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MLT

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Quick View

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

Message from the President

I hope everyone has had a very enjoyable summer! and a great vacation! Now that we are rested up it's time to get involved. If you haven't been attending your academy meetings, why not start now. Take a course - there is a great variety available by correspondence. Read some articles. Remember to keep track of all your activities for your PDP.

Colleen Moran and I spent a very enjoyable morning with the Medical Laboratory Technology students at NBCC in Saint John. Hopefully we have inspired them to become active members of the NBSMLT. We co-sponsored (with CSMLS) a pizza party for the students. It was a great time! Janet Reid, President-elect, attended another function at NBCC on Friday. The Society is taking a more active role in the education of future technologists. There are 14 students in second year and 21 in first year. I hope all of the students will have an exciting and challenging year. We look forward to welcoming them into our profession. I attended graduation exercises at NBCC in June and it was my honour to present Erin Staples the NBSMLT award. It was a privilege to congratulate each student (especially my daughter Shelley) on his or her accomplishments! Many of you are working towards a degree and are in the workforce. Good luck to all of you in your endeavours!!

Our executive is busy trying to finalize the NBSMLT Rules. The board has had a bit of a break over the summer but is now back in full swing.

Congratulations to Manitoba!! Their Medical Laboratory Technologist Act was passed by the Manitoba Legislature July 25, 2002.

Edna Smith
President NBSMLT

Thought for the day:

We make a living by what we get, but we make a life by what we give."

Sir Winston Churchill

SUCCESS !!

Congratulations to the following 2002 graduates who were successful on the **CSMLS** certification examination in June 2002:

RT General

Thesa Albert
Paulette Beal
Justin Carhart
Kathleen Grondine
Charles Heinstein
Kirk MacDonald
Shauna MacKinnon
Kimberly McKee
Shelley Smith
Erin Staples
Erica Steeves
Kimberly Tenhave

RT Subject – Diagnostic Cytology

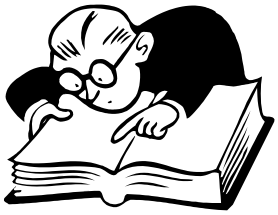
Shelley Glidden
Pamela Scott

General Proficiency Award at NBCCSJ

The 2002 winner of the General Proficiency Award is **Erin Staples**. This award was presented by President Edna Smith at the graduation at NBCCSJ on June 21, 2002. This award consists of $200 cheque, $100 voucher for NBSMLT dues and a CSMLS professional emblem pin.

Congratulations to Erin and best wishes for the future she has begun at the Saint John Regional Hospital!

NEWEST NBSMLT PDP RECIPIENTS ! CONGRATULATIONS !!



Martha MacPherson
Cynthia Wilson
Glenda Morris
Claire Marie Wright
Rino Roy
Ghislaine Dancause
Mary Wong Hamilton
Ghislaine Gionet
Gilberte Caissie

Focus On Technologists who make a difference: Luc Lévesque

Luc Lévesque was nominated for the first David Ball Community Service Award. Although the CSMLS selection committee ultimately chose another nominee, we felt that Luc's community service deserves to be recognized in this, our provincial society newsletter. Much of this information was excerpted from an article published in the Nor'East Health Network Newsletter *Synapse*.June 2000.

While technologists have many talents, fire chief is not usually counted among them**.** Luc Lévesque, a technologist with the Nor'East Health Region, moved to Ste-Marie/St. Raphael at the beginning of March l987. He had to fight his way through snowdrifts, to Lamèque.

Luc Lévesque has since been deeply involved in his adopted community. He has been a volunteer firefighter in Ste-Marie/St-Raphael since 1987 when the local mayor asked a group of volunteers to put together a fire-brigade for the village. Luc became fire chief in 1991. "Our work has borne fruit as we're now well established and able to provide a quick and effective service", he explains.

A volunteer firefighter, as you might imagine, requires some pretty intensive training. Luc took several emergency measures courses in Arnprior, Ontario. He has since worked on the development of an emergency measures plan for his municipality.

Indeed, Luc has chaired the Acadian Peninsula firefighter training committee for the past year, while also serving as vice-president of the Acadian Peninsula Association of Firefighters. Under his direction, the province revised training standards for volunteer firefighters and about 80 Acadian Peninsula firefighters have been trained.

Luc devotes between 10 and 15 hours a week to his volunteer activities. Often he can be seen walking around with two pagers on his belt — one for the fire brigade and the other for the hospital when he is on call at the laboratory.

Luc's volunteer commitments extend beyond the municipality to the hospital where he works. He is the paramedical group liaison officer for the New Brunswick Public Employees' Association. He has also designed a program to teach patients how to monitor their blood sugar and use a glucometer correctly. The program has now been in place for several years. In addition, Luc has served on the emergency measures planning committee as well as the joint health and safety committee for several years.

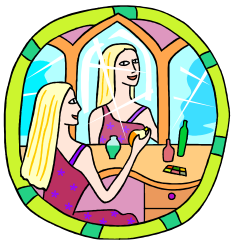
Despite such a busy schedule, Luc Lévesque still finds the time for fly-fishing — a pastime he discovered about six years ago and that has since become his passion. It is an activity, he says, that helps him stay in touch with nature while discovering New Brunswick's hidden treasures. His biggest catch to date: a 40-inch salmon.

Luc lives in Ste-Marie/St-Raphael with his wife Jacinthe and their two children Tammy and Rémi. He has been an elected municipal councillor and is very involved with the community minor hockey association.

OPPORTUNITIES ARE USUALLY DISGUISED AS HARD WORK,
SO MOST PEOPLE DON'T RECOGNIZE THEM.

LOOK GOOD *FEEL BETTER*

From April to October 2002, the **Look Good** *Feel Better* program is honoring women living with cancer, as well as celebrating its 10th anniversary in a cross Canada tour. Founded in 1992 by the Canadian Cosmetic, Toiletry and Fragrance Association, **Look Good** *Feel Better,* is a national public service program. This program is sponsored by the cosmetic industry's trade association and is dedicated to helping Canadian women living with cancer manage the appearance related side effects of cancer, and its treatments. Many times, cancer treatments result in temporary changes in a woman's appearance. Common appearance related side effects which may occur are: hair loss, including eyebrows and eyelashes, dry sensitive skin, pale or sallow complexion, puffiness or uneven skin pigmentation or nail discoloration. Looking good on the outside can help a woman who is undergoing cancer treatment feel better about herself on the inside, as well as giving her a sense of control.



