

Antoine de Morree
Associate Professor
Department of Biomedicine - Forskning og uddannelse, Skou-bygningen
Type of address: Postal address.
Høegh-Guldbergs Gade 10
1116, 328
8000
Aarhus C
Denmark
Email: demorree@biomed.au.dk



Employment

Associate Professor

Department of Biomedicine - Forskning og uddannelse, Skou-bygningen
Aarhus University
Aarhus C, Denmark
1 Mar 2024 → present

affiliate scientist

Stanford University
Menlo Park, United States
1 Aug 2021 → present

Education

Stem cell biology, Postdoctorate, Post-transcriptional regulation of muscle stem cell quiescence, Stanford University
1 Feb 2011 → 31 Jan 2018
Award Date: 31 Jan 2018

Human Genetics, PhD, Functional protein networks unifying limb girdle muscular dystrophy, Leiden University
1 Nov 2005 → 31 Jan 2011
Award Date: 12 Jan 2011

Biomolecular Sciences, MSc, Utrecht University
1 Sept 2003 → 31 Aug 2005
Award Date: 27 Jun 2005

Biomedical Sciences, BSc, Utrecht University
1 Sept 2000 → 31 Aug 2003

Prizes

Science Magazine Essay Competition
de Morree, A. (Recipient), 5 Jul 2013

Stanford SURPAS Outstanding Advocate Award
de Morree, A. (Recipient), 16 Dec 2016

Awards

Towards FSHD Therapeutics: Understanding Polyadenylation Site Choice
de Morree, A. (PI)
Muscular Dystrophy Association: DKK1,300,000.00
01/08/2015 → 31/07/2018

Activities

Leadership Programme for Research Managers at AU
de Morree, A. (Participant)
Aug 2024 → Dec 2024

Studieprøve

de Morree, A. (Lecturer)
1 Jan 2024 → 30 Jun 2024

Limiting fatty infiltration in skeletal muscle

de Morree, A. (Lecturer)
7 Nov 2023

Prøve i Dansk 3

de Morree, A. (Participant)
15 Jun 2023

Stressful environments and how to navigate them, Part 2

de Morree, A. (Lecturer)
26 May 2023

Stressful environments and how to navigate them

de Morree, A. (Lecturer)
23 May 2023

Using animal models to study Stem Cell Quiescence

de Morree, A. (Lecturer)
19 Apr 2023

Regulation of Stem Cell Quiescence in the Maintenance of Tissue Integrity

de Morree, A. (Lecturer)
11 Apr 2023

PhD thesis opposition

de Morree, A. (Examiner)
27 Jan 2023

Regulation of stem cell quiescence in the maintenance of tissue integrity (ingelesez)

de Morree, A. (Lecturer)
26 Jan 2023

Regulation of stem cell quiescence in the maintenance of tissue integrity

de Morree, A. (Lecturer)
19 Jan 2023

Cell Cycle (Journal)

de Morree, A. (Reviewer)
2023 → ...

Life Sciences (Journal)

de Morree, A. (Reviewer)
2023 → ...

Signal Transduction and Targeted Therapy (Journal)

de Morree, A. (Reviewer)
2023 → ...

Danish Diabetes Academy Postdoc Summit

de Morree, A. (Lecturer)
25 Sept 2022

Consultant on muscle biology research

de Morree, A. (Consultant)
12 Sept 2022 → 11 Sept 2023

Aarhus University Pedagogical Program

de Morree, A. (Participant)
24 Aug 2022 → 14 Dec 2022

Invited presentation

de Morree, A. (Lecturer)
2 Aug 2022

The Skeletal Muscle Stem Cells and Regeneration Conference

de Morree, A. (Lecturer)
28 Jul 2022

Neuroscience Theme Day

de Morree, A. (Lecturer)
18 May 2022

Affiliate scientist

de Morree, A. (Participant)
1 Aug 2021 → ...

