

1 personalia



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Scopus <https://www.scopus.com/authid/detail.uri?authorId=23024820200>

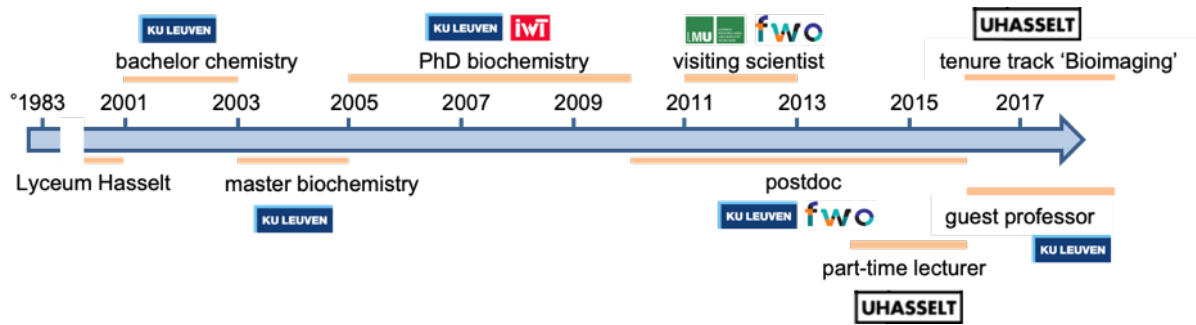


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2 education & work history



master thesis title: Study of the interaction of HIV-1 integrase and LEDGF/p75 and characterization of monomeric red fluorescent proteins with fluorescence correlation spectroscopy
promotor: Yves Engelborghs
grade: magna cum laude

PhD thesis title: Confocal spectroscopy in living cells - Chromatin and protein interactions of HIV-1 integrase co-factor LEDGF/p75
promotors: Yves Engelborghs, Zeger Debyser
funding: Agency for the Promotion of Innovation through Science and Technology Flanders (IWT, now VLAIO)

postdoc topic: development of advanced fluorescence imaging modalities and application in the life sciences
funding: Research Foundation Flanders (FWO)
promotor: Johan Hofkens

visiting scientist topic: development of novel pulsed interleaved excitation imaging methods and application in the life sciences
location: Ludwig-Maximilians-Universität München, Germany
funding: FWO scholarship for a long term abroad and the German Academic Exchange Service (Deutscher Akademischer Austauschdienst, DAAD).

part-time lecturer location: Hasselt University, Discipline group Chemistry
tasks: biochemistry lecturer and coordinator interuniversity (Hasselt-Leuven) Bachelor internships

assistant professor bioimaging location: Hasselt University, BIOMED & Advanced Optical Microscopy Center

guest professor location: KU Leuven Molecular Imaging and Photonics

3 mission

We're interested in obtaining structural information on biomolecules without using complex crystallization procedures. Instead we focus on developing advanced fluorescence methods (both hardware and software) that provide detailed insights in the quaternary (stoichiometry) and tertiary (conformation and dynamics) structure of molecules at the ensemble, sub-ensemble or true single molecule level.

The methods we focus on mostly, as well as the instruments we use in our daily practice, are nicely illustrated on our website: <https://www.uhasselt.be/UH/DBI/Research/methods.html>

Over the last decade, we've managed in this way to provide unprecedented insights in, for example, the workings of retroviruses such as the HIV/AIDS virus. For an overview of our current research lines (excluding projects from collaborators), see our website: <https://www.uhasselt.be/UH/DBI/Research/Projects.html>

4 team

We are currently a biophysics team of 4 PhD students, 1 postdoc and 1 master student, where everyone has a defined methodological expertise and biological project(s) to which these methods are applied. However, we also closely follow up on the fluorescence imaging activities (time-resolved and fluctuation spectroscopy) of many other researchers in our institutes.

5 funding

5.1 personal

| | |
|-------------------------|--|
| IWT PhD Fellow | October 1 st 2005 – September 30 th 2009 |
| FWO postdoctoral Fellow | October 1 st 2010 – September 30 th 2013 |
| FWO travel grant | September 5 th 2011 – August 31 st 2012, 19.8k€ |
| DAAD Research Fellow | March 2013-June 2013 |
| Travel grant | for attending the 58 th Annual Meeting of the Biophysical Society in San Francisco, February 14-19, 2014 from the Belgian Society for Microscopy (BSM). |
| Research Grant (FWO) | 1/1/18-31/12/18, 30k€ |

