

# Stanford

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## Antoine de Morree

Casual - Other Teaching Staff

Continuing Studies and Summer Session

### Bio

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#### ACADEMIC APPOINTMENTS

- Casual - Other Teaching Staff, Continuing Studies and Summer Session

#### Research & Scholarship

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#### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Molecular mechanisms underlying neuromuscular disorders and the molecular regulation of satellite cell quiescence and activation in relation to normal aging.

#### Publications

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##### PUBLICATIONS

- **Regulation of adult stem cell quiescence and its functions in the maintenance of tissue integrity.** *Nature reviews. Molecular cell biology*  
de Morree, A., Rando, T. A.  
2023
- **Isolation of Quiescent Stem Cell Populations from Individual Skeletal Muscles.** *Journal of visualized experiments : JoVE*  
Frimand, Z., Das Barman, S., Kjær, T. R., Porpiglia, E., de Morrée, A.  
2022
- **The Tabula Sapiens: A multiple-organ, single-cell transcriptomic atlas of humans.** *Science (New York, N.Y.)*  
Jones, R. C., Karkanias, J., Krasnow, M. A., Pisco, A. O., Quake, S. R., Salzman, J., Yosef, N., Bulthaup, B., Brown, P., Harper, W., Hemenez, M., Ponnusamy, R., Salehi, et al  
2022; 376 (6594): eabl4896
- **Fasting induces a highly resilient deep quiescent state in muscle stem cells via ketone body signaling.** *Cell metabolism*  
Benjamin, D. I., Both, P., Benjamin, J. S., Nutter, C. W., Tan, J. H., Kang, J., Machado, L. A., Klein, J. D., de Morree, A., Kim, S., Liu, L., Dulay, H., Feraboli, et al  
2022
- **Institutions' role in postpandemic support** *SCIENCE*  
de Morree, A., Alvarez, A.  
2021; 373 (6561): 1318
- **Alternative polyadenylation of Pax3 controls muscle stem cell fate and muscle function.** *Science (New York, N.Y.)*  
de Morree, A. n., Klein, J. D., Gan, Q. n., Farup, J. n., Urtasun, A. n., Kanugovi, A. n., Bilen, B. n., van Velthoven, C. T., Quarta, M. n., Rando, T. A.  
2019; 366 (6466): 734–38
- **Outside the tower. A night at the museum.** *Science (New York, N.Y.)*  
de Morrée, A.  
2014; 345 (6194): 279

- **An organism-wide atlas of hormonal signaling based on the mouse lemur single-cell transcriptome.** *Nature communications*  
Liu, S., Ezran, C., Wang, M. F., Li, Z., Awayan, K., Long, J. Z., De Vlaminck, I., Wang, S., Epelbaum, J., Kuo, C. S., Terrien, J., Krasnow, M. A., Ferrell, et al 2024; 15 (1): 2188
- **Division-Independent Differentiation of Muscle Stem Cells During a Growth Stimulus.** *Stem cells (Dayton, Ohio)*  
Ismaeel, A., Goh, J., Mobley, C. B., Murach, K. A., Brett, J. O., de Morree, A., Rando, T. A., Peterson, C. A., Wen, Y., McCarthy, J. J. 2023
- **Multiomics reveals glutathione metabolism as a driver of bimodality during stem cell aging.** *Cell metabolism*  
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, et al 2023
- **Elevated CD47 is a hallmark of dysfunctional aged muscle stem cells that can be targeted to augment regeneration.** *Cell stem cell*  
Porziglia, E., Mai, T., Kraft, P., Holbrook, C. A., de Morree, A., Gonzalez, V. D., Hilgendorf, K. I., Fresard, L., Trejo, A., Bhimaraju, S., Jackson, P. K., Fantl, W. J., Blau, et al 2022
- **ATR activity controls stem cell quiescence via the cyclin F-SCF complex.** *Proceedings of the National Academy of Sciences of the United States of America*  
Salvi, J. S., Kang, J., Kim, S., Colville, A. J., de Morree, A., Billeskov, T. B., Larsen, M. C., Kanugovi, A., van Velthoven, C. T., Cimprich, K. A., Rando, T. A. 2022; 119 (18): e2115638119
- **Publisher Correction: Cell types of origin of the cell-free transcriptome.** *Nature biotechnology*  
Vorperian, S. K., Moufarrej, M. N., Tabula Sapiens Consortium, Quake, S. R., Jones, R. C., Karkanias, J., Krasnow, M., Pisco, A. O., Quake, S. R., Salzman, J., Yosef, N., Bulthaup, B., Brown, P., et al 2022
- **Molecular hallmarks of heterochronic parabiosis at single-cell resolution.** *Nature*  
Palovics, 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., et al 2022
- **Cell types of origin of the cell-free transcriptome.** *Nature biotechnology*  
Vorperian, S. K., Moufarrej, M. N., Tabula Sapiens Consortium, Quake, S. R., Jones, R. C., Karkanias, J., Krasnow, M., Pisco, A. O., Quake, S. R., Salzman, J., Yosef, N., Bulthaup, B., Brown, P., et al 2022
- **Institutions' role in postpandemic support.** *Science (New York, N.Y.)*  
de Morree, A., Alvarez, A. 2021; 373 (6561): 1318
- **RNA splicing programs define tissue compartments and cell types at single cell resolution.** *eLife*  
Olivieri, J. E., Dehghannasiri, R., Wang, P. L., Jang, S., de Morree, A., Tan, S. Y., Ming, J., Ruohao Wu, A., Tabula Sapiens Consortium, Quake, S. R., Krasnow, M. A., Salzman, J. 2021; 10
- **RNA splicing programs define tissue compartments and cell types at single-cell resolution** *ELIFE*  
Olivieri, J., Dehghannasiri, R., Wang, P. L., Jang, S., de Morree, A., Tan, S. Y., Ming, J., Wu, A., Consortium, T., Quake, S. R., Krasnow, M. A., Salzman, J. 2021; 10
- **Exercise rejuvenates quiescent skeletal muscle stem cells in old mice through restoration of Cyclin D1** *NATURE METABOLISM*  
Brett, J. O., Arjona, M., Ikeda, M., Quarta, M., de Morree, A., Egner, I. M., Perandini, L. A., Ishak, H. D., Goshayeshi, A., Benjamin, D. I., Both, P., Rodriguez-Mateo, C., Betley, et al 2020; 2 (4): 307-+
- **Exercise rejuvenates quiescent skeletal muscle stem cells in old mice through restoration of Cyclin D1.** *Nature metabolism*  
Brett, J. O., Arjona, M., Ikeda, M., Quarta, M., de Morree, A., Egner, I. M., Perandini, L. A., Ishak, H. D., Goshayeshi, A., Benjamin, D. I., Both, P., Rodríguez-Mateo, C., Betley, et al 2020; 2 (4): 307-317
- **Ageing hallmarks exhibit organ-specific temporal signatures.** *Nature*

