

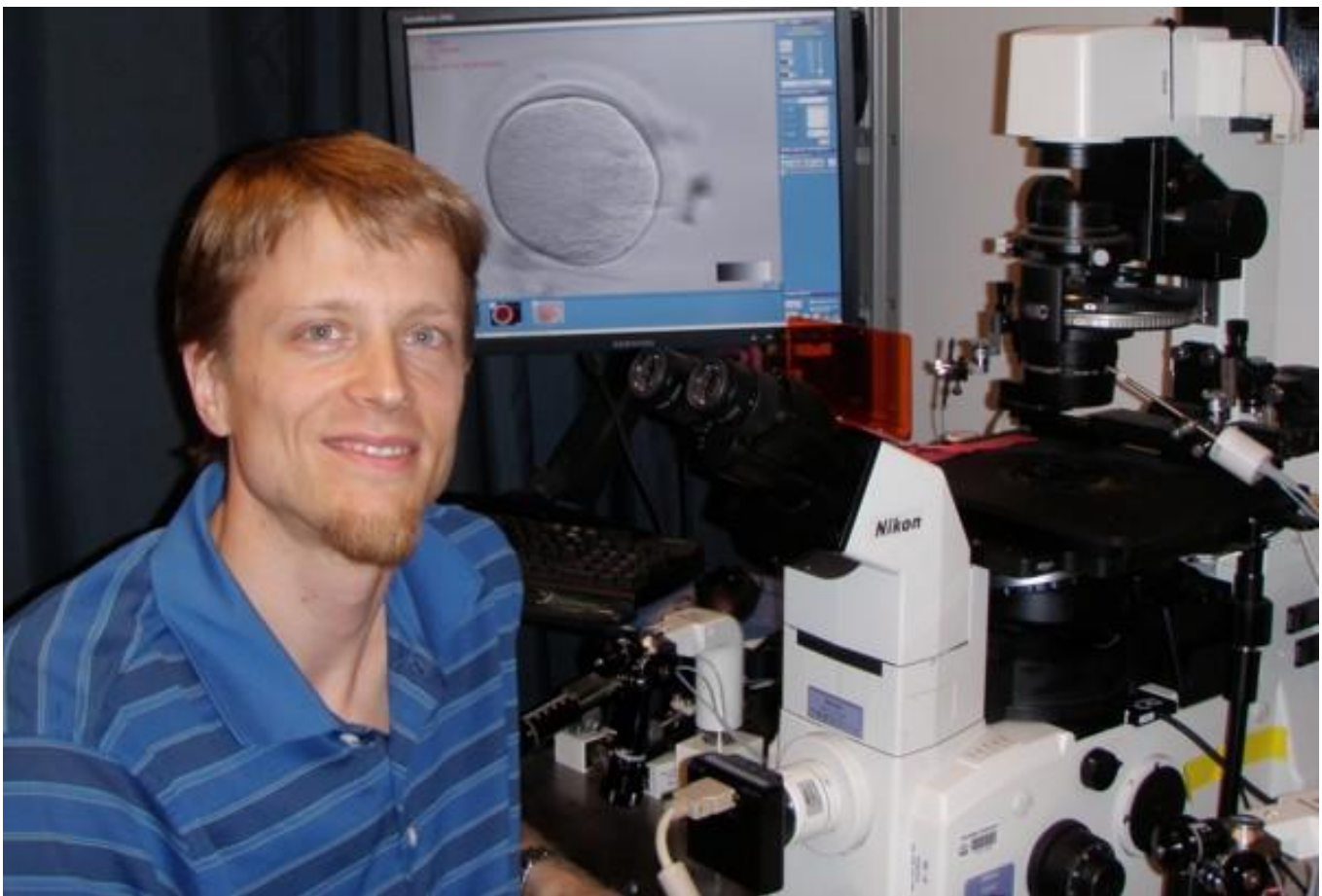


Dieter Egli, Ph.D.

Senior Research Fellow, New York Stem Cell Foundation

Research Scientist in Pediatrics & Molecular Genetics, Columbia University

After receiving his PhD from the University of Zurich, Switzerland, Dieter Egli, PhD, joined the laboratory of Kevin Eggan, PhD, at Harvard University, as a post-doctoral fellow. It was through his work at Eggan's laboratory that Dieter was introduced to the XYClone laser system.



In 2008, Dieter was awarded a Druckenmiller Fellowship from the New York Stem Cell Foundation (NYSCF) where his current research focuses on Reprogramming Human Somatic Cells by Nuclear Transfer. Working in the NYSCF laboratory, Dieter continues his studies with the XYClone. He says, "I am using the XYClone to drill the zona pellucida of both human and mouse oocytes or zygotes (1, 2). It is very fast, offers reliable zona drilling and makes nuclear transfer very convenient."



The NYSCF XYClone system is equipped with the optional Staccato feature, which allows rapid multipulse firing of the laser. Dieter finds the Staccato option especially beneficial for the isolation of the inner cell mass from human embryos and the ablation of cells in tissue culture after plating the inner cell mass on a feeder layer (3).

Dieter likes the high level of compatibility between the XYClone and other micromanipulation equipment and techniques. "The XYClone is a great tool that works well with other tools and methods, including the piezo drill. With improved objectives, it is now possible to perform all manipulations with the laser objective."

When asked for his impression of Hamilton Thorne, Dieter replied "Hamilton Thorne provides great support. I particularly appreciate the direct contact with both the sales and technical personnel."



In a paper published in Nature (1), Egli used the XYClone to open the zona pellucida prior to spindle extraction and chromosome injection into a mitotic mouse zygote.

Relevant Publications

- 1) Egli D, Rosains J, Birkhoff G, Eggan K. Developmental reprogramming after chromosome transfer into mitotic mouse zygotes. *Nature*. 2007 Jun 7;447(7145):679-85. PubMed PMID: 17554301.
- 2) Egli D, Sandler VM, Shinohara ML, Cantor H, Eggan K. Reprogramming after chromosome transfer into mouse blastomeres. *Curr Biol*. 2009 Aug 25;19(16):1403-9. Epub 2009 Aug 13. PubMed PMID: 19682906
- 3) Chen AE, Egli D, Niakan K, Deng J, Akutsu H, Yamaki M, Cowan C, Fitz-Gerald C, Zhang K, Melton DA, Eggan K. Optimal timing of inner cell mass isolation increases the efficiency of human embryonic stem cell derivation and allows generation of sibling cell lines. *Cell Stem Cell*. 2009 Feb 6;4(2):103-6. PubMed PMID: 19200798.

XYClone Specifications

- 40x objective
- Staccato multipulse option
- Footswitch
- Digital camera
- Desktop