

# Scientific work performed thanks to the Bennink Foundation

Amsterdam, October 2020

## Scientific Articles and Reviews:

### 2014

1. Garajová I, Le Large TY, Frampton AE, Rolfo C, Voortman J, Giovannetti E. **Molecular mechanisms underlying the role of microRNAs in the chemoresistance of pancreatic cancer.** *Biomed Res Int* 2014;2014:678401.

### 2015

1. Le Large TY, Meijer LL, Prado MM, Kazemier G, Frampton AE, Giovannetti E. **Circulating microRNAs as diagnostic biomarkers for pancreatic cancer.** *Exp Rev Mol Diagnostics.* 2015;15(12):1525-9.
2. Le Large TY, Frampton AE, Meijer LL, Stebbing J, Kazemier G, Giovannetti E. **Usefulness of Measuring microRNAs in Bile and Plasma for Pancreatic Ductal Adenocarcinoma Diagnosis.** *Am J Gastroenterol* 2015;110(5):768-9.

### 2016

1. Le Large TY, Mato Prado M, Krell J, Bijlsma MF, Meijer LL, Kazemier G, Frampton AE, Giovannetti E. **Bioinformatics reveals pancreatic cancer molecular subtypes specific to the tumor and microenvironment.** *Exp Rev Mol Diagnostics* 2016;16(7):733-6.
2. Caparello C,\* Meijer LL,\* Garajova I, Falcone A, Le Large TY, Funel N, Kazemier G, Peters GJ, Vasile E, Giovannetti E. **FOLFIRINOX and translational studies: Towards personalized therapy in pancreatic cancer.** *World J Gastroenterol.* 2016;22(31):6987-7005. (\*equally contributed)
3. Meijer LL, Puik JR, Kazemier G, Peters GJ, Giovannetti E. **The hENT-1 Expression and Localization Predict Outcome to Adjuvant Gemcitabine in Resected Cholangiocarcinoma Patients.** *Oncologist.* 2016;21(12):e4.

### 2017

1. Le Large TYS, Bijlsma MF, Kazemier G, van Laarhoven HMW, Giovannetti E, Jimenez C.R. **Key biological processes driving metastatic spread of pancreatic cancer as identified by multi-omics studies.** *Semin Cancer Biol* 2017;44:153-169. <http://dx.doi.org/10.1016/j.semcancer.2017.03.008>
2. Meijer LL, Frampton AE, Garajova I, Caparello C, Le Large TYS, Funel N, Vasile E, Stebbing J, Krell J, Kazemier G, Giovannetti E. **Circulating microRNAs as dynamic biomarkers of response to treatment with FOLFIRINOX combination therapy in advanced pancreatic ductal adenocarcinoma.** *Lancet* 2017;389, S68, [http://dx.doi.org/10.1016/S0140-6736\(17\)30464-6](http://dx.doi.org/10.1016/S0140-6736(17)30464-6)
3. Best MG, ..., Le Large TY, Meijer LL, Kazemier G, Giovannetti E et al. **Swarm Intelligence-Enhanced Detection of Non-Small-Cell Lung Cancer Using Tumor-Educated Platelets.** *Cancer Cell.* 2017;32(2):238-252.e9. doi: 10.1016/j.ccell.2017.07.004 doi: 10.1016/j.ccell.2017.07.004.
4. Puik JR,\* Meijer LL,\* Le Large TYS, Prado MM, Frampton AE, Kazemier G, Giovannetti E. **MicroRNA profiling for diagnosis, prognosis and stratification of cancer treatment in cholangiocarcinoma.** *Pharmacogenomics.* 2017;18(14):1343-1358. doi: 10.2217/pgs-2017-0010 (\*equally contributed)