Schaum, N. n., Lehallier, B. n., Hahn, O. n., Pálovics, R. n., Hosseinzadeh, S. n., Lee, S. E., Sit, R. n., Lee, D. P., Losada, P. M., Zardeneta, M. E., Fehlmann, T. n., Webber, J. T., McGeever, et al  
2020

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

2020

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

2018; 562 (7727): 367–72

- **Transcriptional Profiling of Quiescent Muscle Stem Cells In Vivo** *CELL REPORTS*

van Velthoven, C. J., de Morree, A., Egner, I. M., Brett, J. O., Rando, T. A.

2017; 21 (7): 1994–2004

- **Staufer1 inhibits MyoD translation to actively maintain muscle stem cell quiescence** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*

de Morree, A., van Velthoven, C. J., Gan, Q., Salvi, J. S., Klein, J., Akimenko, I., Quarta, M., Biressi, S., Rando, T. A.

2017; 114 (43): E8996–E9005

- **Deltex2 represses MyoD expression and inhibits myogenic differentiation by acting as a negative regulator of Jmjd1c** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*

Luo, D., de Morree, A., Boutet, S., Quach, N., Natu, V., Rustagi, A., Rando, T. A.

2017; 114 (15): E3071–E3080

- **An artificial niche preserves the quiescence of muscle stem cells and enhances their therapeutic efficacy.** *Nature biotechnology*

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2016; 34 (7): 752–759

- **Dysferlin regulates cell adhesion in human monocytes.** *journal of biological chemistry*

de Morree, 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.  
2013; 288 (20): 14147–14157

- **GREG cells, a dysferlin-deficient myogenic mouse cell line** *EXPERIMENTAL CELL RESEARCH*

Humphrey, G. W., Mekhedov, E., Blank, P. S., de Morree, A., Pekkurnaz, G., Nagaraju, K., Zimmerberg, J.  
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- **Self-regulated alternative splicing at the AHNAK locus** *FASEB JOURNAL*

de Morree, A., Droog, M., Moursel, L. G., Bisschop, I. J., Impagliazzo, A., Frants, R. R., Klooster, R., van der Maarel, S. M.  
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- **Comparison of Dysferlin Expression in Human Skeletal Muscle with That in Monocytes for the Diagnosis of Dysferlin Myopathy** *PLOS ONE*

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2011; 6 (12)

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

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2011; 11 (5): 843–853

- **Proteomic Analysis of the Dysferlin Protein Complex Unveils Its Importance for Sarcolemmal Maintenance and Integrity** *PLOS ONE*

de Morree, A., Hensbergen, P. J., van Haagen, H. H., Dragan, I., Deelder, A. M., 't Hoen, P. A., Frants, R. R., van der Maarel, S. M.  
2010; 5 (11)

- **Calpain 3 Is a Rapid-Action, Unidirectional Proteolytic Switch Central to Muscle Remodeling** *PLOS ONE*

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- **Novel Protein-Protein Interactions Inferred from Literature Context** *PLOS ONE*

van Haagen, H. H., 't Hoen, P. A., Bovo, A. B., de Morree, A., van Mulligen, E. M., Chichester, C., Kors, J. A., den Dunnen, J. T., van Ommen, G. B., Van der Maarel, S. M., Kern, V. M., Mons, B., Schuemie, et al  
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- **Calpain 3 is a modulator of the dysferlin protein complex in skeletal muscle** *HUMAN MOLECULAR GENETICS*  
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- **Insect lipoprotein biogenesis depends on an amphipathic beta cluster in apolipoporphin II/I and is stimulated by microsomal triglyceride transfer protein** *JOURNAL OF LIPID RESEARCH*  
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