1. Name of Affiliated Organization
IMGA – International Medical Geology Association
Geoscience Department, University of Aveiro
3810-193 Aveiro, Portugal

2. Overall objectives
The overall objective of IMGA is to facilitate interactions between geoscientists and biomedical/public health researchers in addressing human and animal health problems caused by geologic materials or geologic processes. The Association is a “policy neutral” organization. The specific objectives of the organization include:

1. To stimulate interest and promote research in medical geology.
2. To provide a forum for discussion, to disseminate information, and to provide educational opportunities in medical geology.
3. To promote state-of-the-art technologies in medical geology.
4. To inspire the highest standard of professional ethics of its members.

3. Relate goals to overall IUGS scientific objectives
One of the major IMGA goals is to provide service to students interested in medical Geology: list of opportunities on scholarships, courses, projects, collaborations, etc. A list has recently been compiled including opportunities with 40 researchers from 14 countries. This list is posted on the websites of IMGA, IUGS, and other sites.

A second major task is to provide a list of universities that offer undergraduate courses in Medical Geology that can be consulted on website of IMGA. An increasing number of students are asking about opportunities to continue their education in Medical Geology. They are seeking courses, degree programs, mentors, advisors, scholarships, internships, volunteer opportunities, etc., as well as job opportunities.

One very important service that we can provide is to develop and maintain a list of professors and organizations seeking students for medical geology programs, to work on medical geology research projects, and as candidates for job opportunities. This information will be compiled into a master database.
4. Structure and organization

Executive Committee:

- **Chair: Nelly Mañay**
  Director, Specialised Centre for Chemical Toxicology
  Faculty of Chemistry - University of the Republic
  Montevideo, Uruguay
  Email: nellymanay@gmail.com

- **Co-Chair for Geological Sciences: Maria Aurora Armienta**
  Geophysics Institute
  Universidad Nacional Autónoma de México
  Mexico City, Mexico
  Email: victoria@geofisica.unam.mx

- **Co-Chair for Medical Sciences: Diego Fridman**
  Director, Clinical Research Department
  Fundación Centro de Estudios Infectológicos
  Buenos Aires, Argentina
  Email: dfridman@stamboulian.com.ar

- **Secretary: Carla Patinha**
  Environmental Geochemistry and Medical Geology
  University of Aveiro
  Aveiro, Portugal
  Email: cpatinha@ua.pt

- **Treasurer: Scott Cherba**
  Geologist
  Arizona, USA
  Email: imga@cherba.com

- **Councillors:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iossif Volfson</td>
<td>Medical Geology Division RosGeo</td>
</tr>
<tr>
<td></td>
<td>Moscow, Russia</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:mgeolog1955@mail.ru">mgeolog1955@mail.ru</a></td>
</tr>
<tr>
<td>Ester Sztein</td>
<td>U.S. National Committees for the geosciences</td>
</tr>
<tr>
<td></td>
<td>Board on International Scientific Organizations of the U.S.</td>
</tr>
<tr>
<td>Héctor Rubio</td>
<td>College of Animal Production and Ecology</td>
</tr>
<tr>
<td></td>
<td>Autonomous University of Chihuahua</td>
</tr>
</tbody>
</table>
Darren Beriro
Environmental Geochemist
British Geological Survey
Nottingham, UK
Email: darrenb@bgs.ac.uk

Laura Börge
Toxicology and Risk Assessment
Universidad de Chile
Santiago de Chile, Chile
Email: dra.borgel@toxicologia.org

Cassio Roberto da Silva
Medical Geology and Environment Geochemistry
Geological Survey of Brazil
Rio de Janeiro, Brazil
Email: cassio.silva@cprm.gov.br

General Assembly Board:
- **Chair**: Jose Centeno (US Food and Drug Administration, United States of America)
- **Co-Chair**: Bob Finkelman (University of Dallas, United States of America)
- **Secretary**: Olle Selinus (Linneus University Kalmar, Sweden)

Supervisor Board:
- **Chair**: Eduardo Ferreira da Silva
  Medical Geology and Environmental Geochemistry
  University of Aveiro
  Aveiro, Portugal
  eafsilva@ua.pt

