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## Research Area

The research conducted in the group of Henrik Dimke can be divided into two lines. Focus is directed towards:

- 1) Elucidating the regulatory mechanisms involved in maintaining mineral balance (Calcium, Magnesium, and Phosphate) via trans- and paracellular pathways in kidney and intestine. In particular, we aim to understand the molecular regulation of divalent cation transport proteins such as the epithelial channels TRPV5 and TRPM6, which play key roles in renal Ca<sup>2+</sup> and Mg<sup>2+</sup> transport as well as the paracellular pore forming claudins. In addition, focus is directed towards understanding the role of the calcium sensing receptor and its involvement in renal calcium transport and kidney stone formation.
- 2) Moreover, additional studies are focusing on understanding the role of the endothelium in renal physiology and various forms of kidney disease.

### Methods and Techniques

To elucidate the regulatory mechanisms involved in maintaining mineral balance, with special focus on the transport of the divalent cations calcium and magnesium in intestine and kidney, we have set up several approaches to study these specific areas utilizing various complex targeted transgenic strategies, histological and molecular biological techniques as well as human kidney isolates. In general, all studies aim to use whole-animal models to understand the often-complex relationship between structure and function of the kidney, intestine and bone as well as signaling cascades and hormonal regulatory systems functioning between cells and organs.

## CV

Henrik Dimke is a molecular biologist with a M.Sc from Aarhus University with a PhD from Radboud University Nijmegen in the Netherlands. He has worked within the field of physiology for more than 15 . The group of Associate Professor Henrik Dimke is part of the Epithelial Transport Section at the Cardiovascular and Renal Research unit, situated in the Department of Molecular Medicine at the University of Southern Denmark. In addition, Henrik Dimke is affiliated with the Department of Nephrology, at the Odense University Hospital.

Henrik Dimke has holds support from the Independent Research Fund Denmark, in the form of Research Project 1 and Sapere Aude grants. In addition, the laboratory of H. Dimke has received funding from Fabrikant Vilhelm Pedersen og Hustrus Mindelegat, the Novo Nordisk Foundation, the Carlsberg Foundation, the A.P. Møller Foundation, the Beckett Foundation and the Lundbeck Foundation.

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## Teaching portfolio

Formel education:

2016: Completed lecturer training program at SDU.

Experience with teaching, guidance and exams:

-Henrik Dimke has been teaching since 2008. Focus has mainly been directed towards physiology teaching of medical and biomechanical students (lectures and class hours as well as exercises) and related exams.

Education administrative tasks:

- Course director for module B8 (since 2016)

Specific classes taught at SDU since 2014:

Medicine, Module B8: Homeostasis

- Acid Base Physiology
- Renal Clearance
- Diuretics
- Regulatory function of the kidneys

Medicine, Module B7: Reproduction and Pharmacodynamics

- Calcium and Phosphate Balance
- Female Reproduction
- Male Reproduction

SU502 biomedicine

- Acid Base Physiology

Methods, materials and tools:

- Lectures (PowerPoint, whiteboard), team teaching (whiteboard), responsible for group teaching (physiology-exercise).

Educational development:

- Lecturer training program at SDU (2016)

educational awards:

- Department of Molecular Medicine Teaching Award (2017)

Methods, materials and tools: Lectures (PowerPoint, whiteboard), Classroom teaching (whiteboard), responsible for physiology exercise module B8

## Publications

### **Unge forskere: Vi vil advare mod direkte politisk styring af forskningsfinansiering**

Björk, R., Dalsgaard, P., Dimke, H., Jauffred, L., Laustsen, A. H., Pedersen, B. P., Sørensen, T. J. & Vallgård, K. A. A., 2. Oct 2020, In : Altinget.

### **Vedtag en hjælpepakke til yngre forskere**

Dalsgaard, P., Dimke, H., Jauffred, L., Kropp, K., Laustsen, A. H., Pedersen, B. P., Suhr, C., Sørensen, T. J. & Vallgård, K., 15. Sep 2020, In : Politiken. p. 7

### **Nej, Ane Halsboe-Jørgensen, forskningsmidler skal ikke bruges på erhvervsstøtte**

Björk, R., Dalsgaard, P., Dimke, H., Jauffred, L., Kropp, K., Laustsen, A. H., Pedersen, B. P., Sørensen, T. J. & Vallgård, K., 12. Sep 2020, In : Information.