5.2 group level – granted

| | # | date | | € |
|-------------------------------------|------------|----------------------------|---|-------|
| FWO research project | G0B4915N | 01/01/2015-31/12/2019 | Development and application of broadly applicable microscopy methods and probes for diffraction-unlimited fluctuation imaging of dynamic biological systems. role: co-supervisor (supervisor Johan Hofkens, co-supervisor Lily Karamanou), I designed and wrote project | 500k€ |
| Hercules large-scale infrastructure | ZW15_09 | 01/10/2016-31/09/2021 | consortium (Dept. Chemistry, Centre for Surface Chemistry and Catalysis, Dept. Mechanical Engineering) for a commercial laser scanning microscope equipped with (among other things) pulsed interleaved excitation. Title: Multimodal fluorescence microscopy and nanoscopy platform. role: co-promoter (promoter Johan Hofkens, co-promoters Hans van Oosterwyck, Peter Dedecker and Maarten Roeffaers). I had a substantial contribution in wrting the project. | 1.8M€ |
| KU Leuven Cat. 1 project | C14/16/053 | 01/09/2016-31/09/2020 | Role: co-supervisor (promoter Hideaki Mizuno, cosup. Susana Rocha), I designed the methodological and part of applications part of the project | 583k€ |
| IWT scholarship | 111595 | | to Doortje Borrenberghs: 'Development of an advanced model system for studying retroviral replication at the single-virus level.' start date January 1, 2011. role: promotor, I designed and coordinate project | 200k€ |
| IWT scholarship | 141515 | start date January 1, 2015 | to Niels Vandenberg: 'The E.coli Sec reaction pathway for cellular protein sorting under an innovative single-molecule loupe': role: co-promotor, I designed and coordinated project | 200k€ |
| KUL Cat. 1 project | C12/16/024 | 01/10/2016-31/09/2018 | Scientific collaborator, promotor Rik Schrijvers | |
| BOF-New Initiatives | | Start date 1/2019 | To Keerthana Ramanathan: Moleculaire dynamica en kracht generatie: een nieuwe kijk op celmechanosensatie en communicatie | 206k€ |
| BOF | | Start date 10/2016 | To Veerle Lemmens: Een patch-clamp fluorometrie platform om de structuur functie relatie van glycine receptoren te ontrafelen. | 200k€ |
| H2020-MSCA-ITN-2018 | | Start 2019 | NanoCarb 'Glyco-Nanoparticles for Applications in Advanced Nanomedicine' project from VITO-Mol. I am the scientific promotor of the project for ESR11 | |

6 teaching

With *publication pressure* being grafted onto everyone, the importance of high-level education is sometimes overlooked. Luckily, however, I have a true passion for teaching science in a simple and understandable manner. In my opinion, this is the only way people (scientists or not) can appreciate its true value.

6.1 current duties

| KU Leuven course | ± students | Level | | role |
|------------------|------------|--------|---|----------|
| B-KUL-G0G59A | 30 | Master | Advanced fluorescence and fluorescence microscopy | Lecturer |

| UHasselt course | ± students | Level | | role |
|-----------------|------------|----------|-------------------------------|-------------|
| 3408 | 100 | Bachelor | Cell biology | Coordinator |
| 3620 | 90 | Bachelor | Immunity | Lecturer |
| 3951 | 40 | Master | Innovative Imaging Techniques | Coordinator |
| 3979 | 20 | master | Advanced Light Microscopy | Coordinator |

6.2 past duties

I followed a course in educational professionalization in 2016-2017, and regularly attend educational focus days at Hasselt University.

I am a former lecturer at Hasselt University of the entry level course in Biochemistry (Inleiding tot de biochemie, course number 1399) and of the coordinator of the interuniversity bachelor internships UHasselt-KU Leuven.

I lectured in the following courses at KU Leuven:

- Spectroscopy of Biomolecules (B-KUL-G0O58C)
- Geïntegreerd practicum (B-KUL-G0O57C)
- Advanced Enzymology (B-KUL-G0U19A)
- Advances in Microscopy (B-KUL-E08F8A)

I lectured the following classes at LMU Munich:

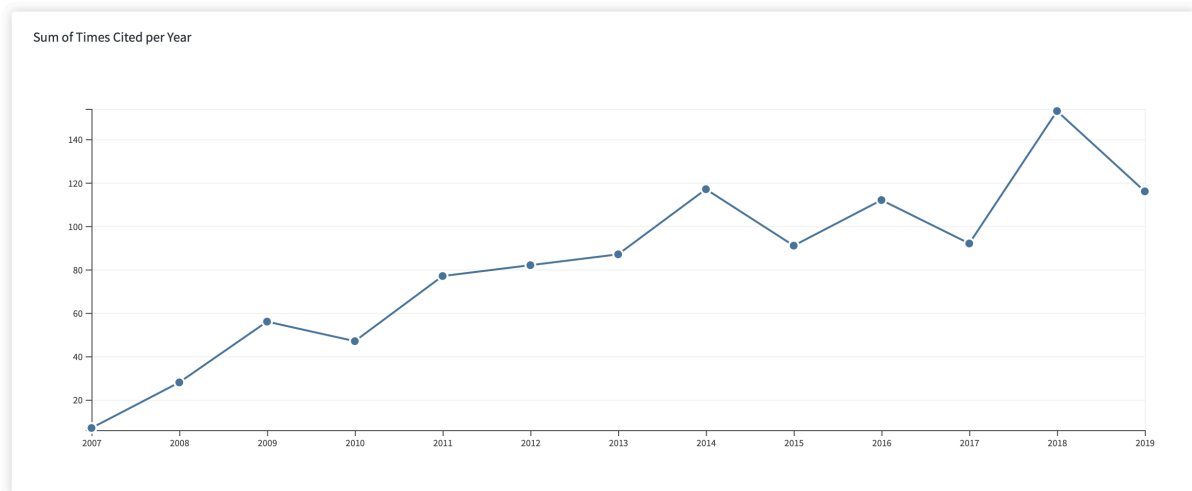
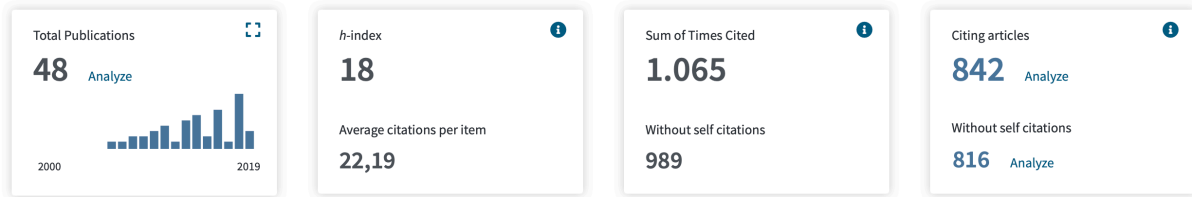
- instrumentation for microscopy
- physical biochemistry
- advanced fluorescence spectroscopy

