

Publikationer

Biomechanics of sound production in high-pitched classical singing

Echternach, M., Burk, F., Köberlein, M., Döllinger, M., Burdumy, M., Richter, B., Titze, I. R., Elemans, C. P. H. & Herbst, C. T., dec. 2024, I: Scientific Reports. 14, 1, 13 s., 13132.

Male and female syringeal muscles exhibit superfast shortening velocities in zebra finches

Gladman, N. W. & Elemans, C. P. H., 8. apr. 2024, I: Journal of Experimental Biology. 227, 7, jeb246330.

Evolutionary novelties underlie sound production in baleen whales

Elemans, C. P. H., Jiang, W., Jensen, M. H., Pichler, H., Mussman, B. R., Nattestad, J., Wahlberg, M., Zheng, X., Xue, Q. & Fitch, W. T., mar. 2024, I: Nature. 627, 8002, s. 123-129

Daily vocal exercise is necessary for peak performance singing in a songbird

Adam, I., Riebel, K., Stål, P., Wood, N., Previs, M. J. & Elemans, C. P. H., dec. 2023, I: Nature Communications. 14, 1, 12 s., 7787.

Predicting 3D soft tissue dynamics from 2D imaging using physics informed neural networks

Movahhedi, M., Liu, X. Y., Geng, B., Elemans, C., Xue, Q., Wang, J. X. & Zheng, X., dec. 2023, I: Communications Biology. 6, 1, 10 s., 541.

The reconstruction of flows from spatiotemporal data by autoencoders

Fainstein, F., Catoni, J., Elemans, C. P. H. & Mindlin, G. B., nov. 2023, I: Chaos, Solitons and Fractals. 176, 7 s., 114115.

Toothed whales use distinct vocal registers for echolocation and communication

Madsen, P. T., Siebert, U. & Elemans, C. P. H., 3. mar. 2023, I: Science (New York, N.Y.). 379, 6635, s. 928-933

A flexible carbon nanotube electrode array for acute in vivo EMG recordings

Pack, A. R., Yan, J. S., Pasquali, M., Sober, S. J. & Elemans, C. P. H., 1. mar. 2023, I: Journal of Neurophysiology. 129, 3, s. 651-661

Dynamic System Coupling in Voice Production

Herbst, C. T., Elemans, C. P. H., Tokuda, I. T., Chatziioannou, V. & Švec, J. G., 1. feb. 2023, (E-pub ahead of print) I: Journal of Voice.

Aerodynamics and motor control of ultrasonic vocalizations for social communication in mice and rats

Håkansson, J., Jiang, W., Xue, Q., Zheng, X., Ding, M., Agarwal, A. A. & Elemans, C. P. H., dec. 2022, I: BMC Biology. 20, 1, 15 s., 3.

Bats expand their vocal range by recruiting different laryngeal structures for echolocation and social communication

Håkansson, J., Mikkelsen, C., Jakobsen, L. & Elemans, C. P. H., nov. 2022, I: PLOS Biology. 20, 11, e3001881.

Driving singing behaviour in songbirds using a multi-modal, multi-agent virtual environment

Larsen, L. B., Adam, I., Berman, G. J., Hallam, J. & Elemans, C. P. H., 2022, I: Scientific Reports. 12, 1, 13414.

One-to-one innervation of vocal muscles allows precise control of birdsong

Adam, I., Maxwell, A., Rößler, H., Hansen, E. B., Vellema, M., Brewer, J. & Elemans, C. P. H., 26. jul. 2021, I: Current Biology. 31, 14, s. 3115-3124.e5

How Loud Can you go? Physical and Physiological Constraints to Producing High Sound Pressures in Animal Vocalizations

Jakobsen, L., Christensen-Dalsgaard, J., Juhl, P. M. & Elemans, C. P. H., maj 2021, I: Frontiers in Ecology and Evolution. 9, 15 s., 657254.

Syringeal vocal folds do not have a voice in zebra finch vocal development

Maxwell, A., Adam, I., Larsen, P. S., Sørensen, P. G. & Elemans, C. P. H., 19. mar. 2021, I: *Scientific Reports*. 11, 18 s., 6469.

