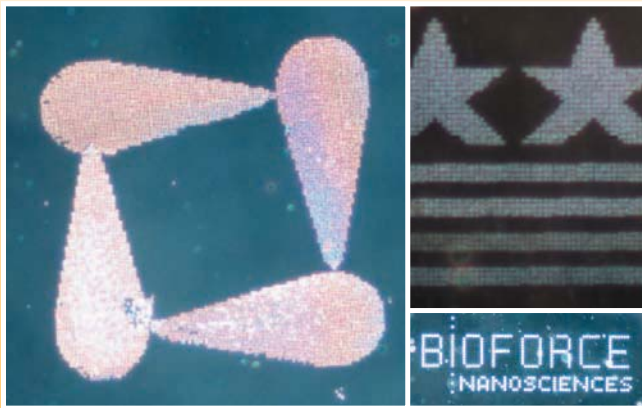


# Can your **PDMS** stamp do all this?

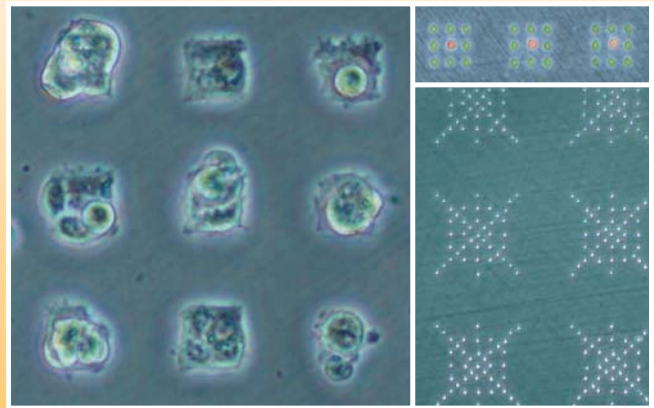


Create your own unique cell-based assays!

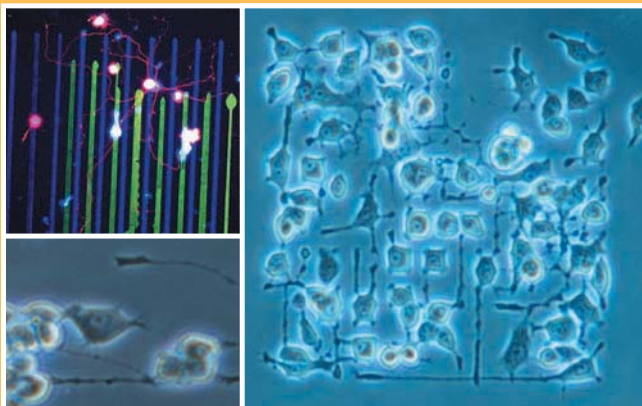
**Cell adhesion and migration** – Design and print elaborate patterns of ECM proteins and chemoattractants to study cell adhesion and motility



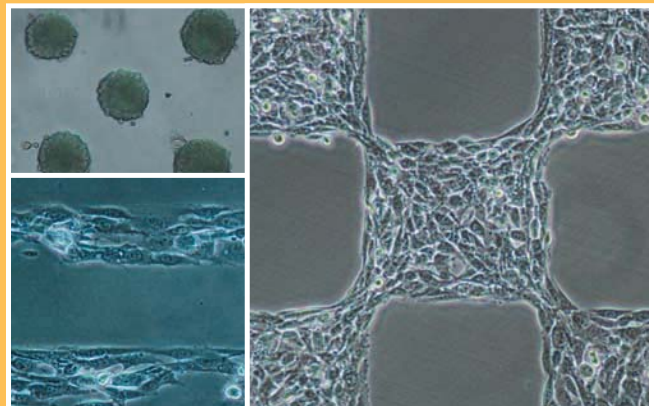
**Stem cell microenvironments** – Construct complex multicomponent microenvironments to direct stem cell differentiation and proliferation



**Axon guidance** – Fabricate CAM pathways to provide axon guidance, and pattern neurotrophic factors to stimulate growth and branching of dendrites

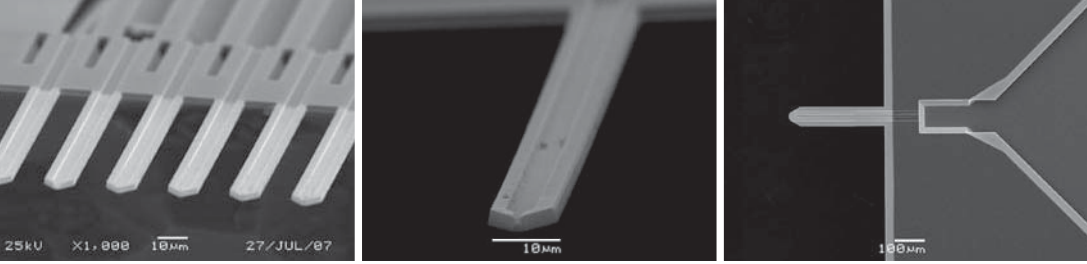


**Tissue engineering** – Build sophisticated multiplexed scaffolds on biocompatible surfaces to seed tissue growth for implantation



Images courtesy of F. Nothias and S. Fereol.

