Prikulis, i C Korth  
„DISC1 regulates the processing of reelin in the perinatal cortex: Convergence of mental illness and neurodevelopmental proteins“ *Schizophrenia Research* Prihvaćeno za objavljivanje: doi:10.1016/j.schres.2017.04.012
- ASK Yerabham, A Müller-Schiffmann, T Ziehm, A Stadler, S Köber, X Indurkya, R Marreiros, SV Trossbach, **NJ Bradshaw**, I Prikulis, D Willbold, OH Weiergräber i C Korth  
„Biophysical insights from a single chain antibody directed against the disrupted in schizophrenia 1 protein“, *PLOS One* (2018) **13** (1) e0191162
- NS Gowert, I Krüger, M Klier, L Donner, F Kipkeew, M Gliem, **NJ Bradshaw**, D Lutz, S Köber, H Langer, S Jander, K Jurk, M Frotscher, C Korth, HH Bock, i M Elvers  
„Loss of reelin protects mice against arterial thrombosis by impairing integrin activation and thrombus formation under high shear conditions“ *Cellular Signalling* (2017) **40** 210-221
- NJ Bradshaw**, L Ukkola-Vuoti, M Pankokoski, AB Zheutlin, A Ortega-Alonso, M Torniaainen-Holm, V Sinha, S Therman, T Paunio, J Suvisaari, J Lönnqvist, TD Cannon, J Haukka i W Henna  
„The *NDE1* genomic locus affects treatment of psychiatric illness through gene expression changes related to microRNA-484“ *Open Biology* (2017) **7** 170153
- NJ Bradshaw**  
„The interaction of schizophrenia-related proteins DISC1 and NDEL1, in light of the newly identified domain structure of DISC1“ *Communicative and Integrative Biology* (2017) **9** (4) e1335375
- NJ Bradshaw**, ASK Yerabham, R Marreiros, T Zhang, L Nagel-Steger i C Korth  
„An unpredicted aggregation-critical region of the actin-polymerizing protein TRIOBP-1/Tara, determined by elucidation of its domain structure“ *Journal of Biological Chemistry* (2017) **292** (23) 9583-9598
- ASK Yerabham, PJ Mas, C Decker, DC Soares, OH Weiergräber, L Nagel-Steger, D Willbold, DJ Hart, **NJ Bradshaw** i C Korth  
„A structural organization for Disrupted in Schizophrenia 1, identified by high throughput screening, reveals distinctly folded regions which are bisected by mental illness-related mutations“ *Journal of Biological Chemistry* (2017) **292** (16) 6468-6477

**NJ Bradshaw** i MAF Hayashi

„NDE1 and NDEL1 from genes to (mal)functions: Parallel but distinct roles impacting on neurodevelopmental disorders and psychiatric illness“ *Cellular and Molecular Life Sciences* (2017) **74** (7) 1191-1210

**NJ Bradshaw**

„Cloning of the promoter of *NDE1*, a gene implicated in psychiatric and neurodevelopmental disorders through copy number variation“ *Neuroscience* (2016) **324** 262-270

**NJ Bradshaw**, V Bader, I Prikulis, A Lueking, S Müllner i C Korth

„Aggregation of the protein TRIOBP-1 and its potential relevance to schizophrenia“ *PLOS One* (2014) **9** (10) e111196

ASK Yerabham, OH Weiergräber, **NJ Bradshaw** i C Korth

„Revisiting Disrupted in Schizophrenia 1 as a scaffold protein“ *Biological Chemistry* (2013) **394** (11) 1425-1437

**NJ Bradshaw**, W Henna i DC Soares

„NDE1 and NDEL1: Twin neurodevelopmental proteins with similar "nature" but different "nurture"“ *Biomolecular Concepts* (2013) **4** (5) 447-464

V Bader, L Tomppo, SV Trossbach, **NJ Bradshaw**, I Prikulis, SR Leliveld, C-Y Lin, K Ishizuka, A Sawa, A Ramos, I Rosa, Á García, JR Requena, M Hipolito, N Rai, E Nwulia, U Henning, S Ferrea, C Luckhaus, J Ekelund, J Veijola, M-R Järvelin, W Henna i C Korth

„Proteomic, genomic and translational approaches identify CRMP1 for a role in schizophrenia and its underlying traits“ *Human Molecular Genetics* (2012) **21** (29) 4406-4418

JE Eykelenboom, GJ Briggs, **NJ Bradshaw**, DC Soares, F Ogawa, S Christie, ELV Malavasi, P Makedonopoulou, S Mackie, MP Malloy, MA Wear, EA Blackburn, J Bramham, AM McIntosh, DH Blackwood, WJ Muir, DJ Porteous i JK Millar