Increasing Muscle Speed Drives Changes in the Neuromuscular Transform of Motor Commands during Postnatal Development in Songbirds

Adam, I. & Elemans, C. P. H., 26. aug. 2020, I: *Journal of Neuroscience*. 40, 35, s. 6722-6731

High-fidelity continuum modeling predicts avian voiced sound production

Jiang, W., Rasmussen, J. H., Xue, Q., Ding, M., Zheng, X. & Elemans, C. P. H., 3. mar. 2020, I: *PNAS*. 117, 9, s. 4718-4723 6 s.

An Intralaryngeal Whistle Using an Elaborated Structure Enables Song in Alston's Singing Mouse

Smith, S. K., Hakansson, J., Frazel, P. W., Long, M. A., Elemans, C. P. H. & Phelps, S. M., 1. mar. 2020, I: *Integrative & Comparative Biology*. 60, Suppl. 1, s. E420 1 s.

Author Correction: Vocal state change through laryngeal development (*Nature Communications*, (2019), 10, 1, (4592), 10.1038/s41467-019-12588-6)

Zhang, Y. S., Takahashi, D. Y., Liao, D. A., Ghazanfar, A. A. & Elemans, C. P. H., 24. feb. 2020, I: *Nature Communications*. 11, 1, 1096.

Vocal Motor Performance in Birdsong Requires Brain-Body Interaction

Adam, I. & Elemans, C. P. H., 10. jun. 2019, I: *eNeuro*. 6, 3, 6 s.

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Vocal state change through laryngeal development

Zhang, Y. S., Takahashi, D. Y., Liao, D. A., Ghazanfar, A. A. & Elemans, C. P. H., 2019, I: *Nature Communications*. 10, 12 s., 4592.

Quantifying syringeal dynamics in vitro using electroglottography

Rasmussen, J. H., Herbst, C. T. & Elemans, C. P. H., 23. aug. 2018, I: *The Journal of Experimental Biology*. 221, 16, s. 1-12

High-fidelity fluid-structure interaction modeling of bird vocalization in syrinx

Jiang, W., Xue, Q., Zheng, X., Rasmussen, J. H. & Elemans, C. P. H., 2018, *2018 AIAA Aerospace Sciences Meeting*. American Institute of Aeronautics and Astronautics Inc. (AIAA), 2018-0578

The last common ancestor of animals lacked the HIF pathway and respired in low-oxygen environments

Mills, D. B., Francis, W. R., Vargas, S., Larsen, M., Elemans, C. P. H., Canfield, D. E. & Wörheide, G., 2018, I: *eLife*. 7, e31176.

In situ vocal fold properties and pitch prediction by dynamic actuation of the songbird syrinx

Düring, D. N., Knörlein, B. J. & Elemans, C. P. H., 12. sep. 2017, I: *Scientific Reports*. 7, 14 s., 11296.

Oilbirds produce echolocation signals beyond their best hearing range and adjust signal design to natural light conditions

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Mahrt, E., Agarwal, A., Perkel, D., Portfors, C. & Elemans, C. P. H., 10. okt. 2016, I: *Current Biology*. 26, 19, s. R880-R881

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Düring, D. N. & Elemans, C., feb. 2016, *Vertebrate sound production and acoustic communication*. Suthers, R. A., Fitch, W. T., Fay, R. R. & Popper, A. N. (red.). Springer, Bind 53. s. 119-157 (Springer Handbook of Auditory Research, Bind 53).

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Universal mechanisms of sound production and control in birds and mammals

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Multifunctional and context-dependent control of vocal acoustics by individual muscles

Srivastava, K. H., Elemans, C. P. H. & Sober, S. J., 2015, I: *Journal of Neuroscience*. 35, 42, s. 14183-14194

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Vocal production complexity correlates with neural instructions in the oyster toadfish (*Opsanus tau*)

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The songbird syrinx morphome: a three-dimensional, high-resolution, interactive morphological map of the zebra finch vocal organ

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Superfast muscles are devoid of glycogen particles in the intramyofibrillar space

Nielsen, J., Ørtenblad, N., Frandsen, U., Schrøder, H. D. & Elemans, C., 2012.

Superfast muscles are devoid of glycogen particles in the intramyofibrillar space

Nielsen, J., Ørtenblad, N., Frandsen, U., Schrøder, H. D. & Elemans, C., 2012.