7 organization of conferences

| date | Place | conference | role | Partner(s) |
|------------------------|---------|---|--|---|
| 2013 | Leuven | International Conference of Photochemistry, ICP2013 | Help in organization | Johan Hofkens |
| 2012, 2014, 2016, 2018 | Munich | European Workshop on Advanced Fluorescence Imaging and Dynamics | Help in organization, invited lecturer | Don Lamb |
| 4/2016 | Leuven | 1-day symposium on fluorescence imaging at the level of a single virus, in the context of the Interuniversity Attraction Pole BelVir IAP 7/45 'Virus-host interplay at the early stages of infection' | Main organizer | Zeger Debyser |
| 2017 | Bruges | Methods and Applications in Fluorescence (MAF15) conference | Help in organization | Johan Hofkens, Maarten Roeffaers |
| 9/2018 | Hasselt | NanoMacro workshop. https://www.uhasselt.be/NanoMacroImaging-2018 . We welcomed about 50 participants from Belgium, Ireland, Germany, the Netherlands and even Mexico for an immersive course (lectures, demos, exercise classes) on microscopy from the nanoscale all the way to the organism level. | Main organizer | Marcel Ameloot, Nick Smisdom |
| 6/2017 | Hasselt | Advanced Optical Microscopy Launch event in collaboration with Zeiss | Main organizer | Marcel Ameloot, Nick Smisdom |
| 10/2018 | Leuven | Advanced multiscale fluorescence imaging @ Arenberg Imaging Centre | Main organizer | Johan Hofkens, Peter Dedecker, Hans van Oosterwyck, Maarten Roeffaers |

8 publications

Web of Science citation report for 'Hendrix Jelle' on September 4, 2019:



Since 2006, I have published in peer-reviewed internationally recognized journals, including top journals such as the *Journal of Cell Biology* (first author), *ACS Nano* (corresponding author), *Nucleic Acids Research* (one first author, and one corresponding author), *Science Advances* (first author), *Nature Methods*, *Nature Communications*, *PLoS Pathogens* and *PNAS*.

I am corresponding author on 10 A1 publications and first author on 11 papers/reviews/book chapters.

I have published together with different groups at KU Leuven, UGhent, UHasselt, ULB-Charleroi, VUB-VIB and with different universities across the globe.

8.1 list

◦ = shared authorship

* = corresponding author

= running number

type: R = review

type: A1 = peer-reviewed internationally recognized journal

c = number of citations on December 19, 2018, according to Web of science

IF = impact factor at time of publication

IF5 = 5-year impact factor

| year | # | type | c | IF | IF5 | |
|------|-----|------|---|----|-----|---|
| 2019 | 38. | A1 | | | | Harshita Bhatia, Julian A. Steele, Cristina Martin, Masoumeh Keshavarz, Guillermo Solis-Fernandez, Haifeng Yuan, Guillaume Fleury, Haowei Huang, Iurii Dovgaliuk, Dmitry Chernyshov, Jelle Hendrix , Maarten |