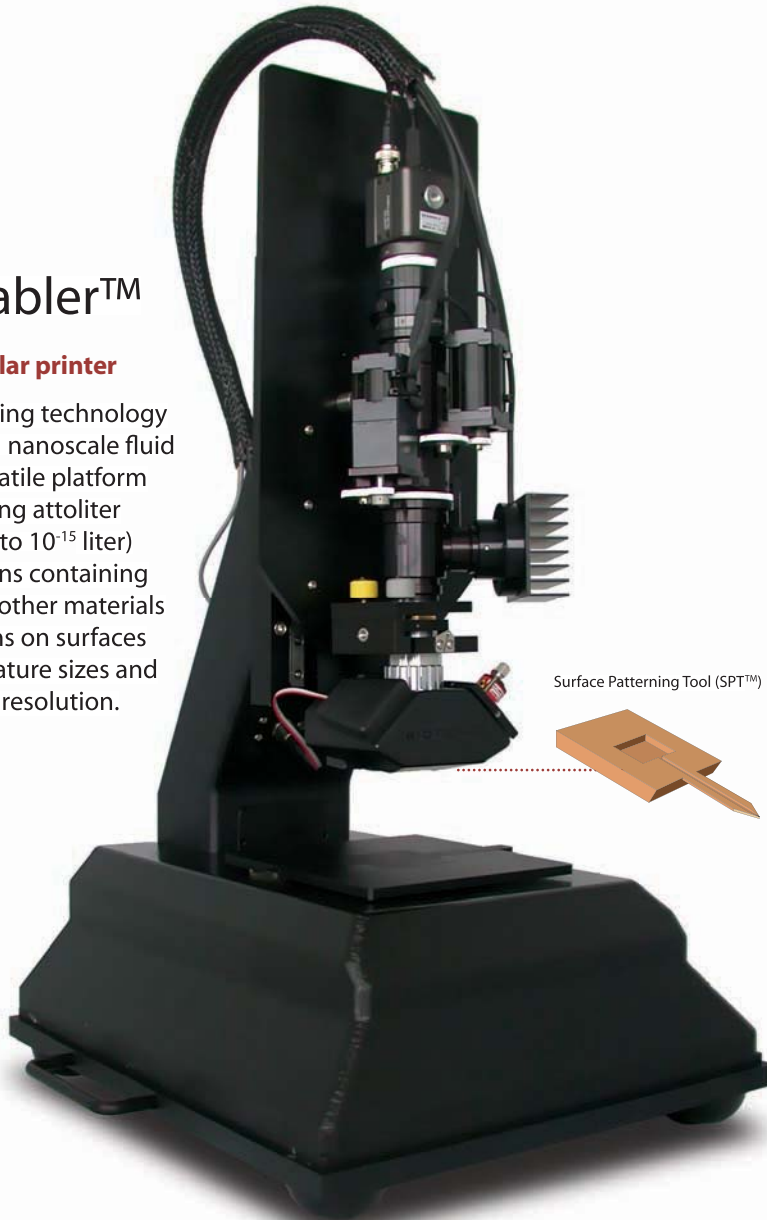
*Now there's a smarter way to pattern your surfaces.*



## Nano eNabler™

### benchtop molecular printer

is a new and enabling technology for ultramicro- and nanoscale fluid delivery. It is a versatile platform capable of delivering attoliter to femtoliter ( $10^{-18}$  to  $10^{-15}$  liter) volumes of solutions containing biomolecules and other materials to defined locations on surfaces with 1 to 30  $\mu\text{m}$  feature sizes and nanometer spatial resolution.



Surface Patterning Tool (SPT™)

## Features

- Print spots and lines from 1-30 microns
- Dispense attoliter to femtoliter volumes
- Precision printing (20 nm encoder resolution) over a 50 mm x 50 mm area of travel
- Multiplexed printing of sub-cellular sized features in close proximity
- Integrated 1000x video microscope for surface alignment

## Benefits

- Ideal for printing complex patterns of biomolecules onto cell culture compatible surfaces
- Greater versatility and patterning flexibility than PDMS microcontact printing or DPN
- Make dynamic pattern changes on the fly via the NanoWare™ user interface
- Fast printing speeds due to the direct microfluidic printing process
- Reduced clogging with open channel cantilevers

## Compatible Materials

- Proteins
- Large DNA molecules
- Quantum dots
- Nanoparticles
- Adhesives
- Oligonucleotides
- Lipids
- Colloids
- Etchants

## Compatible Surfaces

- Hydrogel
- PDMS
- Nitrocellulose
- Glass
- Silicon
- Alkanethiol SAMs
- Polystyrene
- Polymers
- Poly-l-lysine
- Silanes
- Gold

**BioForce Nanosciences, Inc.**  
1615 Golden Aspen Drive, Suite 101  
Ames, IA 50010

Phone: 515.233.8333 x127  
nanoenabler@bioforcenano.com  
www.bioforcenano.com

