

Curriculum Vitae Kimberly M. Bonger

Updated September 2016

Personal details

Full Name: Dr. Kimberly Michelle Bonger
Date and place of birth: 02 November 1980 Toronto (Canada)
Nationality: Dutch
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ResearcherID: A-5900-2015
Children: 2: born: 22 June 2012 & 28 July 2016



Work & Education

Current position

Function: Assistant Professor (tenure track)
University: Radboud University, Nijmegen, The Netherlands
Date: January 2013 – current
Main subject: Chemical Biology

Postdoc

University: Stanford University, Stanford, USA
Date: April 2009 – December 2012
Main subject: Molecular Biology, Cell Biology
Supervisor: Prof. Dr. T.J. Wandless

Doctorate

University: Leiden University, Leiden, The Netherlands
Date: January 2004 – December 2008
Main subject: (Bio)Organic Chemistry and Medicinal Chemistry
Supervisors: Prof. Dr. H.S. Overkleeft and Prof. Dr. G.A. van der Marel
Dr. C. M. Timmers (NV Organon, Oss)
Title of thesis: Dimeric ligands for GPCRs involved in reproduction: Synthesis and biological evaluation

International research experience

University: University-College Stavanger, Norway
Date: September 2001 – November 2002
Main subject: Organic chemistry
Supervisor: Dr. E. Bakstad

Master's

University: Free University, Amsterdam, The Netherlands
Date: September 2000 – July 2002
Main subject: Organic chemistry
Supervisor: Prof. Dr. R.V.A. Orru

Bachelor's

College of Higher Education: Hogeschool Leiden, Leiden, The Netherlands
Date: September 1997 – July 2001
Main subject: Organic Chemistry

Teaching experience

Course development and lecturing:

- 2013-current: Lecturer Medicinal chemistry course for third year chemistry and molecular life science students at Radboud University Nijmegen (NWI-MOL053).
- 2013-current: lecturer of protein modification course for students of the Netherlands Research school of Chemical Biology (NWI-MOL411).
- 2013-current: Lecturer Chemical biology course for master students in chemistry and molecular life science students at Radboud University Nijmegen (NWI-MOL401).
- 2013-current: lecturer and development of a chemical biology practical course for second year students in Molecular Life Science at Radboud University Nijmegen (NWI-MOL049).
- 2013-current: Lecturer in Molecular Mechanisms of Novel Therapeutics (BM049B)
- October 2007 – December 2008: Development of a new organic chemistry practical course for first year students in Life Science & Technology and Bio-Pharmaceutical Sciences at Leiden University.
- January 2004 – December 2007: Lecturer at organic chemistry practical courses for first and second years chemistry students at Leiden University.

Supervision of Graduate students (sole PI)

December 2014 - current:	MSc. Lianne Lelieveldt; funded from Institute for Chemical Immunology (NWO)
August 2014 - current:	MSc. Fleur Kleipenning; funded from Marie Curie Career Integration Grant
May 2013 - current:	MSc. Selma Eising; funded from start-up package from Radboud University and the Netherlands Research School for Chemical Biology (NRSCB)
Other:	
January 2013 – current:	Supervision of 8 master internships and 15 bachelor internships

Institutional responsibilities

August 2015-current:	Member of the mentoring board of the Radboud Honours Academy at Radboud University
July 2015-current:	Member of the representative council of the Science Faculty Board at Radboud University
2014-current:	Member of the program committee of the Nanomedicine Radboud Research Rounds (organized 3x per year)
2014-current:	Member of the orientation committee for Molecular Science at the Radboud University
2013-current:	Member of the recruitment and communication committee for Molecular Science at Radboud University

Invited communications

O: oral presentation; P: poster presentation

- February 2016 (O): Utrecht University, Utrecht, The Netherlands
- June 2015 (O): NextGenChem, Leiden, The Netherlands
- March 2015 (O): ISAS, Dortmund, Germany
- December 2014 (O): NL-GB Chaperone Meeting, Amsterdam, The Netherlands
- November 2014 (O): NVBMB fall symposium, Groningen, The Netherlands