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|------|-----|------|---|------|------|--|
| | | | | | | B. J. Roeffaers, Johan Hofkens, Elke Debroye, Single-Step Synthesis of Dual Phase Bright Blue-Green Emitting Lead Halide Perovskite Nanocrystal Thin Films, <i>Chemistry of Materials</i> , 2019, American Chemical Society, August 2019 |
| | 37. | A1 | | 11.6 | 10.2 | Borrenberghs D, Dirix L, Cereseto A, Hofkens J, Debyser Z* and Hendrix J* , "Post-mitotic BET-induced reshaping of integrase quaternary structure supports wild-type MLV integration" <i>Nucleic Acids Research</i> . 2019 February 20; gky1157 |
| | 36. | A1 | | 4.9 | 5.0 | Vandenberk N, Karamanou S, Portaliou AG, Zorzini A, Hofkens J, Hendrix J* , Economou A*, "The preprotein binding domain of SecA displays intrinsic rotational dynamics." <i>Structure</i> . 2019 January 2 |
| 2018 | 35. | A1 | | 12.3 | | Huang H, Yuan H, Zhao J, Solís-Fernández G, Zhou C, Seo JW, Hendrix J , Steele J, Hofkens J, Long J, Roeffaers M, "C(sp ³)-H Bond Activation by Perovskite Solar Photocatalyst Cell" <i>ACS Energy Letters</i> , January 2019 |
| | 34. | A1 | | 9.7 | 10.4 | Barth A, Hendrix J , Fried D, Barak Y, Bayer EA, Lamb DC*, "Dynamic interactions of type I cohesin modules fine-tune the structure of the cellulosome of <i>Clostridium thermocellum</i> " <i>Proceedings of the National Academy of Sciences USA</i> . 2018 November 14 |
| | 33. | A1 | 4 | 26.9 | 41.9 | Hellenkamp B ^o , Schmid S ^o , Adariani SR, Ambrose B, Aznauryan M, Barth A, Birkedal V, Bowen ME, Chen H, Cordes T, Eilert T, Fijen C, Gebhardt C, Götz M, Gouridis G, Gratton E, Ha T, Hao P, Hanke CA, Hartmann A, Hendrix J , Hildebrandt LL, Hirschfeld V, Hohlbein J, Hua B, Hübner CG, Kallis E, Kapanidis AN, Kim JY, Krainer G, Lamb DC, Lee NK, Lemke EA, Levesque B, Levitus M, McCann JJ, Naredi-Rainer N, Nettels D, Ngo T, Qiu R, Robb NC, Röcker C, Sanabria H, Schlierf M, Schröder T, Schuler B, Seidel H, Streit L, Thurn J, Tinnefeld P, Tyagi S, Vandenberk N, Vera AM, Weninger KR, Wunsch B, Yanez-Orozco IS, Michaelis J*, Seidel CAM*, Craggs TD* and Hugel T, "Precision and accuracy of single-molecule FRET measurements - a multi-laboratory benchmark study" <i>Nature Methods</i> 2018, 15:669-676 |
| | 32. | A1/R | 1 | 3.8 | 3.7 | Parveen N, Borrenberghs D, Rocha S, Hendrix J* , "Single Viruses on the Fluorescence Microscope: Imaging Molecular Mobility, Interactions and Structure Sheds New Light on Viral Replication." <i>Viruses</i> . May 10 2018. 10(5) pii: E250. |
| | 31. | A1 | 4 | 3.5 | 3.7 | Schrimpf W ^o , Barth A ^o , Hendrix J and Lamb DC, "PAM: A Framework for Integrated Analysis of Imaging, Single-Molecule, and Ensemble Fluorescence Data." <i>Biophysical Journal</i> , April 10, 2018, 114 (7), p1518-1528. |
| | 30. | A1 | 6 | 12.2 | | Huang H, Yuan H, Janssen KPF, Solis-Fernandez G, Wang Y, Tan CYX, Jonckheere D, Debroye E, Long JL, Hendrix J , Hofkens J, Steele JA, Roeffaers, M.B.J., "Efficient and Selective Photocatalytic Oxidation of Benzylic Alcohols with Hybrid Organic-Inorganic Perovskite Materials." <i>ACS Energy Letters</i> , May 2018, 3(4), pp755-759 |
| | 29. | A1 | | 11.5 | | Talavera A ^o , Hendrix J^o , Versées W, Jurénas D, Van Nerom K, Vandenberk N, Singh RK, Konijnenberg A, De Gieter S, Castro-Roa D, Barth A, De Greve H, Sobott F, Hofkens J, Zenkin N, Loris R, Garcia-Pino A, "Phosphorylation decelerates conformational dynamics in bacterial translation elongation factors." <i>Science Advances</i> . 2018 Mar 14; 4(3), eaap9714 |
| | 28. | A1 | 1 | 3.1 | | Vandenberk N, Barth A, Borrenberghs D, Hofkens J, Hendrix J* , "Evaluation of Blue and Far-Red Dye Pairs in Single-Molecule Förster Resonance Energy Transfer |