### **Der er akut behov for en hjælpepakke til unge forskere**

Dalsgaard, P., Dimke, H., Kropp, K., Pedersen, B. P., Sørensen, T. J. & Vallgård, K., 8. Sep 2020, In : Altinget.

### **Risk of Urolithiasis in Patients with Inflammatory Bowel Disease:**

Dimke, H., Winther-Jensen, M., Allin, K. H., Lund, L. & Jess, T., Sep 2020, In : Clinical Gastroenterology and Hepatology.

### **Unge forskere: Genåbn universiteterne nu**

Björk, R., Dalsgaard, P., Dimke, H., Jauffred, L., Møller, N. M., Pedersen, B. P. & Sørensen, T. J., 20. May 2020, In : Science Report.

### **Forskning må ikke forveksles med erhvervsstøtte**

Björk, R., Dalsgaard, P., Dimke, H., Kropp, K., Laustsen, A. H., Pedersen, B. P., Sørensen, T. J. & Vallgård, K., 13. May 2020, In : Science Report.

### **Unge forskere: Fri forskning er vigtigt – også i krisetider**

Björk, R., Dalsgaard, P., Dimke, H., Jauffred, L., Møller, N. M., Niss, K., Pedersen, B. P., Sørensen, T. J. & Vallgård, K. A. A., 12. May 2020, In : Altinget.

### **Inden næste epidemi**

Björk, R., Dimke, H., Dalsgaard, P., Engberg-Pedersen, A., Jauffred, L., Kropp, K., Niss, K., Pedersen, B. P., Sørensen, T. J. & Vallgård, K., 1. May 2020, In : Weekendavisen. p. 13

### **G protein-coupled pH-sensing receptor OGR1 and metabolic acidosis-induced hypercalciuria**

Dimke, H., May 2020, In : *Kidney International*. 97, 5, p. 852-854

### **Claudin-12 Knockout Mice Demonstrate Reduced Proximal Tubule Calcium Permeability**

Plain, A., Pan, W., O'Neill, D., Ure, M., Beggs, M. R., Farhan, M., Dimke, H., Cordat, E. & Alexander, R. T., 18. Mar 2020, In : *International Journal of Molecular Sciences*. 21, 6, 18 p., 2074.

### **Transcriptional dynamics of hepatic sinusoid-associated cells after liver injury**

Terkelsen, M. K., Bendixen, S. M., Hansen, D., Scott, E. A. H., Moeller, A. F., Nielsen, R., Mandrup, S., Schlosser, A., Andersen, T. L., Sorensen, G. L., Krag, A., Natarajan, K. N., Detlefsen, S., Dimke, H. & Ravnskjaer, K., 7. Mar 2020, In : *Hepatology (Baltimore, Md.)*.

### **Unge forskere: Ph.d.-studerende skal ikke udnyttes som billig arbejdskraft**

Bjork, R., Dalsgaard, P., Danbolt, M., Dimke, H., Jauffred, L., Niss, K., Pedersen, B. P., Sorensen, T. J. & Vallgård, K., 30. Jan 2020, In : *Altinget*.

### **Vi har ikke råd til at tabe en generation af unge forskere**

Dalsgaard, P., Dimke, H., Kropp, K., Niss, K., Pedersen, B. P., Rasmussen, L. V., Sorensen, T. J., Ulstrup, S. & Vallgård, K., 30. Jan 2020, In : *Berlingske Tidende*.

### **Unge forskere: Høj risikovillighed i forskningsfinansieringen er nødvendigt**

Bjork, R., Dalsgaard, P., Dimke, H., Engberg-Pedersen, A., Jauffred, L., Kropp, K., Niss, K., Pedersen, B. P. & Sorensen, T. J., 16. Jan 2020, In : *Altinget*.

### **Ny stillingsstruktur på universiteterne har flere faldgruber**

Det Unge Akademi & Dimke, H., 13. Jan 2020, In : *Altinget*.

### **Bekymrede forskere: Politisk styring af offentlige forskningsmidler må ikke underminere grundforskningen**

Bjork, R., Dalsgaard, P., Dimke, H., Jauffred, L., Kropp, K., Laustsen, A. H., Pedersen, B. P., Sorensen, T. J. & Vallgård, K. A. A., 2020, In : *Sciencereport.dk*.