- **Other members**:
  - **Nuno Durães**
    Geologist and Environmental Geochemistry
    University of Aveiro
    Aveiro, Portugal
    nunoduraes@ua.pt

  - **Elena Gimenez-Forcada**
    Hidrogeochemistry and water pollution
    Geological Survey of Spain-Instituto Geológico de España (IGME), Salamanca Unit,
    Salamanca, Spain
    Email: e.gimenez@igme.es

Webmaster: R. Scott Cherba
Geologist
Arizona, USA
Email: imga@cherba.com
Established Chapters

Argentina
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Certificate Presented 2010

Australia
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Certificate Presented 2013

Bolivia
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Certificate Presented 2009

Brazil
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E-mail: berna@ige.unicamp.br
Joint Leader: Dr Cassio Silva, Territorial Management Department, Geological Survey of Brazil, Rua da passagem, 07 apto. 1002 - Botafogo, Rio de Janeiro, 22290030, Brazil.
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Bulgaria
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tel. +359 899 000676
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Canada
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Colombia
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E-mail: amrojasb17@gmail.com.
Vice-Chair: Sandra Carolina Londono
E-mail slondon1@asu.edu

Denmark
Leader: Dr Peter W.U. Appel, Geological Survey of Denmark and Greenland (GEUS), Copenhagen, Denmark
E-mail: pa@geus.dk
Secretary: Birgitte Guldberg Hansen, GEUS.
E-mail: bgh@geus.dk
Certificate presented 2012

Ghana
Leader: Dr Emmanuel Arhin, Department of Earth and Environmental Sciences, Faculty of Applied Sciences, University for Development Studies, Navrongo Campus, P.O. Box 24, Navrongo, UER, Ghana
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Chapter Secretary: Mr. Emmanuel O. Oyelude, Department of Applied Chemistry and Biochemistry, Faculty of Applied Sciences, University for Development Studies, Navrongo Campus, P.O. Box 24, Navrongo, UER, Ghana
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Haiti
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E-mail: dr.simonyanick2007@yahoo.fr
Treasurer: Tony Jean-Pierre Cajouste
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Certificate presented 2013

Iran
Leader: Parisa Piroozfar, Medical Geology International Research Centre, Geological Survey of Iran, Tehran, Iran
E-mail: parisapiroozfar@gmail.com

Italy (Chapter currently under reorganisation)
Leader: Prof Saverio Fiore, Institute of Methodologies for Environmental Analysis- CNR, 85050 Tito Scalo (PZ), Italy
Adjunct Professor of Mineralogy, University of Basilicata
E-mail: saverio.fiore@cnr.it
Certificate Presented 2010

Japan
Leader: Prof Hisashi Nirei, The Geo-pollution Control Agency
International Union of Geological Science (IUGS) Geoscience for Environmental Management (GEM) Japan Branch, 1277-1 Kamayauchi, Motoyahagi, Katori City, Chiba Prefecture 287-0025, Japan
E-mail: nireihisashi@msn.com
Secretary: Kunio Furuno,
E-mail: kuniofurunojp@gmail.com
Certificate Presented 2010

Mexico
Leader: Prof. Hector Rubio Arias, University of Chihuahua, Chihuahua, Mexico
E-mail: rubioa1105@hotmail.com
IMGA Vice-chair: Maria Armienta, Geophysics Institute, Universidad Nacional Autónoma de México Mexico City, Mexico
E-mail: victoria@geofisica.unam.mx
Certificate Presented 2012

NIS
Leader: Dr Iosif Wolfsen. Chair of Medical Geology Division, Russian Geological Society, st. 2-d Roshchenskaya, h.10, off. 211, Moscow, Russia, 115191
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Certificate presented 2012

Pakistan
Leader: Mumtaz Hussain, Engineer, Environmental Consultant and Editor "The Environ Monitor". W-715, Defence Housing Authority, Lahore, 54792 Pakistan
E-mail: theenvironmonitor@gmail.com
Deputy Leader: Qamar Dar, AJ&K University, Muzaffarabad, Pakistan
E-mail: darqamar80@yahoo.com Certificate Presented 2013

