

Curriculum vitae with track record: SIMONA CHERA
(postdoctoral fellow in my lab from 2009 to 2015)

CURRENT AND PREVIOUS POSITIONS

- 20.06.2016 - **Associate Professor** (Førsteamanuensis)
Department of Clinical Science, Faculty of Medicine, University of Bergen, Norway;
10.2015 - **NCMM Young Associate Investigator**
The Center for Molecular Medicine Norway

FELLOWSHIPS, AWARDS AND PRIZES

- 2016 **Young Research Talent Project** - The Research Council of Norway - FRIPRO
2015 **Young Research Talent Project** - The Research Council of Norway - STAMCELLER
2015 **Excellence Project** - Nordic Countries, Novo Nordisk Foundation; success rate 10%

AWARDS:

- 2015 Prize for best presentation and project at the LS2 Annual Meeting, in the session "PI of tomorrow", Zurich, Switzerland

SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS

- 2015 - 2 PhD Students: H. Vethe* (2015-2019); T.A. Legøy (2017-on going);
(*co-shared with Prof. H. Ræder)
2018 - 2 Master Students: A. Mathisen (2018-2019); N. Gharari (2018-2019 collaboration UiB-Karolinska Institute)
Faculty of Medicine / Department of Clinical Science / University of Bergen / Norway

TEACHING ACTIVITIES

- 2019- Lecturer 4x45min: "Ageing Biology & Organ Regeneration Strategies" – ELMED303 19V / Future Medicine, UiB (*content developed by the applicant*): 17 students
2018- Lecturer 2x45min: "Animal Models" – BMED320 18H / Methods in Medical Cell Biology, UiB (*content developed by the applicant*): 20 students
2017- Responsible for organising Optional Module: "Future Medicine" 2 weeks per year, UiB
2016 Lecturer 2x50min: "National PhD Course in Molecular Medicine" – 2-week course for PhD students, organized in Oslo, Norway (*content developed by the applicant*)

ORGANISATION OF SCIENTIFIC MEETINGS

- Oct. 2018 K2 Doctoral School Retreat / 35 participants / Norway

INSTITUTIONAL RESPONSIBILITIES

- 2016 Departmental representative in Professorial Committee (*K2 representantene i semesterstyret for 12 semester MEDICINE*)

PROJECT MANAGEMENT EXPERIENCE

- 2019-2020 Co-PI: NCMM seed grant: Regulating cell-differentiation potential through mechanical forces and adhesion
2016-2020 PI: FRIPRO: Characterizing and modulating the insulin-producing beta-cell fate in monogenic diabetes by using novel genetic setups
2015-2020 PI: Novo Nordisk Foundation: Characterizing and reversing β -cell senescence and proliferation quiescence in monogenic diabetes
2015-2019 PI: STAMCELLER: Identifying the molecular mechanisms leading to age-related chronic disease onset using an innovative in vivo setup

COMMISSIONS OF TRUST

- 2015 - Ad hoc reviewer: Diabetologia, Current Pharmaceutical Biotechnology, Aging, Frontiers in Pharmacology,
2017- Reviewer, grant applications Medical Research Council (UK); Horizon2020;
2016 - Editorial board member: Reviews in Biological and Biomedical Sciences

MEMBERSHIPS OF ACADEMIES / SCIENTIFIC SOCIETIES

- 2017 – Member, *Swedish Developmental Biology Organization (SwedBo)*
2015 – 2018 Member, *European Association for the Study of Diabetes (EASD)*

PUBLICATION TRACK RECORD

The total number of publications during the career:

25 peer-reviewed papers h-index=17

Total publications in peer-reviewed journals = 25

First author = 7, Research articles=17, Reviews=7, Book chapter=1

Last author = 2

Publications without PhD supervisor =12

Cumulative citation index excluding self-citations (ISI) = 1602

Citations: 10 most cited articles from the last 10 years have:

