



MLT

Analyzer

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President's Message

Hello everyone! I hope that everyone is having a great spring after the winter that wouldn't end!

I have heard (as I was unable to attend due to health reasons) that the Annual Provincial Scientific Convention in Fredericton was a great success, and I hope that many of you were able to attend. Congratulations to the Fredericton academy and the APSC planning committee on a well planned and well attended conference.

Anyone who attended the AGM received a copy of our 2002 annual report. The board has decided to produce this for AGM annually, with copies also being sent to Laboratory Directors and other stakeholders. This is a wonderful communication tool for us, and I would like to congratulate Bernadette and her daughter on a job well done! There were some translation shortfalls, but we were under some time constraint, and will

strive to prevent this problem in the future.

We have had some changes in the board of directors since the last newsletter. Randy Thornhill-Saint John academy area director, has stepped down, and the academy is recruiting a replacement. The position of PR chair,



which he also held, has been taken over by the Edmundston area director, Janelle Levesque. PR continues to be a priority with the board, and Janelle and her committee will be working on completing a couple of projects in the works, as well as perhaps looking at updating our website.

(Continued on page 2)

NBSMLT Office
Janet Kingston
Executive Director
P.O. Box 20180
Fredericton, N.B.
E3B 7A2

Ph: (506) 455-9540
Fax: (506) 455-7491

e-mail: cvkingst@nbnet.nb.ca
and now visit us on the web at:
<http://www.nbsmlt.nb.ca>



Age doesn't matter.

Unless you are a cheese.

President's Message

(Continued from page 1)

Discussion took place at the pre-AGM board meeting regarding education funding. It was decided that a bursary-type education fund would be difficult to manage at this time. It was suggested that we should perhaps consider more funding for APSC – at present a \$500 forgivable loan is all the host academy is provided for funding. It sometimes places a lot of financial constraint on the planning committee. The board may look at increasing this amount to facilitate the planning of these important educational events.

The University of New Brunswick has approached the board with plans for a new degree program to be made available this fall. It is a Bachelor of Science in Medical Laboratory Science, which would require more credits than the current Bachelor of Medical Laboratory Science already in place (which is also being updated with different course requirements). The BScMLS would be more like a pre-med degree, and would allow more extensive graduate school opportunities. It would be offered in addition to the current BMLS, which would be the minimum credential required when we go to mandatory degree entry to the field. Both programs have the community college program as part of the course of study.

The MLT program at NBCC-SJ

will be a busy place this fall. The Nova Scotia government has signed a contract with them to provide 22 training seats for NS (the NS government is offering \$8,000 bursaries to prospective students in a recruitment effort), which will involve didactic training for their students, followed by clinical training in NS. The original MLT program will also be full, with the 3 former seats that NS had funded being replaced by PEI students, which their provincial government is funding. The human resource crunch is being felt already in many provinces. We must closely monitor the situation in our own province. Already, it is getting difficult to fill some positions, with some hospital regions feeling the shortage more than others. Recruitment issues in our own province are quickly becoming a reality.

On the national front, point of care testing (POCT) is still a big issue. It is a standing agenda item for the Council of Presidents meetings. The NBSMLT has taken the initiative and written to the hospital authorities regarding POCT practices in the province, citing the Provincial Laboratory Standards (May, 2002), and requesting that they review the current POCT practices within the provincial hospital setting.

I regret to say that I will be unable to attend the upcoming Council of Presidents meeting to be held at Congress in Que-

bec City June 9 due to recent surgery which prevents me from traveling. However, we will be well represented, as Bernadette Muise, our president elect, will be attending in my place. In addition, Colleen Moran will be attending in place of our executive director, and will be an added resource for Bernadette, as she is well versed in the regulatory issues of the NBSMLT and has recent experience on the Council of Presidents (2001) and on the national committee for professional development as well.

In closing, I would like to invite anyone who has any questions or issues regarding society issues to contact me or the NBSMLT office.

Respectfully submitted,
Janet Reid, MLT, RT
President, NBSMLT, 2003



AGM 2003 President's Address

Welcome to the Annual General Meeting 2003 for the NBSMLT. My name is Bernadette Muise, president elect 2003. Right now you may be saying to yourselves; why is the president elect giving this address? As some of you may be aware, Janet Reid had been battling colitis for some time now. Apparently good living has not been the panacea she had hoped, and consequently she has had to put herself in the capable hands of a surgeon. I suspect that she would much rather be here speaking to you than where she is at present. I know you all join me in wishing her a speedy recovery.

What does the society do for me? This is a question I have been asked occasionally. The New Brunswick Society of Medical Laboratory Technologists provides for us a security in our workplace. We are assured that the profession we have chosen is regulated to ensure that only qualified technologists may practise medical laboratory technology. Many of the technologists here in Fredericton were instrumental in ensuring that that regulation was put in place properly. We have much for which to thank them. We have achieved regulation in advance of many other provinces that are still struggling with the many thorny issues with which our Society has already dealt. Frequently they look to us for solutions. It is a tribute to those volunteers

who both pioneered and persevered to bring us to this point in our professional lives.

What, then, is the future practise of medical laboratory technology going to entail.