- October 2014 (O): NextGenChem, Eindhoven, The Netherlands
- November 2013 (P): New Frontiers symposium Nijmegen, Netherlands.
- October 2013 (O): Collaborative Research Center "Cellular Surveillance and damage response, Annweiler, Germany.
- January 2013 (O): NCMLS focus session, Nijmegen, The Netherlands.
- December 2011 (O): Leiden University, Leiden, The Netherlands.
- June 2011 (P): 2011 HFSP meeting, Montreal, Canada.
- September 2010 (O): Chemical and Systems Biology Meeting, Asilomar, USA.
- September 2010 (O): EMBL chemical biology 2010 meeting, Heidelberg, Germany
- June 2010 (O): Leiden-Gent Chemistry Symposium Gent, Belgium
- January 2009 (O): Honour lecture for NVFW (Dutch Society of Pharmaceutical Sciences) on behalf of best thesis prize, Lunteren, The Netherlands.
- August 2007 (O): International Symposium on Advances in Synthetic and Medicinal Chemistry (ASMC07), St Petersburg, Russia (subsidized by the Leiden university fund (LUF))
- October 2007 (O): National Medicinal Chemistry and FIGON Meeting, Lunteren, The Netherlands.
- July 2006 (O): 3rd International Conference on Multi-Component Reactions and Related Chemistry, Amsterdam, The Netherlands.
- January 2006 (O): NWO Combinatorial Chemistry Meeting, Utrecht, The Netherlands.
- October 2006 (P): National meeting on Design, Synthesis, Structure, Reactivity and Biomolecular Chemistry, Lunteren, The Netherlands.
- November 2005 (P): National Medicinal Chemistry and FIGON Meeting, Lunteren, The Netherlands.
- October 2004 (P): National meeting on Design, Synthesis, Structure, Reactivity and Biomolecular Chemistry, Lunteren, The Netherlands.

Organization of scientific meetings

- December 2016: member of study group committee for Chains2016 with ~ 1500 participants.
- May 2016: Co-organizer of the NextGenChem meeting in Nijmegen, the Netherlands with 50 participants.
- April 2016: Co-organizer of the international KNCV chemistry symposium in Wageningen, the Netherlands with 170 participants
- May 2015: Co-organizer of the Dutch peptide symposium in Nijmegen with 130 participants.
- April 2015: Co-organizer of the national KNCV chemistry symposium in Wageningen the Netherlands with 120 participants
- April 2014: Co-organizer of the national sIMMposium meeting in Nijmegen the Netherlands with 100 participants

Prices and awards

- May 2015: Radboud University Certificate for Academic Leadership
- October 2014: Institute for Chemical Immunology Grant (600 K€)
- January 2014: Marie Curie Career Integration Grant (100 K€)
- May 2011 – August 2012: Stanford Institute for Immunity, Transplantation and Infection Seed grant in collaboration with Dr. R. Rakhit, Stanford (25 K\$)
- January 2010 – December 2012: Human Frontiers Science Program (HFSP) cross disciplinary research fellowship
- April 2009 – December 2009: Dutch Science Organization (NWO) Rubicon research fellowship
- October 2009: Dutch Society of Pharmaceutical Sciences (NVFW) Best thesis prize

- October 2007: Best Communication award. National Medicinal Chemistry and FIGON Meeting, Lunteren, The Netherlands.
- August 2007: First Oral Communication award. International Symposium on Advances in Synthetic and Medicinal Chemistry (ASMC07), St Petersburg, Russia.
- July 2007: Travel Grant from Leiden University Fund

Memberships of Scientific Societies

2015-current: Member of the COST-CM1004 Research Network "Synthetic Probes for Chemical Proteomics and Elucidation of Biosynthetic Pathways"

2014-current: Partner in the Institute for Chemical Immunology

2014-current: Board Member of the Royal Dutch Chemical Society (KNCV) Section Organic Chemistry

2013-current: Board Member of the Dutch Science Organization (NWO) studygroup Biomolecular Chemistry

