

# Cyto Paths

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Marluce Bibbo, M.D., Sc.D., F.I.A.C., Editor

## Tell Us About Your Lab

*Integrated Section for Technology in Cytopathology, Rio de Janeiro, Brazil*

**Lucilia Zardo, M.D., Medical Director**



**T**he National Cancer Institute (Instituto Nacional de Câncer [INCA]) is the agency within the Brazilian Ministry of Health that is responsible for developing and coordinating integrated action for the prevention and treatment of cancer in Brazil. One laboratory, the Inte-

Prevention of Cervical Cancer, Viva Mulher, provides nationwide coverage. Its main task is to develop measures for the prevention and early detection of cancer in women aged 25–59. Among the measures used are diagnosis by the Pap test and histopathologic examinations for



**Dr. Zardo, standing on the right side, with the members of the SITEC Team.**

### Highlights

- Dr. Lucilia Zardo
- 16th International Congress of Cytology
- Dr. Naum Shapiro

grated Section for Technology in Cytopathology (SITEC), handles cytopathologic and histopathologic tests from 21 municipalities in the State of Rio de Janeiro.

### *Viva Mulher Program*

The government-run Program for the

confirmation and diagnostic investigation. In 2004 about 8,400,000 cytopathologic tests were performed in Brazil. It is estimated that this year around 70,000 Brazilian women will develop malignant breast and cervical tumors, which constitute approximately 30% of cancer in Brazilian women.

#### IAC Websites

[www.cytology-iac.org](http://www.cytology-iac.org)  
[www.acta-cytol.com](http://www.acta-cytol.com)  
[www.aqch.com](http://www.aqch.com)  
[www.cytology-tutorial.org](http://www.cytology-tutorial.org)

### *SITEC*

Founded in 1985, SITEC currently operates under INCA's pathology division. The lab performs approximately 300,000 cytopathologic tests annually, and its largest client is the city of Rio de Janeiro, which accounts for about 70% of its workload.

SITEC has a staff of 74, including 6 cytopathologists, 30 cytotechnologists, 11 other health professionals, and 19 others. SITEC's computer system books patients into hospitals by automatically selecting cases with abnormal cytopathologic diagnoses. Patients identified as suspect or positive for neoplastic or preneoplastic lesions are sent to 1 of 6 hospitals, which conduct more complex procedures, such as histopathologic diagnosis and/or treatment of cervical lesions. Booking is done when the report is printed and takes into account the patient's residence and availability of appointments. SITEC functions as an integral part of the State of Rio de Janeiro's

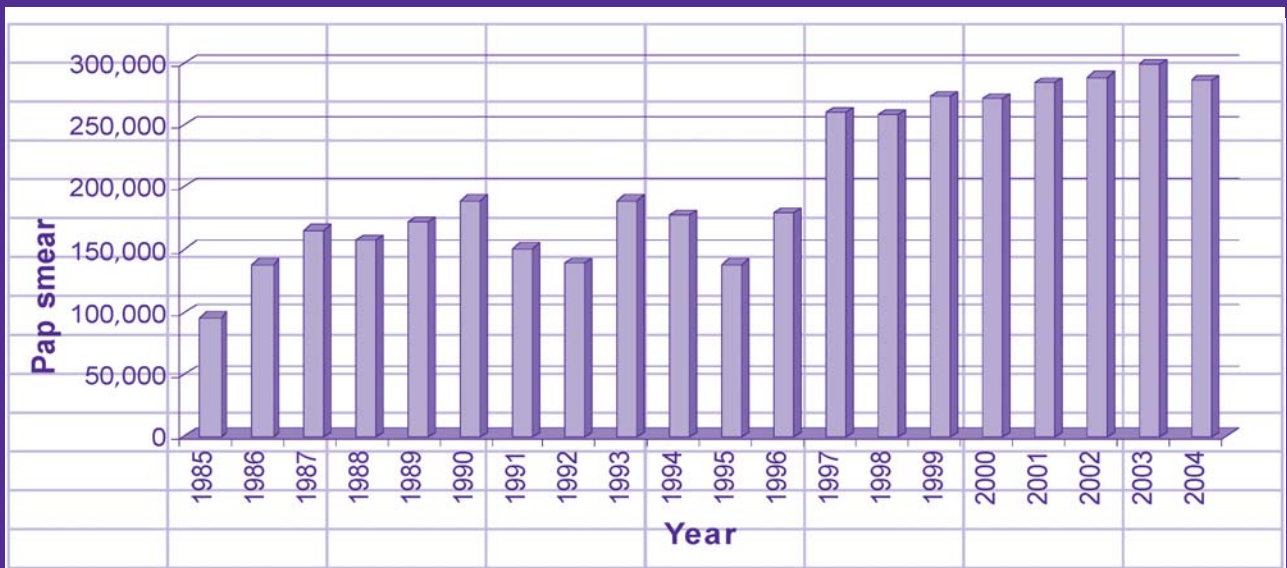
health care network, linking basic health care units to hospitals.