Workshops are led by industry-trained cosmeticians and wig specialists who donate their time and expertise. These workshops are two hours long and offered at 65 hospitals and cancer care facilities across Canada. The opportunity to learn make-up tips, hair alternatives, nail and skin care and cosmetic hygiene in a supportive environment has proven to be beneficial to the morale of those women. Participants are guided through the hands-on workshops with a complimentary tool kit of cosmetic products donated by members of the Canadian Cosmetic Toiletry and Fragrance Association. For those women who are unable to attend the workshops, a guide and how-to video are also available. The program also publishes an annual magazine, which is a valuable resource and may help women face cancer with confidence. The magazine includes makeovers, personal stories of success and inspiring information for women living with cancer as well as their family, friends and health care professionals.

For more information telephone 1-800-914-5665, or visit the website at *www.lookgoodfeelbetter.ca*.

Look Good
Feel Better™
Belle et bien
dans sa peau™

You are your greatest asset, there is nothing you can't do.
No one can keep you from dreaming, only you can stop them coming true.
Your achievements are determined by the desire that you possess.
Believe in who you are.
Believe in what you do.
It's not a quirk of fate
it's strictly up to you.

Anonymous

Editor's Note

I hope everyone has enjoyed this past summer and had a great vacation. I imagine everyone heaved a huge sigh of relief at the news that our new contract has been signed. Perhaps some of you are thinking about using a little of that hard earned "back time" to take a course or go to *Maritech* in PEI, November 21st & 22nd.

As we get ready to begin another school year, many of us are busy getting children off to school and college; we must remember to find time for our own professional development. The ACR&PP committee has been receiving and reviewing many applications for the PDP and are pleased with the response. We will continue to publish the names of the newest recipients in each issue of the Analyzer.

Submissions are always welcome. The publications committee is always on the lookout for items of interest to the membership. As you might have noted there were no Academy reports in this issue; I hope that there will be some news from each Academy in the next issue.

Deadline: Issue #4 October 21, 2002

Bernadette Muise
Transfusion Medicine
The Moncton Hospital
135 Mac Beath Ave.
Moncton,NB E1C 6Z8
Email : *Analyzer@nbnet.nb.ca*

2004 NBSMLT Dues Increase

For members who haven't already heard, a motion to increase NBSMLT annual dues by $25 was passed at AGM 2002. This increase will not take effect until the membership year 2004 at which time provincial fees will increase from $90 - $115.

You may wonder, why so much all of a sudden! The rationale follows.

NBSMLT has a dual mandate. It is the Regulatory Body for the practice of medical laboratory technology in New Brunswick and it is also the Professional Society for members in the province.

A Regulatory Body is responsible for protecting the public and one way this is achieved is by ensuring that only qualified individuals are licensed. Regulatory activities of the NBSMLT have become more complex, time consuming and labour intensive and the costs associated with this function will continue to rise.

In fulfilling Professional Society responsibilities, the NBSMLT is fortunate to have access to services offered by CSMLS. Considering the size of our membership (~650) and our resources, it would be impossible without CSMLS.

We have come a long way since the early days after regulation in the early 1990's. At that time, when the Medical Laboratory Technology Act (1991) received Royal Assent and our bylaws were in place, who would have thought there would still be so much work to be done?

Until 1996, NBSMLT survived due to the hard work of 2 volunteer Registrars and a volunteer Board of Directors, all of whom held full time jobs and willingly spent their evenings and weekends on NBSMLT projects (not to mention family responsibilities). So much was accomplished but there was still more to be done.

In 1996 a part-time Executive Director / Registrar (three days per week) was hired and with the help of Board members and their Committees, the following has been accomplished:

* Annual budget – approved every November for following calendar year
* Regular financial reporting comparing actual results to approved budget
* NBSMLT on the World Wide Web
* New Membership database with increased analytical capability
* Board Manual including Committee Terms of Reference
* Strategic Plan (1999) facilitated goal achievement
* Legislation Committee set up
* Annual review of NBSMLT bylaws
* Consolidation of NB sexual harassment legislation with Medical Laboratory Technology Act
* Set up Advisory Committee on Regulation and Professional Practice and Advisory Committee on the Education of MLT's.
* Society newsletter, the Analyzer, available in electronic format on the Web site.
* Draft Rules completed
* Prize money for MLT graduates increased fivefold
* Signed Interprovincial Agreement for Labour Mobility of MLT's in Canada
* Optional Professional Development Program introduced

Plans for 2002-03:

* Option to pay dues by Visa
* New membership cards (more durable)
* 1-800 telephone number for member convenience
* NBSMLT Act and bylaws on Web site
* Hire Public Relations Consultant for special projects
* Increased Student involvement in Society activities
* Final approval of NBSMLT Rules

Needs to consider for future years:

* Executive Director / Registrar position will require a 4-5 day week instead of the current 3 day week
* Office equipment will gradually have to be replaced
* Continuing Education and Retraining grants for members

Should you have questions or concerns, please do not hesitate to contact me at the NBSMLT office.

Janet L. Kingston
Executive Director / Registrar
NBSMLT

The Truth about Fiction

The summer has come to an end and I have been cramming in the last of my beach reading books. Like some of my fellow lab technologists in microbiology, I enjoy fiction of the medical and forensic mystery genre and we frequently exchange books. The one I just completed, "The Surgeon" by Tess Gerritson, was gripping and suspenseful, the one you don't want to put down and it kind of ticked me off! If you have read this book then you may know why—the Lab Tech did it!! Again!!! It wasn't enough that a lab tech was careless in "Outbreak" and spread Ebola Virus or that some deranged lab tech in another book cooked up a batch of vancomycin resistant Staph aureus to kill his unsuspecting prey. This villain, expelled from medical school for a perverse act in anatomy class, seems to have been easily accepted into a Medical Laboratory Technology course and I picture him now as he caresses and fondles the tubes of blood as he chooses his next victim all with the aid of a hospital computer that holds all the victim's secrets. And his continuing education, that would impress Jack the Ripper himself!

