

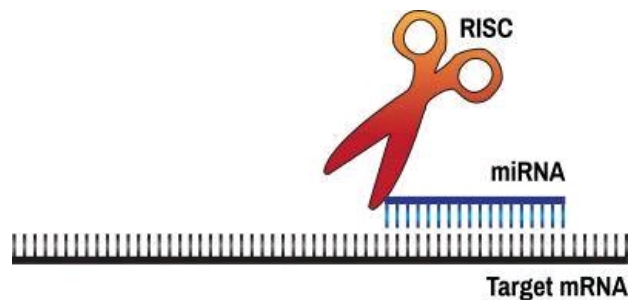


Community Spotlight

Each [Community Spotlight](#) features an outstanding group, partner, resource, or member of our community.

Using Undergraduate Molecular Biology Labs to Discover Targets of miRNAs in Humans

By Adam Idica, Jordan Thompson, Irene Munk Pedersen, and Pavan Kadandale



Module Description:

This resource is an easily adaptable lab module that can be used in existing undergraduate molecular biology lab courses to conduct authentic scientific research. Students use a variety of databases to identify likely candidate genes whose expression may be altered by a given miR, and then experimentally test their predictions in human cells. This inquiry-based module gives students a taste of real scientific research and excites them about the possibility that, even as a student, they have the potential to contribute to this cutting edge research.

Teaching Setting:

This module was used in a large enrollment (100 students per quarter), upper division molecular biology lab course. The students meet for a common lecture by the instructor, and then are split into 5 lab sections of twenty students each. Each lab section is run by a graduate student TA, and the students work through the activities of the lab module in pairs. However, the module is easily adapted to a number of different contexts, since the technical complexity of the activities is not very high.

QUBES Citation:

Idica, A., Thompson, J., Pedersen, I. M., Kadandale, P. (2019). [Using Undergraduate Molecular Biology Labs to Discover Targets of miRNAs in Humans](#). [Network for Integrating Bioinformatics into Life Sciences Education](#), QUBES Educational Resources. [doi:10.25334/Q4XM9B](#)

Visit Resource



Share



Tweet

Related Materials and Opportunities:

This resource is also published in the journal [CourseSource](#), an open-access journal of peer-reviewed teaching resources for undergraduate biological sciences. See the resource's *CourseSource* citation below.

Idica, A., Thompson, J., Munk Pedersen, I., and Kadandale, P.
2015. Using Undergraduate Molecular Biology Labs to Discover
Targets of miRNAs in Humans. *CourseSource*.
<https://doi.org/10.24918/cs.2015.10>

This resource is included in the [Network for Integrating Bioinformatics into Life Sciences Education \(NIBLSE; pronounced "nibbles"\) collection](#). NIBLSE is a National Science Foundation (NSF) Research Coordination Network for Undergraduate Biology Education (RCN-UBE) with the long-term goal to establish bioinformatics as an essential component of undergraduate life sciences education. [Learn more about NIBLSE](#). View the [December 2018 NIBLSE Newsletter](#) and [subscribe to the NIBSLE newsletter](#).

QUBES on Social Media



BioQUEST is a transformative, collaborative community empowering educators to drive innovation in STEM education for all students.

Copyright © 2024 QUBES, All rights reserved.

P.O. Box 1452, Raymond, NH 03077

You are receiving this email because you have shown interest in receiving updates from BioQUEST and QUBES.

[Subscribe / Unsubscribe](#) from mailing list

[View Community Spotlight on QUBESHub](#)

Community Spotlight: Issue 31