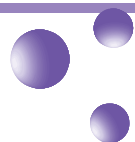
### *Cervical Cancer*

The majority of tests conducted by SITEC are based on material collected from the cervix and sent in by 435 basic health care units located in the 21 municipalities of the State of Rio de Janeiro. Daily, about 1,200 Pap screening tests for preneoplastic lesions are conducted. The team of 26 cytotechnologists performs an initial microscopic reading and formulates a cytologic impression, relating the morphologic findings to the patients' clinical history. Abnormal or doubtful tests are sent for reevaluation by cytopathologists, who reexamine the material and issue a final diagnosis.

### *Internal Quality Monitoring*

Rules governing the receipt of material are aimed at optimizing the flow of material through the laboratory process and





avoiding reworking, risks and losses. Upon receipt, the material is evaluated for compliance with the rules established in the basic health care units. Inadequate cases, detected when opening and identifying the material, are recorded so that appropriate corrective measures can be taken. Monitoring of alcohol is done at this phase to maintain the quality of fixation.

Each day, before staining begins, the staff corrects the staining and processes a small number of slides to check their quality. Cytopathologists and senior cytotechnologists assess the staining and make corrections. The staff records the results, including any changes made. This procedure avoids unpleasant surprises and unnecessary costs.

A computer program assigns daily tasks based on the estimated number of examinations the physicians and cytotechnologists can perform in the time available.

About 8% of the tests considered negative are reviewed by the 2 senior cytotechnologists before the results are recorded. False negative cases, after returning to the cytotechnologist for review, are used for educational purposes.

Tests are sorted daily according to the level of agreement or disagreement between the cytotechnologist and cytopathologist. When there is a diagnostic discrepancy that could change therapy, the slide goes to medical quality control and undergoes a second evaluation. When there is a difference between the 2 diagnoses, the case is reviewed by the staff cytopathologists until a consensus is reached on the diagnosis. This way the lab can identify and correct errors before the report is written and distributed. Cases with difficult diagnoses are recorded for later histopathologic corre-

lation and are used for educational purposes.

### *Breast Cancer*

SITEC also receives fine needle aspirates and biopsies for breast cancer. Only recently has this type of examination gained a place in Brazil's health care system.

### *Assistance with the Viva Mulher Program*

Another of SITEC's roles is providing assistance to the Viva Mulher program since the lab is an agency of the Ministry of Health. SITEC, with its vast database and experience, frequently supports the national administration of the program with laboratory-related matters.

### *Training Cytotechnologists*

Besides its activities as a large laboratory, SITEC is a training center for cytotechnologists. The main objective is to train professionals to work within a program for the early detection of cervical cancer in their state of origin. The course, which started in 1988, graduates 2 groups per year, usually with 15 students in each. Over the last 5 years, 17 students have been selected from different Brazilian states. The service contributes to the resources of state coordinating units by training workers to help with the organization and implementation of regional networks throughout the country. Since the course started, 287 cytotechnologists have graduated.

### *A Benchmark*

Through its various activities, SITEC has become the benchmark for laboratory quality all over Brazil and the largest laboratory to provide cytopathology services in the country's health care system.

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## Book Review

**George Nicholas Papanicolaou: In forma di autobiografia**  
*By Rocco Broso. Rome, CIC Edizioni Internazionali, 2005, 135 pp.*

*Reviewed by Volker Schneider, M.D., F.I.A.C.*

**R**occo Broso, a gynecologist in Turin, has written a most interesting and entertaining book on the life of Dr. Papanicolaou, written in the form of an autobiography. Using this approach, Dr. Broso puts himself in the shoes of Dr. Pap and is able to create a vivid account of Dr. Pap's life with all its challenges, tribulations, disappointments and triumphs. Most probably, not all of it is factual, yet this approach allows the author to go beyond the usual accumulation of facts and figures and add the most human part, the world of emotions.