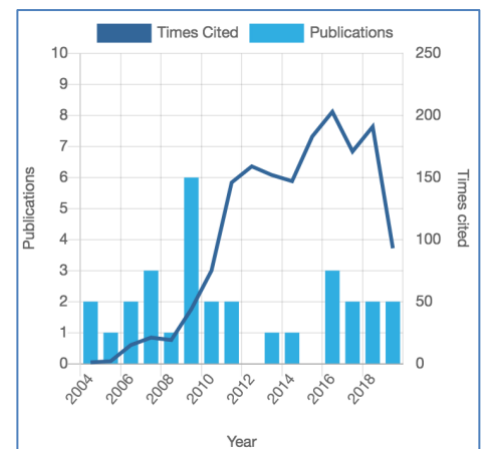
591 (Nature, 2010), 186 (Dev. Cell, 2009), 151 (Nature, 2014), 91 (Dev. Biol. 2009), 60 (Diabetes, 2011), 58 (Cell Metab. 2013), 50 (Trends Cell Biol, 2009), 44 (BBA-Mol. Cell Res, 2009), 32 (Dev. Growth. Diff., 2011), 25 (Cell Metab. 2017) citations.

Original peer-reviewed articles:

1. Furuyama K, **Chera S**, van Gurp L, Damond N, Oropeza D, Ghila L, Vethe H, Paulo JA, Joosten AM, Berney T, Bosco D, Dorrel C, Grompe M, Ræder H, Roep BO, Thorel F and Herrera PL, Diabetes relief in mice by glucose-sensing insulin-secreting human α -cells, **Nature** **2019** 567: 43–48
2. Vethe H, Ghila L, Hoareau L, Bjørlykke Y, Berle M, Haaland ØA, Hoareau L, Paulo J, Scholz H, **Chera S**, Ræder H. “Modulating Wnt signaling in human induced pluripotent stem cell-derived S7 cells” – **Front. Endocrinol.**, **2019**, 08 May doi: 10.3389/fendo.2019.00293
3. Cigliola V, Ghila L, Thorel F, van Gurp L, Baronnier D, Gupta S, Miyatsuka T, Kaneto H, Magnuson MA, Osipovich AB, Sander M, Wright C, Thomas MK, Furuyama K, **Chera S** and Herrera PL, Pancreatic Islet-Autonomous Signals Modulate Identity Changes of Glucagon+ α -Cells, **Nature Cell Biology** **2018** Nov;20(11):1267-1277. doi: 10.1038/s41556-018-0216-y. PMID: 30361701
4. Berle M, Ghila L, Vethe H, Chaudhry A, Garberg H, Beisland C, Haaland ØA, Oveland E, Halvorsen OJ, Davidsson T, **Chera S**. Novel protein signatures suggest progression to muscular invasiveness in bladder cancer. **PLoS One** **2018** Nov 12;13(11):e0206475. doi: 10.1371/journal.pone.0206475. PMID: 30419021
5. Chakravarthy H, Gu X, Enge M, Dai X, Wang Y, Damond N, Downie C, Liu K, Wang J, Xing Y, **Chera S**, Thorel F, Quake S, Oberholzer J, MacDonald PE, Herrera PL, Kim SK. Converting Adult Pancreatic Islet α Cells into β Cells by Targeting Both Dnmt1 and Arx, **2017 Cell Metabolism** 25(3):622-634.
6. Vethe H, Bjørlykke Y, Ghila LM, Paulo JA, Scholz H, Gygi SP, **Chera S**, Ræder H. Probing the missing mature β -cell proteomic landscape in differentiating patient iPSC-derived cells. **Scientific Reports**. **2017** Jul 6;7(1):4780. doi: 10.1038/s41598-017-04979-w. PMID: 28684784
7. **Chera S**, Herrera PL. Regeneration of Pancreatic Insulin-Producing Cells by In Situ Adaptive Cell Conversion, **2016 Current Opinion in Genetics and Development** 40:1-10
8. Cigliola V, Thorel F, **Chera S**, Herrera PL. Stress-Induced Islet Cell Identity Changes, **2016 Diabetes, Obesity and Metabolism** 18(Suppl 1):87-96