At present, the only laboratory services, the public is assured are performed by licensed MLTs are those performed in hospitals. We need to look at this standard, are we comfortable with it? Can we do anything to change it?

Public awareness of our profession could quite possibly be our most important goal. If we say it is OK for anyone to perform lab testing we do ourselves a disservice. We have all trained hard. The commitment to professional development is obvious by the number of technologists who have completed the requirements for, and the many more who are asking questions about how they can obtain, the professional development program certificate. It is time that we come out of the shadows of support service and demonstrate our expertise. As a group of professionals we tend to denigrate our achievements but look, for instance, at our annual scientific conventions. Each region pools their effort and puts on a memorable conference. The skills that are used are then put back "on the shelf" so to speak until the next big effort is required. Often those skills get rusty and peo-

ple dread the next event they have to organize even though they have been successful in the past.

I know that we are all volunteers for many things, which are important to us in a personal way, perhaps the time has come for more of us to recognize that our provincial body is important to us as well. While it is true that many of us have little time to commit to yet another project; there is a sense of satisfaction derived from volunteering to help the society become the best regulatory and advocacy body it can be. I invite you to become more active in your academies, society and in your workplace to promote our profession. Get more involved!

By the way nominations for president elect 2004 are still open. See the next issue of the Analyzer or your Area Director for the nomination form.

I want to take this opportunity to congratulate the APSC organizing committee for a job well done. I am sure there were many hurdles to overcome to arrange this successful convention. I am certain that everyone enjoyed themselves as much as I have.

Thank you for participating in our annual general meeting. I look forward to seeing you next year in Dalhousie.

APSC Fredericton 2003

This past May I had the privilege of attending the APSC in Fredericton and am glad to say I enjoyed it immensely. The speakers were very informative.

As the new Continuing Education representative for the Moncton Academy they gave me a great deal of topics to think about for upcoming events.

Although all of the presenta-

tions were very enjoyable, my favourite one was a personal story given by the father of one of our haemophiliac patients. It was nice to be able to put a face to a name and to hear how much we are appreciated.

The social events were wonderful. I especially enjoyed the Mardi Gras. Congratulations to the Northshore Academy who took home the barbeque. I am looking forward to next year's

conference in Dalhousie. The organizing committee is to be commended on a job well done.



Submitted by
Shelley Stymiest

APSC 2003 Fredericton Organizing Committee



Front row: Michelle Finnegan, Kathy Penney, Coral Curtis, Susan Holland, Paula Kimball
Middle Row: Nancy Eliakas, Edna Smith, Sean Ingersol
Back Row: Adrien LeBlanc, Darlene Egers, Shalawny McCoy, Jeff Justason, Marty White.

Review of APSC 2003

If you weren't able to make it to APSC in Fredericton this year, I hate to break it to you, but you really missed out.

The Fredericton Academy has outdone itself once again. I only have four conventions under my belt, but this one was by the far the most rewarding, in more ways than one.

Every single one of the lectures I attended was captivating and some were even motivating. From Stress, to Haemodialysis, Metabolism errors, Differentials, Nutrition, Forensics, not to mention a touching lecture by a father whose son lives with haemophilia...and the list goes on. Everyone was impressed with the number of interesting lectures. The scientific committee really went out of its way to find good speakers.

The social events were a lot of fun too. Our academy even won a BBQ for getting the most beads during Mardi Gras events. The creative decorations, innovative activities and a rockin' DJ made for a successful evening. They could not have picked a better hotel to hold such an event. The members of the Ramada staff, displayed impeccable service, and were always helpful. The BBQ will be raffled off to raise money for the next APSC 2004 in Dalhousie.

I would like to take this opportunity to thank the organizing committee for taking us under their

wing and showing us the ropes for next year and for answering our endless questions :)

Congratulations to the organizing committee of APSC 2003!

Also, if anyone is interested in speaking at APSC 2004, to email :
Paula Steeves, RT, MLT
Campbellton Regional Hospital
emtlab@nb.sympatico.ca



Paula Steeves & Angela Mundle

(Only minor injuries were reported in the accumulation of the beads).



Great times !

APSC Fredericton 2003



Margie Rogers - clowning around!

I would like to take this opportunity to thank the Moncton Academy of the NBSMLT for the APSC 2003 grant that I received. "Unmasking the Future" was held at the Ramada Inn in Fredericton, May 1-3 and was a huge success. The keynote speaker, Brent Finnermore, kept the audience in stitches with his "Stress Smart" topic. Laughter truly is the best medicine.

Mike Keeney, ART Haematology from the London Health Science Center gave an interesting lecture on Stem cell research. His wit matched his intelligence and he kept us entertained long after his lecture, we hope he'll return for Congress 2005, if not before. He felt warmly welcomed and enjoyed our great maritime hospitality.

Dr Moira McLaughlin, an an-

thropologist from UNB Fredericton gave us a look from the 'other side' with her presentation on forensic anthropology. The tedious nature of her work gave us a newfound respect for her field. She certainly captured our attention.

I spent Friday morning at a workshop hosted by Eric Ching on the "Challenges in Transfusion Medicine" He was an excellent speaker who made everyone feel that they had something to contribute. These were just a few of the talented speakers who contributed to the conference.