2013-current: Member of the Radboud Nanomedicine Alliance

2013-current: Member of Dutch Pharmacology Society

2013-current: Member of the Dutch Society for Biochemistry and Molecular Biology (NVBMB)

2013-current: Member of the Dutch Synthetic Organic Chemistry Society (KNCV-SOC)

Commissions of trust

- Reviewer of peer review journals *Current biology*, *Bioconjugate Chemistry*, *Journal of the American Chemical Society*
- Reviewer Editorial Board of *Frontiers in Chemical Biology*

Career brake

June-august 2012: Child birth
 July-october 2016: Child birth

Publications

* *Corresponding author*

Co-first authors

Selma Eising, Francis Lelivelt, **Kimberly M. Bonger***. Vinylboronic Acids as Fast Reacting, Synthetically Accessible, and Stable Bioorthogonal Reactants in the Carboni-Lindsey Reaction. *Angew. Chem. Int. Ed.* **2016**, 55, 12243.

Jessie A. van Buggenum, Jan P. Gerlach, Selma Eising, Lise Schoonen, Roderick A.P.M. Eijl, Sabine E.J. Tanis, Mark Hogeweg, Nina C. Hubner, Jan C. van Hest, **Kimberly M. Bonger**, Klaas W. Mulder. Direct and reversible antibody-DNA conjugates for sensitive, multiplexed protein detection in cells. *Sci. Rep.* **2016**, 6, 22675.

Richard J.B.H.N. van den Berg, Erwin R. van Rijssel, Anneke Strijland, Wilma E. Donker-Koopman, Tom Wennekes, **Kimberly M. Bonger**, Amar T. Ghisaidoobe, Sascha Hoogendoorn, Gijsbert A. van der Marel, Jeroen D. C. Codée, Herman S. Overkleeft and Johannes M. F. G. Aerts. Synthesis and

evaluation of hybrid structures composed of two glucosylceramide synthase inhibitors. *ChemMedChem* **2015**, *10*, 2042-2062.

Sean R. Collins, Hee W. Yang, **Kimberly M. Bonger**, Emmanuel G. Guignet, Thomas J. Wandless and Tobias Meyer. Using light to shape chemical gradients for parallel and automated analysis of chemotaxis. *Mol. Sys. Biol.* **2015**, *4*, 804.

Sanne M.M. Hensen, Wilbert C. Boelens, **Kimberly M. Bonger**, Remco T.P. van Cruchten, Floris L. van Delft and Ger J.M. Pruijn. Phenylglyoxal-Based Visualization of Citrullinated Proteins on Western Blots. *Molecules* **2015**, *20*, 6592-6600.

Kimberly M. Bonger*, Rishi Rakhit, Alexander Y. Payumo, James K. Chen, Thomas J. Wandless*. A general method for regulating protein stability by light. *ACS Chem. Biol.* **2014**, *9*, 111-115. Highlighted in *Chemical & Engineering News*, November 14th 2013.

Tom Wennekes#, **Kimberly M. Bonger#**, Katrin Vogel, Richard J.B.H.N. van den Berg, Anneke Strijland, Wilma E. Donker-Koopman, Johannes M.F.G. Aerts, Gijsbert A. van der Marel, Herman S. Overkleeft. The Development of an Aza-C-Glycoside Library Based on a Tandem Staudinger/Aza-Wittig/Ugi Three-Component Reaction. *Eur. J. Org. Chem.* **2012**, *32*, 6420-6454.

Kimberly M. Bonger, Ling-chun Chen, Corey W. Liu and Thomas J. Wandless. *Small-molecule displacement of a cryptic degron causes conditional protein degradation.* *Nat. Chem. Biol.* **2011**, *7*, 531-537. Highlighted in *Nature Methods* **2011**, *8*, 711.

Kimberly M. Bonger#, Sascha Hoogendoorn#, Chris J. van Koppen, C. Marco Timmers, Gijsbert A. van der Marel and Herman S. Overkleeft. Development of selective luteinizing hormone receptor agonists by heterodimerization with follicle-stimulating hormone antagonist. *ACS Med. Chem. Let.* **2011**, *2*, 85-89.

