

CPM newsletter: April 2017

(last update on march 20, 2017)

Upcoming work discussions

Every Tuesday at 12:30.

- 21-3-2017 Collegezaal 3 – Angela van Depen (external, PARA).
- 28-3-2017 Collegezaal 2 – Peter van Veelen (Proteomics).
- 4-4-2017 Collegezaal 1 – to be announced.
- 11-4-2017 Collegezaal 3 – Florent Clerc (Glycomics).
- 18-4-2017 Collegezaal 3 – Tugce Guler (Bioinformatics).
- 25-4-2017 Collegezaal 3 – Katarina Madunic (Glycomics).
- 02-05-2017 Collegezaal 2 - Cari Sanger (external, Kantisto BV)

Lectures, symposia, courses, events:

- 30 march 2017 – Elena Sanchez Lopez – Development of CE-MS strategies for chiral analysis
10:00, Lecture room 3, LUMC Building 1.
- The Bioinformatics group is organizing an MGC course “Introduction to Cytoscape” in the first week of April. Lectures will be given by Magnus; Tugce and Rob will be TAs.
- 18 April 2017 - LUMC Top Research Seminar
17:00-18.30, Burumazaal, LUMC Building 3. Drinks and snacks afterwards.
- 2 May, 2017 - Cari Sanger - Analytical Quality by Design and Capillary Electrophoresis: do they match?
12:30, Lecture room 2, LUMC Building 1 (weekly CPM workdiscussion).
- **11 May 2017 – CPM Event – “Clinical Proteomics and Metabolomics”**
Symposium in Lecture room 5 (from 17:00 to 18:30) + Borrel in Het Paleijs (from 18:30 to 19:30)

Social activities:

March 23, Thursday	Borrel	generally held once a month, from 16:30 onwards. Location: next to R3 meeting room (“egg”). Further dates: april 20, may 18, June 22 Organizers: Guinevere and Gerda. If you want to help, please contact them!
April 7, Friday.	Mini-labouting	informal get together at a strand-tent in Katwijk aan Zee: we leave the LUMC around 3pm, by bile/car/bus. More details will follow. If you want to help with the organization, please send a message to CPMsecretary@LUMC.nl
???	Labouting	Stephi and David are taking on the responsibility of organizing it. Further details will follow soon

Comings and goings

People joining the group:

1. **Ieva Palubeckaite** – March 13, 2017, until March 24, 2017
Ieva is a visiting PhD student from Sheffield. She is a guest with the MSImaging group. She has a desk at PO.
2. **Maria Elena Castellani:** March 13, 2017 – June 12, 2017
Maria Elena is a MSc student from the VU and will work in the glyco group under the supervision of Karli Reiding an Noortje de Haan.

3. **Inge Dekker:** March 20, 2017 until December 2017.
Inge studies Analytical Chemistry at HBO Leiden, she will have her 9 months internship in the Proteomics group under Paul Hensbergen/Peter van Veelen's supervision. She will sit in L3-66.
4. **Alan Moran** – April 1, 2017 until April 1, 2021
Alan is one of the 6 PhD students of the GlySign EU project. His daily supervisor will be Guinevere Kammeijer. He will sit in R3-003b. His project is (tentatively) titled: Assessing prostate-specific antigen (PSA) for prostate cancer (PCa) detection combined with glycoform quantitation aiming at patient stratification.
5. **Thomas Senard** – April 1, 2017 until April 1, 2021
Thomas is the other PhD student from the GlySign EU project assigned to the LUMC. His daily supervisor will be David Falck and he will sit in T4-54. His project is (tentatively) titled: Absolute LC-MS based quantitation of serum IgG Fc N-glycosylation for patient stratification in chronic inflammatory diseases.
6. **Wenjun Wang:** April 1, 2017 until April 1, 2021
Wenjun is a new PhD student. Her daily supervisor will be Peter Van Veelen. She will sit in L3-66. Her project will involve the development of HLA peptidomics strategies.
7. **Tao Zhang:** April 1, 2017 until October 1, 2017
Tao completed his PhD in Groningen and will shortly work in the glyco group as postdoc. His direct supervisor will be Manfred Wuhrer and he will have a desk in R6-26.
8. **Marijn Timmer,** from April 1, 2017, until July 2017.
Marijn is a LST bachelor student. He will join the Proteomics group under Paul Hensbergen/Peter van Veelen's supervision for a 3 months internship. He will sit in L3-66.
9. **Jelena Simunovic** – April 1, 2017 until 15 June 2017
Jelena is a PhD student from Genos, this is the second of her secondments abroad, within the GlyCoCan project. She will work with Kathrin Stavenhagen. She will sit in T4-54.
10. **Ana Momcilovic** – April 2017 until July 2017.
Ana is a PhD student from Genos, this is the second of her secondments abroad, within the GlyCoCan project. She will work with Viktoria Dotz. She will sit in T4-56.
11. **Juan Carlos Alarcon** – May 1, 2017 until May 1 2019
Juan Carlos will work on his joint LUMC-Columbian Institution PhD for the coming 2 years, in the Metabolomics and in the Proteomics group. His daily supervisor will be Martin Giera and he will sit in S3-48. His project is tentatively titled: Metabolomic and proteomic profiles of colon cancer cells under co-culture with T cells and hypoxia.
12. **Rob Buurstedde-** April 17 until June 30.
Rob will do his internship on the project "Identification of GR hippocampal regulatory complexes using mass spectrometry. He will join the Proteomics group under Paul Hensbergen/Peter van Veelen's supervision for a 3 months internship. This is a joint project with the Department of Endocrinology. He will sit at Endocrinology.