### **Nephrotic syndrome is associated with increased plasma $K^+$ concentration, intestinal $K^+$ losses, and attenuated urinary $K^+$ excretion: a study in rats and humans**

Ydegaard, R., Svenningsen, P., Bistrup, C., Andersen, R. F., Stubbe, J., Buhl, K. B., Marcussen, N., Hinrichs, G. R., Iraqi, H., Zamani, R., Dimke, H. & Jensen, B. L., 1. Dec 2019, In : *American Journal of Physiology: Renal Physiology*. 317, 6, p. F1549-F1562

### **The kidney anion exchanger 1 affects tight junction properties via claudin-4**

Lashhab, R., Rumley, A. C., Arutyunov, D., Rizvi, M., You, C., Dimke, H., Touret, N., Zimmermann, R., Jung, M., Chen, X-Z., Alexander, T. & Cordat, E., 1. Dec 2019, In : *Scientific Reports*. 9, 1, 16 p., 3099.

### **Skævvridningen af dansk forskningsfinansiering har negative konsekvenser**

Det Unge Akademi, Videnskabernes Selskab & Dimke, H., 24. Nov 2019, In : *Sciencereport.dk*.

### **S-løftebrud er en katastrofe for universiteterne**

Det Unge Akademi, Videnskabernes Selskab & Dimke, H., 21. Nov 2019, In : *Altinget*.

### **Universitetets rammer giver få muligheder for risikovillig forskning**

Det Unge Akademi, Videnskabernes Selskab & Dimke, H., 21. Nov 2019, In : *Altinget*.

### **Forskere efterspørger små og mellemstore bevillinger**

Christiansen, P. M., Dimke, H., Norn, M-T., Wohlert, J. & Zinner, N. T., 31. Oct 2019, In : *Forskningspolitik*.

### **Bacterial Peptide Display for the Selection of Novel Biotinylating Enzymes**

Granhøj, J., Dimke, H. & Svenningsen, P., 3. Oct 2019, In : Journal of visualized experiments : JoVE. 2019, 152, 8 p., e60266.

### **In human nephrectomy specimens, the kidney level of tubular transport proteins does not correlate with their abundance in urinary extracellular vesicles**

Sabaratnam, R., Geertsen, L., Skjødt, K., Højlund, K., Dimke, H., Lund, L. & Svenningsen, P., 1. Sep 2019, In : American Journal of Physiology: Renal Physiology. 317, 3, p. F560-F571

### **Most scientists prefer small and mid-sized research grants**

Dimke, H., Norn, M. T., Christiansen, P. M., Wohler, J. & Zinner, N. T., Aug 2019, In : Nature Human Behavior. 3, 8, p. 765-767

### **Rapid Aldosterone-Mediated Signaling in the DCT Increases Activity of the Thiazide-Sensitive NaCl Cotransporter**

Cheng, L., Poulsen, S. B., Wu, Q., Esteva-Font, C., Olesen, E. T. B., Peng, L., Olde, B., Leeb-Lundberg, L. M. F., Pisitkun, T., Rieg, T., Dimke, H. & Fenton, R. A., Aug 2019, In : Journal of the American Society of Nephrology. 30, 8, p. 1454-1470

### **Activation of the calcium sensing receptor attenuates TRPV6-dependent intestinal calcium absorption**

Lee, J. J., Liu, X., O'Neil, D., Beggs, M. R., Weissgerber, P., Flockerzi, V., Chen, X-Z., Dimke, H. & Alexander, R. T., 6. Jun 2019, In : JCI Insight. 4, 11, 14 p., e128013.

### **The Jejunum and Ileum Mediate Increased Calcium Absorption for Bone Mineralization During Postnatal Development via TRPV6 and Cav1.3 (OR26-07-19)**

Beggs, M., Lee, J., Busch, K., Raza, A., Dimke, H., Weissgerber, P., Engel, J., Flockerzi, V. & Alexander, R. T., Jun 2019, In : Current Developments in Nutrition. 3, Supplement 1, p. 695 1 p.

### **Unge forskere kritiserer strategi: Pionercentre favoriserer få forskere**

Bjork, R., Dalsgaard, P., Dimke, H., Møller, N. M., Niss, K., Panyella Pedersen, B. & Sørensen, T. J., 1. Apr 2019, In : Altinget.

