

Curriculum Vitae

Benjamín Ragnar Sveinbjörnsson

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Date of birth September 24th, 1987 (national ID# 240987-6009)
Citizenship Icelandic
Home address Árkvörn 2, 110 Reykjavík, Iceland
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Education

- **Postgraduate Diploma, *Teaching Studies for Higher Education***, June 2022
University of Iceland
- **Ph.D., *Chemistry***, June 2014
California Institute of Technology
Thesis: Self-Assembly of Brush Polymers
Thesis advisor: Prof. Robert H. Grubbs
- **B.Sc., *Chemistry***, June 2009
University of Iceland
Undergraduate thesis: Total synthesis of structured ether lipids with omega-3 polyunsaturated fatty acids in an end position.
Thesis advisor: Prof. Guðmundur G. Haraldsson

Professional Career

- ***Assistant Professor of Organic Chemistry*, Jul 2017 – present**
University of Iceland, School of Engineering and Natural Sciences, Faculty of Physical Sciences.
- ***CEO and Project Manager*, Jan 2017 – present**
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Focusing on methods to increase the thermostability of biopharmaceuticals
- ***Visiting Assistant Professor of Chemistry*, Jul 2016 – Jun 2017**
Pomona College
- ***Robbins Postdoctoral Fellow*, Aug 2014 – Jun 2016**
Pomona College
Advisor: Prof. Cynthia D. Selassie
Taught and worked on the synthesis of anti-malarial drug targets for quantitative structure-activity relationship (QSAR) studies of dihydrofolate reductase (DHFR) inhibition of malarial parasites.

- *Graduate Research Assistant, Nov 2009 – Jun 2014*
California Institute of Technology
Advisor: Prof. Robert H. Grubbs
Worked on the synthesis and self-assembly of brush polymers.
- *Summer Undergraduate Research Fellowship, Summer 2008*
California Institute of Technology
Mentor: Prof. Robert H. Grubbs; Co-mentor: Dr. Ian C. Stewart
Worked on a catalyst for anti-Markovnikov olefin hydrogenation
- *Research Assistant, Summer 2007*
University of Iceland – Faculty of Pharmaceutical Science
Mentor: Prof. Sveinbjörn Gizurarson
Worked on analysis of mass spectrometry data

Teaching experience

Courses taught

- Organic Chemistry for medical students – EFN103G – Uni. of Iceland, **2017-present**
- Organic Chemistry 1 – EFN309G – Uni. of Iceland, **2018-present**
- Organic Chemistry 4 – EFN608M – Uni of Iceland, (taught a third of the course) **2019**
- Organic Chemistry (2nd semester) – CHEM 110B – Pomona College, **2015-17**
- General Chemistry (2nd semester) – CHEM 1B – Pomona College, **2017**
- Organic Chemistry (1st semester) – CHEM 110A – Pomona College, **2015-16**
- Organic Chemistry Lab (1st semester) – CHEM 110AL – Pomona College, **2014, 2016**
- Physical Organic Chemistry – CHEM 176 – Pomona College, **2016**
- General Chemistry Lab (2nd semester) – CHEM 1BL – Pomona College, **2016**

Courses organized

- Organic Chemistry Lab 1 & 1a – EFN310G & EFN313G – Uni. of Iceland, **2017, 2019-present**
- Chemistry/Biochemistry Seminar Series – EFN011F & EFN012F – Uni. of Iceland, **2018-2020**

Guest lecturer

- Laboratory Safety – LYF110G & LYF125G – Uni. of Iceland, **2017-2020**
- Pharmaceutical Analysis – LYF403G – Uni. of Iceland **2019-2020**
- Training of the Icelandic Chemistry Olympiad team – **summers 2018-2019**

Teaching Assistant

- Oral Presentation – Chem 90 – Caltech, **2013-14**
- Advanced Techniques of Synthesis and Analysis – Chem5a – Caltech, **2010-13**
- Experimental Procedures of Synthetic Chemistry – Chem 3b – Caltech, **2009-10**
- Organic Chemistry (1st quarter) – Chem 41a – Caltech, **2012**

Tutoring

- Independent – Tutoring general chemistry for a group of students at the University of Iceland from the faculty of food science and nutrition. **2008**

Student Advising Experience

- *Ph.D. students* – Uni. of Iceland – Graduated: 1; Currently advising: 2
- *M.Sc. students* – Uni. of Iceland – Graduated: 2
- *B.Sc. students* – Uni. of Iceland – Graduated: 3; Currently advising: 2
- *B.Sc. students co-advised* – Caltech – Graduated: 2