People "leaving" the group

1. **Dana Ohana:** april 1, 2017.
Dana worked as a PhD student in the Bioinformatics group, under Magnus Palmblad supervision. She will still be around to complete her thesis. She can still be found in R3-003a
2. **Hulda Sofia Jónasdóttir:**
Hulda worked as a PhD student in the Metabolomics group, under Martin Giera's supervision. She is finalizing her thesis while working as a post-doc in Iceland. We look forward to host her again soon for the defense of her PhD thesis.
3. **Sander Wagt:** april 1, 2017.
Sander is a MSc Anal.Chem. student at VU University, Amsterdam. For his 8-months internship he worked under Guinevere Kammeijer's supervision. Title of his project: Exploring the possibilities for isomer separation of glycans and glycopeptides using "zero-flow" separation with CE-ESI-MS
4. **Pablo Mohaupt:** april 1, 2017.
Pablo is a MSc Anal.Chem. student at VU University, Amsterdam. For his 6-months internship he worked under Noortje de Haan's supervision. Title of his project: Optimizing reducing end labeling in combination with sialic acid stabilization for the analysis of released glycans with CE-ESI-MS.
5. **Tamás Pongrász:** 14 april 2017
Tamás is an Erasmus exchange student from the University of Pécs, Medical School. He worked in the

glycogroup under Guinevere Kammeijer's supervision, to explore the possibilities of coupling CE to FT-ICR and its usefulness for intact protein analysis.

The CPM will be represented at:

- **CASSS**, Brussels, 15-17 March 2017. Manfred is attending.
- **MSB**, Noordwijkerhout, 26-29 March, 2017. Oleg, Manfred, Noortje, David, Guinevere, Valeria, Tamás and Sander will attend.
- **ABRF 2017**, San Diego: March 25 - 28, 2017. Members of the bioinformatics team will attend.
- The **Proteomics Forum**, Postdam: April 3-5, 2017 (<http://www.proteomic-forum.de/>) Manfred will present, Peter will attend.
- **6th European Lipidomic Meeting**, Toulouse: 10-12 April. Plenary lecture by Martin! <https://elm2016.sciencesconf.org/>
- **ECCMID** – Vienna: 22-25 April 2017 (<http://www.eccmid2017.org/>). Paul will present.
- **10th International Metabolomics workshop** – Leiden: 1-5 May. Lectures given by Sarantos and Martin. <http://www.plantsandmetabolomics.nl/>
- **first HUPO-HIPP workshop** (immunopeptidomics, closed meeting) - Zurich: May 4-5, 2017. Peter will attend.
- **Jenner Symposium** – Dubrovnik: May 6-9. <http://www.jenner-glyco.com>. Stephi, Viktoria, Kathrin and Manfred will give presentations.
- **ASMS** - Indianapolis: June 4-8, 2017.
- **Joint Glycobiology Meeting** – Aachen: September 17-19, 2017. (<http://www.jgm2017.rwth-aachen.de/>). Call for abstracts! Members of the glycobiology group will attend.
- **HUPO** – September 17-20, 2017, Dublin. (<http://hupo2017.ie/>). Close of Abstracts – 5th April 2017. Members of the bioinformatics group will attend.