Consultant on FSHD research

de Morree, A. (Consultant)
22 Apr 2021 → 31 Dec 2022

Certificate program in Applied Compassion Training

de Morree, A. (Participant)
1 Jan 2020 → 15 Nov 2020

Supervisory Academy certificate program

de Morree, A. (Participant)
7 Sept 2018 → 8 Aug 2019

Bio-protocol (Journal)

de Morree, A. (Editor)
3 Feb 2015 → 1 Jul 2025

Bio-protocol (Journal)

de Morree, A. (Editorial board member)
2015 → ...

the reproducibility initiative: cancer biology

de Morree, A. (Member)
24 Jan 2014 → 9 Dec 2021

FASEB journal : official publication of the Federation of American Societies for Experimental Biology (Journal)

de Morree, A. (Reviewer)
2014 → ...

Grant reviewer for Italian Ministry of Health

de Morree, A. (Participant)
12 Jun 2013 → ...

Human Molecular Genetics (Journal)

de Morree, A. (Reviewer)
2011 → ...

European Journal of Human Genetics (Journal)

de Morree, A. (Reviewer)
1 Jan 2010 → ...

Press/Media**Cell atlas will make it possible to transplant more types of organs in the future**

de Morree, A.
07/06/2022
1 item of Media coverage

EMPLOYEES' MENTAL HEALTH SHOULD BE PRIORITISED (EVEN) MORE

de Morree, A.
17/09/2021
1 item of Media coverage

Et skridt tættere på et komplet atlas over menneskekroppen

de Morree, A.
14/06/2022
1 item of Media coverage

Five Questions with FSHD Researcher Antoine de Morrée

de Morree, A.
14/10/2015
1 item of Media coverage

Frank fra museet fikser brækket dinosaur-knogle

de Morree, A.
13/01/2023
1 item of Media coverage

Neuroscience Theme Meeting

de Morree, A.
18/05/2022
1 item of Media coverage

Old stem cells can be rejuvenated with young blood

de Morree, A.
17/03/2022
1 item of Media coverage

Projects**Differentiation potential of mesenchymal stem cells**

de Morree, A. (PI)

How stem cells control the quiescent state, including entry, maintenance, and exit
de Morree, A. (PI)

Post-transcriptional control of gene expression
de Morree, A. (PI)

Stem cell therapeutics in muscular dystrophy
de Morree, A. (PI)

Teaching and Supervision

AU Bio-technology Masters Program

de Morree, A.
26/09/2023 → 26/09/2023

Bachelor thesis projects in biochemistry - written

de Morree, A.
01/09/2021 → 31/07/2024

Bachelor thesis projects - practical

de Morree, A.
01/09/2022 → 31/07/2025

Building Resilience Workshop

de Morree, A.
06/12/2021 → 06/12/2021

Building Resilience Workshop

de Morree, A.
08/12/2021 → 08/12/2021

Molekylære principper for celle- og organfunktioner

de Morree, A.
01/03/2022 → 01/10/2027

Research outputs

Division-Independent Differentiation of Muscle Stem Cells During a Growth Stimulus
Ismaeel, A., Goh, J., Mobley, C. B., Murach, K. A., Brett, J. O., de Morrée, A., Rando, T. A., Peterson, C. A., Wen, Y. & McCarthy, J. J., 14 Mar 2024, In: Stem cells (Dayton, Ohio). 42, 3, p. 266-277 12 p.

Absolute Quantification of mRNA Isoforms in Adult Stem Cells Using Microfluidic Digital PCR

Das Barman, S., Frimand, Z. & de Morree, A., Sept 2023, In: Bio-protocol. 13, 17, e4811.

Regulation of adult stem cell function by ketone bodies

Andersen, O. E., Poulsen, J. V., Farup, J. & de Morree, A., Aug 2023, In: Frontiers in Cell and Developmental Biology. 11, 9 p., 1246998.

Regulation of adult stem cell quiescence and its functions in the maintenance of tissue integrity

de Morree, A. & Rando, T. A., May 2023, In: Nature Reviews. Molecular Cell Biology. 24, 5, p. 334-354 21 p.