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|------|-----|----|----|------|------|---|
| | | | | | | Experiments." J. Phys. Chem. B. March 15, 2018; 122(15), pp 4249–4266 |
| | 27. | A1 | 1 | 4.0 | 3.9 | Schrimpf W ^o , Lemmens V ^o , Smisdom N, Ameloot M, Lamb DC*, Hendrix J* , "Crosstalk-free multicolor RICS using spectral weighting." <i>Methods</i> . 2018 May 1;140-141:97-111 |
| | 26. | A1 | 2 | 13.3 | 12.8 | Rosam M, Krader D, Nickels C, Hochmair J, Back KC, Agam G, Barth A, Zeymer C, Hendrix J , Schneider M, Antes I, Reinstein J, Lamb DC, Buchner J., "Bap (Sil1) regulates the molecular chaperone BiP by coupling release of nucleotide and substrate." <i>Nat Struct Mol Biol</i> . 2018 Jan;25(1):90-100. |
| 2017 | 25. | A1 | 1 | 13.9 | | Burger VM, Vandervelde A, Hendrix J , Konijnenberg A, Sobott F, Loris R, Stultz CM (2017). Hidden States within Disordered Regions of the CcdA Antitoxin Protein. <i>J Am Chem Soc</i> . 2017 Feb 22;139(7):2693-2701. doi: 10.1021/jacs.6b11450 |
| 2016 | 24. | A1 | 6 | | | Doortje Borrenberghs, Lieve Dirix, Flore De Wit, Susana Rocha, Jolien Blokken, Stéphanie De Houwer, Rik Gijsbers, Frauke Christ, Johan Hofkens, Jelle Hendrix* & Zeger Debyser* (2016). Dynamic Oligomerization of Integrase Orchestrates HIV Nuclear Entry, <i>Scientific Reports</i> 6 (doi: 10.1038/srep36485) |
| | 23. | A1 | 7 | 3.5 | | Jelle Hendrix* , Tomas Dekens, Waldemar Schrimpf and Don C. Lamb* (2016). Arbitrary-Region Raster Image Correlation Spectroscopy, <i>Biophysical Journal</i> 111(8):1785-1796 |
| 2015 | 22. | A1 | 29 | 9.8 | | Jelle Hendrix , Viola Baumgärtel, Waldemar Schrimpf, Sergey Ivanchenko, Michelle A. Digman, Enrico Gratton, Hans-Georg Kräusslich, Barbara Müller and Don C. Lamb (2015). Direct observation of the onset of HIV-1 assembly in living cells, <i>The Journal of Cell Biology</i> 210(4):629-646 (IF most recent: 9.8) |
| | 21. | A1 | 24 | 12.1 | | Röhl A, Wengler D, Madl T, Lagleder S, Tippel F, Herrmann M, Hendrix J , Richter K, Hack G, Schmid AB, Kessler H, Lamb DC, Buchner J (2015). Hsp90 regulates the dynamics of its cochaperone Sti1 and the transfer of Hsp70 between modules. <i>Nat Communications</i> 6:6655. (doi: 10.1038/ncomms7655) |
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| | 19. | A1 | 5 | 4.7 | | Hendrix, J. ^o , Van Heertum, B. ^o , Vanstreels E, Daelemans D and De Rijck, J. (2014) Dynamics of the ternary complex formed by c-Myc interactor JPO2, transcriptional co-activator LEDGF/p75 and chromatin. <i>Journal of Biological Chemistry</i> 289(18):12494-506. (doi: 10.1074/jbc.M113.525964) |
| | 18. | A1 | 3 | 12.0 | | Borrenberghs, D., Thys, W., Rocha, S., Demeulemeester, J., Weydert C., Dedecker, P., Debyser, Z., Hofkens, J., and Hendrix, J.* HIV virions as nanoscopic test tubes for probing oligomerization of the integrase enzyme (2015). <i>ACS Nano</i> 8(4):3531-45. (doi: 10.1021/nn406615v). <ul style="list-style-type: none"> • Knack magazine, nr. 27, 02/07/2014 – 'Eiwitten volgen in een virus' (door Dirk Draulans, gedrukte versie)(Knack is a Belgian (Flemisch) weekly news magazine covering local news, politics, sports, business, jobs, and community events) |

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|------|-----|------|----|-----|---|
| | | | | | <ul style="list-style-type: none"> • KU Leuven Campuskrant, jaargang 25, nr. 9, 28/05/2014 – 'Hiv-deeltje omgetoverd tot proefbuis om geneesmiddelen te testen' (newspaper of KU Leuven) • Imaging&Microscopy Newsletter May 14, 2014 • ScienceDaily |
| | 17. | A1/R | 8 | | Hendrix J* , Lamb DC*, "Implementation and application of pulsed interleaved excitation for dual-color FCS and RICS." <i>Methods Mol Biol.</i> 2014;1076:653-82 |
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| | 14. | A1 | 3 | 4.7 | De Graeve, S., Marinelli, S., Stolz, F., Hendrix, J. , Vandamme, J., Engelborghs, Y., Van Dijck, P., and Thevelein, J.M. (2013). Mammalian ribosomal and chaperone protein RPS3A counteracts alpha-synuclein aggregation and toxicity in a yeast model system. <i>Biochem J</i> 455, 295-306. |
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| 2012 | 12. | A1 | 36 | 7.0 | Desimmie, B., Humbert, M., Lescrinier, E., Hendrix, J. , Vets, S., Gijsbers, R., Ruprecht, R., Dietrich, U., Debyser, Z., Christ, F. (2012). Phage display-directed discovery of LEDGF/p75 binding cyclic peptide inhibitors of HIV replication. <i>Molecular Therapy</i> , 20 (11), art.nr. 10.1038/mt.2012.132, 2064-2075 |
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| | 8. | A1 | 56 | 4.2 | Nath, S., Meuis, J., Hendrix, J. , Carl, S., Engelborghs, Y. (2010). Early aggregation steps in alpha-synuclein as measured by FCS and FRET: evidence for a contagious conformational change. <i>Biophysical Journal</i> , 98 (7), 1302-11. |
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8.2 in preparation or in submission