OK, I know it is fiction. **I also know that the general public has no idea about the real work and lives of medical laboratory technologists**. We are so removed from the patient that most hardly know that we exist but when they read books like this I am sure that they think us calculating (maybe even in a perverse way), invisible (maybe because only a freak would work with blood and other assorted body fluids), frustrated (maybe a Dr. wannabe like our villain) and who knows what else. I for one am getting tired of being the bad guy in the movies, the villain in the books and the careless one in real life (the lab lost your specimen). When did this negative image begin and why? When is this image going to change? **Well I am hoping that it will be soon!** The Board of Directors and the PR committee of the NBSMLT have identified Public Relations and Communication as a priority in the year to come. We may really need some outside help in this endeavour but I think it will be worth it and none too soon. Next book let the physiotherapist be the bad guy and the lab tech the hero.

And that's the way I see it…
Marty White

Continuing Education Committee Report

As the fall arrives, and the students return to school, many of us are also considering our continuing education choices. I encourage everyone to set a goal to participate in some form of professional development during the coming year. There are several excellent conferences upcoming – Maritech in Charlottetown, Nov 21 and 22, 2002; APSC in Fredericton, May 1-3, 2003; and CSMLS/ OPTMQ Joint Congress in Quebec City, June 7–11, 2003.

As well, the CE committee is currently attempting to put together a list of topics for traveling seminars/workshops, which we will develop over the coming year. If you have any suggestions for topics of a general or discipline-specific nature which you feel would be useful, please pass them on to us as we will be attempting to organize several offerings. In addition, if you have expertise in a particular field/topic, and would consider perhaps giving a workshop or seminar, we will be planning a seminar on public speaking and the presentation of lectures/ workshops for anyone who feel they could use some specialized training. In order to optimize our planning efforts, we urge everyone to think about what they would like to see offered, and to pass the information along to their academy's CE representative, or to me directly.

I hope that everyone will strive to obtain the NBSMLT PDP certificate in the near future. It does not require very much effort, and the certificate is well worth it! It is also a valuable documentation of your efforts, which comes in handy at performance appraisal time!

I wish everyone a good and productive year as I finish out the end of my term as CE committee chair. I look forward to serving the membership as president in the coming year. Look for the announcement of the new chair for the start of 2003.

Respectfully submitted,
Janet Reid
CE Chair, 2001-2002

MUTUAL RECOGNITION AGREEMENT FOR LABOUR MOBILITY OF MEDICAL LABORATORY TECHNOLOGISTS IN CANADA

Over the past few years there have been several articles in the Analyzer regarding the Agreement on Internal Trade as it related to the profession of Medical Laboratory Technology. This Agreement was signed in 2001 at the CSMLS Congress in Newfoundland. The document has been translated and is presented here, for your information only, so that you may read it for yourself and fully understand the implications of the document.

Agreement on Labour Mobility Between
Alberta Society of Medical Laboratory Technologists [ASMLT]
Saskatchewan Society of Medical Laboratory Technologists [SSMLT]
College of Medical Laboratory Technologists of Ontario [CMLTO]
New Brunswick Society of Medical Laboratory Technologists [NBSMLT]

1.0 Purpose

We, the undersigned, enter into this Mutual Recognition Agreement (MRA) in order to comply with our obligations under the Agreement on Internal Trade (AIT), Chapter 7 (Labour Mobility). The purpose of this MRA is to establish the conditions under which a Medical Laboratory Technologist who is licensed/certified/registered in one Canadian Jurisdiction will have his/her qualifications recognized in another Canadian Jurisdiction which is a Party to this Agreement.

2.0 Definitions of Terms for the Purposes of this Agreement

2.1 **Party** means a signatory to this Agreement.

2.2 **Medical Laboratory Technologist** means a person who is licensed/certified/registered by a Regulatory Body in Canada to practice in medical laboratory technology.

2.3 **Scope of Practice** means the role and responsibilities of a Medical Laboratory Technologist.

2.4 **Good Standing** means the Medical Laboratory Technologist is currently licensed/certified/registered by a provincial Regulatory Body to practice medical laboratory technology, is in full compliance with the continuing education/continuing competence/quality assurance requirements of the Regulatory Body and does not have any sanctions or practice restrictions resulting from criminal conviction, disciplinary action, non-payment of fees, failure to provide information to the Regulatory Body, or not having met practice requirements.

2.5 **Occupational Standards** means the education and training required for entry to practice in medical laboratory technology.

2.6 **Occupational Requirements** means requirements other than education and training defined by a Regulatory Body and required for entry to practice, such as practice hours.

2.7 **Accredited** means a program of study accredited by the Conjoint Committee for the Accreditation of Educational Programs in Allied Medical Disciplines.

2.8 **Jurisdiction** means the extent of the authority of a Regulatory Body.

2.9 **Jurisprudence** means knowledge of local legislation and policies specific to the Jurisdiction of a Regulatory Body.

2.10 **Home Jurisdiction** means the Jurisdiction in which the Medical Laboratory Technologist is currently licensed/certified/registered.

2.11 **Host Jurisdiction** means the Jurisdiction in which the Medical Laboratory Technologist is requesting to be licensed/certified/registered.

3.0 Terms and Conditions

3.1 WHEREAS the undersigned agree that it is in the interest of their memberships and members of the general public to enable qualified Medical Laboratory Technologists to have access to employment opportunities in that occupation in all regulated provinces and territories in Canada;

3.2 WHEREAS it is further agreed and understood that threshold levels of competence and public safety in the practice of medical laboratory technology must be established, maintained and upheld by regulators to ensure protection of the public;

3.3 WHEREAS this recognition Agreement does not modify the authority of each Regulatory Body to set Occupational Standards and Occupational Requirements;

3.4 WHEREAS the undersigned take the responsibility of setting standards responsibly and in good faith to en-

(Continued on page 8)

MUTUAL RECOGNITION AGREEMENT FOR LABOUR MOBILITY OF MEDICAL LABORATORY TECHNOLOGISTS IN CANADA

(Continued from page 7)

sure that the public is protected;

3.5 WHEREAS the Parties have determined a high level of commonality with respect to:

- 3.5.1 Scope of Practice
- 3.5.2 the competencies required for an entry level Medical Laboratory Technologist, as reflected in one or more of the Canadian Society for Medical Laboratory Science (CSMLS) documents:
  Competencies expected of an Entry-Level Medical Laboratory Technologist (2000)
  Competencies expected of an Entry-Level Cytotechnologist (1997)
  Competencies expected of an Entry-Level Clinical Genetics Technologist (1998)
- 3.5.3 Occupational Standards and Occupational Requirements that all signatories currently expect for initial entry to practice:
  - graduation from an Accredited Medical Laboratory Technology Program
  - successful completion of the ***relevant*** CSMLS medical laboratory technology certification examination.
- 3.5.4 having complaints and disciplinary procedures in place;

3.6 WHEREAS the Parties have conducted the Article 708 process as described in Chapter 7 - Labour Mobility of the Agreement on Internal Trade and have identified the following exception(s):

- 3.6.1 the Parties have determined that Ontario is the only Jurisdiction that currently specifies Occupational Standards and Occupational Requirements for entry to practice Clinical Genetics.