Manuscripts submitted/in revision:

1. Vethe H*, Legøy TA*, Abadpour S, Strand BL, Scholz H, Paulo JA, Ræder H., Ghila L., **Chera S**. Encapsulation boosts islet-cell signature in differentiating human induced pluripotent stem cells via integrin signaling – *Scientific Reports (in revision)*
2. Cigliola V, Ghila L, **Chera S**, Herrera PL. Regeneration Brakes: A Common Paradigm of Regenerative Systems – *invited review Stem Cells (in revision)*
3. Bjørlykke Y, Søviknes AM, Hoareau L, Vethe H, Mathisen AF, **Chera S**, Vaudel M, Ghila L, Ræder H. hiPSC colony morphology variations associated with distinct proteomic signatures – *Stem Cell Internat. (submitted May 2019)*



CONFERENCES: 26 ORAL SCIENTIFIC COMMUNICATIONS AND 27 POSTERS PRESENTATIONS

Invited speaker at:

1. **17th World Congress of the International Pancreas & Islet Transplant Association**, Mentor of Young Investigator Pre-congress Symposia Stream 3, Lyon, France (2019)
2. **Nordic Centre for Molecular Medicine Retreat**, Oslo, Norway (2019)
3. **Joint Lund/Bergen/FIMM Meeting on Extreme can be useful**, Malmo, Sweden (2019)
4. **Joint BSDB/Nordic Meeting on Developmental Biology and Regeneration**, Stockholm, Sweden (2017), *r*
5. **The Christie Conference [Christiekonferansen 2017]**, Bergen, Norway (2017), *Invitation letter*
6. **Inauguration of K. G. Jebsen Center for Diabetes Research**: New laboratories and new collaborations, Bergen, Norway (2017)
7. **Nordic Molecular Medicine Network Meeting**, Oslo, Norway (2017)
8. **4th Annual Helmholtz-Nature Medicine Diabetes Conference**, Munich, Germany (2016)
9. **Nordic Molecular Medicine Network Meeting**, Oslo, Norway (2016) Panel debate: "Research career development at the young group leader stage – the “make it or break it” phase"
10. **12th Annual Norwegian Stem Cell Networking Meeting**, Oslo, Norway (2015)
11. **Applied Bioinformatics in Diabetes and Obesity**, Bergen, Norway (2015)

Curriculum vitae with track record: KENICHIRO FURUYAMA
(postdoctoral fellow in my lab from 2013 to 2019)

CURRENT AND PREVIOUS POSITIONS

- 2019- Senior lecturer, Center for iPS Cell Research and Application, Kyoto University, Japan
2012-2019 Postdoc, Dept. of Genetic Medicine and Development, University of Geneva, Switzerland
2011-2012 Assistant professor, Center for iPS Cell Research and Application, Kyoto University, Japan
2003-2011 Clinical fellow, Dept of Hepato-Pancreato-Biliary Surgery and Transplantation, Kyoto University, Japan
1998-2003 Clinical resident/fellow, Dept of Surgery, Kobe City General Hospital, Japan

FELLOWSHIPS, AWARDS AND PRIZES

- 2017 Best poster prize in the 4th Geneva Diabetes Center Symposium
2011 KM Young Investigator Award, Kyoto University Graduate School of Medicine, Japan

SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS

3 PhD students (Dr. S.Hosokawa, Dr. T.Goto, Dr. M.Sakikubo) published papers as PhD works under my supervision.

COMMISSIONS OF TRUST

Reviewed for IDF (International Diabetes Federation) 2019 abstracts

MEMBERSHIPS OF ACADEMIES / SCIENTIFIC SOCIETIES

- 1998- Member, Japanese Surgery Society
1998- Member, Japanese Society of Gastroenterological Surgery
2003- Board Certified Surgeon, Japanese Surgery Society

