

Professor Dr. Med. Ole Petter Ottersen, M.D., Ph.D.

Professor of Medicine and Neuroscience, Former Director of Center of Excellence for Molecular Biology and Neuroscience, Institute of Basic Medical Science, Faculty of Medicine University of Oslo, Former Rector (President) of the University of Oslo, Oslo, Norway.

Current: Vice-Chancellor (President) of Karolinska Institute (KI), Stockholm, Sweden.



From Wikipedia

Ole Petter Ottersen (born 17 March 1955) is a [Norwegian](#) physician and [neuroscientist](#).

He serves as the [Rector](#) of [Karolinska Institute](#) in Sweden, and took office in August 2017. Ottersen has been professor of medicine at the [University of Oslo](#) since 1992 and served as the university's [directly elected Rector](#) from 2009 to 2017.

Ottersen graduated with the [cand.med.](#) degree at the [University of Oslo](#) in 1980 and with the [dr.med.](#) degree (Med.Sc.D.; a higher doctorate in medicine) at the same university in 1982.

He was a Research Fellow at the Institute of Anatomy at the University of Oslo from 1978 to 1983 and a [prosector](#) (which in Norway is an academic rank in anatomy equal to [reader](#)) at the same institute from 1983 to 1992. He was promoted to Professor in 1992.

He has been head of department of the Institute of Anatomy (1997–1999), Pro-Dean for Research of the Faculty of Medicine (2000–2002) and director of the Centre for Molecular Biology and Neuroscience at the University of Oslo (2002–2009), a centre of excellence funded by the [Research Council of Norway](#).^[1]

He was editor-in-chief of the journal [Neuroscience](#) 2006–2009.

Rector of the University of Oslo

In 2009, he was elected as the [rector](#) of the University of Oslo, while [Inga Bostad](#) was elected as the pro-rector.^{[2][3]} At the University of Oslo the rector is directly elected to a four-year term by all employees and students, and may serve a maximum of two terms; the rector is the university's ceremonial head, chief executive officer and chairman of the board, and thus corresponds to both the chancellor and the vice chancellor at a British university. By convention and formerly also by law, the rector is elected among the professors at the university. The rector's deputy and the university's second highest official, the pro-rector, is also directly elected alongside the rector.

In 2013, he was reelected for a second term, while [Ruth Vatvedt Fjeld](#) was elected as the new Pro-Rector; she resigned the following year and was succeeded by [Ragnhild Hennum](#).^[4]

Ottersen became a board member of [Oslo University Hospital](#) in 2011 and became chairman of the board of the Norwegian Association of Higher Education Institutions in 2013. He attended the [Bilderberg Group](#) meeting in 2011.^[5]

Rector of Karolinska Institute

On 20 February 2017 the board of the [Karolinska Institute](#) in Sweden nominated him to become rector of Karolinska Institute.^{[6][7]} He was formally appointed as rector by the Government of Sweden on 27 April 2017 and assumed the position on 1 August 2017.^[8]

Research

His research field is [neuroscience](#). He is particularly noted for his research on [molecular](#) mechanisms involved in the development of acute and chronic [neurodegenerative](#) disease, with a special emphasis on the role of cellular water balance and glutamate [excitotoxicity](#).

In 2001 he, together with Jon Storm-Mathisen and [Per Brandtzæg](#), was found to be the most cited Norwegian scholar in international academic journals.^[9] According to [Google Scholar](#), he has been cited over 38,000 times in scientific literature and has an [h-index](#) of 102.^[10] From 2002, he was included in the Institute of Scientific Information list of "[Highly Cited Researchers](#)."

Awards

- [Anders Jahre Medical Prize for young scientists](#), 1990
- Member of the [Norwegian Academy of Science and Letters](#), 1993
- Member of the [Academy of Sciences Leopoldina](#), 1999^[11]

- Lundbeck Foundation's research prize (with [Jon Storm-Mathisen](#)), 2005^[1]
- Member of the [Royal Norwegian Society of Sciences and Letters](#), 2006
- [Anders Jahre Award for Medical Research](#), 2008^{[12][13]}
- [Honorary doctor](#), [University of Eastern Finland](#), 2010^[14]
- Honorary doctor, [École normale supérieure de Lyon](#), 2015

