



Universiteit
Leiden
The Netherlands

Duct cells in development, regeneration, and transplantation: charting a path to new islets

Balak, J.R.A.

Citation

Balak, J. R. A. (2025, May 16). *Duct cells in development, regeneration, and transplantation: charting a path to new islets*. Retrieved from <https://hdl.handle.net/1887/4246519>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/4246519>

Note: To cite this publication please use the final published version (if applicable).

Curriculum Vitae

Jeetindra Balak was born on August 3, 1989, in Leiden, the Netherlands. After completing his pre-university education at Bonaventura College in Leiden, he began his medical training at Leiden University in September 2007.

During his studies, Jeetindra actively engaged in both academic and extracurricular pursuits. He was involved in student organisations dedicated to medical education, including the Medische Faculteit der Leidse Studenten (MFLS) and the International Federation of Medical Students' Associations-Leiden (IFMSA-Leiden). He also served as the first president of the Spoedeisende Hulp Studenten Organisatie (SEHSO)-Leiden, an organisation focused on emergency medicine education for students. On an international scale, he held the role of Secretary-General of the European Medical Students' Association (EMSA), advocating for cross-border collaboration in medical education. Additionally, he was a member of the Leiden University Student Council. Academically, Jeetindra participated in two prestigious Honours Classes at Leiden University: the Honours Class of 2009 - *Psychiatric Disorders Across the Lifespan* (Faculty of Medicine), where he contributed as an editor for the final publication, and the Honours Class 2010 - *For God's Sake* (Faculties of Medicine, Law, and Humanities), an interdisciplinary exploration of healthcare, ethics, and law.

His first steps into research came through an elective summer research project, *Breakpoint Analysis of Novel Deletions Causing Thalassemia*, at the Hemoglobinopathies Laboratory (Department of Human and Clinical Genetics, LUMC). Under the mentorship of Dr. C. Hartevelde, he investigated genomic deletions responsible for thalassemia, sparking his fascination with basic research. This passion led him to a scientific internship in the laboratory of Prof. Dr. E.J.P. de Koning, where he focused on beta cell regeneration. His growing interest in translational medicine ultimately drove him to pursue a PhD at the same lab, focused on human pancreas duct cell plasticity and the possible role of these cells in beta cell regeneration. During his PhD traineeship he mentored multiple medical and biomedical science students during their internships.

While advancing his research, Jeetindra also continued his clinical training, earning his master's degree in Medicine in December 2016. In January 2017, he began his residency in internal medicine at the Haga Hospital in The Hague under the guidance of Dr. M. van Buren and Dr. Ir. J. Lagro. In his second year of residency, he won the prestigious *Heilige Huisjes* session at the annual conference of the Dutch Society of Internal Medicine with his presentation: *First, Do No Harm: No Insulin in the Treatment of the Hyperosmolar Hyperglycaemic Syndrome*. He was also actively involved as a member of the editorial board for *Het Acute Boekje*, a key resource for internal medicine doctors in the Netherlands.

In 2020, he transitioned to Leiden University Medical Center (LUMC) to complete his internal medicine training under the mentorship of Prof. Dr. J.W. de Fijter and Prof. Dr. N.M. Appelman-Dijkstra. He then pursued a nephrology specialization under the supervision of Prof. Dr. J.I. Rotmans and Drs. A. Gaasbeek. During his nephrology residency, Jeetindra participated in the Nephrology Partnership for Advancing Technology in Healthcare (N-PATH), the first official

European Advanced Training Course in Diagnostic and Interventional Nephrology, implementing a multidisciplinary approach funded by Erasmus+ Knowledge Alliance. In this project he received advanced training from leading European nephrologists, together with fellow nephrology residents.

Upon completing his nephrology training in 2023, he joined the nephrology department at the LUMC as an internist-nephrologist. In November 2024, Jeetindra has come full circle—returning to the Haga Hospital, where he first developed his clinical skills. Through his continued clinical practice, research and education contributions, he remains dedicated to advancing nephrology and internal medicine to improve outcomes for patients.