Portugal
Leader: Dr Eduardo Ferreira da Silva, Geosciences Department, University of Aveiro, Aveiro, Portugal
E-mail: eafsilva@ua.pt
Certificate Presented 2010

South Africa
Leader: Prof Hassina Mouri, Dept of Geology, University of Johannesburg, Auckland Park Campus, Johannesburg, South Africa
E-mail: hassina.mouri2014@gmail.com
Tel: +27-11-559-4706
Secretary: Refilwe Shelembe
E-mail: rshelembe@geoscience.org.za
Certificate presented 2012

Sweden
Leader: Prof Robert Walinder, Dept of Occupational and Environmental Medicine, Uppsala University Hospital, 751 85, Uppsala, Sweden
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Certificate Presented 2011

Taiwan
President: Professor Chien-Yen Chen, Department of Earth and Environmental Sciences, National Chung Cheng University, 168, University Rd., Min-Hsiung Township, Chia-Yi, Taiwan, 62102
E-mail: chienyen.chen@gmail.com
Secretary-General: Professor Ying-Jan Wang, Toxicologist, Department of Environmental Medicine, National Cheng Kung University, Tainan City 70101, Taiwan
E-mail: yjwang@mail.ncku.edu.tw.
Certificate Presented 2010

**Uruguay**

Leader: Prof Nelly Manay, Dept of Toxicology and Environmental Hygiene, University of the Republic (Facultad de Química- Gral.), Flores 2124 Montevideo CP 11800, Uruguay

E-mail: nmanay@fq.edu.uy and nellymanay@gmail.com

Certificate Presented 2010

**USA**

Chairperson: Dr Laura Ruhl, 309 Fribourgh Hall, 2801 S. University Ave.
University of Arkansas at Little Rock, Little Rock, AR 72204. USA.

E-mail: Isruhl@ualr.edu

Treasurer/Secretary: Alex Eisen-Cuadra

Certificate Presented 2012

**UK**

Contact: Dr Darren Beriro, British Geological Survey, Keyworth, Nottingham, UK

E-mail: darrenb@bgs.ac.uk

Certificate Presented 2015

**Spain**

Contact: Dr Elena Gimenez Forcada, Instituto Geológico y Minero de España, IGME. Azafranal 48, 37001 Salamanca, Spain.

E-mail: e.gimenez@igme.es

Certificate Presented 2015

**Nigeria**

Contact: Dr Femi Akinade Shadrach Olatunji, Dept of Geology, University of Ibadan, Nigeria

E-mail: akinadeshadrach@yahoo.com; as.olatunji@ui.edu.ng

Certificate Presented 2015

**Honorary Chapters**

**Geology and Health Division, Geological Society of America**

Leader: Dr Saugata Datta, Chair, Geology & Health Division, Geological Society of America

E-mail: sdatta@k-state.edu

Certificate Presented 2011

**China-Ireland Concord**

Chair Ireland: Dr Chaosheng Zhang, Dept of Geography, National University of Ireland, University Road, Galway, Ireland

E-mail: Chaosheng.Zhang@nuigalway.ie

Chairs China: Prof. Xinbin Feng and Prof. Tangfu Xiao, Institute Of Geochemistry, Chinese Academy of
5. Interaction with other International organizations and projects

Selected organizations:

- Society for Environmental Geochemistry and Health, SEGH (with an official representative of IMGA)
- IUGS International Union of Geological Sciences
- International Society of Medical Geography
- International Association of Geochemistry and Cosmochemistry, Working Group on Geochemistry and Disease
- American Registry of Pathology
- Geomedical Committee of the Norwegian Academy of Science and letters
- Geology and Health Division of the Geological Society of America
- Russian Geological Society

The establishment of new relationships with other scientific association is a key point in the IMGA and in the Medical Geology topic divulgation.