Dr. Broso carefully searched the literature. There are 136 references and a wealth of illustrations that the author was able to obtain mainly from Drs. Korprowska and Carmichael and from a distant niece, Maria Papanicolaou Kokoris.

The book is written in Italian and may therefore be impossible for the non-Italian reader to comprehend, yet not fluent in Italian myself, I was able to follow the story quite easily. For the reader interested in the history of cytology and particularly in the life of Dr. Pap, this is a worthwhile addition to the literature on the topic.

## Joint National Portuguese and Spanish Congress of Cytology

*Évora, Portugal, June 1–3, 2006*

**T**he Joint National Portuguese and Spanish Congress of Cytology will be held on June 1-3, 2006, at Colégio do Espírito Santo, Évora University, Évora, Portugal (<http://www.spicitologia.org>).

The meeting, organized by the Portuguese and Spanish Societies of Cytology, occurs every 3 years and attracts many cytopathologists, pathologists and cytotechnologists from all over the Iberian Peninsula. The main scientific themes of the meeting will be new technologies in cytology, telecytology, diagnostic cytology, quality control and population screening.

On June 9, 2006, for the first time in Portugal, the Comprehensive Cytotechnology Examination will be given by the

International Academy of Cytology.

Évora is a great cultural and artistic center. It was founded in 59 AD by the Roman emperor César Augusto and given the name Liberalitas Julia. The city is midway between Olisipo (Lisbon) and Emérita (Mérida). After Roman colonization, it was occupied by the Christian warrior Giraldo Sem Pavor, in 1165, and became part of the Portuguese kingdom. In 1986 UNESCO deemed it a world heritage.

The Portuguese Society of Cytology (Fernando Schmitt, president) and Spanish Society of Cytology (Cesar Lacruz, president) welcome cytology professionals to the congress.

**16TH INTERNATIONAL CONGRESS OF CYTOLOGY**  
**MAY 31–17, 2007**  
**VANCOUVER, BRITISH COLUMBIA, CANADA**

The congress theme is “Cytology in the Global Village.” The conference program will feature symposia, award lectures, satellite meetings, concurrent sessions, poster presentations and state-of-the-art workshops. Program highlights will include:

- HPV testing in screening programs
- HPV vaccines
- Cervical cancer management in developing countries
- In vivo imaging and cytology
- Impact of genomics and proteomics on diagnostic cytology and screening programs
- Automation in cytology—current status
- Molecular profiles of precancer and early cancer
- Hot topics in diagnostic cytology
- Predictive oncology and personalized, targeted therapies— is cytology combined with genomics an enabling platform?

Please join us to explore recent advances in cytology as well as to discover or reacquaint yourself with beautiful Vancouver and British Columbia.



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**ANNOUNCEMENTS**

31st European Congress of Cytology  
October 2–5, 2005, Paris, France  
For further information, contact  
MCI France  
11 Rue de Soférino  
75007 Paris, France  
Phone: 011 33 (0) 1 53 85 82 52  
Fax: 011 33 (0) 1 53 85 82 83  
E-mail: [cytology2005@mci-group.com](mailto:cytology2005@mci-group.com)  
Web site: [www.cytologyparis2005.com](http://www.cytologyparis2005.com)

For an examination schedule for cytopathologists and cytotechnologists, please visit the International Academy of Cytology Web site, [www.cytology-iac.org](http://www.cytology-iac.org).

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## Light Source

**N**aum A. Shapiro, M.D., Sc.D., was born in Minsk, Belarus Republic, to a family of physicians. He belongs to the generation that lived through the ordeals of World War 2. His father, a military surgeon, was engaged in military service from the beginning of the war. As a 6-year-old, Naum, along with his mother and younger brother, escaped to Siberia to avoid the Nazis.

On finishing secondary school, Naum Shapiro had no doubt about his professional choice. His entire life has been devoted to medicine, in particular morphology, moving from anatomy through pathology to cytopathology.

Dr. Shapiro graduated from the State Medical Institute, Minsk, obtaining his medical degree in 1959. As a student, Shapiro spent his days on scrupulous preparation of nerve branches, studying cross-innervation of the lumbar truncus sympathicus in cats.