Publications:

- **Upcoming Book:** Methods in Molecular Biology (Springer) - Clinical Metabolomics Methods and Protocols – edited by Martin **Giera**.
- Mueller C, Binder U, Bracher F, **Giera M**. Antifungal drug testing: Combining minimal inhibitory concentration testing with target identification by the use of gas chromatography - mass spectrometry. Nature Protocols. 2017, accepted.
- Jónasdóttir HS, Brouwers H, Kwekkeboom JC, van der Linden HM, Huizinga T, Kloppenburg M, Toes RE, **Giera M**, Ioan-Facsinay A. Targeted lipidomics reveals activation of resolution pathways in knee osteoarthritis in humans. Osteoarthritis Cartilage. 2017 Feb 8. pii: S1063-4584(17)30839-7. doi: 10.1016/j.joca.2017.01.018.
- Laan LC, Williams AR, **Stavenhagen K**, **Giera M**, Kooij G, Vlasakov I, Kalay H, Kringel H, Nejsum P, Thamsborg SM, **Wuhrer M**, Dijkstra CD, Cummings RD, van Die I. The whipworm (*Trichuris suis*) secretes prostaglandin E2 to suppress proinflammatory properties in human dendritic cells. FASEB J. 2017 Feb;31(2):719-731. doi: 10.1096/fj.201600841R.
- Kohler I, **Giera M**. Recent advances in liquid-phase separations for clinical metabolomics. J Sep Sci. 2017 Jan;40(1):93-108. doi: 10.1002/jssc.201600981. Review.
- Kracht MJ, van Lummel M, Nikolic T, Joosten AM, Laban S, van der Slik AR, **van Veelen PA**, Carlotti F, de Koning EJ, Hoeben RC, Zaldumbide A, Roep BO. Autoimmunity against a defective ribosomal insulin gene product in type 1 diabetes. Nat Med. 2017 Feb 27. doi: 10.1038/nm.4289. [Epub ahead of print] PubMed PMID: 28263308.
- Jahn L, Hombrink P, Hagedoorn RS, Kester MG, van der Steen DM, Rodriguez T, Pentcheva-Hoang T, **de Ru AH**, Schoonakker MP, Meeuwse MH, Griffioen M, **van Veelen PA**, Falkenburg JH, Heemskerk MH. TCR-based therapy for multiple myeloma and other B-cell malignancies targeting intracellular transcription factor BOB1. Blood. 2017 Mar 9;129(10):1284-1295. doi: 10.1182/blood-2016-09-737536. PubMed PMID: 28053195.
- Kooy-Winkelaar YM, Bouwer D, **Janssen GM**, Thompson A, Brugman MH, Schmitz F, **de Ru AH**, van Gils T, Bouma G, van Rood JJ, **van Veelen PA**, Mearin ML, Mulder CJ, Koning F, van Bergen J. CD4 T-cell cytokines synergize to induce proliferation of malignant and nonmalignant innate intraepithelial

lymphocytes. Proc Natl Acad Sci U S A. 2017 Feb 7;114(6):E980-E989. doi: 10.1073/pnas.1620036114. PubMed PMID: 28049849; PubMed Central PMCID: PMC5307453.