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Lynhurtig vokal gymnastik: Den neuromuskulære kontrol af fuglenes sang

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Superfast muscles control sound production in songbirds

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Parasitic inhibition of cell suicide facilitates symbiosis

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Syringeal muscles fit the trill in ring doves (*Streptopelia risoria* L.)

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Superfast muscles control dove's trill

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Presseklip

African elephants use names to call each other, study suggests

Elemans, C. P. H.

10/06/2024

1 Mediebidrag

And forbløffer forskere ved at imitere bandeord og lyden af smækkende dør

Elemans, C.

28/09/2021

1 Mediebidrag

Australsk and forbløffer forskere ved at imitere bandeord og lyden af en dør, der smækker

Elemans, C.
28/09/2021
1 Mediebidrag

Bats have a better vocal range than Mariah Carey: study

Jakobsen, L. & Elemans, C. P. H.
29/11/2022
1 element af Mediedækning

Bats have greater vocal range than Mariah Carey and growl like death metal singers

Jakobsen, L. & Elemans, C. P. H.
29/11/2022
1 element af Mediedækning

Cantar podría mantenerse atractivo, al menos si eres un pájaro

Elemans, C. P. H. & Adam, I.
15/12/2023
1 element af Mediedækning

Daily voice workouts help songbirds find a mate, study finds

Elemans, C. P. H. & Adam, I.
19/12/2023
1 element af Mediedækning

Death metal singers have a vocal counterpart ... in bats

Jakobsen, L. & Elemans, C. P. H.
04/12/2022
1 element af Mediedækning

Dolphins use 'Kim Kardashian voice' to help them hunt deep under ocean

Elemans, C. P. H.
03/03/2023
1 element af Mediedækning

DR1 TV Avisen 18.30

Elemans, C.
09/10/2019
1 Mediebidrag

For toothed whales, sound production is all in the nose

Elemans, C. P. H.
03/03/2023
1 element af Mediedækning

Forvildet hval gav unikke forskningsmuligheder

Elemans, C.
21/12/2018
1 Mediebidrag

Fugle og mennesker synger på samme måde

Elemans, C.
30/12/2015
1 element af Mediedækning

Gopler har hukommelse og lærer hurtigt af deres fejl

Elemans, C. P. H.

22/09/2023

1 Mediebidrag

Hør selv! And har lært at imitere bandeord og en smækkende dør

Elemans, C.

27/09/2021

1 Mediebidrag

How do whales sing? Lab experiments suggest their voice boxes have a unique feature

Elemans, C. P. H. & Wahlberg, M.

24/02/2024

1 element af Mediedækning

HUGORMEN ER VÅGNET

Elemans, C.

25/04/2021

1 Mediebidrag

Hvalens strubehoved til SDU

Elemans, C.

13/12/2018

1 Mediebidrag

Kan man lave lyd med en død hval? Pukkelhvalen fra Skagen skæres op

Elemans, C.

09/10/2019

1 Mediebidrag

Kim Kardashian sounds like a whale (in a manner of speaking)

Elemans, C. P. H.

03/03/2023

1 Mediebidrag

Kontrolleret fuglesang

Elemans, C.

18/08/2021

1 Mediebidrag

Les chauves-souris, des chanteurs de death metal?

Jakobsen, L. & Elemans, C. P. H.

02/12/2022

1 element af Mediedækning

Les chauves-souris ont une meilleure voix que Mariah Carey

Jakobsen, L. & Elemans, C. P. H.

02/12/2022

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Magnus opnåede sin branches Oscar ved at undersøge død hval

Elemans, C. P. H.

06/03/2024

1 Mediebidrag

Magnus opnåede sin branches Oscar ved at undersøge død hval

Elemans, C. P. H.

07/03/2024

1 Mediebidrag

Mariah Carey's vocal range is better than most humans'. Bats surpass it.

Jakobsen, L. & Elemans, C. P. H.

01/12/2022

1 element af Mediedækning

mice sing

Elemans, C.

10/10/2016

1 element af Mediedækning

Mus synger deres kærlighedssange i ultralyd

Elemans, C.

04/11/2016

1 element af Mediedækning

Mystery of whale song unraveled by scientists, study says

Elemans, C. P. H. & Wahlberg, M.

22/02/2024

1 element af Mediedækning

Nu bliver sejhvalen skåret op - én ting springer i øjnene

Elemans, C.