List of publications

Balak JRA, Töns HAM, Chuva de Sousa Lopes SM, de Koning EJP, Carlotti F. Cytoplasmic SOX9 Expression in Human Pancreas Development. In preparation.

Balak JRA, Doppenberg JB, Nijhoff MF, Dekkers OM, de Koning EJP. *Impact of Islet Purity on Graft Function in Islet Allograft Transplantation*. In preparation.

Balak JRA, Juksar J, Carlotti F, Lo Nigro A, de Koning EJP. *Organoids from the Human and Fetal Pancreas*. *Curr Diab Rep*. 2019 Dec 11;19(12):160

Westgeest A, **Balak JRA**, Mairuhu ATA. Chronische totale occlusie van de abdominale aorta: Syndroom van Leriche. *Focus Vasculair*. 2019

Balak JRA, de Graaf N, Zaldumbide A, Rabelink TJ, Hoeben RC, de Koning EJP, Carlotti F. *Highly efficient ex vivo lentiviral transduction of primary human pancreatic exocrine cells*. *Sci Rep*. 2019 Nov 1;9(1):15870.

Loomans CJ*, Williams Giuliani N*, **Balak JRA**, Ringnalda F, van Gurp L, Huch M, Boj SF, Sato T, Bonner-Weir S, Engelse MA, Rabelink TJ, Heimberg H, Vries RGJ, van Oudenaarden A, Carlotti F, Clevers H, de Koning EJP. *Expansion of adult human pancreatic tissue yields organoids harbouring progenitor cells with beta cell differentiation potential*. *Stem Cell Reports*. 2018 Mar 13;10(3):712-724.

Balak JRA, Loupatty A, Liefers GJ, Bosman WMPF. *Ileo-ileale invaginatie met als leading point een geïnvagineerde Meckel-divertikel*. *Nederlands Tijdschrift van Heelkunde*. 2017

Balak JRA, Williams N, Sundara YT, Dielen T, Loomans CJM, Carlotti F, de Koning EJP. *Improved expansion of primary pancreatic exocrine tissue by blockade of the TGFβ signaling pathway*. *Nederlands Tijdschrift voor Diabetologie*. 2015 Nov; 13(4):87-93.