Kimberly M. Bonger, Varsha V.Kapoerchan, Gijsbert M Grotenbreg, Chris J.van Koppen, C. Marco Timmers, Gijsbert A van der Marel, Herman S. Overkleeft. Oligoproline helices as structurally defined scaffolds for oligomeric G protein-coupled receptor ligands. *Org. Biomol. Chem.* **2010**, *8*, 1881-1884.

Kimberly M. Bonger#, Sascha Hoogendoorn#, Chris J. van Koppen, Cornelis M. Timmers, Herman S. Overkleeft, Gijsbert A. van der Marel. Synthesis and Pharmacological Evaluation of Dimeric Follicle-Stimulating Hormone Receptor Antagonists. *ChemMedChem* **2009**, *4*, 2098-2102.

Kimberly M. Bonger, Richard J. B. H. N. van den Berg, Annemiek D. Knijnenburg, Laura H. Heitman, Chris J. van Koppen, Cornelis M. Timmers, Herman S. Overkleeft, Gijsbert A. van der Marel. Discovery of Selective Luteinizing Hormone Receptor Agonists Using the Bivalent Ligand Method. *ChemMedChem*, **2009**, *4*, 1189-1195.

Tom Wennekes, Richard J. B. H. N. van den Berg, **Kimberly M. Bonger**, Wilma E. Donker-Koopman, Amar Ghisaidoobe, Gijsbert A. van der Marel, Anneke Strijland, Johannes M. F. G. Aerts, Herman S. Overkleeft, Synthesis and evaluation of dimeric lipophilic iminosugars as inhibitors of glucosylceramide metabolism. *Tetrahedron Asym.* **2009**, *20*, 836-846.

Kimberly M. Bonger#, Tom Wennekes#, Gerrit Lodder, Dmitri Filippov, Gijss A. van der Marel and Herman S. Overkleeft. The effect of Lewis Acids on the stereochemical outcome of L-Lyxo Pyrroline with the tandem Staudinger aza-Wittig Ugi 3CR. *Eur. J. Org. Chem.* **2008**, *21*, 3678-3688

Kimberly M. Bonger#, Richard J. B. H. N. van den Berg#, Laura H. Heitman, Ad P. IJzerman, Julia Oosterom, Cornelis M. Timmers, Herman S. Overkleeft, Gijsbert A. van der Marel. Synthesis

and evaluation of homobivalent GnRHR ligands having a rigid benzene core. *Bioorg. Med. Chem.* **2008**, *16*, 3744-3758.

Laura H. Heitman, Julia Oosterom, **Kimberly M. Bonger**, Cornelis M. Timmers, Peter H.G. Wiegerinck and Adriaan P. IJzerman. [3H]Org 43553, the First Low-Molecular-Weight Agonistic and Allosteric Radioligand for the Human Luteinizing Hormone Receptor. *Mol. Pharmacol.* **2008**, *73*, 518-524.

Kimberly M. Bonger#, Richard J. B. H. N. van den Berg#, Laura H. Heitman, Ad P. IJzerman, Julia Oosterom, Cornelis M. Timmers, Herman S. Overkleeft, Gijsbert A. van der Marel. Synthesis and evaluation of homobivalent GnRHR ligands. *Bioorg. Med. Chem.* **2007**, *15*, 4841-4856.

Kimberly M. Bonger#, Tom Wennekes#, Sebastiaan V. P. de Lavoie, Davide Esposito, Richard J. B. H. N. van den Berg, Remy E. J. N. Litjens, Gijs A. van der Marel and Herman S. Overkleeft. Transformation of Carbohydrate Derived 4-Azidopentanal Into Highly Functionalized pyrrolidines Via a Tandem Staudinger/aza-Wittig/Ugi Multicomponent Reaction, *QSAR Comb. Sci.* **2006**, *25*, 491 – 503.

Patents

Kimberly M. Bonger*, Rishi Rakhit and Thomas J. Wandless. Light inducible system for regulating protein stability. 2014, US 9115184 B2