- Vandenberk N, Hofkens J, **Hendrix J***, "Dynamic structural biology using single-molecule FRET." Review (in preparation).
- Zurnic I, Dirix L, Lemmens V, Borrenberghs D, Rocha S, Christ F, Hofkens J, **Hendrix J**, Debyser Z, "Capsid labeled HIV reveals nuclear envelope uncoating and questions capsid role during integration." (submitted)
- Marco Longfils*, Nick Smisdom, Marcel Ameloot, Mats Rudemo, Veerle Lemmens, Guillermo Solís Fernández, Magnus Röding, Niklas Lorén, **Jelle Hendrix***, Aila Särkkä, Raster Image Correlation Spectroscopy Performance Evaluation. (submitted)
- Simone Giovannozzi, Veerle Lemmens, **Jelle Hendrix**, Rik Gijsbers, Rik Schrijvers, Live cell imaging demonstrates multiple routes towards a STAT1 gain-of-function phenotype. (in preparation)
- Roth A., Martens C., **Hendrix J*** and Govaerts C*. Conformational and dynamic heterogeneity of the multidrug transporter LmrP

- Scholl D., Colomer R., **Hendrix J.**, Govaerts, C. Nucleotide binding domain of the cystic fibrosis transport receptor (in preparation). Nucleotide binding domain of the cystic fibrosis transport receptor
- Hedvig Tamman, Katleen Van Nerom, Hiraku Takada, Niels Vandenberg, Daniel Scholl, Yury Polikanov, Johan Hofkens, Ariel Talavera, Vasili Haurlyiuk, **Jelle Hendrix***, Abel Garcia-Pino*, Nucleotide-mediated allosteric regulation of bifunctional Rel enzymes, bioRxiv (submitted).
- Parveen N., Solís-Fernández G, Couck Q., Zurnic I., Hofkens J., Debyser Z., **Hendrix J.***, Single-virus FLIM analysis reveals subviral intasome heterogeneity. (in preparation)

8.3 reviews and book chapters

° = shared authorship

* = corresponding author

type: R = review, A1 = peer-reviewed internationally recognized journal

c = number of citations on December 19, 2018, according to Web of science

IF = impact factor at time of publication

| year | type | c | IF | |
|------|------|----|-----|--|
| 2018 | A1/R | 1 | 3.8 | Parveen N, Borrenberghs D, Rocha S, Hendrix J* , "Single Viruses on the Fluorescence Microscope: Imaging Molecular Mobility, Interactions and Structure Sheds New Light on Viral Replication." <i>Viruses</i> . May 10 2018. 10(5) pii: E250. |
| 2014 | A1/R | 8 | | Hendrix J* , Lamb DC*, "Implementation and application of pulsed interleaved excitation for dual-color FCS and RICS." <i>Methods Mol Biol</i> . 2014;1076:653-82 |
| 2013 | A1/R | 12 | 2.0 | Hendrix, J. , and Lamb, D.C. (2013). Pulsed interleaved excitation: principles and applications. <i>Methods Enzymol</i> 518, 205-243. |
| 2011 | | | | Christ, F., Busschots, K., <u>Hendrix, J.</u> , McNeely, M., Engelborghs, Y., Debyser, Z. (2011). Assays for evaluation of HIV-1 integrase enzymatic activity, DNA binding, and cofactor interaction. In: Neamati N. (Eds.), <i>HIV-1 Integrase. Mechanism and Inhibitor Design, Chapt. 12</i> . Hoboken, New Jersey, USA: John Wiley & Sons, Inc., 151-16 |

9 talks and posters

9.1 invited talks

| date | where | |
|--------------------------------|---------------------------------|--|
| 23-27/8/11 | Budapest, Hungary | Visualizing and quantifying HIV-host interactions with fluorescence microscopy, 8th European Biophysics Congress |
| 21/10/14 | Brussel | Probing biomolecular structure and function with single-photon sensitive fluorescence imaging, Modern Biophysical Techniques for the Life Sciences, Koninklijke Akademie voor Wetenschap |
| September 28 - October 2, 2014 | University of Bayreuth, Germany | Keynote lecture - Physics on the Scale of the Cell - Theoretical concepts and Experimental Methods |
| 2012, 2014, 2016, 2018 | Munich, Germany | NIM Workshop on Advanced Fluorescence Methods, a total of 8 invited talks |
| 1-5 June 2015 | Oulu, Finland | Modern biophysical methods for protein-ligand interactions |
| October 2, 2015 | Leuven | Research seminar, Medical School Leuven, invited by Prof. Zeger Debyser |

| | | |
|----------------------|-----------------------------|---|
| February 20-24, 2017 | University of Luxembourg | "Fluorescence fluctuation spectroscopy - the confocal as a molecular speedometer" 2 nd Hands-on-Light Microscopy Workshop (Invited by Zeiss Microscopy). |
| October 2018 | Düsseldorf | Plenary talk: FRET theory in practice at the Satellite Workshop of the DGfB biannual meeting "Advanced Fluorescence Spectroscopy and Imaging" |
| September 2018 | Leuven | "Single virus imaging" at the Frontiers in Retrovirology Conference 2018 |
| September 2018 | M4I - Maastricht University | "Dynamic structural biology via fluorescence: A tale on molecular interplay and wobbliness" |
| September 2019 | Antwerp, Belgium | "Imaging molecular dynamics using fluorescence microscopy", Picores-2-Numbers image analysis workshop, Winnok de Vos, UAntwerpen. |