3.7 WHEREAS no Party will endorse or seek any requirement for residency in its Jurisdiction as part of its Occupational Standards or Occupational Requirements;

3.8 WHEREAS each Party shall ensure that any Occupational Standard it adopts or maintains relating to registration of Medical Laboratory Technologists from any other Party is competency-based and readily accessible or published and does not result in unnecessary delay nor impose inequitable, burdensome fees, except for cost differentials;

3.9 WHEREAS each Party may require an applicant for licensure/certification/registration to demonstrate knowledge of the local legislation and policies that apply to the practice of medical laboratory technology as a condition for registration;

3.10 WHEREAS an applicant who is licensed/certified/registered in a Jurisdiction shall not be required to undergo additional training or examination as a condition of licensure/certification/registration in another Jurisdiction, excepting when Scope of Practice differences exist as described in 3.6;

3.11 WHEREAS Parties recognize that in order to be licensed/certified/registered in a Canadian Jurisdiction an applicant may be required to:

- 3.11.1 demonstrate the competencies [3.5.2] to begin practice as a Medical Laboratory Technologist in the Jurisdiction where initial application is made, and those competencies are deemed to be equivalent by the Parties;
- 3.11.2 establish and confirm identity for entry onto the register;
- 3.11.3 pay applicable fees;
- 3.11.4 demonstrate good standing in the Jurisdiction in which they are currently licensed/certified/registered and provide additional evidence of good character or behaviour;
- 3.11.5 demonstrate they meet any language requirement in place in a Jurisdiction to which they are applying for licensure/certification/registration;
- 3.11.6 demonstrate they have met any requirements pertaining to local Jurisprudence in a Jurisdiction to which they are applying for licensure/certification/registration;
- 3.11.7 meet other requirements relating to immigration status, capacity, insurance coverage and similar matters on the same basis as other applicants for licensure/certification/registration.

3.12 WHEREAS it is recognized that at the time of signing this Agreement Parties may have Medical Laboratory Technologists who qualified for licensure/certification/registration under a different regulatory regime, and who may not meet the current Occupational Standards and Occupational Requirements for entry to practice. It is recognized that these individuals are qualified, experienced Medical Laboratory Technologists and are eligible for membership in all signatory Jurisdictions provided they meet all other criteria described above in 3.11 and they are currently licensed/certified/registered by one of the Parties;

3.13 WHEREAS it is recognized that Parties may have Medical Laboratory Technologists with a restricted Scope of Practice. It is recognized that these people will be subject to individual assessment by the Host Jurisdiction and may

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MUTUAL RECOGNITION AGREEMENT FOR LABOUR MOBILITY OF MEDICAL LABORATORY TECHNOLOGISTS IN CANADA

(Continued from page 8)
be eligible for a temporary /conditional license/certificate/registration. They will be required to meet all other criteria described above in 3.11.2 to 3.11.6;

3.14 WHEREAS Parties to this Agreement may maintain differing continuing education/continued competency/ quality assurance requirements of Medical Laboratory Technologists in their Jurisdictions. Applicants for licensure/ certification/registration will be required to demonstrate compliance with continuing education/continued competency/quality assurance requirements once licensed/certified/registered in the Host Jurisdiction;
3.15 WHEREAS Parties to this Agreement may maintain differing currency or practice hour requirements for Medical Laboratory Technologists in their Jurisdictions. Applicants for licensure/certification/registration may be required to demonstrate compliance with currency or practice hour requirements in the Host Jurisdiction, or may be required to demonstrate competency through another mechanism, once licensed/certified/registered or as a condition for licensure/certification/registration in the Host Jurisdiction.

4.0 Terms of Recognition

4.1 THEREFORE, based on the principles specified above, We the Parties agree to recognize those licensed/ certified/registered Medical Laboratory Technologists in Good Standing without further assessment.
4.2 Applicants may be granted, for a specified period, a temporary/conditional license/certificate/registration in order that he/she can acquire and/or demonstrate the acquisition of competency or meet other Occupational Requirements.

5.0 Administration of the Agreement

5.1 Parties agree to identify a contact person responsible for implementation, and how implementation should be monitored and assessed; acceptable duration for processing of applications; length of procedures; how problems associated with implementation of the Agreement could be resolved; if there is a need to establish a monitoring committee.
5.2 Each Party agrees to give advance notice to other signatories when proposing modification or adoption of new Occupational Standards or Occupational Requirements that might impact on the inter-provincial/territorial mobility of workers. Each signatory agrees to notify its government of any proposed modification of Occupational Standards and Occupational Requirements so that the government can meet its obligation under Annex 708, Part II of the Agreement on Internal Trade.
5.3 Each Party agrees that this Agreement is a dynamic and evolving instrument that may be amended with the consent of all signatories. The Parties agree to initiate periodic reviews of this Agreement every three years after July 1, 2002 and/or to review the operation of the Agreement when such a request is made by one of the signatories.
5.4 Each signatory will give written notice to its government and to other signatories of its intent to withdraw from this Agreement at the earliest possible opportunity. The withdrawal will take effect 12 months after the notification. The notice period is waived where the withdrawal is not within the Party's control. Some governments may require prior consultation or prior approval.
5.5 Any entity that has been delegated authority to regulate Medical Laboratory Technologists by their government may accede to this Agreement on such terms as are agreed to by all signatories.
5.6 Each Party agrees to seek the necessary legislative changes from their respective government if, in order to implement this Agreement, there is a need for such changes. Each Party also agrees to make the necessary changes to by-laws, policies or procedures in order to implement this Agreement.
5.7 The Parties agree that this Agreement is effective on or before June 1, 2002, recognizing that implementation may be limited by pending legislative changes in one or more Jurisdictions.