Opponent in Ph.D. defenses

- Ph.D. thesis by Margarida Costa: *Exploring marine sponges and their associated microorganisms as a source of natural compounds*. Faculty of Pharmaceutical Sciences, School of Health Sciences, University of Iceland, **December 2018**

Peer-reviewed publications

[Google scholar](#): Citations: 674, h-index: 7

[ISI](#): Citations: 501, h-index: 5

1. Ghasemisarabadih, M.; Sigurdsson, S.J.; Dong, V.N.; Gizurarson, S.; Sveinbjornsson, B.R. The stability effect of D-(+)-glucosamine, N-acetyl-D-glucosamine and Tetraethylene Glycol on Oxytocin in Aqueous Solution. *Pharmazie*, **2021**, 76, 480-483. (<https://doi.org/10.1691/ph.2021.1081>)
2. Ghasemisarabadih, M.; Gizurarson, S.; Sveinbjornsson, B.R. The Effect of Trehalose, Antioxidants, and Acetate Buffer Concentration on Oxytocin Stability. *J. Pept. Sci.* **2021**;e3324. (<https://doi.org/10.1002/psc.3324>)
3. Ghasemisarabadih, M.; Gizurarson, S.; Sveinbjornsson, B.R. The effect of 18-crown-6 on oxytocin stability in aqueous buffer solutions. *ACS Omega*. **2021**, 6, 5805-5811. (<https://doi.org/10.1021/acsomega.0c06248>)
4. Sveinbjornsson, B.R. What is in a prerequisite? An Observational Study on the Effect of General Chemistry on Organic Chemistry Performance. *J. Chem. Ed.* **2021**, 98, 368-373. (<https://doi.org/10.1021/acs.jchemed.0c01065>)
5. Sveinbjornsson, B. R.; Miyake, G. M.; El-Batta, A.; Grubbs, R. H. Stereocomplex Formation of Densely Grafted Brush Polymers. *ACS Macro Letters*, **2014**, 3, 26-29. (<https://doi.org/10.1021/mz400568j>)
6. Hong, S. W.; Gu, W.; Huh, J.; Sveinbjornsson, B. R.; Jeong, G.; Grubbs, R. H.; Russell, T. P.; On the Self-Assembly of Brush Block Copolymers in Thin Films. *ACS Nano*, **2013**, 7, 9684-9692 (<https://doi.org/10.1021/nn402639g>)
7. Fang, L.; Liu, P.; Sveinbjornsson, B. R.; Atahan-Evrenk, S.; Vandewal, K.; Osuna, S.; Jiménez-Osés, G.; Shrestha, S.; Giri, G.; Wei, P.; Salleo, A.; Aspuru-Guzik, A.; Grubbs, R. H.; Houk, K. N.; Bao, Z. Confined organization of fullerene units along high polymer chains. *J. Mater. Chem. C*. **2013**, 1, 5747-5755. (<https://doi.org/10.1039/C3TC31158A>)
8. Gu, W.; Huh, J.; Hong, S. W.; Sveinbjornsson, B.R.; Park, C.; Grubbs, R. H.; Russell, T.P. Self-Assembly of Symmetric Brush Diblock Copolymers. *ACS Nano*, **2013**, 7, 2551-2558. (<https://doi.org/10.1021/nn305867d>)
9. Sveinbjörnsson, B.R.; Weitekamp, R. A.; Miyake, G. M.; Xia, Y.; Atwater, H. A.; Grubbs, R. H. Rapid self-assembly of brush block copolymers to photonic crystals. *Proc. Natl. Acad. Sci. USA*, **2012**, 109, 14332-14336. (<https://doi.org/10.1073/pnas.1213055109>)

Papers in the pipeline

- Mhango, E.K.G.; Sveinbjornsson, B.R.; Snorraddottir, B.S.; Gizurarson, S. Incompatibility of antimalarial drugs. Challenges in formulating combination products for malaria. *Submitted*
- Möller, W.T.; Hreinsdottir, S.D.; Sveinbjornsson, B.R., Regioselectivity effect of *meta*- and *para*- substituents on the Claisen rearrangement of allyl aryl ethers. *In preparation*
- Ghasemisarabadi, M.; Gizurarson, S.; Sveinbjornsson, B.R. Effect of buffer choice and sugars on the stability of fibroblast growth factor 2 (FGF2) in aqueous solutions. *In preparation*

Books

1. Sveinbjornsson, B.R.; Gizurarson, S.; *Handbook of Laboratory Safety*, 2022, 1st Ed. Elsevier. ISBN: 978-0-323-99320-3.