References

1. "1,5 millioner til hjerneforskere ved UiO" (in Norwegian). Norwegian News Agency. 25 February 2005.
2. Topdahl, Rolv Christian (16 February 2009). "[Liten rift om rektorjobb](#)". Aftenposten (in Norwegian). Archived from [the original](#) on 18 February 2009. Retrieved 12 March 2009.
3. Eik, Espen A. (3 April 2009). "[Ottersen ny rektor](#)". Aftenposten (in Norwegian). Archived from [the original](#) on 6 April 2009. Retrieved 10 April 2009.
4. «[Trekker seg etter langvarig mangel på arbeidsoppgaver](#)» i Uniform 6. mai 2014
5. [Letter på Bilderberg-sløret](#), [Verdens Gang](#), 12 June 2011
6. [Norsk rektor väntar KI](#), Dagens Medicin
7. <http://ki.se/nyheter/ole-petter-ottersen-foreslas-bli-ny-rektor-for-karolinska-institutet>, Karolinska Institute
8. "[Ole Petter Ottersen blir ny rektor vid Karolinska Institutet](#)". [ki.se](#).
9. "Oslo-forskere topper internasjonal sitatliste" (in Norwegian). Norwegian News Agency. 16 January 2001.
10. "Ole Petter Ottersen," [Google Scholar](#)
11. "[Mitgliederverzeichnis](#)". [www.leopoldina.org](#).
12. "Jahre-pris til Ole Petter Ottersen" (in Norwegian). Norwegian News Agency. 12 August 2008.
13. "Jahrepris til professor [Terje Lømo](#)" (in Norwegian). Norwegian News Agency. 10 October 2003.
14. "[Promootio - UEF](#)". [www2.uef.fi](#).

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About me

I took office as President of Karolinska Institutet on August 1, 2017 after having served eight years (2009-2017) as rector (President) of the University of Oslo (UiO).

From 2002 to 2009 I was Director of Centre for Molecular Biology and Neuroscience - one of Norway's Centres of Excellence.

I have served as Dean of Research at UiO's Faculty of Medicine (2000-2002) and as Head of the UiO's Department of Anatomy (1997-1999).

In my period as rector, I led the Norwegian Association of Higher Education Institutions (2013- 2015) and NUS- Det nordiska universitetssamarbetet (2013-2015).

I have headed one of UiO's interdisciplinary initiatives (EMBIO; now UiO:Life Science) and one of the major national programmes of the Norwegian Research Council (FUGE: Functional Genomics in Norway).

I have coordinated two projects under the EU Framework Programme and one of the first three Nordic Centres of Excellence in Molecular Medicine, funded by NordForsk.

I have taught medical students since 1976.

Commission of trust

From 2006 to 2009 I served as Chief Editor of Neuroscience - the official journal of the International brain research organization (IBRO). I have been engaged in a number of international institutional evaluations and served as panel leader in the European research Council (ERC Advanced Grants) from the start to 2012. I was Founding Chair (2016-2017) of a newly established European university network (the Guild of Research Intensive Universities) and chaired the Lancet Commission that studied the political determinants of global health inequalities (The Lancet-University of Oslo Commission on Global Governance for Health). I have served at a number of boards, including the Board of the Oslo University Hospital (2012-2017) and chaired Samarbeidsorganet (Joint Council) of the regional health authority (Helse Sør-Øst) and University of Oslo, alternating with the Director of Helse Sør-Øst. I have led several prize award committees, and I am the current Chair of the Kavli Prize Committee in Neuroscience and of the Thon Foundation Advisory Board. At the Nordic level I have been board Member of Wallenberg Consortium North (2002-2006), Member of the Scientific Advisory Board of Lundbeck Foundation (2007-2013), and Member of the board of Nordforsk (2013-2016).

Selected publications

Interstitial solute transport in 3D reconstructed neuropil occurs by diffusion rather than bulk flow.

Holter K, Kehlet B, Devor A, Sejnowski T, Dale A, Omholt S, *et al*
Proc. Natl. Acad. Sci. U.S.A. 2017 09;114(37):9894-9899

The Sustainable Development Goals: ambiguities of accountability.

Engebretsen E, Heggen K, Ottersen O
Lancet 2017 01;389(10067):365

Paradoxes of sustainability with consequences for health.

Engebretsen E, Heggen K, Das S, Farmer P, Ottersen O
Lancet Glob Health 2016 Apr;4(4):e225-6

The political origins of health inequity: prospects for change.