### 2018

1. Meijer LL, Alberga A, de Bakker JK, vd Vliet HJ, Le Large TYS, van Grieken NCT, de Vries, Daams F, Zonderhuis BM, Kazemier G et al. **Outcomes and treatment options for duodenal adenocarcinoma: A systematic review and meta-analysis.** *Annals of Surgical Oncology* 2018 Sep;25(9):2681-2692. doi: 10.1245/s10434-018-6567-6
2. Meijer LL, Kazemier G. **ASO Author Reflections: Current Treatment Options for Duodenal Adenocarcinoma- A Call for Collaborative Studies.** *Ann Surg Oncol.* 2018 Oct 16. doi: 10.1245/s10434-018-6896-5.
3. Le Large TYS, El Hassouni B, Kazemier G, Giovannetti E et al. **Multidrug-resistant transporter expression does not always result in drug resistance.** *Cancer Sci.* 2018 Oct;109(10):3360-3362. doi: 10.1111/cas.13756.
4. Choy ATF, Carnevale I, Coppola S, Meijer LL, Kazemier G, Zaura E, Deng D, Giovannetti E. **The microbiome of pancreatic cancer: from molecular diagnostics to new therapeutic approaches to overcome chemoresistance caused by metabolic inactivation of gemcitabine.** *Expert Rev Mol Diagn.* 2018 Nov 5:1-5. doi: 10.1080/14737159.2018.1544495.
5. Meijer LL, Garajová I, Caparello C, Le Large TY, Frampton AE, Vasile E, Funel N, Kazemier G, Giovannetti E. **Plasma miR-181a-5p Down-Regulation Predicts Response and Improved Survival After FOLFIRINOX in Pancreatic Ductal Adenocarcinoma.** *Ann Surg.* 2018 Nov 1. doi: 10.1097/SLA.0000000000003084.
6. Le Large TY, El Hassouni B, Funel N, Olive K, Kazemier, van Laarhoven HWM, Jimenez C, Bijlsma MF, Giovannetti E. **Proteomic analysis of gemcitabine resistant pancreatic cancer cells reveals microtubule-associated protein 2 to confer sensitivity to taxane treatment.**

## 2019

1. Meijer LL\*, Puik JR\*, Le Large TYS, Heger M, Dijk F, Funel N, Wurdinger T, Garajová I, van Grieken NCT, van de Wiel M, Giovannetti E, Kazemier G. **Unravelling the diagnostic dilemma of pancreatic head lesions: A panel of circulating microRNAs to diagnose distal cholangiocarcinoma.** (\*equally contributed)
2. El Hassouni B, Mantini G, Li Petri G, Capula M, Boyd L, Weinstein HNW, Vallés-Martí A, Kouwenhoven MCM, Giovannetti E, Westerman BA, Peters GJ; EORTC PAMM Group To **Combine or Not Combine: Drug Interactions and Tools for Their Analysis. Reflections from the EORTC-PAMM Course on Preclinical and Early-phase Clinical Pharmacology.**
3. Alessandro Leonetti, Lenka Boyd, Jacopo Giuliani, Elisa Giovannetti, Ingrid Garajová, on behalf of the EORTC-PAMM group. **Light and shadow on innovative clinical trial designs: Reflections from the EORTC-PAMM Course on "Preclinical and Early-phase Clinical Pharmacology"**
4. Meijer LL, Zwart ES, Brandt BW, Mebius R, Deng D, Giovannetti E, Zaura E, Kazemier G. **Tumor microbiome: Pancreatic cancer and duodenal fluids contain multitudes, ...but do they contradict themselves?** Crit Rev Oncol Hematol. 2019 Dec;144:102824. doi: 10.1016/j.critrevonc.2019.102824. Epub 2019 Nov 2.

