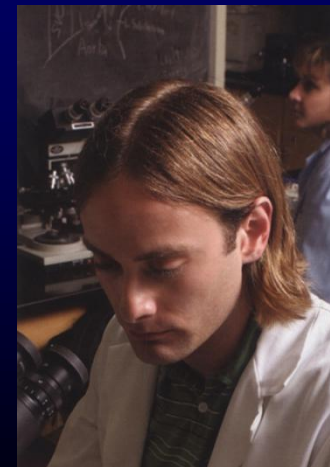


Histotechnology Careers!



What is Histology and Histotechnology ?

- Histology: is the study of the microscopic anatomy of cells and tissues of plants and animals
- Histotechnology: is the application of the methods, techniques and procedures that are used to microscopically study cells and tissues.



What does a Histologist do?

- Histologists are responsible for the process of preparing human, plant and animal tissues so that they may be observed and studied
- Histologists are experts in techniques that allow the visualization of different micro-anatomical features



How is it done ?

- Tissues are preserved (*fixed*) and then pass through a series of steps (*processing*) that renders the tissue in a medium that allows extremely thin sections (*microtomy*) to be collected on glass slides or other media. *The sections can be thinner than a human hair!*
- The slides can then be treated ("*stained*") in a variety of ways so that different micro-anatomic structures may be observed microscopically.



Why do we need Histotechnology ?

Many reasons...

- To study the micro-anatomy and morphology of human, plant and animal cells and tissues
- To study diseases
- To diagnose diseases in humans, animals, and plants
- To study the effects of different treatments for disease



What knowledge do I need to be a Histologist?

- A histologist is academically trained and learns the chemical (inorganic & organic chemistry), immunological (immunology) and molecular reactions (biochemistry & molecular biology) that produce the desired effects.
- This knowledge, combined with an understanding of anatomy, physiology, histology, microbiology and pathology, enables the histologist to apply the most appropriate method to achieve a high quality result that demonstrates the features of interest.



What High School Background do I Need?

- Enjoy science and have taken...
 - Biology
 - Chemistry
 - 2 Years of Math
- Good manual dexterity
- Good analytical skills



Do I need a License to Practice?

- **Yes**, within New York State, all laboratory practitioners in hospital settings are licensed.
 - Licenses are obtained by meeting all the educational and training criteria mandated by the New York State Education Department, Office of Professions
 - <http://www.op.nysed.gov/home.html>
- **National Certification**
 - American Society of Clinical Pathology, Board of Registry offers certification that is accepted in many states
 - <http://www.ascp.org/>
 - Several States have specific licensing boards (Florida, California)



So, where can I work?

- Career opportunities exist in a wide range of areas
 - Human medicine (Hospital)
 - Veterinary medicine
 - Healthcare administration
 - Biomedical research (academic and private)
 - Medical industry
 - Pharmaceutical industry
 - Marine biology
 - Botany
 - Forensic medicine



What's the Laboratory Workforce Outlook ?

- Nationally, total number of jobs in healthcare expected to grow 18% by 2012 ¹
 - More than twice the rate of growth of all other occupations
- Nationally 2008 ²
 - Average age of laboratory workforce: 49.2
 - Percentage of workforce within 10 years of retirement: 40%
- Estimates for 2014 if current trends continue ²
 - Number of technologist and technicians needed to replace retirees: 81,000
 - Number of technologist and technicians needed to fill new positions: 68,000
- NYS 2006: 11.4% of all NY jobs were in healthcare (national average 8.7%) ¹



HANYS 2008 Workforce Advocacy Survey Results: Nursing and Allied Health Professionals ¹

- 43% of hospitals in NYS report shortage of laboratory personnel †
- The number of practicing laboratory personnel has decreased by 1.5% (2001 to 2006)
- 82% respondents found it more difficult to hire laboratory tech (2006-2007)

†: 1 FTE below budget, n=128



What About Histology?

- Shortage of histologists is expected to worsen in next 10 years
 - Retirements
 - Few students in the "pipeline"
- In 2008...
 - Vacancy estimates vary (based on region), but range from 7% to as high as 22%^{3,4}
 - 44% of laboratories are having difficulty recruiting ^{3,4}
 - Average of 2.22 months to fill histologist position ⁴



How Much Can I Expect to be Paid ?

- American Society of Clinical Pathologist 2005 Wage and Vacancy Survey (Northeast, n=210) ⁴
 - Average (yearly) salary for Histologist \$40,000/year (\$19.35/hour)
 - 65% working in hospital setting
- Advance for Laboratory Professionals: 2007-2008 Salary Survey (NY, NJ, PA n=285) ⁵
 - Average (yearly) salary for Histologist \$56,000/year (\$26.00/Hour)
 - 68% working in hospital setting



How Much Can I Expect to be Paid ?

- American Society of Clinical Pathologist
2009 Wage and Vacancy Survey
(Northeast Region, n=176) ⁶
 - Average (yearly) salary for Histologist
\$42,099/year (\$20.24/hour)
 - 70% working in hospital setting
 - 8% Vacancy rate nationwide (highest across all surveyed positions)



Where can I pursue my Education?

- State University of New York College of Agriculture and Technology at Cobleskill
 - Oldest accredited histotechnology program in the US
 - Degree options
 - Medical Laboratory Technology-Histotechnology (AAS)
 - Complete 2 years of college course work (66 credits)
 - Bachelor's of Technology in Animal Science-Histotechnology option (BT)
 - Complete 4 years of college course work (126 credits)
 - Partnered with 14 affiliate NYS area hospitals



Where Else Can I get information?

- National Society for Histotechnology (NSH)
 - National Histotechnology organization representing over 4500 members worldwide
 - <http://www.nsh.org/>
- Region I Histotechnologist
 - Composed of constituent state societies (NY, CT, MA, RI, VT, NH, MA)
 - Over 300 members
- New York State Histotechnological Society (NYSHS)
 - Representing NYS histologist since 1972
 - Over 150 members
 - <http://www.nyhisto.org/>



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