### **A bacterial display system for effective selection of protein-biotin ligase BirA variants with novel peptide specificity**

Granhøj, J., Dimke, H. & Svenningsen, P., 11. Mar 2019, In : Scientific Reports. 9, 1, 11 p., 4118.

### **"Hvis den private sektor virkelig mangler talent, så kom og hent det på universiteterne"**

Bjork, R., Dalsgaard, P., Dimke, H., Panyella Pedersen, B., Ravnsbæk, D. B. & Sørensen, T. J., 25. Feb 2019, In : Altinget.dk. 7 p.

### **Transcriptional regulation of Hepatic Stellate Cell activation in NASH**

Marcher, A-B., Bendixen, S. M., Terkelsen, M. K., Hohmann, S. S., Hansen, M. H., Larsen, B. D., Mandrup, S., Dimke, H., Detlefsen, S. & Ravnskjaer, K., 20. Feb 2019, In : Scientific Reports. 9, 1, 55 p., 2324.

### **Stop besparelserne på forskning og uddannelse**

Dimke, H. & Niss, K., 27. Jan 2019, In : Science Report.

### **TRPV6 and Cav1.3 Mediate Distal Small Intestine Calcium Absorption Before Weaning**

Beggs, M. R., Lee, J. J., Busch, K., Raza, A., Dimke, H., Weissgerber, P., Engel, J., Flockerzi, V. & Alexander, R. T., 2019, In : Cellular and Molecular Gastroenterology and Hepatology. 8, 4, p. 625-642

### **Unge akademikere: Politiske prioriteringer udsulter grundforskningen**

Bjork, R., Dalsgaard, P., Dimke, H., Engberg-Pedersen, A., Niss, K., Panyella Pedersen, B. & Sørensen, T. J., 18. Dec 2018, In : Altinget.dk.

**H<sup>+</sup>-ATPase B1 subunit localizes to thick ascending limb and distal convoluted tubule of rodent and human kidney**  
Frische, S., Chambrey, R., Trepiccione, F., Zamani, R., Marcussen, N., Alexander, R. T., Skjødt, K., Svenningsen, P. & Dimke, H., 1. Sep 2018, In : American Journal of Physiology: Renal Physiology. 315, 3, p. F429-F444

**Hydronephrosis is associated with elevated plasmin in urine in pediatric patients and rats and changes in NCC and  $\gamma$ -ENaC abundance in rat kidney**

Zachar, R., Al-Mashhadi, A., Dimke, H., Svenningsen, P., Jensen, B. L. & Carlström, M., 1. Sep 2018, In : American Journal of Physiology: Renal Physiology. 315, 3, p. F547-F557

**Forskere foretrækker mellemstore bevillinger**

Norn, M. T., Munk Christiansen, P., Dimke, H. & Zinner, N. T., 9. Jun 2018, In : Politiken.

**Den ideelle forskningsbevilling: En spørgeskemaundersøgelse af forskeres ønsker til forskningsbevillinger og deres vurdering af muligheder for at få finansieret deres forskning**

Wohler, J., Norn, M. T., Grønval Kristensen, V., Bisgaard, K., Dimke, H. & Zinner, N. T., 8. Jun 2018, Tænk tanken DEA, Danmarks Frie Forskningsfond og Det Unge Akademi. 36 p.

**Axial and Cellular Heterogeneity in Electrolyte Transport Pathways Along the Thick Ascending Limb**

Dimke, H. & Schnermann, J., May 2018, In : Acta Physiologica (Print). 223, 1, 17 p., e13057.

**Skatteaftale er gift for forskning: Debat**

Dalsgaard, P., Panyella Pedersen, B., Dimke, H., Møller, N. M., Normand, S., Bjørk, R., Bille, M. & Larsen, K. G., 2. Mar 2018, In : Politiken.

**Endothelial mineralocorticoid receptor ablation does not alter blood pressure, kidney function or renal vessel contractility**

Laursen, S. B., Finsen, S., Marcussen, N., Quaggin, S. E., Hansen, P. B. L. & Dimke, H., 1. Feb 2018, In : PLOS ONE. 13, 2, 20 p., e0193032.