Patents

1. Gizurarson, S.; Kalesi Gondwe Mhango, E.; Sveinbjornsson, B.R. Preventing Incompatibility Among Malarial Drugs, 2020, Publication number: WO/2020/225832, International Application No. PCT/IS2020/050014
2. Xia, Y.; Sveinbjornsson, B.R.; Weitekamp, R.; Miyake, G.M.; Piunova, V.; Daeffler, C.S.; Atwater, H.A.; Grubbs, R.H. Rapid Self-Assembly of Block Copolymers to Photonic Crystals. US Patent, 2012, 13/800,646.
3. Xia, Y.; Sveinbjornsson, B.R.; Weitekamp, R.; Miyake, G.M.; Piunova, V.; Daeffler, C.S.; Grubbs, R.H. Periodic Nanostructures From Self-Assembled Wedge-Type Block Copolymers. US Patent, 2012, 13/801,710.

Publications for the public

- [Hvernig er plast endurinnið?](#) An answer for the Icelandic Web of Science (Vísindavefurinn), **Jan 2021**.
- [Eyðist plast í sjónum eða mun það verða þar um alla eilífð?](#) An answer for the Icelandic Web of Science (Vísindavefurinn), **Jan 2021**.
- Gizurarson, S.; Sveinbjornsson, B.R. Augnskaði, *Á vakt fyrir Ísland (Journal of the Icelandic national association of firefighters and EMTs)* 2020, 47, 6.

Oral Presentations

1. *Tilraunir með heima- og staðpróf undanfarin ár*, (English: *Experiments with home and on-site exams in recent years*), a presentation at the 1st symposium of the Teaching Academy of Public Universities in Iceland, **May 23rd, 2022**.
2. *Það er leikur að læra*, (English: *Learning is a game*), a teaching seminar at the School of Engineering and Natural Sciences at the University of Iceland, **March 28th, 2022**.
3. *Vísindagreinaverkefni til að vekja nemendaáhuga*, (English: *A scientific article based project to induce student interest*), a presentation at [Menntakvika HÍ](#), **October 15th, 2021**.
4. *The effect of 18-crown-6 on oxytocin stability in aqueous buffer solutions*, 20th Biomedical and Health Sciences Conference at the University of Iceland. **June 3rd, 2021**.

5. *Kahoot keppnir í kennslu: Fyrir nemendavirkjun og eftirfylgni með námsframvindu. Fjarmenntabúðir* at the University of Iceland, **May 20th, 2021.**
6. *Fjölliðuefnafræði: Ljóseindakristallar og endurvinnsla plasts*, Chemistry research – a chemistry symposium for high school teachers at Endurmenntun HÍ, **June 5th, 2020.**
7. *Polymer architectures and applications*, at a Scientific Workshop held by COST Action CA16227. Università di Torino, Turin, Italy, **7. febrúar 2018.**
8. *Brush polymers: synthesis and self-assembly* at a Scientific Workshop held by COST Action CA16217. Porto, Portugal, **2. febrúar 2018.**
9. *Polymer architectures: Recent advances and future adventures*, Chemistry-biochemistry seminar series at the University of Iceland. **January 26th, 2018.**

Posters co-authored

1. Ghasemisarabadih, M.; Gizurarson, S.; Sveinbjornsson, B.R. (2019) The Stability of Oxytocin in Aqueous Solutions with Glucosamine and Tetraethyleneglycol. *International Research Conference on Protein Stability and Interactions.*
2. Ghasemisarabadih, M.; Gizurarson, S.; Sveinbjornsson, B.R. (2019) The Protection of Oxytocin from Degradation in Aqueous Solutions using Glucosamine and Tetraethyleneglycol. *19th Biomedical and Health Sciences Conference at the University of Iceland.*
3. Jeong, G.; Sveinbjornsson, B.R.; Grubbs, R.H.; Russell, T.P. (2015) Thin Films of Bottlebrush Block Copolymers with Homopolymer. *APS March Meeting 2015.*
4. Jeong, G.; Russell, T.P.; Sveinbjornsson, B.R.; Grubbs, R.H.; (2014) In Situ X ray scattering for investigating morphology of bottle brush BCP with Solvent annealing. *APS March Meeting 2014.*
5. Gu, W.; Sveinbjornsson, B.R.; Hong, S.W.; Grubbs, R.H.; Russell, T.P. (2012) Self-Assembly of Narrowly Dispersed Brush Diblock Copolymers with Domain Spacing more than 100nm. *APS March Meeting 2012.*

Research Funding (Principal Investigator)