As a student, Shapiro began to study pathology. First he took a special course at the Chair of Pathology in Minsk and continued training in St. Petersburg at the Chair of Pathology, Institute of

Advanced Medical Studies. He then returned to Belarus and for 3 years performed obligatory social service as a pathologist in a regional hospital.

In 1962 Dr. Shapiro began to study cytopathology. He underwent special



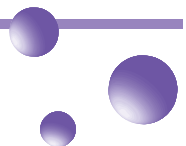
**Naum A. Shapiro, M.D., Sc.D.**

training in cytology and intensive cytopathologic practice at the Institute of Oncology and Medical Radiology, Minsk. Then he became a scientific assistant in the Department of Pathology, Institute of Medical Radiology, Obninsk. During this period Dr. Shapiro became interested in autolysis and defended his thesis, "Activity of Some Oxidizing-Restoration Enzymes in Autoly-

sis," at the Morphologic Academy Council, Academy of Medical Sciences of the USSR, in 1970.

In 1971 Dr. Shapiro became a cytopathologist at the Department of Pathology and Cytopathology, Central Clinical Hospital of the Russian Railroad Ministry (RRM), Moscow. He examined as many as 15,000 nongynecologic cases a year, with special attention to cytologic diagnosis of lung tumors. In 1980 Dr. Shapiro received a doctor

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of science degree from the Academy Council of Cancer Research Center of the Academy of Medical Sciences of the USSR.

Later Dr. Shapiro organized and headed the Central Cytologic Laboratory of the RRM Central Clinical Hospital. After becoming cytopathologist-in-chief of RRM, Dr. Shapiro established more than 30 new cytologic laboratories in RRM hospitals. At the same time he opened a cytologic training center at the Central Cytologic Laboratory. Since its founding, over 250 cytopathologists and 120 cytotechnologists trained in compliance with international standards of cytologic training. Since 1984 at the Central Cytologic Laboratory, Dr. Shapiro has organized 25 annual tutorials for RRM cytologists on problems in cytopathology and also 5 international tutorials.

Dr. Shapiro has held numerous positions on medical journals and has been active in numerous medical societies. He is one of the founders and a permanent member of the editorial board of *News of Russian Clinical Cytology*, founded in 1965. For 10 years Dr. Shapiro was the scientific editor of the tumor morphology section of *Clinical Oncology*. In 1993 he became Russian national editor of *Acta Cytologica*.

In 1993 Dr. Shapiro took the initiative to found the Russian Association of Clinical Cytology (RACC). Dr. Shapiro served as president (1999–2003) and vice-president (1995–1999) of RACC. Currently he is vice-president of RACC again. Dr. Shapiro was president, general secretary or codirector of the five RACC meetings held to date. In 1993 RACC joined the International Academy of Cytology. Dr. Shapiro was a member of

the IAC General Policy and Long Range Planning Committee (1995–2001), of the Archival Committee (1998–2001) and of the Subcommittee on Educational Exchange of the Committee on Continuing Education and Quality Assurance (2002–2004). In 1994–1995 Dr. Shapiro translated into Russian the Tutorial of Cytology's multivolume *Cytology Training Slide Sets*.

Dr. Shapiro's scientific research has covered various aspects of cytologic diagnosis of lung, thyroid, adrenal and breast tumors; utilization of morphometric methods in diagnosis; and organizational problems in cytology laboratories. He has published 5 books and over 200 papers in academic, professional and scientific journals and 2 atlases on cytologic diagnosis of thyroid and lung lesions for *Color Atlases on Cytologic Diagnosis*.

Since 1998, when Dr. Shapiro became a full professor, he has directed a course on cytopathology at the Chair of Pathology, Voronezh State Medical Academy. Recently Dr. Shapiro has spent much time on electronic technologies in clinical cytology (telecytology). In 1999 he computerized his laboratory, which now offers telemedical consultations, teleconferences and online teleconsultations for the 17 cytology laboratories in RRM regional hospitals.

In his youth Dr. Shapiro devoted much time to gymnastics and mountaineering and today participates daily in increasingly "heroic" physical exercises. At leisure Dr. Shapiro takes great interest in theatergoing and poetry and writes verses himself. His philosophy of life is optimism: everything passes, including the bad.

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