**Deficiency of Carbonic Anhydrase II Results in a Urinary Concentrating Defect**

Krishnan, D., Pan, W., Beggs, M. R., Trepiccione, F., Chambrey, R., Eladari, D., Cordat, E., Dimke, H. & Alexander, R. T., 2018, In : Frontiers in Physiology. 8, 12 p., 1108.

**Undervisere: Her er de fem største problemer med studenterevalueringer**

Dalsgaard, P., Bille, M., Bjørk, R., Dalsgaard, S., Dimke, H., Gram-Skjoldager, K. & Zinner, N. T., 31. Oct 2017, In : Altinet.dk.

**Expression of transcellular and paracellular calcium and magnesium transport proteins in renal and intestinal epithelia during lactation**

Beggs, M. R., Appel, I., Svenningsen, P., Skjødt, K., Alexander, T. R. & Dimke, H., 1. Sep 2017, In : American Journal of Physiology: Renal Physiology. 313, 3, p. F629-F640

**Effect of Diuretics on Renal Tubular Transport of Calcium and Magnesium**

Alexander, R. T. & Dimke, H., 1. Jun 2017, In : American Journal of Physiology: Renal Physiology. 312, 6, p. F998-F1015

**A variant in a Cis-regulatory element enhances claudin-14 expression and is associated with pediatric-onset hypercalciuria and kidney stones**

Ure, M. E., Heydari, E., Pan, W., Ramesh, A., Rehman, S., Morgan, C., Pinski, M., Erickson, R., Herrmann, J. M., Dimke, H., Cordat, E., Lemaire, M., Walter, M. & Alexander, R. T., Jun 2017, In : Human Mutation. 38, 6, p. 649-657

**Effects of phospho- and calcitropic hormones on electrolyte transport in the proximal tubule: [version 1; referees: 2 approved]**

Lee, J. J., Plain, A., Beggs, M. R., Dimke, H. & Alexander, R. T., 2017, In : F1000Research. 6, 14 p., 1797.

**Acidosis and Urinary Calcium Excretion: Insights from Genetic Disorders**

Alexander, R. T., Cordat, E., Chambrey, R., Dimke, H. & Eladari, D., Dec 2016, In : American Society of Nephrology. Journal. 27, 12, p. 3511-3520

**Untargeted metabolomics analysis of ABCC6-deficient mice discloses an altered metabolic liver profile**

Rasmussen, M. R., Nielsen, K. L., Laursen, M. R., Nielsen, C. B., Svendsen, P., Dimke, H., Christensen, E. I., Johannsen, M. & Moestrup, S. K., 19. Oct 2016, In : Journal of Proteome Research. 15, 12, p. 4591-4600

**Deletion of Endothelial Mineralocorticoid Receptors Confers Protection Towards Altered Vessel Contractility During Endothelial Dysfunction in Renal Vessels**

Hansen, P. B. L., Laursen, S. B., Finsen, S. L. H., Quaggin, S. E. & Dimke, H., 6. Jun 2016.

**Alternative splice variant of the thiazide-sensitive NaCl cotransporter: a novel player in renal salt handling**

Tutakhel, O. A. Z., Jeleń, S., Valdez-Flores, M., Dimke, H., Piersma, S. R., Jimenez, C. R., Deinum, J., Lenders, J. W., Hoenderop, J. G. J. & Bindels, R. J. M., 1. Feb 2016, In : American Journal of Physiology: Renal Physiology. 310, 3, p. F204-F216

**A single simple procedure for dewaxing, hydration and heat-induced epitope retrieval (HIER) for immunohistochemistry in formalin fixed paraffin-embedded tissue**

Paulsen, I. M. S., Dimke, H. & Frische, S., 3. Nov 2015, In : European Journal of Histochemistry. 59, 4, p. 303-309 2532.

**Ultrastructural and immunohistochemical localization of plasma membrane Ca<sup>2+</sup>-ATPase 4 in Ca<sup>2+</sup>-transporting epithelia**

Alexander, R. T., Beggs, M. R., Zamani, R., Marcussen, N., Frische, S. & Dimke, H., 1. Oct 2015, In : American Journal of Physiology: Renal Physiology. 309, 7, p. F604-F616 ajprenal.00651.2014.