The exhibitor's reception was a great opportunity to make new friends and meet old. I got to reminisce with a couple of college friends I hadn't seen in years. I had some good laughs with a couple of technologists from Sackville. I spoke with other techs from far and wide to compare notes on different topics. All in all, I came home feeling uplifted, refreshed and like an important part of a great health care profession.

We sometimes get bogged down with the everyday stresses of life and forget to see outside the box; this was a great opportunity to see our purpose and to be proud of it. Thank you to all those involved to make the APSC a memorable experience, job well done!

Natalie Raymond MLT
The Moncton Hospital

Marty & Edna



Susan & Colleen



"Successful winter games due in part to planning by Laboratory Technologists in the region."

Many of our staff members volunteered for the Canada Winter Games held February 22 - March 18, 2003. With 21 different venues there was no lack of work! Data entry, officiating, security, housekeeping, team leading, driving were some of activities the staff of the Campbellton and Dalhousie Laboratories were assigned during this very exciting period. All volunteers had to attend sessions on hospitality and orientation, have reference checks and be accredited before being allowed to carry out their duties.

Those in the picture are:

Standing left to right Peter Delaney, Doreen Frenette, Maryse Thibeault, Paula Steeves, Denise Arsenault and Lucille Dunn. Peeking over Peter's shoulder is Heather Cortes.

Kneeling: Judy Watling, Connie Allain, Patsy Parker and Dan Leger.



The drawings were done by Dan, Paula and Nancy Savoie who is not in the picture (Nancy was at coffee!) The rest of the Lab was also decorated with the help of all staff. The rabbit is Ninu and the Moose is Welipuk...Miq maq names. Yet another example of community involvement on the part of Medical Laboratory Technologists in NB.

Submitted by,
Dan Leger

Upcoming events:

NLST Conference Oct 15-18, 2003 Cornerbrook; NF

NSSLT Somogen sponsored Histology Day, Saturday, Sept 27, 2003 Halifax, NS

Contact: Rob Smith

Continuing Education Committee

QE2 Histology Dept. VG site

7th Floor MacKenzie Bldg. Rm 708

Ph: (902)473-7740

e-mail: robsmith@ns.sympatico.ca

NBSMLT APSC Dalhousie, Apr 22-24, 2004

CSMLS Congress Saskatoon **The Sky's the Limit** June 13-17, 2004



Microbiology representatives from Dr. Everett Chalmers Regional Hospital 2003

SOMETHING NEW - BNP

by Deborah MacDonald, MLT

B-type Natriuretic Peptide (BNP), a 17 ring structured amino acid, was first identified in the porcine brain in 1988. Subsequent studies have demonstrated that the heart is the major source of circulating BNP. It is stored in and secreted predominately from membrane granules in the heart ventricles and is continuously released from the heart in response to both ventricle volume expansion and pressure overload. It is cleared from circulation via NPR-C (natriuretic peptide receptor) in the blood and is degraded by a neutral peptidase, which cleaves the ring structure.

The natriuretic peptide system and the renin-angiotension system of the adrenals and kidneys counteract each other in arterial pressure regulation. BNP is activated by atrial and ventricular distension due to increased intra-cardiac pressure.

Congestive heart failure (CHF) occurs when the heart cannot deliver a sufficient blood supply to the body. Diagnosing CHF in the very early stages permits early intervention that might prevent the disease from advancing. However, it is often difficult to distinguish CHF from other causes of shortness of breath, such as chronic obstructive pulmonary disease (COPD). Treatments for these two conditions are not the same. For example: CHF patients benefit from diuretic therapy while COPD patients need to have fluids administered. An echocardiogram may be useful in these diagnoses but is very expensive and may not be locally available.

In approximately 1400 studies done over the last 10 years, it has been demonstrated that circulating BNP concentrations increase with the severity of CHF. Studies have also shown there to be a direct relationship between BNP levels and left ventricular and diastolic pressure and inverse correlation to left ventricular function.

In the largest trial of its kind to date, the Breathing Not Properly (BNP) Trial, conducted between April 1999 and December 2000, involved 1586 patients presenting to ER complaining of shortness of breath. Each patient had blood samples analyzed for BNP and was examined by physicians blinded to these results. In addition, two physicians reviewing the patient's symptoms, baseline characteristics and clinical history were also asked to provide their level of clinical certainty in giving or ruling out a diagnosis of

CHF.

The BNP testing in this study demonstrated diagnostic accuracy of 87% (using a cut off of 100 pg/ml or higher). By comparison, clinical judgement yielded an accurate diagnosis 74% of the time. Its negative predictive value was 96% (using a cutoff of 50 pg/ml or less). Overall the sensitivity of BNP cut off of >100 pg/ml was 90% and specificity of 74%. In this trial, a total of 30 cases were misdiagnosed by ER physicians; all but one of which would have been corrected with the availability of BNP measurements.

If the BNP level is <100 pg/ml it is highly unlikely that the patient's symptoms are resulting from systolic or diastolic dysfunction heart failure. As such, an echocardiogram would be unlikely to provide additional diagnostic information and is not recommended in most cases.

Biosite Diagnostics Triage BNP is the only currently FDA approved BNP test available on the market although several companies are at present, developing technology so that BNP testing can be done on analytical systems currently in use and should be available in the near future.