Multiomics reveals glutathione metabolism as a driver of bimodality during stem cell aging

Benjamin, D. I., Brett, J. O., Both, P., Benjamin, J. S., Ishak, H. L., Kang, J., Kim, S., Chung, M., Arjona, M., Nutter, C. W., Tan, J. H., Krishnan, A. K., Dulay, H., Louie, S. M., de Morree, A., Nomura, D. K. & Rando, T. A., 7 Mar 2023, In: Cell Metabolism. 35, 3, p. 472-486.e6

Elevated CD47 is a hallmark of dysfunctional aged muscle stem cells that can be targeted to augment regeneration

Porpiglia, E., Mai, T., Kraft, P., Holbrook, C. A., de Morree, A., Gonzalez, V. D., Hilgendorf, K. I., Frésard, L., Trejo, A., Bhimaraju, S., Jackson, P. K., Fantl, W. J. & Blau, H. M., 1 Dec 2022, In: Cell Stem Cell. 29, 12, p. 1653-1668.e8 16 p.

Isolation of Quiescent Stem Cell Populations from Individual Skeletal Muscles

Frimand, Z., Das Barman, S., Kjær, T. R., Porpiglia, E. & de Morree, A., Dec 2022, In: Journal of Visualized Experiments. 190, e64557.

Fasting induces a highly resilient deep quiescent state in muscle stem cells via ketone body signaling

Benjamin, D. I., Both, P., Benjamin, J. S., Nutter, C. W., Tan, J. H., Kang, J., Machado, L. A., Klein, J. D. D., de Morree, A., Kim, S., Liu, L., Dulay, H., Feraboli, L., Louie, S. M., Nomura, D. K. & Rando, T. A., 7 Jun 2022, In: Cell Metabolism. 34, 6, p. 902-918.e6

Cell types of origin of the cell-free transcriptome

Vorperian, S. K., Moufarrej, M. N., Tabula Sapiens Consortium & Quake, S. R., Jun 2022, In: Nature Biotechnology. 40, 6, p. 855-861 7 p.

The Tabula Sapiens: A multiple-organ, single-cell transcriptomic atlas of humans

Tabula Sapiens Consortium*, 13 May 2022, In: Science (New York, N.Y.). 376, 6594, p. eabl4896 abl4896.

Adversarial domain translation networks for integrating large-scale atlas-level single-cell datasets

Zhao, J., Wang, G., Ming, J., Lin, Z., Wang, Y., The Tabula Microcebus Consortium, Wu, A. R. & Yang, C., May 2022, In: Nature Computational Science. 2, 5, p. 317-330 14 p.

ATR activity controls stem cell quiescence via the cyclin F-SCF complex

Salvi, J. S., Kang, J., Kim, S., Colville, A. J., de Morrée, A., Billeskov, T. B., Larsen, M. C., Kanugovi, A., van Velthoven, C. T. J., Cimprich, K. A. & Rando, T. A., May 2022, In: Proceedings of the National Academy of Sciences (PNAS). 119, 18, p. e2115638119 e2115638119.

Molecular hallmarks of heterochronic parabiosis at single-cell resolution

Pálovics, R., Keller, A., Schaum, N., Tan, W., Fehlmann, T., Borja, M., Kern, F., Bonanno, L., Calcuttawala, K., Webber, J., McGeever, A., Tabula Muris Consortium, Luo, J., Pisco, A. O., Karkanias, J., Neff, N. F., Darmanis, S., Quake, S. R. & Wyss-Coray, T., Mar 2022, In: Nature. 603, 7900, p. 309-314 6 p.

Institutions' role in postpandemic support

de Morree, A. & Al'Ai, A., 17 Sept 2021, In: Science. 373, 6561, p. 1318 1 p.