**Crosstalk in glomerular injury and repair**

Dimke, H., Maezawa, Y. & Quaggin, S. E., May 2015, In : Current Opinion in Nephrology & Hypertension. 24, 3, p. 231-238

**Tubulovascular cross-talk by vascular endothelial growth factor a maintains peritubular microvasculature in kidney**

Dimke, H., Sparks, M. A., Thomson, B. R., Frische, S., Coffman, T. M. & Quaggin, S. E., May 2015, In : Journal of the American Society of Nephrology. 26, 5, p. 1027-1038

**Loss of the Podocyte-Expressed Transcription Factor Tcf21/Pod1 Results in Podocyte Differentiation Defects and FSGS**

Maezawa, Y., Onay, T., Scott, R. P., Keir, L. S., Dimke, H., Li, C., Eremina, V., Maezawa, Y., Jeansson, M., Shan, J., Binnie, M., Lewin, M., Ghosh, A., Miner, J. H., Vainio, S. J. & Quaggin, S. E., 5. Jun 2014, In : Journal of the American Society of Nephrology. 25, 11, p. 2459-2470

**Ankyrin-3 is a novel binding partner of the voltage-gated potassium channel Kv1.1 implicated in renal magnesium handling**

San-Cristobal, P., Lainez, S., Dimke, H., de Graaf, M. J. J., Hoenderop, J. G. J. & Bindels, R. J. M., 2014, In : Kidney International. 85, 1, p. 94-102

**Paracellular calcium transport across renal and intestinal epithelia**

Alexander, R. T., Rievaj, J. & Dimke, H., 2014, In : Biochemistry and Cell Biology. 92, 6, p. 467-480

**Proximal tubular NHEs: sodium, protons and calcium?**

Alexander, R. T., Dimke, H. & Cordat, E., 1. Aug 2013, In : American Journal of Physiology: Renal Physiology. 305, 3, p. F229-36

**Evaluation of hypomagnesemia: lessons from disorders of tubular transport**

Dimke, H., Monnens, L., Hoenderop, J. G. J. & Bindels, R. J. M., Aug 2013, In : Monografi: ISSN 1046-7750. 62, 2, p. 377-83 7 p.

**Activation of the Ca(2+)-sensing receptor increases renal claudin-14 expression and urinary Ca(2+) excretion**

Dimke, H., Desai, P., Borovac, J., Lau, A., Pan, W. & Alexander, R. T., 15. Mar 2013, In : American Journal of Physiology: Renal Physiology. 304, 6, p. F761-9

### **Aquaporin Water Channels in Mammalian Kidney**

Nielsen, S., Kwon, T-H., Dimke, H., Skott, M. & Frøkiær, J., 1. Jan 2013, *Seldin and Geibisch's The Kidney*. Vol. 1. p. 1405-1439 35 p.

### **Autosomal dominant hypercalciuria in a mouse model due to a mutation of the epithelial calcium channel, TRPV5**

Loh, N. Y., Bentley, L., Dimke, H., Verkaart, S., Tammaro, P., Gorvin, C. M., Stechman, M. J., Ahmad, B. N., Hannan, F. M., Piret, S. E., Evans, H., Bellantuono, I., Hough, T. A., Fraser, W. D., Hoenderop, J. G. J., Ashcroft, F. M., Brown, S. D. M., Bindels, R. J. M., Cox, R. D. & Thakker, R. V., 2013, In : PLOS ONE. 8, 1, p. e55412

### **Tissue transglutaminase inhibits the TRPV5-dependent calcium transport in an N-glycosylation-dependent manner**

Boros, S., Xi, Q., Dimke, H., van der Kemp, A. W., Tudpor, K., Verkaart, S., Lee, K. P., Bindels, R. J. & Hoenderop, J. G., 2012, In : Monografi: ISSN 1046-7750. 69, 6, p. 981-92

### **Exploring the intricate regulatory network controlling the thiazide-sensitive NaCl cotransporter (NCC)**

Dimke, H., Dec 2011, In : Pflügers Archiv - European Journal of Physiology. 462, 6, p. 767-77

### **Opposing effects of NaCl restriction and carbohydrate loading on urine volume in diabetic rats**

O'Neill, H. A., Kwon, T-H., Ring, T., Dimke, H., Lebeck, J., Frøkiær, J., Collins, P. B., Nielsen, S. & Frische, S., May 2011, In : Acta Physiologica (Print). 202, 1, p. 47-57