Triage BNP is a fluorescent immunoassay that quantitatively measures BNP levels in whole blood or plasma samples. EDTA must be used as the anticoagulant. Whole blood samples must be analyzed within 4 hours of collection or the plasma separated from the cells and frozen for later testing.

The test device, in a sealed pouch, is stored refrigerated but must be at room temperature for at least 15 minutes before use. The sample is placed in the test device, which contains a filter to remove cells from the plasma. The plasma then moves by capillary action into a reaction chamber containing murine fluorescent antibodies. The reaction mixture then flows through an elution column where the analyte/fluorescent antibody conjugates are captured in discrete zones along the column. Bound fluorescent material represents the serum BNP concentration. The device is placed in an immuno-fluorescent reader, which reports the BNP concentration after approximately 15 minutes. The assay detection limits are 5 - 5000 pg/ml.

(Continued on page 10)

SOMETHING NEW - BNP

by Deborah MacDonald, MLT

(Continued from page 9)

Each device costs approximately \$40 - \$50 per test. A daily electronic control needs to be performed as well as monthly liquid controls (2 levels) and semi-annual calibration verification samples (3 levels).

Studies have demonstrated a prognostic usefulness in predicting long term risk of death and non-fatal cardiac events in the first few days after an acute coronary event. In known CHF patients, BNP levels increase with severity of heart failure. The New York Heart Association (NYHA) developed a classification system for CHF consisting of four stages based on severity of symptoms:

- * Stage 1: patients are characterized as having cardiac disease but ordinary physical activity does not produce undue fatigue or pain
- * Stage 2: patients are comfortable at rest but become symptomatic during ordinary physical activity
- * Stage 3: patients are comfortable at rest but become symptomatic upon even minimal physical activity
- * Stage 4: the most severe stage, patients experience discomfort with any physical activity.

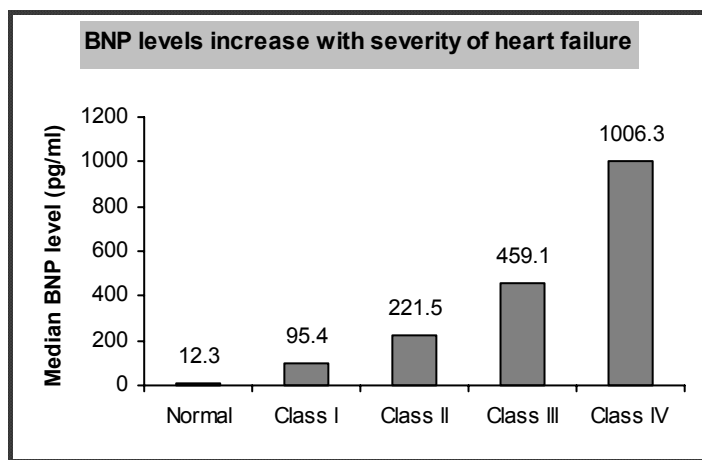
The following table shows a correlation between severity of CHF and BNP levels.

BNP levels correlate well with treatment efficacy in diagnosed CHF patients. Following an exacerbation of heart failure, a declining BNP indicates a good response to therapy and portends a more favourable outcome. A rising BNP suggests a greater risk of adverse outcome, warranting a more aggressive treatment strategy.

BNP has a half-life of about 20 minutes. It has so far been recommended to draw blood for post-treatment analysis after about 5 half lives (approximately 1 ½ to 2 hours). If treatment for CHF has been successful the BNP testing should show a declining level. Further BNP monitoring may prove useful in titration of heart failure medications.

BNP testing does not replace current diagnostic protocols for CHF but is an additive test that can complement existing tools. Ideally it should be added to the established criteria of patient history, physical exam, electrocardiogram, echocardiography and chest x-ray.

Studies are ongoing and in the near future, BNP may be useful as a tool in not only diagnosing CHF but in short and long term prognoses and monitoring efficiency of its treatment. "Although more work is necessary, it is clear that BNP is rapidly moving from being a research tool to being a clinically useful test".



REFERENCES

Biosite Triage BNP test product information

UCLA Diagnostic Module - 2001

Cardiopulmonary Research Science and Technology Institute <http://www.crsti.org/bnpresults.html>

Cleveland Clinic Journal of Medicine Vol.69 Number 3 March 2002

Somagen Diagnostics slide presentation

The **NBSMLT North Shore Academy** recipe book has finally arrived ! Over 200 mouth watering recipes contributed by Laboratory staff from all over the north shore. Profits go to APSC 2004 to be held in Dalhousie Apr 22-24. If your lab would like to order “**Hi-Tech Cuisine**” at the low cost of 8\$ each, please fill out the order form below along with a cheque made payable to APSC 2004 to :

*Campbellton Regional Hospital Laboratory,
c/o Paula Steeves, 189 Lily Lake Road, P.O. Box 880,
Campbellton, N.B., E3N 3H3.*

Laboratory Shipping Address	Contact Person	Phone Number/ Email	# of copies	CRH use only.

