



ALAGO NEWSLETTER

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Latin American Association of Organic Geochemistry - ALAGO

EDITORIAL

In the last issue of the **ALAGO NEWSLETTER**, the present Board of the **ALAGO** bid farewell, since, in accordance with the Statutes, a new Board was to be elected for 1996 to 2000 at the General Meeting at the Vth. ALAGO Congress in Cancún, Mexico. However, the only candidacy put forward did not meet the approval of the majority of the integrants of the Meeting. Therefore, new elections were called for in April, 1997, which gave ample time not only for the enrollment of candidates but also for information to members and the return of ballots.

The ALAGO Electoral Committee received two proposals (denominated A and B, for the chronological order of application) which were duly despatched to all members in time for consideration and voting. Proposal A came out the winner with 52 votes, while Proposal B was given 23 votes.

Therefore, we are pleased to announce to the ALAGO international community that, for the period leading up to the ALAGO Congress of the Year 2000, this Association will be led by the Advisory Director whose composition appears on page 2.

We take this opportunity to send our congratulations to ALAGO's President, our colleague and friend, Luiz Antonio Trindade, assured that, under his leadership, our Association cannot but prosper, quite apart from his immense personal and professional achievements. We welcome and congratulate the first-time Directors; those that remain in power will now be able to contribute with the experience that they have acquired toward a common effort to achieve our goals that we, assuredly, will attain in the not-too-distant future.

This Editorial also offers us the opportunity to extol the scientific achievements at the Vth. ALAGO Congress and the extraordinarily warm reception given by the Mexican people in Cancún. We would also like to extend our congratulations and thanks to the Organizing Committee, through its Chairman and Vice-Chairman, Noel Holguin, of PEMEX, and Cristóbal León García, of IMP, respectively. The ALAGO was considerably gratified by the attention given by the international community to feel that its attempts to divulge and integrate Organic Geochemistry in Latin-America was showing signs of consolidation. It is for this reason that this issue will be entirely devoted to this Event so as to convey an idea of the outstanding level of the papers that were delivered through the resúmenes of the thematic sessions through the eyes of their Chairmen-Coordinators.

We are delighted to announce that the host of the VIth. ALAGO Congress in 1998 will be Venezuela, to take place, probably, on the Island of Margarita. PDVSA and INTEVEP will officially back the Congress, thus, for the second time, revealing their great perception, knowledge and insight, not to mention their confidence in the results already attained through the many and diverse applications of Organic Geochemistry. Full details of this Event will be found in the First Circular.

The Organizing Committee will be supervised by Angel Callejón (from CORPOVEN) and the Scientific Committee by Júlio Pérez-Infante (from INTEVEP). If the outstanding work achieved at the IIInd. ALAGO Meeting in Caracas in 1990 by Venezuelan companies and universities is anything to go by, there can be little doubt that this meeting of ALAGO associates will prove to be a mine of information and opportunities.

Once again, we bid you all farewell and send our best, and very warmest, regards.

Jorge Alberto Trigüis
President of ALAGO (1992 - 1996).

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Vth Latin American Congress on Organic Geochemistry (Cancún, Mexico, Oct. 1996).

A REWARDING BALANCE

Petroleum Geochemistry in Exploration

Marcio R.Mello (chairman)

Mike Moldowan (co-chairman)

The Petroleum Geochemistry in Exploration session of the ALAGO Congress of Cancun, Mexico, November, 1996, was a huge success. Representing research and application in geochemistry from 17 countries, a total of 47 papers including oral and poster contributions were presented. The Congress was marked by an improvement in number and quality of the papers over previous years of application of classical geochemistry to addressing regional exploration problems. The symposium was highlighted by the keynote address of Marcio Mello and Michael Moldowan in which it was demonstrated how an integration of geochemical methods can produce the best working petroleum system model, by showing important differences in source rock facies operating in various areas of a basin. In some areas this may indicate multiple source rocks of different ages, which changes the whole economics and prospectivity of an area. It was also shown how new analytical methods (such as gas chromatography-mass spectrometry-mass spectro-

metry, gas chromatography-isotope ratio monitoring-mass spectrometry) can contribute important new information by determining the age of an oil source rock or its quality from analysis of the oil. Several papers showed high quality integrations of geochemical applications to various regions of Latin America and the world including Colombia, Venezuela, Mexico, Brazil, Cuba and Peru. The quality of many of these works has reached the point that the results can really be incorporated into exploration programs to make strategy decisions. As exploration focus goes to deeper prospects and areas with lower quality source rocks, the relationship of gas versus liquids charging becomes an issue. Several papers dealt with these issues including the ability to predict and measure the thermal dependency of gas formation from liquid hydrocarbons or kerogen by cracking. Another highlight of the symposium was the contributions dealing with 2D basin modelling in which fluid flow simulations were incorporated allowing to view the processes of generation and migration in a more dynamic way.

Recent Developments in Techniques and Equipment

Carlos Bertrand Camargo (chairman)

Maria Regina Loureiro (co-chairman)

Recent developments in techniques and equipment session of the fifth ALAGO Congress in Cancún was successfully supported by interesting works showed in oral and poster presentations. We all were expectant about the latest technical advances not only applied on oil exploration and oil reservoir geochemistry but on young and challenging fields such as environmental and forensic geochemistry.