### **Molecular basis of epithelial Ca<sup>2+</sup> and Mg<sup>2+</sup> transport: insights from the TRP channel family**

Dimke, H., Hoenderop, J. G. J. & Bindels, R. J. M., 1. Apr 2011, In : Journal of Physiology. 589, Pt 7, p. 1535-42

### **γ-Adducin stimulates the thiazide-sensitive NaCl cotransporter**

Dimke, H., San-Cristobal, P., de Graaf, M., Lenders, J. W., Deinum, J., Hoenderop, J. G. J. & Bindels, R. J. M., Mar 2011, In : Journal of the American Society of Nephrology. 22, 3, p. 508-17 10 p.

### **Novel molecular pathways in renal Mg<sup>2+</sup> transport: a guided tour along the nephron**

San-Cristobal, P., Dimke, H., Hoenderop, J. G. & Bindels, R. J., Sep 2010, In : Current Opinion in Nephrology & Hypertension. 19, 5, p. 456-62

### **Effects of the EGFR Inhibitor Erlotinib on Magnesium Handling**

Dimke, H., van der Wijst, J., Alexander, T. R., Meijer, I. M. J., Mulder, G. M., van Goor, H., Tejpar, S., Hoenderop, J. G. & Bindels, R. J., Aug 2010, In : Journal of the American Society of Nephrology. 21, 8, p. 1309-16

### **Calcitonin-stimulated renal Ca<sup>2+</sup> reabsorption occurs independently of TRPV<sub>5</sub>**

Hsu, Y-J., Dimke, H., Hoenderop, J. G. J. & Bindels, R. J. M., May 2010, In : Nephrology, Dialysis, Transplantation. 25, 5, p. 1428-35

### **Testosterone increases urinary calcium excretion and inhibits expression of renal calcium transport proteins**

Hsu, Y-J., Dimke, H., Schoeber, J. P. H., Hsu, S-C., Lin, S-H., Chu, P., Hoenderop, J. G. J. & Bindels, R. J. M., Apr 2010, In : Kidney International. Supplement. 77, 7, p. 601-8 8 p.

### **Hereditary tubular transport disorders: implications for renal handling of Ca<sup>2+</sup> and Mg<sup>2+</sup>**

Dimke, H., Hoenderop, J. G. & Bindels, R. J., Jan 2010, In : Monografi: ISSN 1046-7750. 118, 1, 18 p.

### **Aquaporin Water Channels in Mammalian Kidney**

Nielsen, S., Kwon, T-H., Dimke, H. & Frøkiær, J., 2008, *Seldin and Geibisch's The Kidney: Physiology and pathophysiology*. 4 ed. Academic Press, Vol. 1, chapt. 38. p. 1095-1121, X-XI

### **Long-term aldosterone treatment induces decreased apical but increased basolateral expression of AQP2 in CCD of rat kidney**

de Seigneux, S., Nielsen, J., Olesen, E. T. B., Dimke, H., Kwon, T-H., Frøkiær, J. & Nielsen, S., Jul 2007, In : American Journal of Physiology: Renal Physiology. 293, 1, p. F87-99

**Renal compensation to chronic hypoxic hypercapnia: downregulation of pendrin and adaptation of the proximal tubule**  
de Seigneux, S., Malte, H., Dimke, H., Frøkiaer, J., Nielsen, S. & Frische, S., Apr 2007, In : American Journal of Physiology: Renal Physiology. 292, 4, p. F1256-66

**Acute and chronic effects of growth hormone on renal regulation of electrolyte and water homeostasis**  
Dimke, H., Flyvbjerg, A. & Frische, S., 2007, In : Growth hormone & IGF research : official journal of the Growth Hormone Research Society and the International IGF Research Society. 17, 5, p. 353-68

**Acute growth hormone administration induces antidiuretic and antinatriuretic effects and increases phosphorylation of NKCC2**

Dimke, H., Flyvbjerg, A., Bourgeois, S., Thomsen, K., Frøkiaer, J., Houillier, P., Nielsen, S. & Frische, S., 2007, In : American Journal of Physiology: Renal Physiology. 292, 2, p. F723-35

## Activities

**Invited speaker at the Physiologisches Institut, Christian-Albrechts-Universität, Kiel, Germany**

Henrik Dimke (Guest lecturer)

31. Jan 2017

**Functional characterization, molecular physiology and relevance of pendrin in lung disorders**

Henrik Dimke (Examiner)

2017 → ...