- *The Icelandic Research Fund*, Project Grant, “Brush polymers with cyclic and/or divalent side chains” (49.5 million ISK or ≈ 400 thousand USD), **2021-2023.**
- *The Research Fund of University of Iceland*, “Brush polymers with cyclic and/or divalent side chains” (1.2 million ISK), **2021-2023.**
- *The Research Fund of University of Iceland*, “Tuneable Hydrogels for Small Molecule Drug Delivery” (2.1 million ISK) **2018-2020**
- *The Student Innovation Fund*, “Development of a chemical sorting of mixed plastic waste for recycling”, 2 students, (900 thousands ISK), **summer 2020.**
- *The Student Innovation Fund*, “Brush polymers with cyclic side chains”, 2 students, (1800 thousands ISK), **summer 2019.**

Leadership experience

- Chairman of the board of the *Icelandic Chemical Society (Efnafræðifélag Íslands)*, **2021 – present**
- A member of the *Equality committee for the School of Engineering and Natural Sciences*, University of Iceland, **2021 – present**
- A member of the *Safety group for the Institute of Physical Sciences / Faculty of Physical Sciences*, School of Engineering and Natural Sciences, **2018 – present**

- A member of the board of *Kristilega skólahreyfingin*, **2017 – present**
 - Chairman of the board 2018-20
- A member of the board of *Sumarbúðir KFUM og KFUK – Kaldárseli*, **2017 – 2020**
- A member of the board of *Friends of Rural Development*, **2018 – 2019**
- President of the *Caltech Toastmasters Club*, **2013 – 2014**
- President of *EXPLiCIT*, the student theater club at Caltech, **2012-13**.
 - Co-produced 3 full-stage plays during that time.
- A co-founder and board member of *Gladius*, a student organization organizing forums and seminars relating to aspects of Christianity from an academic perspective. **2007-09**
- A board member of *Kristileg skólasamtök (KSS)*, **2004-07**
 - Chairman of the board 2006-07.

Organizer of conferences and symposiums

- A member of the *Eurobic Conference Office*, organizing the Eurobic 2020 conference, which had to be turned into an online webinar series because of COVID-19. **2020**.
- Coordinated the symposium *Rannsóknir í efnafræði*, which was a chemistry symposium held by *Félag raungreinakennara* in collaboration with Endurmenntun HÍ. **June 2020**.

Other work experience

- *Camp counselor, Summers 2002-2007, 2009*
In the summer camps Vatnaskógur and Kaldársel
- *Youth leader, 2007-2009*
Youth leader in various youth groups and Sunday school for the Evangelical Lutheran Church of Iceland
- *Janitor, 2005-2008*
KFUM og KFUK á Íslandi

Awards and accomplishments

- *University of Iceland Science and Innovation Prize, 2022*. Member of the team that won the “Motivational” category with the project “Plastic recycling based on solubility”. Other team members were Hreinn Kristjánsson, Sigurður Guðni Gunnarsson, and Sólrún Elín Freygarðsdóttir.
- *Teaching award – School of Engineering and Natural Sciences within the University of Iceland, 2021*. One of two recipients of this teaching award this year.
- *Founding member of The Teaching Academy of the Public Universities in Iceland, active 2021-present*.
- *University of Iceland Science and Innovation Prize, 2021*. Member of the team that won the “Health and wellbeing” category as well as the overall competition, with the project “Meðferð við heilahimnubólgu af völdum malaríu” (English – “Treatment of cerebral malaria”). Other team members were Sveinbjörn Gizurarson, Bergþóra S. Snorradóttir and Ellen K. G. Mhango)
- Bronze medal at the *International Chemistry Olympiad, 2006*, Gyongsan S-Korea
- Participated in the *International Mathematical Olympiad, 2005*, Mérida, Mexico
- Participated in the *Baltic Way Mathematical Team Competition, 2005*, Stockholm, Sweden

Interests

- Music
 - Elementary level in singing from Söngskóli Sigurðar Demetz, 2022.
 - Played violing with the Pomona College Orchestra, fall of 2016.
 - Advanced level in violin playing from Reykjavik Suzuki School of Music, 2009.
 - Played violin with the Icelandic Youth Symphony Orchestra, 2007-2008.
 - Played violin with the Icelandic Amateur Symphony Orchestra, 2007-2008.
- Theater
 - Acted in 7 full-stage productions, 1 musical and several playreadings at Caltech, 2011-2015. One of the favorite roles was playing Caliban in Shakespeare's *The Tempest*.
- Dance
 - Took lessons in West Coast Swing, Lindy Hop, Swing and Rock&Roll, and salsa dancing at *Háskóladansinn*, 2018-2019
 - Participated in *Dancing with the Claremont Stars* at Pomona College in 2015, a competition where students teamed up with teachers and/or staff to do a dance routine.