The **Moncton Academy** has been quite active in 2003. We've had 2 academy meetings and an education day so far this year. Our next Academy meeting is planned for May 21st. The Moncton Academy kicked off Medical Laboratory week with an education day at the George Dumont Hospital April 5. It was well attended by 13 technologists and 4 students. There were two presenters; a dietician from the Superstore, Julie Best, who spoke of "Healthy eating for the shift worker" and a chiropractor, Dr Francois LeBlanc who's topic was *Would you rather be well.. Or just not sick?*

A lunch and learn, "The Joy of Stress", was also presented for the Moncton Hospital staff members. The TMH Quality Improvement committee put together a presentation for the doctor's office staff, which described each discipline, and detailed which tests had special requirements or needed special appointments. The presen-

tation was very much appreciated by the staff who attended; and a second presentation was offered for those who could not attend the first. A cake and coffee break was offered to the staff members at the latter end of the week. A Medical Laboratory Information booth was set up at Champlain Place where glucose levels and blood groups were done for the public. The Sackville Hospital had a static display and a cake was also served.

The George Dumont Hospital had a busy week as well. Each sector participated in a display where glucose levels and blood groups were done in the hospital lobby. They also served cake, cheese and crackers to lab staff for coffee break. Their lab staff enjoyed a night out at Morton's Pub. They ended the week with a guest speaker, Michel Drisdell,

who spoke, at an early breakfast meeting of "Society's Obsession with Beauty". It was very thought provoking and gave good food for thought. Participants left feeling very satisfied that they had gotten up so early to attend. The cost was partially covered by the funds that were raised selling tickets for a raffle of 2 baskets and the Education budget covered the rest. The Academy was able to award 3 grants for APSC to Shelley Stymiest, Natalie Raymond and Angela Mundle who all thoroughly enjoyed the experience.



Respectfully submitted by, Sasha Wright

HOSPITAL STANDARDS PROJECT UPDATE

The Hospital Standards Project is a provincial initiative designed to promote and sustain the delivery of quality care and service to patients throughout New Brunswick hospitals. Jointly sponsored by the Department of Health and Wellness (DHW) and the New Brunswick Healthcare Association (NBHA), this Project is under the direction of an Advisory Committee comprised of representatives of the NBHA, the DHW, the New Brunswick Medical Society, and the Nurses Association of New Brunswick.

The standards are revised by working groups composed of health professionals with relevant expertise who represent various sized facilities, geographic locations and language groups throughout the province. Special effort to obtain feedback from healthcare providers is an important part of the revision process.

The standards are written with the understanding that they are reasonable and attainable. They are written with the frontline workers in mind. Take a moment to look through the most

recently revised standards:

- Laboratory Medicine Services
- Anesthesia Services
- Family Centred Maternity and Newborn Care Services
- Respiratory Therapy Services
- Critical Care Services

In response to Survey Recommendations received, our objective is to have the standards available electronically by the end of March / mid April. Simply visit the Department of Health and Wellness Home page via www.gnb.ca, click on Hospital Standards Project and access the most recently revised standards. Should the standards you are interested in not be on the web site refer to the hardcopy in the Hospital Standards Binder that is found in the library of your facility.

March, 2003

To **view the Hospital Standards Website**, simply:

- 1] Go to the DHW Intranet Website <http://142.139.11.45/dhcs-mssc/>
- 2] Choose English or Français
- 3] Click on the dropdown menu on left (on the arrow)
- 4] Click on "Hospital Standards" (in the dropdown list)
- 5] This will open the Hospital Standards home page inside the main content area
- 6] From the home page, click on the index button in upper right hand corner
- 7] From the index page, you will find the list of PDF files



Editor's page:



Deadlines for submissions for the
MLT Analyzer 2003:

Issue 3 **Aug. 1/03**

Issue 4 **Oct. 24/03**

Send any submissions to:

Bernadette Muise
Transfusion Medicine
The Moncton Hospital
135 MacBeath Ave, Moncton NB
E1C 6Z8
Email-Analyzer@nbnet.nb.ca

I have had several opportunities this year to see, again, how versatile and committed laboratory technologists are. I was fortunate enough to be able to attend APSC in Fredericton, which was both stimulating and entertaining. Mr. Wilson's presentation about his family's experiences living with Haemophilia brought home, once again, the impact our profession can have on a patient.

The real challenges we face as

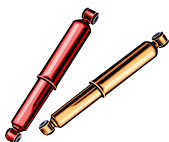
a profession is not the ever-changing technology, it isn't the lack of staff or equipment, we can handle that. But rather, the real challenge is the tendency we technologists have to minimize the importance of our profession. We take pride, and should, in a job we do well; often with less of almost everything we'd like, time, staff, equipment. We need to focus our attention on getting the credit we deserve. No one is going to do that for us, it should

be part of our everyday lives, explaining to anyone who asks, what we do, how we got here. If we don't make ourselves visible to the public, we will be doomed to remain thought of, as faceless automatons who only push buttons on the machines in the lab.

It is time to step out of our 'comfort zone' and stand up and be counted as an integral component of the total health care process.

Error Problem

One day, a mechanical engineer, electrical engineer, chemical engineer, and computer engineer were driving down the road in the same car when it broke down. The mechanical engineer said, "I think a rod broke."



The chemical engineer said, "The way it sputtered at the end, I think it's not getting enough gas."