6. Chief products

NA

7. Chief accomplishments 2016 and plans for 2017

Chief accomplishments 2016

During 2016, many activities have been carried out. Medical geology has been included in curriculum at universities, has received several prestigious awards and has been highlighted all over the world. Courses have been held. Presentations have been held at meetings and conferences dedicated to public health, geosciences and medical sciences.

2016 IMGA Accomplishments

- EC meetings are planned on a 3-month frequency by Skype, saving an important amount of money to IMGA annually. Minutes of each meeting are available on IMGA member website IMGA;
- An extraordinary meeting of IMGA was held on 17th August, during the ISEH 2016, ISEG 2016 & Geoinformatics 2016 Conference, where an updated and recent performance report of IMGA was presented to the attending members;
- IMGA webinar was held on September 27 with the Conference: “Determination of trace elements and their concentrations in clay balls: problem of geophagia in Ghana”, by Dr. Emmanuel Arhim;
On September 19, 2016 the first International Symposium on Medical Geology in Spain was held in Salamanca (Spain), organized by the Local IMGA Chapter of Spain;

The process of moving IMGA headquarters and Bank account from Sweden to Portugal was finished;

The revision and approval of the IMGA statutes were finished and the document was published on the webpage;

A revision of the Bylaws;

The chapters and membership information have been updated and main aspects of the Chapters reports were considered by the board.

Two newsletters were published in June 2016 and December 2016, and two e-news were published, one on February 2016 and the other on October 2016. The editor of the newsletter is Mark Cave (United Kingdom) and the editor of e-news is Aurora Armienta (Mexico);

In April 2006, was proposed a project to CYTED RED entitle “Geologia Medical en Iberoamerica”. The main objective was the creation of network in order to strengthen a new area of knowledge that seeks to relate environmental and health problems in Ibero-American regions and also to encourage and/or improve the implementation of Medical Geology in Latin America.

**Plans for 2017**

As main technical and scientific activities for 2017 are highlight the following:

- Lectures and short courses on the Medical Geology topic in different countries
- Webinars
- Participation in technical and scientific events for diffusion of medical geology

Finalization of the revision and approval of Bylaws

The election of the new governance bodies of IMGA

**8. Specify how any IUGS Allocation for 2016 was used**

NA

**9. Budget request with justification for 2017 (only applicable to low income groups)**

The Medical Geology has been experiencing an increasing interest among scientists and also among environmental and public health decision-makers. Particularly, this discipline has been gain a great importance as a new but also as an integrant subject of geological sciences.

Considering the foregoing, the funding requested below for IMGA will have two main purposes: (1) Encourage students to participate in international conferences/workshops to disseminate their research
developed in their own countries in the field of Medical Geology; (2) Funding small dissemination programs in schools in order to introduce the importance of this thematic in populations, particularly in areas where exist significant impacts in health caused by geological materials or processes, or in areas where geological materials can represent a benefit for health and economy purposes.

<table>
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<tr>
<th>Item Description</th>
<th>Amount Requested</th>
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<tbody>
<tr>
<td>1) Support for students’ participation in international meetings</td>
<td>$6 000</td>
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<tr>
<td>(This fund will provide financial support for 2-3 students to attend the upcoming IMGA meeting in August 2017 or other sponsored by IMGA. The funds would support costs with the inscription fee, travel and accommodation costs of students (ungraduated to PhD students) which apply for this financial support and the selection will be made considering the relevance and quality of the work that will be presented in the meeting.</td>
<td></td>
</tr>
<tr>
<td>2) Dissemination programs in schools</td>
<td>$4 000</td>
</tr>
<tr>
<td>(This will finance 1 or 2 projects for support payments with materials such as flyers, brochures, execution of videos and/or documentaries, student activities, etc. made by/or in collaboration with teachers and students and with a projection out of school, with involvement and enlightenment of local populations).</td>
<td></td>
</tr>
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</table>

Total Amount Requested: $10 000

10. Does your website have a link to IUGS?
Yes, consult http://medicalgeology.org/index.htm

11. Name, address and e-mail of person preparing this report
Carla Patinha (IMGA Secretary)
Geoscience Department, University of Aveiro
3810-193 Aveiro, Portugal
Email: cpatinha@ua.pt