The main topics covered were: the optimization and exploitation of new potentialities of traditional analytical techniques such as pyrolysis, gas chromatography, mass spectrometry and optical methods; the development of computer softwares to make geochemical data handling easier; the use of modern analytical methods such as plasma emission spectroscopy, etc., all of them contributing to a better understanding and evaluation to solve the problems related to petroleum systems and adjacent fields as environmental geochemistry that has received a strong impulse by scientific community worldwide.

Works presented during poster session were highly concurred and also stands where it was possible to get exhaustive information about the improved techniques and equipments and their applications.

Linking Environmental And Petroleum Organic Geochemistry

Daniel Ariztegui (chairman)
Rudolf Jaffé (co-chairman)

The success of the environmental organic geochemistry session of the 5th ALAGO congress in Cancun has reflected the growing interest that exists within the scientific community towards present and past environmental problems. This attention has been clearly shown by both the large number of participants in the one-day course previous to the congress, as well as the increasing number of presentations in the environmental session in comparison to previous ALAGO congress.

The program of the environmental session included a wide range of topics, such as organic geochemical indicators of pollution in the atmosphere, marine and fresh water reservoirs, soils and sediments, to more general aspects, such as the use of biomarkers tracking both recent climatic changes as well as the early Earth life. An active and dynamic group of scientists coming from different corners of the American continent and Europe shared in the superb scenario of Cancun, an interesting and stimulating session. Both oral and poster presentations were well received, showing a continuous and increasing interest on this young field of the organic geochemistry in a milieu that has been traditionally dominated by an oil-oriented audience.

Although some involvement in the environmental geochemistry section by oil companies and traditionally petroleum-oriented research laboratories was well received at the Cancun meeting, there is still a lot to do to improve the exchange between these two research communities. While most environmental and paleoenvironmental geochemists are aware of the enrichment that can be obtained from the different techniques and approaches originated in the oil industry, it would seem that this attitude is not reciprocal. This is a quite unfortunate, because modern environments, for example, can provide an ideal media to test and refine models and tools that are presently applied in the oil industry. In addition to this, a clear trend towards environmental topics has been observed during the last ten years in most oil companies management policies. Thus, a closer involvement of the so-called traditional oil geochemists in environmental topics can be envisaged. We hope that future sessions on environmental organic geochemistry as that of Cancun'96, including a vast range of high quality presentations and subjects, will encourage our oil specialist colleagues to become closer to the researchers of the environment and share with them the profit of mutual research.

Geochemistry of Source Rocks and Coals

Rolando di Primio (chairman)
Rick Requejo (co-chairman)

The session entitled "Geochemistry of Source Rocks and Coals" at the 5th Alago Congress was held on Tuesday afternoon and Wednesday morning, October 8 and 9. The session consisted of eight oral and twenty-eight poster presentations. Research topics presented in the oral session included unusual molecular fossils in lacustrine oil shales (Araujo et al.), isotopic distributions of individual biomarkers in lacustrine source rocks from Brazil (da Frota and Guthrie), oil generation kinetics of source rocks in the Upper Magdalena Basin, Colombia (Rangel et al.), prediction of source kerogen kinetics from molecular parameters (Hughes) and new maturity parameters based on alkylbenzothiophenes (Santamaria-Orozco et al.).

Poster sessions featured research results from Latin American investigators in Brazil, Mexico, Colombia and Venezuela, as well as from Europe and the United States.

**Reservoir and Production Geochemistry:
Enhancing Geochemical Applications**

Luiz Antonio F. Trindade (chairman)

Eric Lafargue (co-chairman)

The key role played by organic geochemistry in petroleum exploration in a basinwide scale is widely recognized. In the last few years, however, petroleum geochemists have focused the zoom on reservoirs, helping to improve development and production strategies of oil and gas fields.

Although just a few groups in Latin America are applying reservoir geochemistry methods and concepts, the interest on the subject is growing fast. We consider Cancún'96 as a landmark on the development of reservoir geochemistry in ALAGO. For the first time a pre-congress short-course on Reservoir and Production Geochemistry was offered in an ALAGO Meeting. The course was fully booked: 23 professionals representing various oil companies and universities from Latin America and abroad attended it and an environment of lively discussion was promoted by those of us who were there.

Oral and poster sessions included an interesting combination of high level papers describing new techniques and case histories. The majority of the papers described applications of organic geochemistry to reservoir characterization and oil field development, providing a powerful method to assess reservoir compartmentalization, direction of reservoir filling and the amount of oil mixing. Also, very nice examples of production monitoring, leading to increasing production rates were discussed. Migration parameters based on heteroatomic compounds and innovative methods to study oil-shows along the migration pathway were exciting developments presented at the meeting. Pyrolysis of asphaltenes also proved to be a helpful technique to evaluate reservoir hydrocarbons.

We believe that the Reservoir and Production Geochemistry Session was highly motivating. We are sure that a larger number of Latin American geochemists will apply it to understand reservoir characteristics as well as to increase petroleum production in the next future and will share their experiences with us in 1998.

† **Cristobal León García**

It is with great regret that we announce that last May, our colleague Cristobal León García passed away unexpectedly. He was head of the Geochemistry Group at the Instituto Mexicano del Petróleo for several years and only a few months ago, played a leading role in the organization of the last ALAGO Congress in Cancún. Thanks to his professional dedication and personal vigor, Organic Geochemistry is now an intrinsic part of petroleum exploration in Mexico.



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