## 2020

1. Laura L. Meijer, M.D.; Tessa Y.S. Le Large, MD; Rosita Paleckyte, MSc; Lenka N.C. Boyd, MD; Bart Kok, BSc; Thomas Wurdinger, PhD; Tim Schelfhorst, BSc; Sander R. Piersma, PhD; Thang V. Pham, PhD; Nicole C.T. van Grieken, MD, PhD; Barbara M. Zonderhuis, MD; Freek Daams, MD, PhD; Hanneke W.M. van Laarhoven, MD, PhD; Maarten F. Bijlsma, PhD; Connie R. Jimenez, PhD; Elisa Giovannetti, MD, PhD; Geert Kazemier, MD, PhD **Combined expression of plasma thrombospondin-2 and CA19-9 for diagnosis of pancreatic cancer and distal cholangiocarcinoma – A proteome approach**
2. El Hassouni B, Granchi C, Vallés-Martí A, Supadmanaba IGP, Bononi G, Tuccinardi T, Funel N, Jimenez CR, Peters GJ, Giovannetti E, Minutolo F. **The dichotomous role of the glycolytic metabolism pathway in cancer metastasis: Interplay with the complex tumor microenvironment and novel therapeutic strategies.** Semin Cancer Biol. 2020 Feb;60:238-248.
3. Mantini G, Vallés AM, Le Large TYS, Capula M, Funel N, Pham TV, Piersma SR, Kazemier G, Bijlsma MF, Giovannetti E, Jimenez CR. **Co-expression analysis of pancreatic cancer proteome reveals biology and prognostic biomarkers.** Cell Oncol (Dordr). 2020 Aug 29. doi: 10.1007/s13402-020-00548-y. Online ahead of print.
4. Le Large TY, Mantini G, Meijer LL, Pham TV, Funel N, van Grieken NC, Kok B, Knol J, van Laarhoven HW, Piersma SR, Jimenez CR, Kazemier G, Giovannetti E, Bijlsma MF. **Microdissected pancreatic cancer proteomes reveal tumor heterogeneity and therapeutic targets.** JCI Insight. 2020 Aug 6;5(15):e138290. doi: 10.1172/jci.insight.138290
5. Boyd LNC, Peters GJ, Kazemier G, Giovannetti E. **NUC-1031 in biliary tract cancer: from bench to bedside and back?** Cancer Chemother Pharmacol. 2020 Jun;85(6):1011-1014. doi: 10.1007/s00280-020-04080-6. Epub 2020 May 31.
6. Meijer LL, Strijker M, de Bakker JK, Toennaer JGJ, Zonderhuis BM, van der Vliet HJ, Wilmink H, Verheij J, Daams F, Busch OR, van Grieken NCT, Besselink MG, Kazemier G. **Clinical outcome of patients with duodenal adenocarcinoma and intestinal-type papilla of Vater adenocarcinoma.** World J Gastrointestinal Oncol 2020

## Book Chapters:

1. Garajová I, Le Large TY, Giovannetti E, Kazemier G, Biasco G, Peters GJ. **The role of microRNAs in resistance to current pancreatic cancer treatment: translational studies and basic protocols for extraction and PCR analysis.** *Methods Mol Biol.* 2016;1395:163-87. Chapter 10.
2. Meijer LL, Puik JR, Le Large TYS, Frampton AE, Kazemier G, Giovannetti E. **Modification of drug response by microRNAs and microRNA polymorphisms.** *Royal Society of Chemistry Book: MicroRNAs in Diseases and Disorders: Emerging Therapeutic Targets, edited by Dr Philip Peplow. (in press)* (\*equally contributed)

## Congress Abstracts / Posters / Presentations:

### 2014

1. Oral presentation, Wetenschapsdag Chirurgie VUmc, November 2014, Tessa Le Large

### 2015

1. Poster presentation, Science Exchange Day VUmc, September 2015, Tessa Le Large
2. Poster presentation, Science Exchange Day VUmc, September 2015, Laura Meijer
3. Oral presentation, Wetenschapsdag Chirurgie, November 2015, Tessa Le Large
4. Oral presentation, Wetenschapsdag Chirurgie, September 2015, Laura Meijer