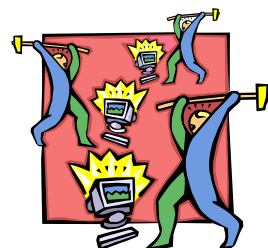
The electrical engineer said, "I think there was a spark and something's wrong with the



electrical system."

All three turned to the computer engineer and said, "What do you think?"

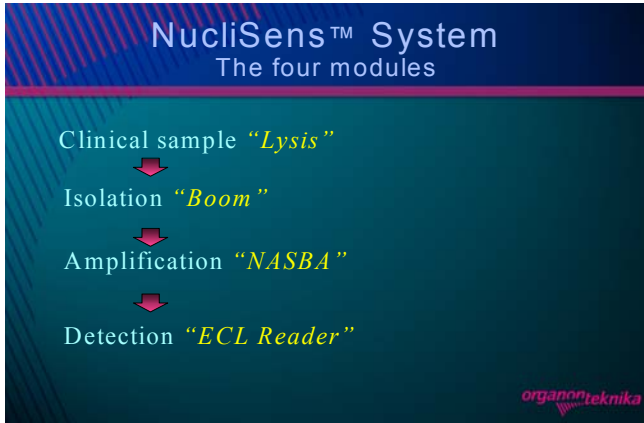
The computer engineer said, "I think we should all get out and then get back in."



“What the Heck is PCR Anyway Column 5”

Gilberte Caissie

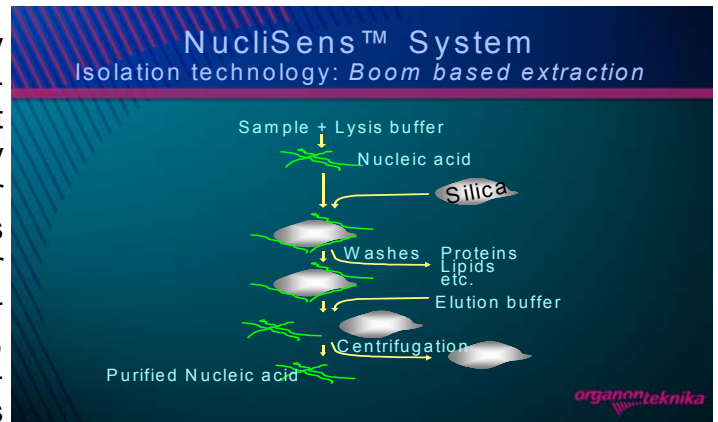
The last column we had seen the principal of the Bayer bDNA Technology. This column we are going to see the BioMérieux Nucleic Acid Sequence Based Amplification (NASBA).



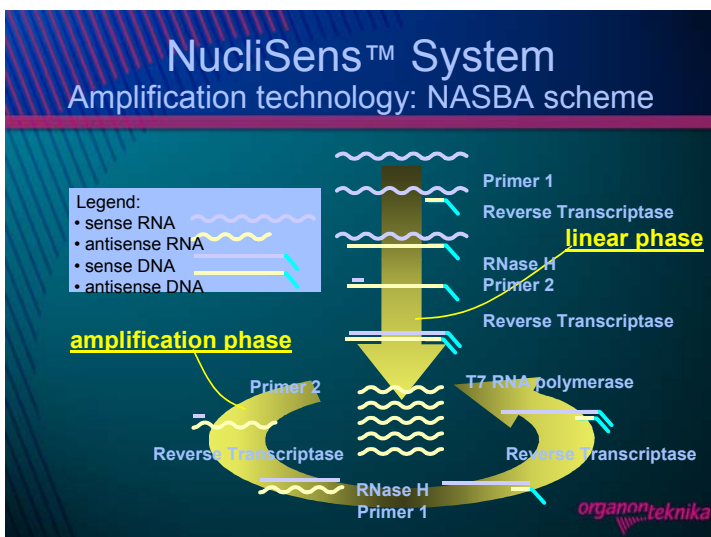
This method is also part of the signal amplification technology.

First we start of by performing an extraction to isolate the nucleic acids. This is performed by using the Boom Extraction Technology, which is Biomérieux Trade Mark. The test has 4 basic modules.

The full explanation of this extraction technology will be covered in a later column when we discuss different extraction methods. Basically it involves the release of nucleic acids (RNA) by the addition of the sample to a lysis buffer which breaks the cell membranes and releases the nucleic acids. These nucleic acids under high salt concentration bind to silicon silica particles. These particles, acting as a solid phase, are washed several times to remove any interfering substances. Finally, the nucleic acid is eluted from the solid phase.