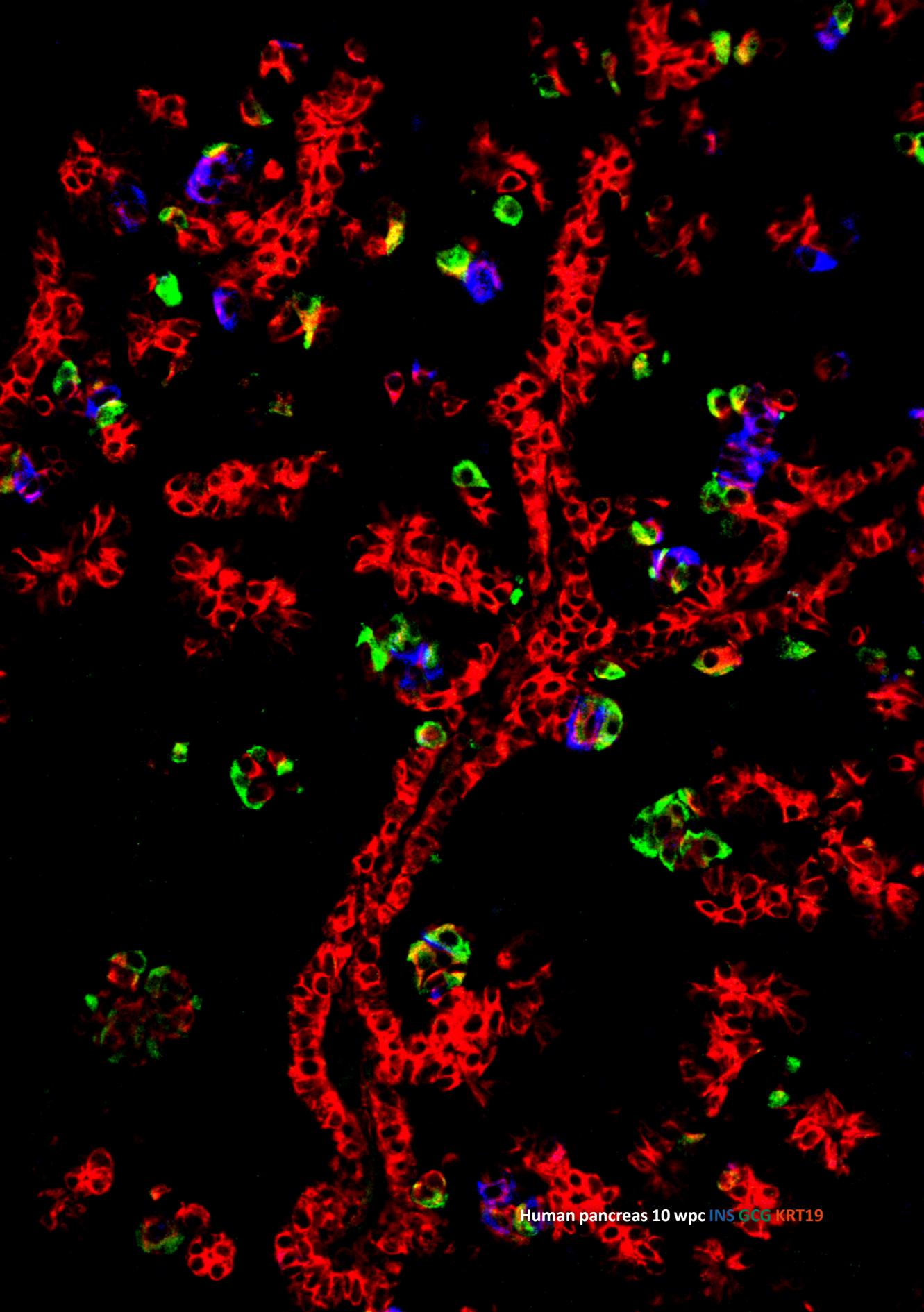
Balak JRA, Williams N, van Helden RWJ, Blanter A, Loomans CJM, Engelse MA, Carlotti F, de Koning EJP. *Identification and characterization of a putative progenitor cell subpopulation in the human adult duct cell compartment*. *Nederlands Tijdschrift voor Diabetologie*. 2014

Balak JRA, Spijker S, Loomans CJ, Carlotti F, De Koning E. *Differentiation of human pancreatic islet-depleted tissue towards a beta-cell phenotype using ingap, FGF7, and a GLP-1R agonist*. *Diabetes*. 2014 63 SUPPL. 1(A544-A545)

Balak JRA, Spijker HS, Loomans CJM, Carlotti F, de Koning EJP. *The effect of INGAP, FGF7 and*

a GLP-1R agonist on the differentiation of primary human duct cells towards beta cells. Nederlands Tijdschrift voor Diabetologie. 2013 Nov;11(4):137-138.

Phylipsen M, Chaibunruang A, Vogelaar IP, **Balak JRA**, Schaap RAC, Ariyurek Y, Fucharoen S, den Dunnen JT, Giordano PC, Bakker E, Harteveld CL. *Fine-tiling array CGH to improve diagnostics for alpha- and beta-thalassemia.* Human Mutation. 2012 Jan;33(1):272-80.



Human pancreas 10 wpc INS GCG KRT19

ॐ

भूर्भुवःस्वः
तत्सवितुर्वरेण्यं
भर्गो देवस्य धीमहि
धियो यो नःप्रचोदयात्

All

Earth Intermedium Space
That light I utilize

On that extremely pure energy I concentrate
To lead my attentions towards bright clear rightnesses

Rigveda 3.62.10