### 2016

1. Oral presentation, EORTC-PAMM Congress, Antwerp, Belgium, February 2016, Tessa Le Large

2. Invited speaker, EORTC-PAMM Congress, Antwerp, Belgium, February 2016, Elisa Giovannetti
3. Oral Presentation, EORTC-PAMM Congress, Antwerp, Belgium, February 2016, Laura Meijer
4. Oral Presentation, IHPBH congress, San Paolo, Brazil, April 2016, Laura Meijer
5. Poster Presentation, IHPBH congress, San Paolo, Brazil, April 2016, Tessa Le Large
6. Poster Presentation, IHPBH congress, San Paolo, Brazil, April 2016, Babs Zonderhuis
7. Oral Presentation, Chirurgendagen, Veldhoven, May 2016, Tessa Le Large
8. Oral Presentation, AISP congress, Rome, Italy, September 2016, Chiara Caparello
9. Oral presentation, Wetenschapsdag Chirurgie VUmc, November 2016, Jisce Puik
10. Oral presentation, Wetenschapsdag Chirurgie VUmc, November 2016, Laura Meijer

### **2017**

1. Poster presentation, AACR, Washington DC, US, April 2017, Tessa Le Large
2. Oral Presentation, E-AHPBA congress, Mainz, Germany, May 2017 Laura Meijer
3. Poster Presentation, E-AHPBA congress, Mainz, Germany, May 2017 Tessa Le Large
4. Oral Presentation, E-AHPBA congress, Mainz, Germany, May 2017 Babs Zonderhuis
5. Oral Presentation, EPC congress, Budapest, Hungary, June 2017, Laura Meijer
6. Poster Presentation, EPC congress, Budapest, Hungary, June 2017, Tessa Le Large
7. Invited lecture, ESMO Congress, Madrid, Spain, September 2017, Elisa Giovannetti
8. Invited lecture, MATD Congress, Paris, France, September 2017, Elisa Giovannetti
9. Oral Presentation, AISP congress, Milano, Italy, October 2017, Ingrid Garajova

### **2018**

1. Oral presentation, EORTC-PAMM Congress, Roma, Italy, February 2016, Ilaria Carnevale
2. Oral presentation, CCA retraite, Noordwijkerhout, February 2018, Laura Meijer
3. Oral presentation, CCA retraite, Noordwijkerhout, February 2018, Ilaria Carnevale
4. Invited lecture, 3rd International course of endovascular oncology, Pesaro, Italy, March 2018, Elisa Giovannetti
5. Invited lecture, Italian-French Erasmus Intensive Course in Oncology organized in collaboration with European Master of Genetics - University Paris7-Paris5, Firenze, Italy, March 2018, Elisa Giovannetti
6. Poster Presentation, AACR congress, Chicago, US, April 2018, Tessa Le Large
7. Poster Presentation, AACR congress, Chicago, US, April 2018, Laura Meijer
8. Poster Presentation, AACR congress, Chicago, US, April 2018, Jisce Puik
9. Oral Presentation, Chirurgendagen, Veldhoven, May 2018, Tessa Le Large
10. Oral Presentation, Chirurgendagen, Veldhoven, May 2018, Laura Meijer
11. Poster Presentation, EPC 2018, Berlin, Germany 2018, Tessa Le Large
12. Oral Presentation, IHPBA, Geneva 2018, Laura Meijer
13. Oral Presentation, IHPBA, Geneva 2018, Tessa Le Large
14. Oral Presentation, AISP congress, Roma, Italy, October 2018, Ilaria Carnevale

### **2019**

1. Poster presentation, EORTC-PAMM Congress, Verona, Italy, February 2019, Lenka Boyd
2. Poster presentation, EORTC-PAMM Congress, Verona Italy, February 2019, Ingrid Garajová
3. Poster presentation, CCA retraite, Noordwijkerhout, NL, February 2019, Lenka Boyd
4. Poster Presentation, AACR congress, Boston, US, April 2019, Lenka Boyd
5. Poster presentation, OOA retraite, Renesse, NL, October 2019, Lenka Boyd
6. Oral presentation, Wetenschapsdag Chirurgie VUmc, November 2019, Lenka Boyd