6.0 Signatory Page for Regulatory Bodies

Regulatory Bodies that exercise authority delegated by law for Medical Laboratory Technologists in Canada.
Alberta Society of Medical Laboratory Technologists [ASMLT]
Organization
Medical Laboratory Technologist Regulation 49/93, under the Health Disciplines Act 1992
Governing Legislation
Saskatchewan Society of Medical Laboratory Technologists [SSMLT]
Organization

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MUTUAL RECOGNITION AGREEMENT FOR LABOUR MOBILITY OF MEDICAL LABORATORY TECHNOLOGISTS IN CANADA

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The Medical Laboratory Technologists Act, 1995 (Chapter M-9.3 of the Statutes of Saskatchewan)
Governing Legislation
College of Medical Laboratory Technologists of Ontario [CMLTO]
Organization
Regulated Health Professions Act, 1991 and Medical Laboratory Technology Act, 1991, as per Schedule 1 of the RHPA
Governing Legislation
New Brunswick Society of Medical Laboratory Technologists [NBSMLT]
Organization
An Act Respecting the New Brunswick Society of Medical Laboratory Technologists, 1991, Chapter 67
Governing Legislation

7.0 Voluntary Professional Endorsements

7.1 Provincial Societies

The undersigned represent voluntary organizations that, while not bodies which exercise authority delegated by law, have participated in development of the attached Mutual Recognition Agreement, and which understand and concur with its terms and precepts. We acknowledge our willingness to abide by the terms of the Agreement in full recognition that our signature to this Agreement is in no way binding on our Governments. We are prepared to assist with and participate in any future initiatives that will facilitate the interprovincial mobility of Medical Laboratory Technologists.

British Columbia Society of Laboratory Science [BCSLS]
Organization
Manitoba Society of Medical Laboratory Technologists [MSMLT]
Organization
Nova Scotia Society of Medical Laboratory Technologists [NSSMLT]
Organization
Prince Edward Island Society of Medical Technologists [PEISMT]
Organization
Newfoundland and Labrador Society of Laboratory Technologists [NLSLT]
Organization

7.3 Yukon, North West Territories and Nunavut

The undersigned represent voluntary groups from Yukon, NWT and Nunavut that, while not professional societies or bodies which exercise authority delegated by law, have participated in development of the attached Mutual Recognition Agreement, and who understand and concur with its terms and precepts. We acknowledge our willingness to abide by the terms of the Agreement in full recognition that our signature to this Agreement is in no way binding on our Governments. We are prepared to assist with and participate in any future initiatives that will facilitate the interprovincial mobility of Medical Laboratory Technologists.

7.2 National Society

The Canadian Society for Medical Laboratory Science (CSMLS) is a national voluntary professional association that provides membership, certification, standard-setting services and assessment of foreign credentials in conjunction with some provincial/territorial associations. While the CSMLS has not been delegated authority by law to regulate the profession of medical laboratory technology, it is recognized that CSMLS can and does play a role in facilitating inter-provincial labour mobility. While CSMLS is not a signatory to this Agreement by virtue of the fact that it is not an entity of a province or territory which has Jurisdiction over the profession, we nevertheless support the signatories in their efforts to comply with the obligations of the Labour Mobility Chapter.

CSMLS will continue to foster the cooperative relationship that exists among and between the signatories. We are prepared to assist with and participate in any future initiatives that will facilitate the interprovincial mobility of Medical Laboratory Technologists.

Congress 2002 Calgary AB

Calgary Crew: From New Brunswick
Pierre Leveille, Susan Atkinson, Dr. Cadeau, Edna Smith, Marty White, Janet Reid
Susan Findlater, Ellen Cloutier, Margie Flynn

In May, with the help of the NBSMLT grant that was awarded to me, I had the good fortune to attend the Canadian Laboratory Medicine Congress 2002 in downtown Calgary. The congress was the first of its kind to bring together the CSMLS, CAP and CSCC and the organizing committee succeeded in presenting a first rate affair. The Telus Convention Center is part of a sprawling complex with enclosed walkways to neighbouring hotels and one hardly had to go outdoors, which was good because it was frigid and snowing!

I went with the plan of observing the big picture as I am on the 2005 congress committee as well as focusing on my areas of interest, which are Microbiology and Virology.

I attended some excellent sessions and felt as one tends to feel at one of these conferences; uplifted and that you are a part of something exciting and larger than you thought. There were speakers from research backgrounds as well as medical and public health – all enthusiastic about their specialties. To give a few examples

- ⇒ I listened to a forensic pathologist describe his mission to Kosovo and the problems, risks of setting up temporary autopsy suites in the field to examine bodies that had been buried
- ⇒ I heard from an enthusiastic public health inspector whose quest had been to track down the source of a Salmonella Infantis outbreak and the problems and rewarding results that followed in establishing standards for pet treats (pig ears)
- ⇒ Trends in STDS was an interesting one as I heard how, with the advent of good treatments for HIV, the safe sex message is wearing off and outbreaks of syphilis and gonorrhoeae have been occurring - mostly among gay men who find anonymous partners through gay chat lines. There are concerns that doctors might not recognize the chancre, as syphilis hasn't been around for awhile
- ⇒ Another thought provoking one was on Human Organ Procurement and how hemodilution can contribute to false negative screening tests because of decreased protein concentration

These barely touch the surface of what I heard about in Calgary. The scientific sessions were excellent, the social events and food were great. The exhibitors were plentiful as there were also chemists and pathologists attending. I met some new people and was pleasantly surprised to run into old classmates. I hope that my experience will also be of help to the Congress 2005 Committee and I would once again like to thank the NBSMLT for their financial support.

Martha White, MLT RT

2003 NBSMLT Membership Renewal

Membership Renewal Time will be upon us before we know it. Renewal forms are scheduled to be mailed in early October, 2002. For those who haven't already heard, a $6 dues increase was approved at the CSMLS AGM in May, 2002.

All Regional Payroll Departments were notified of the increase in early June, 2002. If your dues are deducted from your pay, you have probably noticed a slight increase in the amount deducted.

2003 fees are $226 and include:
CSMLS dues $ 128
NBSMLT dues $ 90
Liability insurance $8

Deadline for receipt of fees is January 31, 2003. Otherwise, a $50 late fee will be charged.

Please note that annual liability insurance coverage for members expires on December 31st of each year, so to ensure coverage, it is recommended that dues be received on or before December 31, 2002.