RNA splicing programs define tissue compartments and cell types at single-cell resolution

Olivieri, J. E., Dehghannasiri, R., Wang, P. L., Jang, S., de Morree, A., Tan, S. Y., Ming, J., Ruohao Wu, A., Quake, S. R., Krasnow, M. A. & Salzman, J., 13 Sept 2021, In: eLife. 10, e70692.

Magnetic: How Great Leaders Persuade and Inspire

de Morree, A., 14 Jul 2021

Becoming Magnetic: A Communication Handbook for Future Leaders

de Morree, A., 1 Dec 2020, Kendall/Hunt Publishing Co.

Ageing hallmarks exhibit organ-specific temporal signatures

The Tabula Muris Consortium, 23 Jul 2020, In: *Nature*. 583, 7817, p. 596-602 7 p.

A single-cell transcriptomic atlas characterizes ageing tissues in the mouse

The Tabula Muris Consortium, 23 Jul 2020, In: *Nature*. 583, 7817, p. 590-595 6 p.

Exercise rejuvenates quiescent skeletal muscle stem cells in old mice through restoration of Cyclin D1

Brett, J. O., Arjona, M., Ikeda, M., Quarta, M., de Morrée, A., Egner, I. M., Perandini, L. A., Ishak, H. D., Goshayeshi, A., Benjamin, D. I., Both, P., Rodríguez-Mateo, C., Betley, M. J., Wyss-Coray, T. & Rando, T. A., 1 Apr 2020, In: *Nature Metabolism*. 2, 4, p. 307-317 11 p.

Alternative polyadenylation of Pax3 controls muscle stem cell fate and muscle function

de Morree, A., Klein, J. D. D., Gan, Q., Farup, J., Urtasun, A., Kanugovi, A., Bilén, B., Van Velthoven, C. T. J., Quarta, M. & Rando, T. A., Nov 2019, In: *Science*. 366, 6466, p. 734-738 5 p.

Single-cell transcriptomics of 20 mouse organs creates a Tabula Muris

de Morree, A. & The Tabula Muris Consortium, 18 Oct 2018, In: *Nature*. 562, 7727, p. 367-372 6 p.

Transcriptional Profiling of Quiescent Muscle Stem Cells In Vivo

van Velthoven, C. T. J., de Morree, A., Egner, I. M., Brett, J. O. & Rando, T. A., 14 Nov 2017, In: *Cell Reports*. 21, 7, p. 1994-2004 11 p.

Staufen1 inhibits MyoD translation to actively maintain muscle stem cell quiescence

de Morrée, A., van Velthoven, C. T. J., Gan, Q., Salvi, J. S., Klein, J. D. D., Akimenko, I., Quarta, M., Biressi, S. & Rando, T. A., 24 Oct 2017, In: *Proceedings of the National Academy of Sciences (PNAS)*. 114, 43, p. E8996-E9005

United We Stand

de Morree, A., Collman, F., Gordon, C. & Klabunde, M., 28 Sept 2017, In: *Nature*. 549, 555

Deltex2 represses MyoD expression and inhibits myogenic differentiation by acting as a negative regulator of Jmjd1c

Luo, D., de Morree, A., Boutet, S., Quach, N., Natu, V., Rustagi, A. & Rando, T. A., 11 Apr 2017, In: *Proceedings of the National Academy of Sciences (PNAS)*. 114, 15, p. E3071-E3080

An artificial niche preserves the quiescence of muscle stem cells and enhances their therapeutic efficacy

Quarta, M., Brett, J. O., DiMarco, R., De Morree, A., Boutet, S. C., Chacon, R., Gibbons, M. C., Garcia, V. A., Su, J., Shrager, J. B., Heilshorn, S. & Rando, T. A., Jul 2016, In: *Nature Biotechnology*. 34, 7, p. 752-9 8 p.

Outside the tower. A night at the museum

de Morrée, A., 18 Jul 2014, In: *Science (New York, N.Y.)*. 345, 6194, p. 279

Science Time Travel

de Morree, A., 5 Jul 2013, In: *Science*. 341

Dysferlin regulates cell adhesion in human monocytes

de Morrée, A., Flix, B., Bagaric, I., Wang, J., van den Boogaard, M., Grand Moursel, L., Frants, R. R., Illa, I., Gallardo, E., Toes, R. & van der Maarel, S. M., 17 May 2013, In: *The Journal of Biological Chemistry*. 288, 20, p. 14147-14157 11 p.