„A t(1;11) translocation linked to schizophrenia and affective disorders gives rise to aberrant chimeric *DISC1* transcripts that encode structurally altered, deleterious mitochondrial proteins“ *Human Molecular Genetics* (2012) **21** (15) 3374-3386

**NJ Bradshaw** i DJ Porteous

„*DISC1*-binding proteins in neural development, signalling and schizophrenia“ *Neuropharmacology* (2012) **62** (3) 1230-1241

DC Soares, **NJ Bradshaw**, J Zou, CK Kennaway, RS Hamilton, ZA Chen, MA Wear, EA Blackburn, J Bramham, B Böttcher, JK Millar, PN Barlow, MD Walkinshaw, J Rappsilber i DJ Porteous

„The mitosis and neurodevelopment proteins NDE1 and NDEL1 form dimers, tetramers and polymers with a folded-back structure in solution“ *Journal of Biological Chemistry* (2012) **287** (39) 32381-32393

**NJ Bradshaw**, DC Soares, BC Carlyle, F Ogawa, H Davidson-Smith, S Christie, S Mackie, PA Thomson, DJ Porteous i JK Millar

„PKA phosphorylation of NDE1 is *DISC1*/*PDE4*-dependent and modulates its interaction with *LIS1* and *NDEL1*“ *Journal of Neuroscience* (2011) **31** (24) 9043-9054

DC Soares, BC Carlyle, **NJ Bradshaw** i DJ Porteous

„DISC1: structure, function and therapeutic potential for major mental illness“ *ACS Chemical Neuroscience* (2011) **2** (11) 609-632

DJ Obbard, FM Jiggins, **NJ Bradshaw** i TJ Little

„Recent and recurrent selective sweeps of the antiviral RNAi gene *Argonaute-2* in three species of *Drosophila*“, *Molecular Biology and Evolution* (2011) **28** (2) 1043-1056

**NJ Bradshaw**, S Christie, DC Soares, BC Carlyle, DJ Porteous i JK Millar

„NDE1 and NDEL1: Multimerisation, alternate splicing and DISC1 interaction“, *Neuroscience Letters* (2009) **449** (3) 228-233

**NJ Bradshaw**, F Ogawa, B Antolin-Fontes, JE Chubb, BC Carlyle, S Christie, A Claessens, DJ Porteous i JK Millar

„DISC1, PDE4B and NDE1 at the centrosome and synapse“, *Biochemical and Biophysical Research Communications* (2008) **377** (4) 1091-1096.

JE Chubb, **NJ Bradshaw**, DC Soares, DJ Porteous i JK Millar

„The *DISC* locus in psychiatric illness“, *Molecular Psychiatry* (2008) **13** (1) 36-64.

## **Projekti, stipendije i nagrade**

2017.           **Zaklada „Alexander von Humboldt“**  
*Subvencija opreme (Vrijednost cca. 150.000 kn)*
- 2014.-2017.   **Zaklada „Fritz Thyssen“**  
*Projekt (Vrijednost cca. 1.100.000 kn)*  
„Function and aggregation of TRIOBP in schizophrenia“
- 2014.-2015.   **BioStruct-X**  
*Pristup objektima i nagrada za putovanje, financira EU-FP7*  
„Expression of soluble Disrupted in Schizophrenia 1 (DISC1) sub-regions for crystallization screening“
- 2013.-2015.   **Istraživačko povjerenstvo Medicinskog fakulteta Sveučilišta „Heinrich Heine“ u Düsseldorfu**  
*Projekt (Vrijednost cca. 550.000 kn)*  
„The *NDE1* locus in psychiatric illness and neurodevelopment“
- 2011.-2014.   **Zaklada „Alexander von Humboldt“**  
*Postdoktorsko zajedništvo (Vrijednost cca. 800.000 kn)*  
„DISC1 and reelin: Linking molecular pathways involved in schizophrenia“
2008.           **Međunarodni studentski kongres medicinskih znanosti**  
*Nagrada: Najbolji oralni nastup tijekom prezentacije na godišnjem sastanku*
2007.           **Sveučilište u Edinburghu, Neuroznanost**

*Nagrada: Najbolji studentski poster na „Dan neuroznanosti“*

2005.-2008. **Savjet za medicinsko istraživanje („MRC“, Velika Britanija)**  
*Doktorsko zajedništvo (Vrijednost cca. 400.000 kn)*

## **Akadske prezentacije**

*IV. Kongres Psihijata Bosne i Hercegovine, Banja Luka, Bosna i Hercegovina*

**Predavanje:** „Aggregation of specific proteins as a biological component of chronic mental illness“

*VI. Hrvatski kongres neuroznanosti, Osijek, Hrvatska  
& SiNAPSA kongres neuroznanosti '17, Ljubljana, Slovenija*