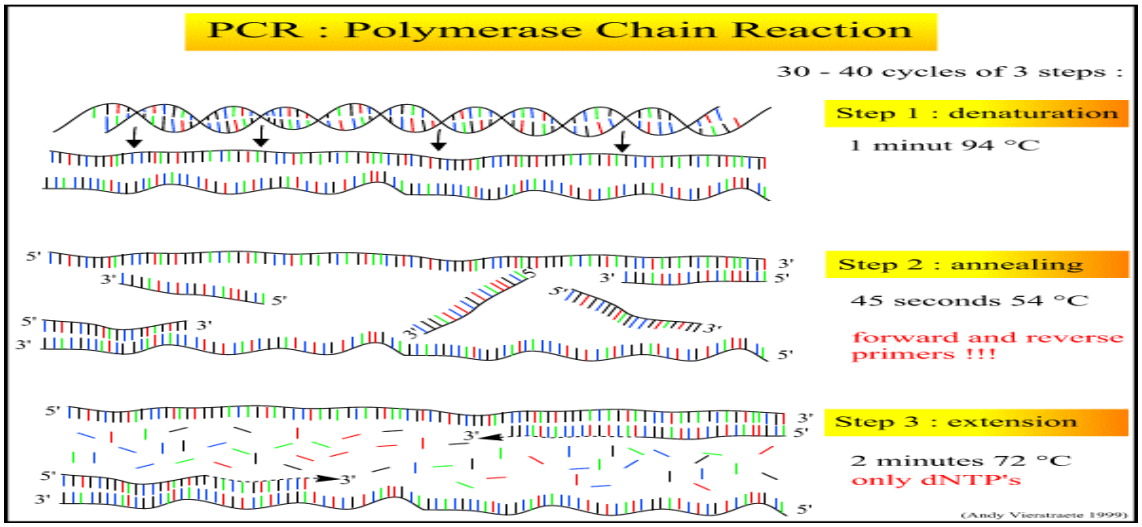
If you have questions, please do not hesitate to call the Society office at 506-455-9540

Janet L. Kingston
NBSMLT Registrar

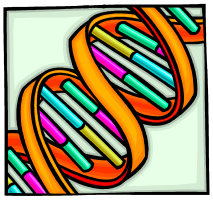
What the heck is PCR? Part 3

Gilberte Caissie

Hope everyone had a nice summer; I know I did. Being back in the Maritimes is great, something about salt water and lobster rejuvenates the brain cells. Summer vacation being over allows me to get back to some Molecular Biology. We finished column 2 with the principle of the PCR (Polymerase Chain Reaction). Here is just a short review to put everyone back in the mood. PCR is based upon the extension of a short DNA primers annealed to single stranded templates by a DNA polymerase, *Thermus aquaticus* (Taq). The reaction takes place during repetitive temperature cycling at 94°C for denaturation of the strands of DNA, 55-70°C for annealing of the primers to their specific targets and 72°C for primer extension by Taq enzyme. After the first cycle extension, the newly synthesized copy is denatured from its template and new primers anneal not only to the original DNA strands but also to the new amplicons. Extension occurs again. Thus, a doubling of the number of copies of the region defined by the primers (amplicon) occurs during each cycle, leading to an exponential increase in amplicons; after 30 cycles, million to billion-fold amplifications can be achieved under ideal circumstances.



Before going on to the other technologies let's have a look of the make up a of a PCR reaction with the different components and their specific functions. Here are the components of a standard DNA PCR reaction:



-Template
-Primers
-d'NTP's
-10X Buffer
-$MgCl_2$
-Taq Polymerase
-H_2O

Let's have a look at the function of the different components.

Template:

Before you can amplify your DNA, you first need to prepare it. You only need one intact strand of DNA to perform the amplification, but any impurities must be sufficiently dilute so they cannot inhibit the annealing of the primers. A 1:5 dilution in water is usually enough to achieve this. We extracted, purified and quantitated the DNA, which serves as our template. The reason for the purification is to eliminate as many inhibitors as possible and get rid of any cellular material. The concentration of DNA is necessary to obtain the desired template in sufficient amount to enable amplification of the template. Sometimes the DNA is present in very low concentrations. The most important issue is to be able to standardize the PCR reaction by always adding the same amount of template. Very little DNA is needed, but to reduce the likelihood of error by Taq DNA polymerase, a higher DNA concentration can be used, though too much template may increase the amount of contaminants and reduce efficiency. The template can either be DNA or RNA

Primers:

A primer anneals to a known sequence of DNA, so there are options open as to what type of primer to use. If the sequences are known, primers specific for those sequences are used. Perhaps the most critical parameter for successful PCR is the design of primers. All things being equal, a poorly designed primer can result in a PCR reaction that will not work. The primer sequence determines several things such as the length of the product, its melting temperature and ultimately the yield. A poorly designed primer can result in little or no product due to non-specific amplification and/or primer-dimer formation, which can become competitive enough to suppress product formation. This application note is provided to give rules that should be taken into account when designing primers for PCR. Several variables must be taken into account when designing PCR primers.

What the heck is PCR? Part 3

Gilberte Caissie

Among the most critical are:

D'NTP's:
D'NTP's (dATP, dCTP,dGTP and dTTP) provide the nucleotides to the Taq polymerase enzyme which adds the bases to create new complementary strands of DNA. All 4 bases are used in equivalent amounts. Usually concentration varies between 20-200 µM but can use up to 1.5 mM dNTP. D' NTP chelate Mg^{++}, therefore the amount of Mg^{++} used may need to be changed. However excessive dNTP can increase the error rate and possibly inhibit Taq. Lowering the dNTP (10-50 uM) may therefore also reduce error rate.

10X Buffer:
A buffer is necessary to regulate the pH of the reaction mixture, thus allowing the reaction to proceed. This buffer (10X buffer) is referred to as the reaction buffer and usually consists of Tris-HCl, KCl or gelatin.

$MgCl_2$:
A major player in the PCR reaction is $MgCl_2$. The optimal concentration ranges between 1.5-2.5 mM, although more may be required for further optimisation. The concentration of $MgCl_2$ is one of the main variables in the resulting PCR. Mg^{++} affects the annealing of the oligo to the template DNA by stabilizing the oligo-template interaction; it also stabilizes the replication complex of polymerase with template-primer. It can therefore also increase non-specific annealing and produce undesirable PCR products (giving multiple bands in gel). EDTA (Ethylenediaminotetracetic acid), which chelates Mg^{++} can change the Mg^{++} concentration. EDTA can also affect strand dissociation temperatures of template and PCR product and also on enzyme activity and fidelity.