PUBLICATION TRACK RECORD

- 1 Senescence caused by inactivation of the homeodomain transcription factor Pdx1 in adult pancreatic acinar cells in mice.
Horiguchi M, Yoshida M, Hirata K, [Furuyama K](#), Masui T, Uemoto S, Kawaguchi Y.
FEBS Lett. 2019 Jun 26.
- 2 Diabetes relief in mice by glucose-sensing insulin-secreting human α -cells.
[Furuyama K](#), Chera S, van Gurp L, Oropeza D, Ghila L, Damond N, Vethe H, Paulo JA, Joosten AM, Berney T, Bosco D, Dorrell C, Grompe M, Ræder H, Roep BO, Thorel F, Herrera PL.
Nature. 2019 Mar;567(7746):43-48.
- 3 Pancreatic islet-autonomous insulin and smoothed-mediated signalling modulate identity changes of glucagon+ α -cells.
Cigliola V, Ghila L, Thorel F, van Gurp L, Baronnier D, Oropeza D, Gupta S, Miyatsuka T, Kaneto H, Magnuson MA, Osipovich AB, Sander M, Wright CEV, Thomas MK, [Furuyama K](#), Chera S, Herrera PL.
Nat Cell Biol. 2018 Nov;20(11):1267-1277.
- 4 Ptf1a inactivation in adult pancreatic acinar cells causes apoptosis through activation of the endoplasmic reticulum stress pathway.
Sakikubo M, [Furuyama K](#), Horiguchi M, Hosokawa S, Aoyama Y, Tsuboi K, Goto T, Hirata K, Masui T, Dor Y, Fujiyama T, Hoshino M, Uemoto S, Kawaguchi Y.
Sci Rep. 2018 Oct 25;8(1):15812.
- 5 Liver-specific Prox1 inactivation causes hepatic injury and glucose intolerance in mice.
Goto T, Elbahrawy A, [Furuyama K](#), Horiguchi M, Hosokawa S, Aoyama Y, Tsuboi K, Sakikubo M, Hirata K, Masui T, Kubo H, Sakai Y, Uemoto S, Kawaguchi Y.
FEBS Lett. 2017 Feb;591(4):624-635.
- 6 Nardilysin Is Required for Maintaining Pancreatic β -Cell Function.
Nishi K, Sato Y, Ohno M, Hiraoka Y, Saijo S, Sakamoto J, Chen PM, Morita Y, Matsuda S, Iwasaki K, Sugizaki K, Harada N, Mukumoto Y, Kiyonari H, [Furuyama K](#), Kawaguchi Y, Uemoto S, Kita T, Inagaki N, Kimura T, Nishi E.
Diabetes. 2016 Oct;65(10):3015-27.
- 7 Diabetes Caused by Elastase-Cre-Mediated Pdx1 Inactivation in Mice.
Kodama S, Nakano Y, Hirata K, [Furuyama K](#), Horiguchi M, Kuhara T, Masui T, Kawaguchi M, Gannon M, Wright CV, Uemoto S, Kawaguchi Y.
Sci Rep. 2016 Feb 18;6:21211.
- 8 Impact of Sox9 dosage and Hes1-mediated Notch signaling in controlling the plasticity of adult pancreatic duct cells in mice.
Hosokawa S, [Furuyama K](#), Horiguchi M, Aoyama Y, Tsuboi K, Sakikubo M, Goto T, Hirata K, Tanabe W, Nakano Y, Akiyama H, Kageyama R, Uemoto S, Kawaguchi Y.
Sci Rep. 2015 Feb 17;5:8518.
- 9 Diabetes recovery by age-dependent conversion of pancreatic δ -cells into insulin producers.
Chera S, Baronnier D, Ghila L, Cigliola V, Jensen JN, Gu G, [Furuyama K](#), Thorel F, Gribble FM, Reimann F, Herrera PL.
Nature. 2014 Oct 23;514(7523):503-7
- 10 CAPS1 deficiency perturbs dense-core vesicle trafficking and Golgi structure and reduces presynaptic release probability in the mouse brain.
Sadakata T, Kakegawa W, Shinoda Y, Hosono M, Katoh-Semba R, Sekine Y, Sato Y, Tanaka M, Iwasato T, Itohara S, [Furuyama K](#), Kawaguchi Y, Ishizaki Y, Yuzaki M, Furuichi T.
J Neurosci. 2013 Oct 30;33(44):17326-34.
- 11 Continuous cell supply from a Sox9-expressing progenitor zone in adult liver, exocrine pancreas and intestine.
[Furuyama K](#), Kawaguchi Y, Akiyama H, Horiguchi M, Kodama S, Kuhara T, Hosokawa S, Elbahrawy A, Soeda T, Koizumi M, Masui T, Kawaguchi M, Takaori K, Doi R, Nishi E, Kakinoki R, Deng JM, Behringer RR, Nakamura T, Uemoto S.
Nat Genet. 43 (1):34-41, 2011
- 12 Reduction of Ptf1a gene dosage causes pancreatic hypoplasia and diabetes in mice

