

Andrés Mauricio Pinzón Velasco

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I can currently be contacted at:

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Phytopathology Laboratory
Biology
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Personal Information

Marital status: single
Place of Birth: Bogotá, Colombia
Date of Birth: 02/09/1975
Citizenship: Colombian

Education

::: Biological Sciences - Doctoral Program.

Faculty of Sciences. Los Andes University. 2005 to date.

::: **Biology**, Faculty of Sciences. National University of Colombia, Bogotá D.C., 1998 – 2004.

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Degree: Biologist.

Final project: "**Search and Identification of New Vaccine Candidates Against *Plasmodium vivax* Malaria**". This was an "*in silico*" research where the complete *Plasmodium vivax* genome was screened in order to find *Plasmodium falciparum*'s like proteins which could act as antigens. I am working on a paper about these results.

Reference: <http://www.andrespinzon.com/grado.php>

::: Object Oriented Programming. Centro de Estudios Técnicos (CET),
Bogotá D.C. January, 2002.

::: Scientific Computation. National University of Colombia,
Department of Mathematics. July-December, 2003.

::: Computational Biology. National University of Colombia,
Department of Computer Science. July-December, 2002.

::: Computers Programming. National University of Colombia,
Department of Computer Science. July-December, 2003.

::: Modern Languages. University of Los Andes, Bogotá D.C. 1994 –
1995.

Profile

As a **computers programmer**, I am focused, but not limited, on high level and web development languages, especially on languages/technologies based on the *free software* concept. I am also interested on developing "binding systems" on bioinformatics which allow users to use the tools from the "concept" perspective not from the "job" one.

As a **biologist** I am focused on the bioinformatics field, I am especially interested on the Systems Biology area, and on the prediction of biological functions of genes and comparative genomics.

I am also interested on immunology, theoretical biology, thermodynamics and chaos theory.

I have a strong ability to work independently as well as in collaboration with

informatics and/or biological groups.

Publications

Survey and analysis of microsatellites from transcript sequences in Phytophthoraspecies: frequency, distribution, and potential as markers for the genus. Diana P Garnica, **Andres M Pinzon**, Lina M Quesada-Ocampo, Adriana J Bernal, Emiliano Barreto, Niklaus J Grunwald and Silvia Restrepo.
BMC Genomics 2006, 7:245 (28 Sep 2006).

ENKIdb, sistema de integración de información taxonómica y molecular de especies colombianas. Revista Colombiana de Biotecnología. (en revisión).

Professional Experience

Bioinformatics Center, Biotechnology Institute, National University of Colombia (CBIB), Colombian EMBnet Node (Nov 2004 - today).

My work here covers three areas:

-Research Assistant: bioinformatics technical support to students and researchers for several projects on malaria vaccine development, phylogeny and biodiversity. I also support the CBIB's "Introduction to Bioinformatics" course, teaching some modules.

-System Administration: bioinformatics services installation, configuration and maintenance (**SRS, EMBOSS, NCBI-BLAST, Phred/Phrap/Consed, parallel BLAST** etc.), general system administration (5 web, DB, and application servers under Solaris

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OS and GNU/Linux). *Sungrid Engine (SGE) installation and configuration for bioinformatics parallel processes.*

-Software Development: to cover the Biotechnology Institute specific research needs, including: routines to **batch BLAST**, interface to capture and process a client/server BLAST version results (called **prettyBlast**), pipelines for primer design. I have also developed some basic BASH routines to help the **LION SRS** system installation automation on our servers and I am the head and core developer of the **ENKI-db** system, which links all known molecular and taxonomic data present on major biological databases (EMBL and UNIPROT) for all colombian registered species.

Reference: Emiliano Barreto, Bioinformatics Center Manager. Tel: +57(1) 3165000, Ext. 16956.

Faculty of Science, Bogotá – Colombia, Universidad de los Andes (February 2006 - today)

“Introduction to Programming and PERL for Bioinformatics”

6 hours talk for the “Genomics and Bioinformatics” course given annually to master students.

Bioinformatics analysis for the Mycology and Phytopathology Laboratory

My work here had included ESTs clustering, SSRs discovery and analysis, protein and DNA motif discovery for various plants pathogens.

<http://bioinf.ibun.unal.edu.co/phytossr/>

Reference: Silvia Restrepo, Tel. +57(1) 339 9999 Ext. 2619

Research Center, Universidad Pedagógica de Colombia.

Developer: head of the development department for the

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ATLAS project.
project, which was
abstraction layer called Smarty.

I was in charge of the communication layer of this
developed in PHP, using XML and an

Reference: Juan Carlos Bernal, Head of the ATLAS project
+571 2275027.

Sustainable development, Politécnico Gran Colombiano.

Professor: i teach this course on Sustainable Development
for the 8th semester Computational Science students, at the
Politécnico Gran Colombiano University in Bogotá Colombia.

Reference: Mónica Rincón, Facultad de Ingeniería de
Sistemas, politécnico Gran Colombiano +571 3468800 Ext. 340

Plant Biotechnology Research Group, Department of Biology, National University of Colombia

Member of the research group. Common tasks were primer design
and DNA amplification.

Web development: PHP, JavaScript, HTML, XML, MySQL (including
the relational model design), under GNU/LINUX.

<http://www.ciencias.unal.edu.co/paginas/transgenicas>.

Reference: Alejandro Chaparro Tel: +57(1) 3165000, Ext. 11318

Hobbies and Skills

- Biophp developer (<http://www.biophp.org>).
- Programming and scripting languages: C++, [Bio]PERL, [Bio]PHP, BASH .
- UML modelling, MySQL Postgres-SQL RDBS managment.
- Markup and typesetting languages HTML, XML, TeX/LateX, CSS.

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- **Linux Hélice:** GNU/Linux distribution (live CD) based on Slackware Linux, intended for people involved in bioinformatics and biological data analysis. This project is under hard development and I am the core developer: <http://www.andrespinzon.com/helice.php>
- **webPoint:** a command line program to create HTML slides for presentation, written in C++. I am the core developer.
- Poetry, play the guitar and sing.

References

Dr. Emiliano Barreto Hernández, EMBnet Colombia Node Manager
National University of Colombia
+571 3165000 Ext. 16956 ebarretoh@unal.edu.co

Dr. Laurent Falquet, Swiss EMBnet node manager, SIB Laussane,
BEP-UNIL, CH1015-Laussane.
+4121 6924078 laurent.falquet@isb-sib.ch

Dr. Silvia Restrepo, head of the Mycology and Phytopathology
Laboratory, Los Andes University.
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