Taq Polymerase:
The upper temperature used in PCR is about 95°C. For eukaryotic enzymes, this poses a problem. Above a temperature of about 40°C, enzymes become denatured; their folding pattern is disrupted. We must therefore look for alternatives. One such alternative is found in the bacterial kingdom. Extremophiles live in conditions which are simply inaccessible to higher organisms. One group of extremophiles are **thermophiles.** This group of bacteria tolerates, or even requires, high temperature environments. The enzymes in these organisms are therefore very different from those in organisms which live in a 'normal' environment, since they can survive exposure to very high temperatures without being denatured. The DNA polymerase typically used for PCR is from *Thermus aquaticus* (Taq), an extreme thermophile. The enzyme survives the temperature cycling involved and therefore does not need to be replaced each time a cycle is completed.This thermostable enzyme adds the deoxynucleotides to the complementary DNA strand being synthesised. The polymerase chain reaction requires the mixture to be subjected to temperature cycles which means that things get very hot.

H_2O:
Water is used to make up volume and to dilute the components of the PCR reactions. A lot of these reagents have to be optimised for every different pair of primers used, different templates, different cycling patterns, etc.…

Optimization of PCR Reactions - Why?

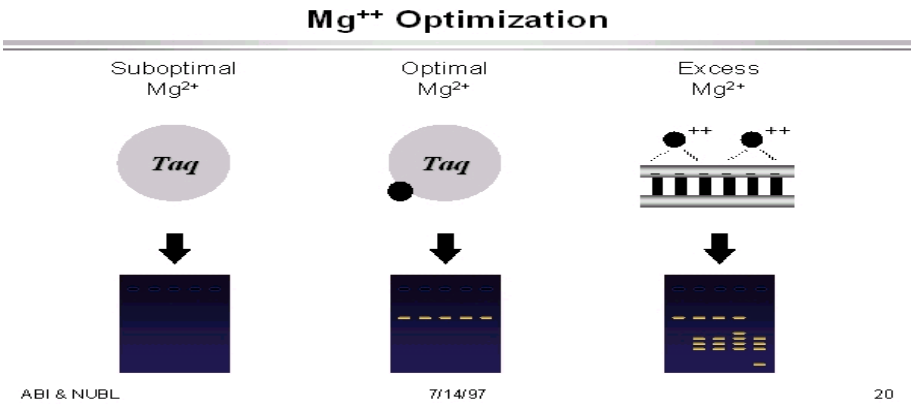
- Increase yield of the reaction (efficiency)
- Increase specificity (especially when high background exists)
- Improve reproducibility (i.e. well-to-well, run to run)

All these components must be optimised in order to get proper specificity and specificity of your PCR reaction.
Reaction Parameters That Affect PCR Efficiency:

1. Annealing temperature and time
2. Denaturation temperature and time
3. Enzyme selection and concentrations
4. PCR buffer
5. MgCl2 concentration
6. Primer design and concentration

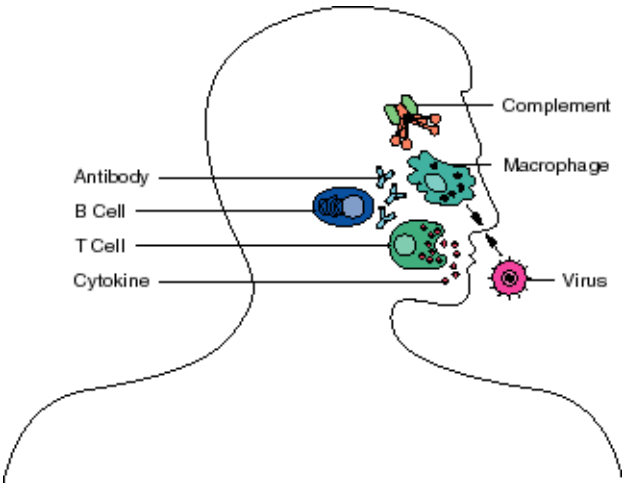
Biochemical Reminders !!!

More is NOT better!
Every reagent has an optimal concentration. Deviations above or below optima may cause problems or prevent reaction from working.



I know I promised that we would also cover the basic principles of the other technologies, but we will have to save that for the next column.

What are Cytokines?



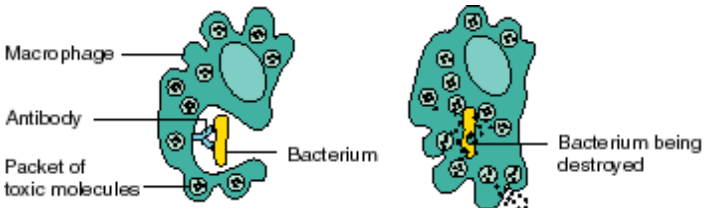
Cytokines are proteins secreted by the cells of innate and adaptive immunity that mediate many of the functions of these cells. They are produced in response to microbes and other antigens, which stimulate immune or inflammatory response. Innate immunity is the initial response to microbes that prevents infection and in many cases eliminates the microbes. Phagocytosis is an effector mechanism of innate immunity. Generally speaking cytokines are not stored but are synthesized as a result of cellular activation. They cause immune system molecules to become activated, grow or die. Cytokines serve to communicate information among inflammatory cells and between inflammatory cells and responsive tissue cells such as vascular endothelial cells. Adaptive or specific immunity is mediated by lymphocytes and is stimulated by exposure to infectious agents. Adaptive immunity is characterized by memory, which provides a more vigorous response to the same microbe.

Cytokines may be classified by their three main biological actions. As mediators and regulators of innate immunity they are produced mainly by macrophages as a response to the lipopolysaccharide of bacteria and viral RNA. In adaptive immunity the cytokines are produced mainly by T lymphocytes in response to specifically recognized foreign antigens. Some T cell cytokines regulate the growth and differentiation of lymphocyte populations playing an important role in activation of immune response. Others regulate effector cells like macrophages and neutrophils, which then eliminate antigens in the effector phase of adaptive immune response. Still other cytokines are produced in bone marrow to stimulate the growth and differentiation of immature leukocytes.

Cytokine receptors are divided into five families based on the structural homologies of the extracellular cytokine binding domains. All cytokine receptors consist of one or more transmembrane proteins whose extracellular portions are responsible for cytokine binding and whose cytoplasmic portions are responsible for initiating intracellular signaling pathways.