- Fukuda A, Kawaguchi Y, Furuyama K, Kodama S, Horiguchi M, Kuhara T, Kawaguchi M, Terao M, Doi R, Wright CV, Hoshino M, Chiba T, Uemoto S.
Diabetes. 57 (9) : 2421-2431, 2008
- 13 Rbp-j regulates expansion of pancreatic epithelial cells and their differentiation into exocrine cells during mouse development.
Fujikura J, Hosoda K, Kawaguchi Y, Noguchi M, Iwakura H, Odori S, Mori E, Tomita T, Hirata M Ebihara K, Masuzaki H, Fukuda A, Furuyama K, Tanigaki K, Yabe D and Nakao K
Dev Dyn. 236(10):2779-91. 2007
- 14 Ectopic pancreas formation in Hes1 -knockout mice reveals plasticity of endodermal progenitors of the gut, bile duct, and pancreas.
Fukuda A, Kawaguchi Y, Furuyama K, Kodama S, Horiguchi M, Kuhara T, Koizumi M, Boyer DF., Fujimoto K, Doi R, Kageyama R, Wright CVE, Chiba T.
J Clin Invest. 116(6):1484-93. 2006
- 15 Loss of the major duodenal papilla results in brown pigment biliary stone formation in pdx1 null mice.
Fukuda A, Kawaguchi Y, Furuyama K, Kodama S, Kuhara T, Horiguchi M, Koizumi M, Fujimoto K, Doi R, Wright CVE, Chiba T.
Gastroenterology. 130(3):855-67. 2006
- 16 Clinical significance of focal adhesion kinase in resectable pancreatic cancer.
Furuyama K, Doi R, Mori T, Toyoda E, Ito D, Kami K, Koizumi M, Kida A, Kawaguchi Y, Fujimoto K.
World J Surg. 30(2):219-26, 2006

CONFERENCES: 4 ORAL SCIENTIFIC COMMUNICATIONS AND 8 POSTERS PRESENTATIONS

Invited speaker at:

- 1 Conversion of Human non- β -cells into Insulin Producers.
Keystone Symposia, March 2019, Whistler, Canada.
- 2 Alpha-Cell Transdifferentiation.
78th American Diabetes Association, June 2018, Orlando, USA.
- 3 Conversion of Human Pancreatic non- β -cells into Insulin Producers.
International Diabetes Federation Congress, December 2017, Abu Dhabi, UAE.
- 4 Origin of pancreatic progenitor cells.
45th European Pancreatic Club meeting, June 2013, Zurich, Switzerland.