

CV - Søren-Peter Olesen

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Private address Emiliekildevej 43, 2930 Klampenborg, Denmark

Education

1979 MSc (elec.engineer.; civilingeniør), Danish Technical University

1982 MD, University of Copenhagen

1988 Internship, Rigshospitalet

1989 PhD (dr.med.), University of Copenhagen

Previous positions

1982-86 Research assistant/PhD student, Dept. Med. Physiol., University of
Copenhagen 1986-87 Postdoc, Brigham & Women's Hospital, Harvard Med. School,
Boston, USA 1987-89 Internship, Dept. of Medicine, Surgery, Ophthalmology,
Copenhagen Hospitals 1989-98 Head of Department, NeuroSearch A/S

1998- Professor of Physiology, Department of Biomed Sci, University of Copenhagen

2005-2015 Director of the Danish National Research Foundation Centre for Cardiac Arrhythmia

2008-2015 Head of the Section of Cardiovascular Research, Dept. Biomed. Sci., U.
Copenhagen 2015- CEO of the Danish National Research Foundation

The Royal Danish Academy of Sciences and Letters

1998- Member

2005-08 Member of the Science Policy board

2009-11 Secretary General

Publications

Published >180 papers in international peer reviewed journals including Nature, PNAS, Circulation, Physiological Reviews about ion channels, arrhythmia, cardiovascular- and neuro-physiology. h-factor is 48. Co-inventor on 25 issued international patents on new chemical compounds, biological principles, and technological inventions for electrophysiological characterization of drug effects.

Grants

The Danish Medical Research Council. Framework grants from 1998-2016. PI

The Danish National Research Foundation Center for Cardiac Arrhythmia. 2005-15. PI

Innovationfund Denmark. Grant no 65-2013-3. 2014-18. Co-PI.

The Lundbeck Foundation, The NovoNordisk Foundation, The Danish Heart Foundation, The Velux Foundation a.o. continuous support from 1998-2015. PI

EU Marie Curie Actions: Coordinator and/or participant in Science Grant SC1*CT91-0665; Biomed 2 project BMH4-97-2118; FP7, Marie Curie, ITN, PITN-GA-2009-2357

Teaching and supervision

. Have supervised 39 PhD students. Currently teach a number of bachelor students.

Scientific conferences

Give several invited talks and co-organize 1-2 international conferences in Copenhagen each year.

Boards

Member of the board of the Carlsberg Foundation, 2012-

Member of the board of the Scandinavian Physiological Society, 2010-2015

Member of Fagligt Udvalg, Danish Ministry of Higher Educations and Science, 2009-2015

Chairman of committees for international guest scientist housing in the Danish National Bank (2002-)
and in The Nordea Foundation (2009-)

Industry

Member of the supervisory board of The Carlsberg Group A/S, 2012-

Member of the Board of Directors of Sophion Bioscience A/S, 2001-11

Co-founder of Sophion Bioscience and Poseidon Pharma 2001-2, CEO of Poseidon 2002-4

Consultant to NeuroSearch A/S, 1998-2012

Consultant to Acesion Pharma A/S, 2013-15

Chairman of the committee making the university-industry collaboration strategy at U Cph, 2009-10

Chairman of the University of Copenhagen patent and licensing supervisory board 1998-2007

Selected publications from Søren-Peter Olesen – 25 out of 180 papers

Rare truncating variants in the sarcomeric protein titin associate with familial and early-onset atrial fibrillation.

Ahlberg G et al.

Nature Communications, vol 9, No 1, 4316, 2018

Magnetocardiography on an isolated animal heart with a room temperature optically pumped magnetometer.

Jensen K et al.

Scientific Reports, vol 8, 16218, 2018

Non-invasive detection of animal nerve impulses with an atomic magnetometer operating near quantum limited sensitivity. Jensen K **Olesen SP**, Polzik E. *Scientific Reports*. July 15,6: 29638, 2016

Live imaging of Kv7.2/7.3 cell surface dynamics at the axon initial segment: high steady state stability and calpain-dependent excitotoxic downregulation revealed. Binned-Jensen T, Christensen RK, Denti F, Perrier JF, Rasmussen HB, **Olesen SP**. *J Neurosci* 2016 Feb 17;36(7):2261-6

Cardiac potassium channel subtypes: new roles in repolarization and arrhythmia

N Schmitt, M Grunnet, **SP Olesen**

Physiological Reviews 94 (2), 609-653, 2014

Very early-onset lone atrial fibrillation patients have a high prevalence of rare variants in genes previously associated with atrial fibrillation

MS Olesen, L Andreasen, J Jabbari, L Refsgaard, S Haunsø, **SP Olesen**, ...

Heart Rhythm 11 (2), 246-251, 2014

Annotation of loci from genome-wide association studies using tissue-specific quantitative interaction proteomics

A Lundby, EJ Rossin, AB Steffensen, MR Acha, C Newton-Cheh, ...

Nature Methods, 11 (8), 868-74, 2014

A novel KCND3 gain-of-function mutation associated with early-onset of persistent lone atrial fibrillation

MS Olesen, L Refsgaard, AG Holst, AP Larsen, S Grubb, S Haunsø, ...