9.2 *international talks, abstract-selected*

- Targeting replication and integration of HIV - TRIoH General Assembly, Barcelona, Spain, 8-12/12/06
- Joint Biophysical Society 52nd Annual Meeting and 16th IUPAB International Biophysics Congress, Long Beach, California, USA, 2-6/02/08
- Targeting HIV integration co-factors - 2nd General Assembly, Prague, Czech Republic, 29-30/01/09
- 7th European Biophysics Congress, Genoa, Italy, 11-15/07/09
- 12th Carl Zeiss sponsored workshop on FCS and related methods, Cargèse, Corsica, 12-16/10/09
- 18th International Workshop on Single Molecule Spectroscopy and Ultrasensitive Analysis in the Life Sciences, Berlin, Germany, 5-7/9/12
- 3rd European Workshop on Advanced Fluorescence Imaging and Dynamics, October 8-12, 2012 in Munich, Germany
- Dutch meeting on Molecular and Cellular Biophysics, Veldhoven, The Netherlands 30/9-1/10, 2013
- 26th International Conference on Photochemistry, July 21-26, 2013, Leuven, Belgium
- Biophysical Society 57th Annual Meeting, February 2-6, 2013 in Philadelphia, USA
- 25th Single-molecule and super-resolution microscopy Workshop – Picoquant, 3-6 September 2019, Berlin, Germany
- EMBO Membrane protein structural biology Workshop, October 9-11, 2019, Hamburg, Germany

9.3 *international poster presentations, abstract-selected*

For poster prizes, see 'Awards'

- Targeting replication and integration of HIV - TRIoH General Assembly, Barcelona, **Spain**, 8-12/12/06
- Zeiss International Workshop on Fluorescence Correlation Spectroscopy methods, Stockholm, **Sweden**, 4-6/12/06
- Joint Biophysical Society 52nd Annual Meeting and 16th IUPAB International Biophysics Congress, Long Beach, **California**, USA, 2-6/02/08

- 7th International Weber Symposium on Innovative Fluorescence Methodologies in Biochemistry and Medicine and 11th International Workshop on Fluorescence Correlation Spectroscopy and Related Methods, Kauai, **Hawaii**, USA, 6-12/06/08
- 58th Annual Meeting of the Biophysical Society, **San Francisco**, 15-19 February 2014
- National poster presentations, abstract-selected
- I attended multiple local symposia and conferences where I presented posters, without abstract selection.
- Belgian Physical Society & Belgian Biophysical Society General Scientific Meeting, Universiteit **Hasselt**, 01/04/09
- Advanced Light Microscopy Symposium, University of **Ghent**, 23-24/09/10

10 collaborators

10.1 external

- Inge Nelissen, VITO Mol - nanoparticle imaging (H2020-ITN)
- Johan Hofkens, KU Leuven Molecular Imaging and Photonics - smFRET & FLIM method development (FWO, Hercules)
- Anastassios Economou, KU Leuven Rega Institute - protein structural biology via smFRET
- Niklas Lorén - RISE & Chalmers Sweden - molecular dynamics in food
- Cedric Govaerts, ULB Bruxelles - protein structural biology via smFRET
- Abel Garcia Pino, ULB Charleroi - protein structural biology via smFRET
- Don C. Lamb, LMU Munich - software development
- Hans van Oosterwyck, KU Leuven Biomechanics - mechanosensation (BOF)
- Susana Rocha, KU Leuven Molecular Imaging and Photonics - biosynthetic hydrogels (BOF)
- Zeger Debyser, KU Leuven Molecular Medicine - single virus imaging
- Rik Schrijvers, KU Leuven Clinical Immunology - protein dynamics (KUL Cat1)
- Peter Dedecker, KU Leuven Biochemistry - imaging molecular dynamics
- Hideaki Mizuno, KU Leuven Biochemistry - signaling pathways (KUL Cat1)
- Maarten Roeffaers, KU Leuven, Bioengineering COK - perovskite FLIM

10.2 internal

- BIOMED & UHasselt researchers - microscopy support
- Marcel Ameloot, Biophysics - method development
- Ronald Thoelen, IMO - microfluidics
- Jean Manca, Rob Cornelissen, XLab & Bart Cleuren, Physics - cable bacteria

10.3 euro-bioimaging



We also take part in the European Research Infrastructure for Imaging Technologies in Biological and Biomedical Sciences (Euro-BioImaging), that provides open physical user access to a broad range of state-of-the-art technologies in biological and biomedical imaging for life scientists. In addition, EuBI offers image data support and training for infrastructure users and providers. <http://www.eurobioimaging.eu/content-page/about-euro-bioimaging>

10.4 FRET community

We are an active member of the [FRET community](#) that regularly meets to discuss on recent developments in the field, on strategic plans for the FRET field in general, to disseminate knowledge on FRET and single-molecule FRET, and to organize workshops on FRET methods and applications.