The main reaction of this technology follows this diagram :



The reaction starts with hybridization of an oligonucleotide primer 1 that contains a T7 RNA Polymerase promoter binding site to the target RNA. Reverse Transcriptase elongates the primer, creating a cDNA copy of the RNA template and forming an RNA/DNA hybrid. RNaseH recognises this as a substrate and hydrolyses the RNA portion of the hybrid, leaving single stranded DNA. The second oligonucleotide primer (which has an extra tail, allowing hybridization with ECL probe) anneals to the DNA strand, again forming a substrate suitable for reverse transcriptase extension. This ex-

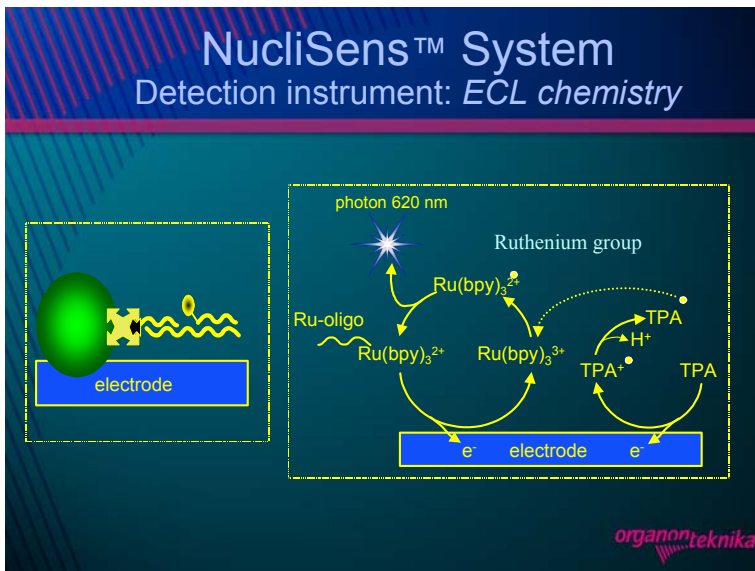
(Continued on page 15)

“What the Heck is PCR Anyway Column 5”

Gilberte Caissie

(Continued from page 14)

tension finally renders the promoter portion of the nucleic acid sequence double-stranded and transcriptionally active. Recognizing the now functional promoter, T7 RNA polymerase produces multiple copies of antisense RNA transcripts of the original RNA sequence. Each new molecule can in its turn again be targeted, but now primer annealing and extension will happen in reverse order because the newly generated RNA template is opposite in orientation to the original target. This being an isothermal reaction, it is done in a 41°C in a heating block, no thermocycler is needed. Once the reaction has been allowed to proceed for approximately 90 minutes the products are ready for detection.



The detection is based on electrochemiluminescent (ECL) which the amplicon is hybridized to a ruthenium (Ru²⁺) labelled oligonucleotide probe, specific for either wild-type or the desired template, and to a specific-biotylated generic probe, through which the resulting complex is bound to streptavidin-coated magnetic beads. The magnetic beads carrying the complexes are captured on the surface of an electrode by means of a magnet. Voltage is applied to this electrode triggers the ECL reaction. The light emitted by the hybridized ruthenium-labelled probes is proportional to the amount of product.

This technology does not involve the use of very expensive equipment, just the BioMérieux reader, PC and good heating blocks. This technology has many applications and many kits are available or you can design your own experiments. The only draw back is the extraction part which is very time consuming (which will be covered in the extraction column), the remaining of the experiment is basically pipetting and incubations.





Canadian Society for Transfusion Medicine Conference Halifax, NS May 8-11, 2003

Anne Robinson

This conference covered many timely topics in Transfusion Medicine including a session on Sunday morning on the new standards for Transfusion services that will be coming into effect soon.

Julia Hill, Director General, Biologics and Genetic Therapies Directorate, Health Canada gave an update on the regulatory process: The intent is for the standards to be published in their final form in April of 2004 and to go into effect in January of 2005. The proposal is to have a law passed in parliament that will be a regulation that refers to the "standards as amended" so that the changes will be made in the standards and not in the law. This is the first time this process has been tried in a health care setting. The items such as storage and transportation that fall under federal jurisdiction will be mandatory; the provinces will have jurisdiction over other items. It is hoped that there will be a Federal-Provincial –Territorial system of inspection for hospitals put in place.

Dr. Gilles Delage, the chair of the standards committee, spoke on some issues regarding the standards. Following are some of the highlights.

1. Exemptions for hospital based autologous pro-

grams will be clearly defined. For instance, they will be exempted for the GMP regulations in that they will not need a separate Quality Assurance (QA) person and production person. The technologists, as well as nurses, may be physician delegates.

2. Competency of staff- Documentation will be required and time frames will be defined.
3. Standard 4.3.6 Clarification of the role of the Transfusion committee
 - * Defines who is needed on a Transfusion Committee
 - * Transfusion committees may be regional
 - * The committee should meet at least quarterly
4. Transfusion services should have a QA specialist; this person may also be the hospital QA specialist. There does not need to be a separate person in TM
5. The storage temperature for blood products has been changed back to 1-6° C
6. Standard 10.8: The "shall" will be changed to a "should" in regard to mixing ABO groups of platelets.
7. Standard 9.5.2.1: It is not necessary to take the temperature of each crate shipped from CBS, providing that both the crates and the transportation method have been validated

for time frame of 24 hours and that time frame is exceeded, then the temperature needs to be taken.

For more information on the standards the website is www.hc-sc.gc.ca/hpb-dgps/therapeut

The conference provided many opportunities to discuss with colleagues the new regulations, which are looming and exchange ideas on how best to implement the changes that will be required. Workshops on adverse event reporting and documentation proved very popular. New Brunswick was well represented with nine technologists from throughout the province attending. The dinner cruise in Halifax harbour would have been much more enjoyable if there hadn't been the need for winter clothing. The organizing committee should be congratulated on a very informative and pleasant conference.