Tissue Necrosis Factor (TNF) is the principal mediator of the acute inflammatory response to gram-negative bacteria and other infectious microbes and is responsible for many of the systemic complications of severe infections. Lipopolysaccharide produced by gram- negative bacteria activates mononuclear phagocytes to secrete TNF. Mast cells, NK (natural killer cells) and antigen stimulated T-cells can also secrete this protein. The main function of TNF is to recruit neutrophils and monocytes to the infection site where they become activated and eradicate the bacteria. Monocytes recruited from the blood, are acted upon by signals from effector T-cells, which converts the monocyte to an activated macrophage capable of killing microbes. At low concentrations TNF acts on leukocytes and endothelium to induce acute inflammation. At moderate concentrations it mediates the systemic effects of inflammation such as fever, production of leukocytes and acute phase proteins. At high concentration the pathological effects of septic shock, vascular collapse, disseminated intravascular coagulation and metabolic disturbances, become evident. The concentration of TNF may in fact be predictive of the outcome of severe gram-negative infections.

Cytokines made by activated T-cells, macrophages, endothelial cells and bone marrow stromal cells act on bone marrow progenitors to increase production of inflammatory leukocytes. Granuloctye colony stimulating factor (G-CSF) is generated at infection site and acts as an endocrine hormone to move neutrophils from the bone marrow to replace those used up in the inflammatory process. GM-CSF promotes the differentiation of Langerhans cells of the epidermis into dendritic cells, which can then efficiently present antigens to T-cells. GM-CSF also activates macrophages. Recombinant GM-CSF and G-CSF are being used, with some success, after chemotherapy or bone marrow transplant to stimulate the bone marrow.



Cytokines serve many functions critical to defend against pathogens and provide links between innate and adaptive immunity. They regulate immune response by regulating the growth and maturation of lymphocytes. Cytokines enable lymphocytes to activate effector mechanisms, which will then eliminate the offending antigen. An excessive cytokine response can in fact be pathological, but proper administration of some cytokines may modify the biological response to immune and inflammatory response.

References:

Immunology, Sixth Edition
Ivan Roitt / Jonathan Brostoff / David Male
Harcourt Publishers Limited 2001

Cellular and Molecular Immunology Fourth Edition
Abul K Abbas / Andrew H. Lichtman / Jordan S. Pober
W.B. Saunders Company 2000

NBSMLT IMAGE GRANT

OBJECTIVE:

The NBSMLT Image Grant is presented to a current member to provide financial assistance to attend a National or International educational event in the capacity of a faculty or resource person.

SELECTION COMMITTEE:

The Board of Directors will review and determine whether the applicant meets the criteria and the amount of financial support to be provided.

PRESENTATION:

The grant will be presented or sent to the successful candidate

SELECTION CRITERIA:

Current registered member of the NBSMLT.

Needs financial assistance to attend a national or international educational event involving medical laboratory technology.

Participation in a national or international event as a member of the faculty or as a resource person.

Provides a report of the educational event and their involvement to the general membership of the NBSMLT at the appropriate time.

Acts as a public relations representative of the NBSMLT at the national or international event

Conducts oneself in a professional manner

PUBLICITY:

A resume and picture of the recipient and a report is sent to the Analyzer for publication.

New Brunswick Society of Medical Laboratory Technologists

Exceptional Professional Service Award

OBJECTIVE:

The Exceptional Professional Service Award is presented to a member who is leaving the profession of Medical Laboratory Technology. The award will only be given when a suitable recipient is nominated.

SELECTION COMMITTEE:

The Awards Committee shall select the recipient by reviewing the CV's of the nominees submitted on or before December 31st. The Awards committee will purchase the award.

PRESENTATION:

The recipient shall receive an expense paid trip to APSC where the President will present the award at the APSC banquet.

SELECTION CRITERIA:

Must be leaving (retiring or changing careers) the profession of Medical Laboratory Technology after at least 20 years as a member of NBSMLT.

Must have demonstrated professionalism, integrity and a commitment to high personal standards throughout his/her career.

Must have significantly contributed to the professional society at the Academy, Provincial, National or International level for at least 5 years.

Must be nominated by an active member of NBSMLT.

PUBLICITY:

A resume and picture of the recipient shall be made available for press releases and publication in the Analyzer.

A Bird's Eye View on Technology
MARITECH 2002

Delta Prince Edward Convention Centre
Charlottetown PEI November 21-22

See preliminary program MLT : Analyzer Volume 33 Issue 2

REGISTRATION	Full Conference November 21-22	November 21	November 22
CSMLS Member	$175.00	$100.00	$100.00
(after October 15th)	$200.00	$125.00	$125.00
Non Member	$250.00	$140.00	$140.00
(after October 15th)	$275.00	$180.00	$180.00
Student/Retiree	$25.00	$25.00	$25.00

ACCOMMODATIONS		Telephone	Cost per night
Delta Prince Edward Convention Center 18 Queen Street	Book Under	902-566-2222	$89.00 + tax Single / double
Inns on Great George Street 58 Great George Street	Maritech 2002	902-892-0606	$89.00 + tax
Rodd Charlottetown Hotel 72 Kent Street	by	902-894-7371	$79.00 + tax
Best Western Hotel 238 Grafton Street	October 20th	902-892-2461	$79.00 + tax Includes breakfast

SOCIAL EVENTS	Special Notes	Dates	Cost
Meet and Greet	Ticket Required	Wed. Nov. 20th 2030 –2230 h	$10.00
Exhibitors Reception	Ticket Required	Thurs. Nov 21st 1800-2000	N/C
Island Kitchen Party	Ticket Required	Thurs. Nov. 21st 2030-2300	$15.00

MARITECH 2002 Registration Form

Mail Registration & Cheque to: Maritech 2002 Registration Committee
c/o Queen Elizabeth Hospital
P.O. Box 6600
Charlottetown, PEI C1A 8T5

Fee Summary: Registration Fee $_____
Meet & Greet $_____
Island Kitchen Party $_____
Total $_____

Exhibitor's Reception Ticket Yes/No (please circle)

_____ _____
First name Last name Organization/Workplace

_____ _____
Name Tag Preference Phone

_____ _____
Mailing address Email

_____ _____
Town/City Province Postal Code CSMLS#