- van Keimpema M, Grüneberg LJ, Schilder-Tol EJ, Oud ME, Beuling EA, **Hensbergen PJ**, de Jong J, Pals ST, Spaargaren M. The small FOXP1 isoform predominantly expressed in activated B cell-like diffuse large B-cell lymphoma and full-length FOXP1 exert similar oncogenic and transcriptional activity in human B cells. *Haematologica*. 2017 Mar;102(3):573-583. doi: 10.3324/haematol.2016.156455. PubMed PMID: 27909217.
- Kemna MJ, **Plomp R**, van Paassen P, **Koeleman CA**, **Jansen BC**, Damoiseaux JG, Cohen Tervaert JW, **Wuhrer M**. Galactosylation and Sialylation Levels of IgG Predict Relapse in Patients With PR3-ANCA Associated Vasculitis. *EBioMedicine*. 2017 Jan 28. pii: S2352-3964(17)30037-3. doi: 10.1016/j.ebiom.2017.01.033. [Epub ahead of print] PubMed PMID: 28169190.
- Fettke F, Schumacher A, Canellada A, Toledo N, Bekeredjian-Ding I, **Bondt A**, **Wuhrer M**, Costa SD, Zenclussen AC. Maternal and Fetal Mechanisms of B Cell Regulation during Pregnancy: Human Chorionic Gonadotropin Stimulates B Cells to Produce IL-10 While Alpha-Fetoprotein Drives Them into Apoptosis. *Front Immunol*. 2016 Dec 8;7:495. doi: 10.3389/fimmu.2016.00495. PubMed PMID: 28008329; PubMed Central PMCID: PMC5144100.
- Hafkenscheid L, **Bondt A**, Scherer HU, Huizinga TW, **Wuhrer M**, Toes RE, Rombouts Y. Structural Analysis of Variable Domain Glycosylation of Anti-Citrullinated Protein Antibodies in Rheumatoid Arthritis Reveals the Presence of Highly Sialylated Glycans. *Mol Cell Proteomics*. 2017 Feb;16(2):278-287. doi: 10.1074/mcp.M116.062919. PubMed PMID: 27956708; PubMed Central PMCID: PMC5294214. (**this one made it to the cover of MCP!**)
- **Sonneveld ME**, Koelewijn J, de Haas M, Admiraal J, **Plomp R**, **Koeleman CA**, **Hipgrave Ederveen AL**, Ligthart P, **Wuhrer M**, van der Schoot CE, Vidarsson G. Antigen specificity determines anti-red blood cell IgG-Fc alloantibody glycosylation and thereby severity of haemolytic disease of the fetus and newborn. *Br J Haematol*. 2017 Feb;176(4):651-660. doi: 10.1111/bjh.14438. PubMed PMID: 27891581.
- **Vreeker GC**, **Wuhrer M**. Reversed-phase separation methods for glycan analysis. *Anal Bioanal Chem*. 2017 Jan;409(2):359-378. doi: 10.1007/s00216-016-0073-0. Review. PubMed PMID: 27888305; PubMed Central PMCID: PMC5203856.
- **Reiding KR**, Ruhaak LR, Uh HW, El Bouhaddani S, van den Akker EB, **Plomp R**, **McDonnell LA**, Houwing-Duistermaat JJ, Slagboom PE, Beekman M, **Wuhrer M**. Human Plasma N-glycosylation as Analyzed by Matrix-Assisted Laser Desorption/Ionization-Fourier Transform Ion Cyclotron Resonance-MS Associates with Markers of Inflammation and Metabolic Health. *Mol Cell Proteomics*. 2017 Feb;16(2):228-242. doi: 10.1074/mcp.M116.065250. PubMed PMID: 27932526; PubMed Central PMCID: PMC5294210.
- Choi, M., Eren-Dogru, Z. F., Colangelo, C., Cottrell, J., Hoopmann, M. R., Kapp, E. A., Kim, S., Lam, H., Neubert, T. A., **Palmblad, M.**, Phinney, B. S., Weintraub, S. T., MacLean, B. and Vitek, O. ABRF Proteome Informatics Research Group (iPRG) 2015 Study: Detection of Differentially Abundant Proteins in Label-Free Quantitative LC-MS/MS Experiments. *Journal of Proteome Research*, 16, 2 (2017/02/03 2017), 945-957.
- Kilgour, D. P. A., Hughes, S., Kilgour, S. L., Mackay, C. L., **Palmblad, M.**, Tran, B. Q., Goo, Y. A., Ernst, R. K., Clarke, D. J. and Goodlett, D. R. Autopicker - a Robust and Reliable Peak Detection Algorithm for Mass Spectrometry. *Journal of The American Society for Mass Spectrometry*, 28, 2 (2017), 253-262
- **Mohammed Y**, **Palmblad M.**, Visualizing and comparing results of different peptide identification methods. *Briefings in Bioinformatics*. 2016 Dec 22. pii: bbw115. doi: 10.1093/bib/bbw115. [Epub ahead of print, to be printed in 2017].
- Dilillo, M., Ait-Belkacem, R. Esteve, C., Pellegrini, D., **Nicolardi, S.**, Costa, M., Vannini, E., de Graaf, E.L., Caleo, M., and **McDonnell, L.** Ultra-High Mass Resolution MALDI Imaging Mass Spectrometry of Proteins and Metabolites in a Mouse Model of Glioblastoma. *Scientific Reports*, 2017, accepted.
- Wijermars LG, Bakker JA, de Vries DK, van Noorden CJ, Bierau J, **Kostidis S**, **Mayboroda OA**, Tsikas D, Schaapherder AF, Lindeman JH. The hypoxanthine-xanthine oxidase axis is not involved in the initial phase of clinical transplantation-related ischemia-reperfusion injury. *Am J Physiol Renal Physiol*. 2017 Mar 1;312(3):F457-F464. doi: 10.1152/ajprenal.00214.2016.

Other information

- A collaboration agreement with Sciex has been signed, giving us access to a Triple ToF 6600 including ion mobility.
- Bas Jansen, Rosina Plomp, Kathrin Stavenhagen and Albert Bondt submitted their PhD theses to the respective reading committees.
- Sha Lou will have her PhD defence on May 16, 2017.
- The MS Imaging group will start moving into L4-74 at the beginning of April. Paul and Oleg will relocate to R6.
- Don't forget that from march 1, 2017 you are requested to book the instrument for your measurements via the online agenda on the CPMtools ([Book/reserve instrument](#))

The next newsletter will land in your inbox in a month time. Any information you wish to share can be sent to CPMsecretary@LUMC.nl or communicated to:

For MS Imaging: Stephanie Holst / Bram Heijs

For Lipidomics/Metabolomics: Martin Giera

For Proteomics: Peter van Veelen

For Glycomics: Albert Bondt / Viktoria Dotz

For Bioinformatics: Magnus Palmblad / Yassene Mohammed