

Nanopublications

Tobias Kuhn

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••••• Nanopublications: tiny containers for FAIR knowledge

RALX2suiPK "Canis lupus Linnaeus, 1758 (species) - eats - Odocoileus virginianus (Zimmermann, 1780) (species)"

```
association is an association between two organism taxa .
association refers to the relation (between subject taxon and object taxon) eats .
association refers to subjtaxon .
association refers to objtaxon .
objtaxon has the name Odocoileus virginianus (Zimmermann, 1780) (species) .
subjtaxon has the name Canis lupus Linnaeus, 1758 (species) .
```

```
this assertion was derived from 10.2307/3800561 .
```

```
this created "2023-09-10T07:15:55.875Z" .
this is created by me (Tobias Kuhn) .
this is published under the license Attribution 4.0 International (CC BY 4.0) .
this supersedes RAmEzfoyc .
```

Tobias Kuhn 10 Sep 2023, 07:15:55 UTC

<https://nanodash.petapico.org/> <https://bdj.pensoft.net/nanopublications>

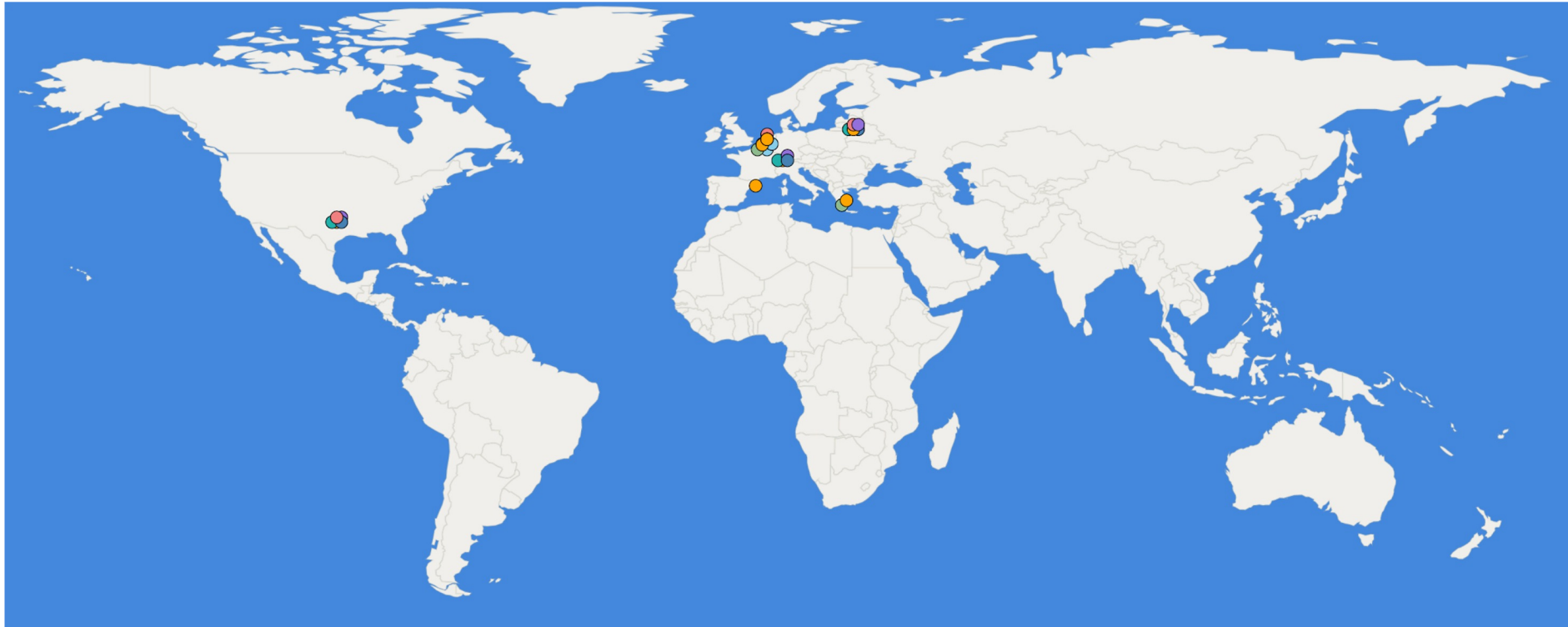
([article](#) for live demo)

••••• Nanopublications: vision

- Computer-interpretable formal representations of findings and their contexts as the **main thing to be published** (narratives as “supplemental material”)
- Letting researchers directly (not through text mining etc.) **build a global scientific knowledge graph**
- **Open and inclusive** (data, tooling, communities) and **anti-silo**
- Publish first, **assess quality later** (post-publication review etc.)
- Nanopublications as **universal containers** for: findings, researchers, studies, equipments, datasets, workflows, hypotheses, opinions, reviews, etc.

••••• Nanopublications: ecosystem

- Decentralized server network with >10M nanopublications
- Has been running for more than 10 years





Publish a new Nanopublication

Assertion: Stating an opinion that something is over-/underrated ^

Such a nanopublication expresses that its creator thinks the given thing is either overrated or underrated. This thing can be anything, such as an approach, a website, or a city.

I (Tobias Kuhn) think this is overrated: the thing you think is over- or underrated .

Provenance: Attributed to myself ^

The assertion above is attributed to me (Tobias Kuhn) .

Publication info add element...

Creator: ^

This nanopublication is created by me (Tobias Kuhn) .

With license: ^

This nanopublication is published under the license Attribution 4.0 International (CC BY 4.0) .

☐ I understand that publishing cannot be fully undone and that the provided information will be publicly visible and openly connected to my ORCID identifier (but nanopublications can be retracted, which makes them invisible in most situations).

https://nanodash.petapico.org/publish?template=http://purl.org/np/RAZI6zoPE0fsmao_xKI5h1rNR2u6vib0EdBWH1FPvi11U

••••• Nanopublications: live global semantic queries

For example, get all associations of species *Canis lupus* Linnaeus, 1758:

...

```
graph ?assertion { ?association biolink:subject ?subj .  
                  ?subj biodiv:hasTaxonName ?taxon . }  
graph ?pubinfo { ?np dct:creator ?user .  
                ?np rdfs:label ?label . }
```

...

	np	label	user	date
1	http://purl.org/np/RATILG_xH-woxWfvHYC-7LyV5F0V6Sq4EbDWS86h6CrUI	<i>Canis lupus</i> Linnaeus, 1758 (species) - has habitat - forested area	https://orcid.org/0000-0002-1267-0234	2023-09-10T07:19:09.343Z
2	http://purl.org/np/RALX2suiPKea3pm65RjS97EL6k9iY1Jew_mb30hO5Zjv0	<i>Canis lupus</i> Linnaeus, 1758 (species) - eats - <i>Odocoileus virginianus</i> (Zimmermann, 1780) (species)	https://orcid.org/0000-0002-1267-0234	2023-09-10T07:15:55.875Z
3	http://purl.org/np/RAnA9oL71Vnax3eqHK-0l-mCsdca_nglEptVXFowzCdq4	<i>Canis lupus</i> (species), Linnaeus, 1758 - is identified by nucleotide sequence - OP804221.1	https://orcid.org/0000-0002-1267-0234	2023-08-31T07:18:07.731Z

••••• Nanopublications

Working ecosystem for semantic publishing

- Universal coverage
- Designed to evolve and scale
- Still cutting-edge ...
- ... but ready to be used
- E.g. in our brand-new BDJ pilot: <https://bdj.pensoft.net/nanopublications>
- Interested? Get in touch, we are looking for use cases and trend-setting communities :)