11/12/2018

1 Mediebidrag

Ny opdagelse: Fugle og mennesker synger på samme måde

Elemans, C.

29/11/2015

1 element af Mediedækning

Pas godt på hugormen, den er vågnet

Elemans, C.

24/04/2021

1 Mediebidrag

PRM / Sangfugle og computermodeller skal skabe øget forståelse af, hvordan mennesker producerer stemme og udvikler tale

Elemans, C.

18/02/2021

1 Mediebidrag

PRM / Sangfugle udviser ekstrem muskelkontrol, når de skal synge for hinanden (og dig)

Elemans, C.

04/06/2021

1 Mediebidrag

PRM / Sangfugle udviser ekstrem muskelkontrol, når de skal synge for hinanden (og dig)

Elemans, C.

04/06/2021

1 Mediebidrag

Pukkelhvalen fra Skagen skæres op

Elemans, C.
10/10/2019
1 Mediebidrag

Rivaler undlader at dræbe hinanden - de strækker bare hals

Elemans, C.
21/06/2015
1 element af Mediedækning

Sangfugle og computermodeller skal skabe øget forståelse af, hvordan mennesker producerer stemme og udvikler tale

Elemans, C.
18/02/2021
1 Mediebidrag

Sangfugle synger på ekstrem muskelkontrol

Elemans, C.
16/06/2021
1 Mediebidrag

Sangfugle udviser ekstrem muskelkontrol

Elemans, C.
07/06/2021
1 Mediebidrag

Sangfugle udviser ekstrem muskelkontrol, når de skal synge for hinanden (og dig)

Elemans, C.
06/06/2021
1 Mediebidrag

Sangfugle udviser ekstrem muskelkontrol, når de skal synge for hinanden (og dig)

Elemans, C.
04/06/2021
1 Mediebidrag

Scientists discover how whales can sing under water and how shipping noise can disrupt communication

Elemans, C. P. H. & Wahlberg, M.
21/02/2024
1 Mediebidrag

Scientists discover the anatomy behind the songs of baleen whales

Elemans, C. P. H. & Wahlberg, M.
21/02/2024
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Scientists discover the anatomy behind the songs of baleen whales

Elemans, C. P. H. & Wahlberg, M.
22/02/2024
1 element af Mediedækning

Sejhvalen skåret op - nu kender vi kønnet

Elemans, C.
11/12/2018
1 Mediebidrag

These songbirds sing for hours a day to keep their vocal muscles in shape

Elemans, C. P. H. & Adam, I.
13/12/2023
1 element af Mediedækning

These Whales Still Use Their Vocal Cords. But How?

Elemans, C. P. H. & Wahlberg, M.
21/02/2024
1 element af Mediedækning

To hvaler strandet i Nordjylland er med til at afdække mysterium om hvalers sang

Elemans, C. P. H.
21/02/2024
1 Mediebidrag

Toothed whales use 'vocal fry' to hunt for food, scientists say

Elemans, C. P. H.
03/03/2023
1 Mediebidrag

- Vi stod nærmest klar med kniv og gaffel deroppe: Magnus opnåede sin branches Oscar ved at undersøge død hval

Elemans, C. P. H.
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- Vi stod nærmest klar med kniv og gaffel deroppe: Magnus opnåede sin branches Oscar ved at undersøge død hval

Elemans, C. P. H.
04/03/2024
1 Mediebidrag

Whales 'cannot out-sing' human noise pollution

Elemans, C. P. H. & Wahlberg, M.
21/02/2024
1 element af Mediedækning

Whales can sing underwater without drowning—now we know how

Elemans, C. P. H. & Wahlberg, M.
21/02/2024
1 element af Mediedækning

Whale song mystery solved by scientists

Elemans, C. P. H. & Wahlberg, M.
22/02/2024
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Who's Using Vocal Fry in the Ocean? Dolphins and Whaaaaaaales

Elemans, C. P. H.
02/03/2023
1 element af Mediedækning

Wie der „Gesangs-Apparat“ der Bartenwale funktioniert

Elemans, C. P. H. & Wahlberg, M.

21/02/2024

1 element af Mediedækning

Wie Wale Töne erzeugen

Elemans, C. P. H.

17/04/2023

1 element af Mediedækning

Young women are criticized for this vocal tic — but it helps whales survive

Elemans, C. P. H.

02/03/2023

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