Cardiovascular Research 98 (3), 488-495, 2013

Familial aggregation of lone atrial fibrillation in young persons

N Øyen, MF Ranthe, L Carstensen, HA Boyd, MS Olesen, **SP Olesen**, ...

Journal of the American College of Cardiology 60 (10), 917-921, 2012

Downregulation of Kv7.4 channel activity in primary and secondary hypertension

TA Jepps, PS Chadha, AJ Davis, MI Harhun, GW Cockerill, **SP Olesen**, ...

Circulation 124 (5), 602-611, 2011

Identification of a Kir3.4 mutation in congenital long QT syndrome

Y Yang, Y Yang, B Liang, J Liu, J Li, M Grunnet, **SP Olesen**, ...

The American Journal of Human Genetics 86 (6), 872-880, 2010

Arvelige hjertesygdomme forårsaget af

natriumkanalmutationer J Tfelt-Hansen, **SP Olesen**, JH

Svendsen, T Jespersen

Ugeskr Læger 171 (15), 1261-5, 2009

Single-copy insertion of transgenes in *Caenorhabditis elegans*

C Frøkjær-Jensen, MW Davis, CE Hopkins, BJ Newman, JM Thummel, ...

Nature Genetics 40 (11), 1375-1383, 2008

hERG1 channel activators: a new anti-arrhythmic principle

M Grunnet, RS Hansen, **SP Olesen**

Progress in Biophysics and Molecular Biology 98 (2), 347-362, 2008

Activation of human ether-a-go-go-related gene potassium channels by the diphenylurea 1, 3-bis-(2-hydroxy-5-trifluoromethyl-phenyl)-urea (NS1643)

RS Hansen, TG Diness, T Christ, J Demnitz, U Ravens, **SP Olesen**, ...
Molecular Pharmacology 69 (1), 266-277, 2006

The KCNQ1 potassium channel: from gene to physiological function

T Jespersen, M Grunnet, **SP Olesen**
Physiology 20 (6), 408-416, 2005

Pharmacological characterization of small-conductance Ca^{2+} -activated K^{+} channels stably expressed in HEK 293 cells

D Strøbæk, TD Jørgensen, P Christophersen, PK Ahring, **SP Olesen**
British Journal of Pharmacology 129 (5), 991-999, 2000

Inhibition of T cell proliferation by selective block of Ca^{2+} -activated K^{+} channels

BS Jensen, N Ødum, NK Jørgensen, P Christophersen, **SP Olesen**
Proceedings of the National Academy of Sciences 96 (19), 10917-10921, 1999

Characterization of NS 2028 as a specific inhibitor of soluble guanylyl cyclase

SP Olesen, J Drejer, O Axelsson, P Moldt, L Bang, JE Nielsen-Kudsk, ...
British Journal of Pharmacology 123 (2), 299-309, 1998

Cloning, expression, and distribution of a Ca^{2+} -activated K^{+} channel beta-subunit from human brain

J Tseng-Crank, N Godinot, TE Johansen, PK Ahring, D Strøbæk, R Mertz, ...
Proceedings of the National Academy of Sciences 93 (17), 9200-5, 1996

Selective activation of Ca^{2+} -dependent K^{+} channels by novel benzimidazolone

SP Olesen, E Munch, P Moldt, J Drejer
European Journal of Pharmacology 251 (1), 53-59, 1994

Haemodynamic shear stress activates a K^{+} current in vascular endothelial cells

SP Olesen, D Clapham, P Davies
Nature 331 (6152), 168-170, 1988

Free oxygen radicals decrease electrical resistance of microvascular endothelium in brain

SP Olesen
Acta Physiologica Scandinavica 129 (2), 181-187, 1987

A calcium-dependent reversible permeability increase in microvessels in frog brain, induced by serotonin

SP Olesen
The Journal of Physiology 361 (1), 103-113, 1985

Electrical resistance of brain microvascular endothelium

C Crone, **SP Olesen**
Brain Research 241 (1), 49-55, 1982

Selected issued international patents from Søren-Peter Olesen – 7 out of 25 patents

Administering 1, 3-bis-(2-hydroxy-5-trifluoromethyl-phenyl)-urea activates an ERG channel; arrhythmia; cardiac ischemia, ischemic heart disease, hypertrophic heart, cardiomyopathia or failing heart

SP Olesen, M Grunnet, P Christophersen, D Strøbæk, J Demnitz, ...

US Patent 7,851,492; 2010

Benzimidazol-2-one derivatives and their use

LS Madsen, C Ærteberg Bæk, A Lauridsen, **SP Olesen**

US Patent 7,244,756; 2007

PCR measurement system

T Jespersen, **SP Olesen**, M Bech, R Taboryski

European Patent 1,511,843; 2002

Bis (benzimidazole) derivatives serving as potassium blocking agents BS Jensen, **SP Olesen**, L Teuber, D Peters, D Strøbæk

US Patent 6,194,447; 2001

A substrate and a method for determining and/or monitoring electrophysiological properties of ion channels. JW Petersen, P Telleman, O Hansen, P Christophersen, M Bech, **SP Olesen** ...

US Patent 6,682,649; 1999

Patch clamp apparatus and technique having high throughput and low fluid volume requirements.

SP Olesen & P Christophersen

US Patent 6,063,260; 1994

Urea derivatives and their use.

SP Olesen, P Moldt & O Pedersen

US Patent 5,696,138; 1993