### **2020**

7. Poster presentation, EORTC-PAMM Congress, Stockholm, Sweden, January 2020, Giulia Mantini
8. Poster Presentation, AACR congress (online), July 2020, Giulia Mantini
9. Poster presentation, EPC 2020 (online), June 2020, Lenka Boyd
10. Invited lecture, International Society of Liquid Biopsy congress (online), 2020, Elisa Giovannetti
11. Oral presentation, EPC 2020 (online), June 2020, Giulia Mantini
12. Oral presentation, EORTC-PAMM Congress, Stockholm, Sweden, January 2020, Mjriam Capula
13. Oral presentation, AISP congress, Verona, Italy, September 2018, Giulia Mantini
14. Oral presentation, AISP congress, Verona, Italy, September 2018, Mjriam Capula

### **Grants awarded / applications:**

## **2016**

1. Travel grant EORTC-PAMM meeting, Antwerp, awarded February 2016, Young Investigator Tessa Le Large
2. Travel grant EORTC-PAMM meeting, , Antwerp, awarded February 2016, Young Investigator Laura Meijer
3. Lisa Waller Hayes Foundation Grant, awarded April 2016, Tessa Le Large
4. Proof-of-Concept CCA grant, June 2016 "Bench-to-bedside studies on the role of exosomal uptake for the individualized selection of effective drugs against metastatic pancreatic cancer"
5. Best presentation Award among young investigators, AISP congress, Roma, September 2016, Chiara Caparello

## **2017**

1. KWF grant, "Development and validation of phosphoproteomics to support personalized treatments in pancreatic cancer"
2. KWF grant, "Evaluation of tumor-educated platelet profiles for screening and follow-up of pancreatic cancer"
3. CCA grant, April 2017 "The microbiome of pancreatic cancer: a correlation between bacteria and pancreatic cancer?"
4. Travel grant EPC meeting, Budapest, Hungary, June 2017, Tessa Le Large
5. Travel grant EPC meeting, Budapest, Hungary, June 2017, Laura Meijer
6. Travel grant E-AHPBA meeting Mainz 2017, Laura Meijer
7. NWO Visitor's Travel grant 2017 for Prof. Omidreza Firuzi (Shiraz University, Iran), "Targeting C-met and related signaling pathways in three-dimensional co-cultures of primary pancreatic cancer and stellate cells"
8. Best Honor Program student, Jisce Puik
9. Nijbakker-Morra Studentenprijs, Jisce Puik

## **2018**

1. CCA Next Best Pitch Award, January 2018, Laura Meijer
2. EORTC-PAMM meeting 2018, February 2018, Roma, Oral Presentation grant, Ilaria Carnevale
3. American Association for Cancer Research, AACR-Warner Fund Scholar-in-Training Award, April 2018, Jisce Puik
4. Fondazione Pisana per la Scienza Onlus grant 2018, Elisa Giovannetti
5. Collaboration with University Hospitals of Florence and Pisa for the FAS-2018 grant application on "Exploiting ion channels and transporters for personalized therapeutic strategies in pancreatic and colorectal cancer"

## **2019**

1. CCA Proof-of-concept grant, February 2019 "A mechanopharmacology approach to overcome chemoresistance in pancreatic cancer", in collaboration with Prof. W. Crielaard (ACTA)

## **2020**

1. Horizon 2020 Marie Skłodowska-Curie RISE grant ALISE (Antibody Light-Induced Selectivity Enhancement for pancreatic cancer drugs)
2. KWF grant in collaboration with MCBI "The glycode in pancreas cancer: immune-suppressive signatures, novel opportunities for diagnosis and therapy
3. PANOMICS grant in collaboration with University of Pisa on
4. Collaboration with AMC/UMCU for KWF application on cholangiocarcinoma liquid biopsies, *submitted December 2019*
5. KWF grant, "Exploiting the pivotal role of exosomal-AXL in liver colonization for the individualized selection of effective drugs against metastatic pancreatic cancer" *submitted August 2018*