NextGen speaks [9]

De Morrée, A., 2013, In: *Science*. 341, 6141, p. 30 1 p.

GREG cells, a dysferlin-deficient myogenic mouse cell line

Humphrey, G. W., Mekhedov, E., Blank, P. S., de Morree, A., Pekkurnaz, G., Nagaraju, K. & Zimmerberg, J., 15 Jan 2012, In: *Experimental Cell Research*. 318, 2, p. 127-35 9 p.

Self-regulated alternative splicing at the AHNAK locus

de Morrée, A., Droog, M., Grand Moursel, L., Bisschop, I. J. M., Impagliazzo, A., Frants, R. R., Klooster, R. & van der Maarel, S. M., Jan 2012, In: *FASEB journal : official publication of the Federation of American Societies for Experimental Biology*. 26, 1, p. 93-103 11 p.

In silico discovery and experimental validation of new protein-protein interactions

van Haagen, H. H. H. B. M., 't Hoen, P. A. C., de Morrée, A., van Roon-Mom, W. M. C., Peters, D. J. M., Roos, M., Mons, B., van Ommen, G.-J. & Schuemie, M. J., Mar 2011, In: *Proteomics*. 11, 5, p. 843-53 11 p.

Comparison of dysferlin expression in human skeletal muscle with that in monocytes for the diagnosis of dysferlin myopathy

Gallardo, E., de Luna, N., Diaz-Manera, J., Rojas-García, R., Gonzalez-Quereda, L., Flix, B., de Morrée, A., van der Maarel, S. & Illa, I., 2011, In: *PLOS ONE*. 6, 12, p. e29061

Proteomic analysis of the dysferlin protein complex unveils its importance for sarcolemmal maintenance and integrity

de Morrée, A., Hensbergen, P. J., van Haagen, H. H. H. B. M., Dragan, I., Deelder, A. M., 't Hoen, P. A. C., Frants, R. R. & van der Maarel, S. M., 5 Nov 2010, In: *PLOS ONE*. 5, 11, p. e13854

Calpain 3 is a rapid-action, unidirectional proteolytic switch central to muscle remodeling

de Morrée, A., Lutje Hulsik, D., Impagliazzo, A., van Haagen, H. H. H. B. M., de Galan, P., van Remoortere, A., 't Hoen, P. A. C., van Ommen, G. B., Frants, R. R. & van der Maarel, S. M., 4 Aug 2010, In: *PLOS ONE*. 5, 8, p. e11940

Novel protein-protein interactions inferred from literature context

van Haagen, H. H. H. B. M., 't Hoen, P. A. C., Botelho Bovo, A., de Morrée, A., van Mulligen, E. M., Chichester, C., Kors, J. A., den Dunnen, J. T., van Ommen, G.-J. B., van der Maarel, S. M., Kern, V. M., Mons, B. & Schuemie, M. J., 18 Nov 2009, In: *PLOS ONE*. 4, 11, p. e7894

Calpain 3 is a modulator of the dysferlin protein complex in skeletal muscle

Huang, Y., de Morrée, A., van Remoortere, A., Bushby, K., Frants, R. R., den Dunnen, J. T. & van der Maarel, S. M., 15 Jun 2008, In: *Human Molecular Genetics*. 17, 12, p. 1855-66 12 p.

Insect lipoprotein biogenesis depends on an amphipathic beta cluster in apolipoprotein II/I and is stimulated by microsomal triglyceride transfer protein

Smolenaars, M. M. W., de Morrée, A., Kerver, J., Van der Horst, D. J. & Rodenburg, K. W., Sept 2007, In: *Journal of Lipid Research*. 48, 9, p. 1955-65 11 p.