

Helmholtz Institute for RNA-based Infection Research | Dept. REMI
Josef-Schneider-Str. 2 | D 15 | 97080 Würzburg | Germany

Jun. Prof. Dr. Neva Caliskan
Group leader
Recoding Mechanisms in
Infections
Tel. 0931 31-85298
Fax 0931 31-82578
neva.caliskan@helmholtz-
hiri.de

Your Ref.	Our Ref.	Date
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Dear Mr. Werth,

I am delighted to submit our manuscript entitled

“Optical Tweezers to Study Translation Regulatory RNA-Protein Interactions”

for publication as a video article in the Journal of Visualized Experiments.

The emerging roles of the mRNA suggest that it is more than an information carrier, and it can interact with various proteins and other RNA molecules in the cell to regulate key cellular activities such as translation.

In this article, we demonstrate the use of single-molecule-fluorescence-coupled optical tweezers to investigate the conformational and the thermodynamic landscape of RNA-protein complexes that regulate translation at a high spatial and temporal resolution. The combination of optical tweezers with fluorescence is a powerful method that is only recently applied to study translation mechanisms. The technique can be widely applied to study distinct RNA-protein complexes or small molecules regulating translation and could facilitate studies of translational control mechanisms.

I hope this video article will be useful for newcomers in the field of RNA-based translational regulation and will provoke interest in the newly emerging technique of fluorescence-assisted optical tweezers for a broad audience of biologists and biochemists.

Best regards,



Neva Caliskan

**Helmholtz Institute for RNA-based
Infection Research (HIRI)**
Josef-Schneider-Str. 2
97080 Würzburg
Germany
Phone +49 931 31-89235
Fax +49 931 31-82578
www.helmholtz-hiri.de

Registered Office:
Helmholtz-Zentrum
für Infektionsforschung GmbH
Inhoffenstraße 7
38124 Braunschweig

Chair of Supervisory Board:
MinDir'in Prof. Veronika von Messling,
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Amtsgericht Braunschweig HRB 477
VAT Reg. No DE 11 48 15 244

St.-Nr. 13/200/24006

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