Ottersen O, Dasgupta J, Blouin C, Buss P, Chongsuvivatwong V, Frenk J, *et al*
Lancet 2014 Feb;383(9917):630-67

Physiological roles of aquaporin-4 in brain.

Nagelhus E, Ottersen O


Physiol. Rev. 2013 Oct;93(4):1543-62

Immunogold cytochemistry in neuroscience.

Amiry-Moghaddam M, Ottersen O

Nat. Neurosci. 2013 Jul;16(7):798-804

Glial-conditional deletion of aquaporin-4 (Aqp4) reduces blood-brain water uptake and confers barrier function on perivascular astrocyte endfeet.

Haj-Yasein N, Vindedal G, Eilert-Olsen M, Gundersen G, Skare , Laake P, et al
Proc. Natl. Acad. Sci. U.S.A. 2011 Oct;108(43):17815-20

An aquaporin-4/transient receptor potential vanilloid 4 (AQP4/TRPV4) complex is essential for cell-volume control in astrocytes.

Benfenati V, Caprini M, Dovizio M, Mylonakou M, Ferroni S, Ottersen O, et al
Proc. Natl. Acad. Sci. U.S.A. 2011 Feb;108(6):2563-8

Critical role of aquaporin-4 (AQP4) in astrocytic Ca²⁺ signaling events elicited by cerebral edema.

Thrane A, Rappold P, Fujita T, Torres A, Bekar L, Takano T, et al
Proc. Natl. Acad. Sci. U.S.A. 2011 Jan;108(2):846-51

Education

MD University of Oslo, 1980.

PhD (Dr Med) University of Oslo, 1982.

Research description

My interest has been in the field of neuroscience, with a particular focus on synaptic structure and function and on the molecular mechanisms underlying water transport in brain. In recent years I have been engaged in global health ([http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(14\)60161-6/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(14)60161-6/fulltext)), much inspired by my experiences gained as Chair of the Lancet-University of Oslo Commission (<http://www.thelancet.com/commissions/global-governance-for-health>).

Teaching portfolio

- Educator of medical students since 1976, taught a number of fields, including neurobiology, histology, gross anatomy and functional anatomy.
- Educator of physiotherapists and postgraduate students.

Academic honours, awards and prizes

I have received several international awards including the Anders Jahre Medical Prize and Lundbeck's Nordic Research Prize (the latter shared with Jon Storm-Mathisen). I am Honorary Doctor of the University of Kuopio (now University of Eastern Finland) and École Normale Supérieure, Lyon.

Topic:

Dear Nick, I assume Mahmood will be talking about aquaporins. I could talk about my recent paper with Holter on modelling water movement through the extracellular space or I could talk about global health. For you to decide.

1. **“Mathematical 3D modeling of water movement in the brain _clinical implications”**

Three Dimensional (3D) modeling of water movement through the extracellular space in the brain.

Interstitial solute transport in 3D reconstructed neuropil occurs by diffusion rather than bulk flow.


Holter K, Kehlet B, Devor A, Sejnowski T, Dale A, Omholt S, *et al*
Proc. Natl. Acad. Sci. U.S.A. 2017 09;114(37):9894-9899

2. Water Channel Aquaporin-4 (AQP4) in the Brain: Structure-Function, Localization, and Clinical Impacts.

Physiological roles of aquaporin-4 in brain.

Nagelhus E, Ottersen O
Physiol. Rev. 2013 Oct;93(4):1543-62

Glial-conditional deletion of aquaporin-4 (Aqp4) reduces blood-brain water uptake and confers barrier function on perivascular astrocyte endfeet.

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Thrane A, Rappold P, Fujita T, Torres A, Bekar L, Takano T, *et al*
Proc. Natl. Acad. Sci. U.S.A. 2011 Jan;108(2):846-51

3. Immunogold Cytochemistry in Neuroscience.

Immunogold cytochemistry in neuroscience.

Amiry-Moghaddam M, Ottersen O
Nat. Neurosci. 2013 Jul;16(7):798-80

4. Future Trends of Global Health: Sustainability and equity

The Sustainable Development Goals: ambiguities of accountability.

Engelbrechtsen E, Heggen K, Ottersen O

Lancet 2017 01;389(10067):365

Paradoxes of sustainability with consequences for health.

Engelbrechtsen E, Heggen K, Das S, Farmer P, Ottersen O

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