**Poster:** „TRIOBP-1 aggregation and major mental illness“

*FENS forum 2016, Kopenhagen, Danska*

**Poster:** „Aggregation of TRIOBP-1 and schizophrenia: Identification of a distinct aggregation domain“

*Društvo za neuroznanost 2015, Chicago, IL, SAD*

**Poster:** „Domain analysis of TRIOBP-1 implies a common basis underlying its actin polymerization activity and its aggregation in schizophrenia“

*V. Hrvatski kongres neuroznanosti, Split, Hrvatska*

**Predavanje:** „Aggregation of the protein TRIOBP-1 and schizophrenia“

*Društvo za neuroznanost 2013, San Diego, CA, SAD*

**Poster:** “TRIOBP as a NDE1-interaction partner which may form insoluble aggregates in schizophrenia”

*Shizofrenija međunarodno istraživačko društvo 2012, Firenca, Italija*

**Predavanje:** „Structural analyses of DISC1 pathway proteins“

*DISC1 2010, Edinburgh, Velika Britanija*

**Predavanje:** „NDE1 and PKA: Signalling within the DISC1 protein complex“

*Molekularni temelji shizofrenije i bipolarnog poremećaja 2009, Keystone, CO, SAD*

**Poster:** „PKA phosphorylation of NDE1: Links between DISC1-interacting proteins“

*Međunarodni studentski kongres medicinskih znanosti 2008, Groningen, Nizozemska*

**Predavanje:** „NDE1 and DISC1: A link between schizophrenia-related genes“

*Društvo za neuroznanost 2007, San Diego, CA, SAD*

**Poster:** „NDE1 interacts with DISC1: A link between two schizophrenia-related genes“

*Britansko udruženje neuroznanosti 2007, Harrogate, Velika Britanija*

**Poster:** „Disrupted-In-Schizophrenia 1 (DISC1) and Protein Kinase A signalling“

## Akadske odgovornosti

### *Mentorstva:*

- Aristea Pavešić Radonja (Doktorat, komentor: 2018.-sada)  
*Naslov koji treba odrediti*
- Antony S. K. Yerabham (Doktorat, komentor: 2012.-2017.)  
„Investigations on the structural organization of the Disrupted-in Schizophrenia 1 (DISC1) protein, a major risk factor for mental illness”
- Ines Gvoić (Magisterij: 2018.)  
„Interakcije proteina koji tvore agregate u mentalnim bolestima“
- Maja Odorčić (Magisterij: 2018.)  
„Identifikacija domena proteina koji uzrokuju agregaciju kod mentalnih bolesti“
- Beti Zaharija (Magisterij: 2018.)  
„Struktura domene DISC1 (Disrupted in Schizophrenia 1) u stanicama sisavaca“

### *Predavanje i podučavanje*

- Nositelj predmeta:** Preddiplomski program „Biologija duševne bolesti“ (2017.-)
- Nositelj predmeta:** Preddiplomski program „Uvod u neuroznanost“ (2017.-)
- Suradnik:** Diplomski program „Uvod u istraživački rad“ (2017.-)
- Suradnik:** Diplomski program „Metode istraživanja proteina“ (2017.-)
- Suradnik:** Preddiplomski program „Mikrobiologija“ (2017.-)
- Suradnik:** Doktorski program „iBrain“ (2016.-2017.)
- Suradnik:** Diplomski program „Biomedicina“ (2013.-2017.)

### *Povjerenstvo za obranu doktorske disertacije*

Ana Filošević (Doktorat: 2018)

### *Reviewer za znanstvene časopise*

British Journal of Pharmacology	Cell & Molecular Life Science
Cell Communication & Signaling	Current Proteomics
Expert Opinions on Therapeutic Targets	Gene
Journal of Neurophysiology	Life Sciences
Molecular Psychiatry	Neurochemistry International
Neuronal Regeneration Research	Neuropharmacology
Neuroscience	PLOS One
Progress in Neuro-Psychopharmacology & Biological Psychiatry	Schizophrenia Research
Psychiatric Genetics	

## Online informacije

[www.researchgate.net/profile/Nicholas\\_Bradshaw](http://www.researchgate.net/profile/Nicholas_Bradshaw)  
[www.scopus.com/authid/detail.url?authorId=7003314018](http://www.scopus.com/authid/detail.url?authorId=7003314018)  
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[scholar.google.hr/citations?user=U0EQKqwAAAAJ&hl=hr](https://scholar.google.hr/citations?user=U0EQKqwAAAAJ&hl=hr)  
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[beta.bib.irb.hr/pregled/znanstvenici/362651](http://beta.bib.irb.hr/pregled/znanstvenici/362651)