**Trimethylangelicin (TMA) interacting directly with the f508del-CFTR protein rescues the chloride secretion**

Henrik Dimke (Examiner)

2017

### Experimental Biology

Henrik Dimke (Participant)

2. Apr 2016 → 6. Apr 2016

**American Journal of Physiology: Renal Physiology (Journal)**

Henrik Dimke (Peer reviewer)

2016 → ...

**American Physiological Society (External organisation)**

Henrik Dimke (Member)

2016 → ...

**American Society of Nephrology (External organisation)**

Henrik Dimke (Member)

2016

**Det Unge Akademi - Det Kongelige Danske Videnskabernes Selskab/Young Academy of Denmark - The Royal Danish Academy of Sciences and Letters (External organisation)**

Henrik Dimke (Member)

2016 → 2021

**Invited chairman at the Epithelial Transport Group Satellite Meeting, San Diego, California**

Henrik Dimke (Organizer)

2016



**Invited speaker at the joint meeting of the Danish Hypertension and Nephrology Societies, Odense University Hospital**  
Henrik Dimke (Lecturer)  
2016

**Invited speaker at the Membrane Disease Protein Research Group, Department of Physiology, University of Alberta, Canada.**  
Henrik Dimke (Lecturer)  
2016

**Invited speaker at the Symposium: Renal Physiology – Old & New, Wallenberg Conference Centre, Gothenburg, Sweden**  
Henrik Dimke (Lecturer)  
2016

**"Hvorfor er forskning sjovt" - Inviteret foredrag hos Sundhedsvidenskabelige Studenter Forskere**  
Henrik Dimke (Lecturer)  
2015

**Inviteret foredragsholder ved sundhedsstyrelsens kursus om nyrefysiologi for nefrologer under uddannelse, ved Odense Universitets Hospital, 2015.**  
Henrik Dimke (Lecturer)  
2015

**American Society of Nephrology 47th Annual Meeting & Scientific Exposition**  
Henrik Dimke (Participant)  
12. Nov 2014

**External Referee Panel at the National Charity, Kidney Research UK (External organisation)**  
Henrik Dimke (Member)  
2014 → ...

**Inauguration talk at the Seminar "New Assistant Professors"**  
Henrik Dimke (Lecturer)  
2014

**Invited chairman at APS Epithelial Transport Group Satellite Meeting, Philadelphia, Pennsylvania**  
Henrik Dimke (Chairman)  
2014

**Invited speaker at the Danish Neuroscience Center, Aarhus University Hospital**  
Henrik Dimke (Lecturer)  
2014

**Pflügers Archiv-European Journal of Physiology (Journal)**  
Henrik Dimke (Peer reviewer)  
2013 → 2016

## **Teaching experience**

University of Southern Denmark (2014-)  
-Course director module B8, 4th Semester medical school curriculum (15 ECTS) on kidney physiology at University of Southern Denmark (Fall 2016 -)  
-Teaching of medical Students, 4th Semester  
- Male Reproductive Physiology  
- Female Reproductive Physiology  
- Calcium and Phosphate Balance  
- Acid Base Physiology  
- Renal Clearance

- Regulation of Renal Function
- Renal Physiology for Nephrologists In-Training.
- SU502 Physiology for Biomedical Students.
- SU503 Pharmacology for Biomedical Students.

2010

Invited speaker at the European Nephropathology Course. Topic: A guided tour along the nephron. Department of Pathology, Academic Medical Center, Amsterdam, The Netherlands.

2008-2010

Computer-assisted renal histology and renal physiology for Biomedical and Medical students, Radboud University Nijmegen

## **Uddannelsesudvikling og universitetspædagogisk (følge)forskning, herunder pædagogiske priser**

2017: Institut for Molekylær Medicins undervisningspris

## **Formel pædagogisk uddannelse**

Universitetspædagogikum (2016)

## **Metoder, materialer og redskaber**

Forelæsninger (PowerPoint, tavle), holdundervisning (tavle), ansvarlig for gruppeundervisning (fysiologi-øvelse)

## **Uddannelsesadministrative opgaver**

Modultovholder for modul B8 (fra 2016).