Margie, Anne & Joan "Cold, eh?"

Election Information 2003

The time is here once again for the nomination of President Elect for the New Brunswick Society of Medical Laboratory Technologists.

The Nomination Committee requests that you put forward names of NBSMLT members to stand for this important position. It is an opportunity for you to nominate technologists with a vision for the future, an individual who will be able to direct the Society's affairs in these interesting and challenging times.

Please forward all nominations to the Society's office on or before Sept 15, 2003.

Nomination Information

Term of Office

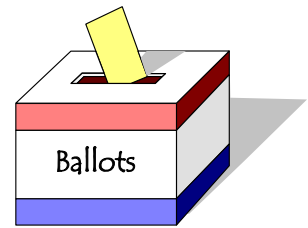
In order to comply with the 1991 Medical Laboratory Technologists Act, an annual election will be held by the Society for the office of President Elect. This will be a three year term: the first year (2004) the technologist will serve as President Elect, the second year (2005) he/she will become President of the Society and the third year (2006) this individual will serve as Past President.

Board Members

The other members of the Board will consist of the six Area Directors, elected by their respective academies. There will also be a lay representative, appointed by the government, serving on the Board.

Service and Goals

In order to provide the membership with background information regarding the candidates' present and past service in Society matters, a summary must be provided of his/her professional activities. A statement regarding goals as President Elect of the New Brunswick Society of Medical Laboratory Technologists should also be included. This information shall accompany the instructions sent with the ballot to each member.



Nomination Form

Election of President Elect

In order to comply with the 1991 Medical Laboratory Technology Act, the membership are to elect a technologist to the position of President elect each year. The term of office will be for three years, progressing from President Elect, to President, and the final year, Past President.

I _____ allow my name to stand for the position of President Elect of the New Brunswick Society of Medical Laboratory Technologists.

Signed _____ Date _____

Nominated by _____

Seconded by _____

Call for Interest:

New Brunswick Community College – Saint John Campus:

invites interested parties to contact June MacDonald at
june.macdonald.gnb.ca or (506) 658 6673

regarding term instructional positions for the
Medical Laboratory Technology Program at that site.

Start Dates:

1-10 month term (Chemistry) August 2003

3 - 8 month renewable terms November 2003
(Generalist with a focus on Chemistry, Microbiology and Haematology)

APSC 2003

More masked
party-goers:

Fruit of the Loom !





Technologist Achievements

The Miramichi Academy would like to announce that:

John T Glidden B.TECH (HSc), MLT RT has completed his Bachelor of Technology (Health Sciences) from Memorial University in Nfld. He will receive his diploma at the spring convocation at MUN.

Karen Richard, BSMLS, MLT RT has completed her degree and will be celebrating her success at the spring convocation at UNB.



Congratulations on your achievement !!!



Congratulations !!

Newest NBSMLT PDP Recipients

*Natalie Raymond
Anne M. Robinson
Kelly Soucie*

*Phyllis Holmes
Tracey Osmond
Suzanne Charest
Francine Volpé*

*Joy Sowers
Lorraine Ward
Claire Turcotte*

Please remember to include all necessary documentation with your PDP applications. This will prevent any additional delay in the processing. If you wish original documents to be returned, please include a stamped self-addressed envelope.

Many thanks...your ACR&PP committee.

Attention: All Retired NBSMLT Members
A l'attention de tous les membres de l'ATLMNB à la retraite

Memo From The Registrar Janet Kingston
Note de Janet Kingston, registraire

To retain membership in the Society, please complete the following and return to the Registrar. Cost of membership is \$30.00 for retired members starting in the year 2000. You will receive applicable publications and correspondence. Please note: members must contact CSMLS *directly* to obtain CSMLS Retired membership.

Afin de conserver votre statut de membre de l'Association, veuillez remplir le formulaire ci-dessous, puis le retourner au registraire. Le prix d'adhésion à l'Association est de \$30. pour les membres retraités. Vous recevrez ainsi, les publications et la correspondance appropriées. S.V.P. veuillez noter que les membres retraités doivent contacter SCCLM directement afin d'obtenir le statut de membre à la retraite de la SCCLM.

CSMLS ID# / No. de membre _____
Name / Nom _____
Address / Adresse _____
City / Ville _____
Postal Code / Code postal _____
Date of Retirement / Date de prise de retraite _____
Telephone number / Numéro de téléphone _____

Please Mail To / Veuillez retourner à l'adresse suivante:
Janet Kingston, Registrar PO Box 20180, Fredericton, NB E3B 7A2

Notification of Address / Employment Change
Avertissement de Changement D'Adresse / Emploi

Please note that all changes must be made with **BOTH** the NBSMLT and CSMLS.
Attention: Vous devez aviser l'ATLMNB et le SCCLM séparément de tous vos changements

Name / Nom _____
Old Address / Ancienne adresse _____
New Address / Nouvelle adresse _____
Previous place of employment / Ancien lieu d'emploi _____
Present place of employment / nouveau lieu d'emploi _____
Discipline / Discipline _____

Please Mail To / Veuillez retourner à:
Janet Kingston, NBSMLT, PO Box 20180, Fredericton, NB E3B 7A2