11 awards

- **Best poster presentation** - LEDGF/p75 switches from a dynamic to a tight chromatin interaction upon binding to HIV-1 integrase, Targeting HIV integration co-factors, 2nd General Assembly, Prague, Czech Republic, 29-30/01/09
- European Physical Journal award for **best poster presentation** - LEDGF/p75 switches from a dynamic to a tight chromatin interaction upon binding to HIV-1 integrase, Belgian Physical Society & Belgian Biophysical Society General Scientific Meeting, Hasselt, 01/04/09
- Third prize in the Belgian Society of Microscopy **Poster Award** - The transcriptional co-activator LEDGF/p75 displays a dynamic scan-and-lock mechanism for chromatin tethering, Advanced Light Microscopy Symposium, University of Ghent, 23-24/09/10

12 valorisation

- In 2013 Don Lamb and I disproved that the PIEFI technology was patentable.
- In 2018 we filed at UHasselt a provisional patent on channel-based spectral RICS (WO2019/138028) and are in contact with potential licensees.

13 science communication

We strive for **broadly accessible research**, which is f.e. why I directly contacted the Press service of KU Leuven after the publication of our HIV work ACS Nano. This resulted in three broad-audience articles concerning our work:

- **Campuskrant**, jaargang 25, nr. 9, 28/05/2014 – ‘Hiv-deeltje omgetoverd tot proefbuis om geneesmiddelen te testen’ (<http://www.kuleuven.be/ck/files/ck25-nr09.pdf>) (newspaper of KU Leuven).
- **Knack magazine**, nr. 27, 02/07/2014 – ‘Eiwitten volgen in een virus’ (door Dirk Draulans) (<http://magazine.knack.be/weekblad/magazines/02-07-2014/#>, gedrukte versie) (Knack is a Belgian (Flemisch) weekly news magazine covering local news, politics, sports, business, jobs, and community events)
- **Imaging&Microscopy** Newsletter May 14, 2014 (<http://www.imaging-git.com/news/single-molecule-fluorescence-imaging-new-technique-tracks-protein-single-hiv-particle>).
- **Our latest PNAS paper will be featured in the Weizmann institute circular**
- Our latest Nature Methods paper was covered in a UHasselt press release: <https://www.uhasselt.be/UH/DBI/News/2018/Press-release.html>
- Press release on our new imaging center: <https://www.uhasselt.be/UH/Nieuws/2017/Gloednieuwe-microscopen-zien-het-licht-in-BIOMED.html>

I gladly allow mentioning our work on **meta-scientific forums**. For example, we wrote a meta-scientific review of our latest work on HIV assembly in the **Atlas of**

Science: <http://atlasofscience.org/on-their-way-out-structural-hiv-proteins-team-up-before-escaping-from-infected-cells/#more-1894>.

Uhasselt has an excellent communication team and meta-scientific forum:
<https://www.uhasselt.be/inscight>

14 promotorships

- **PhD promotor:** Veerle Lemmens, Keerthana Ramanathan
- **PhD copromotor:** Dr. Doortje Borrenberghs (IWT), Danai Laskaratou (BOF), Bart Van Heertum (IWT), Dr. Niels Vandenberk (IWT), Öykü Uslu (BOF), Guillermo Solis-Fernandes (FWO-Aspirant), Simone Giovanozzi (KUL),
- **PhD assessor:** Milena Helmer-Lauer (joint PhD programme KU Leuven & Federal University of Espírito Santo), Jolien Blokken (KUL), Subhalakshmi Sharma (KUL), Ovia Margaret (KUL), Sofie Kessels (UH)
- **PhD exam commission:** Ta Duy Tien (UH)
- **Master thesis promotor:** Jens De Wachter, Maarten Vervecken, Robbert Boudewijns, Niels Vandenberk, Doortje Borrenberghs, Eva Marting, Guillermo Solis Fernandez, Steven Mertens, Dries David, Veerle Lemmens
- **Master internship promotor:** Thierry Verheyen, Erik Soons, Michael Vanhemelen, Joris Rombouts, Lieven Lemaire, Herlinde de Keersmaecker
- **Bachelor thesis promotor:** Eva Marting (UHasselt), Chloe Geeroms, Pieter Noyens, Bea Timmermans, Helen Hamaekers, Charlotte David, Luran Reyniers, Bert Jacobs, Alex Maes, Jolien van Haarlem, Laura Swinnen, Elien Jacques, Tom van Helden, Sigurd Vogler (LMU)

15 miscellaneous

15.1 editorial activities

I review papers on a regular basis for many different peer-reviewed scientific journals, such as ChemPhysChem, Biophysical Journal, Nucleic Acids Research, Scientific Reports, Cell Research, Frontiers in Molecular Neuroscience, ChemComm... In 2018 I peer-reviewed about 10 papers.

15.2 Language proficiency

- Dutch, English: native
 - o I attended the **Academic English** course of the Arenberg Doctoral School, although my English level stems mostly from being from an internationally oriented country, from writing papers and grant proposals, and from presenting at international conferences.
- German, French: B2
- Spanish, Russian: A2

15.3 Computer skills

- Mac & windows: advanced
- Word, Excel, Onenote, Powerpoint, Coreldraw, Origin: expert
- MATLAB (programming): expert
- IgorPro (programming): beginner

15.4 Leadership skills

- Leading a research team – 4 day course