BIPMed – New Projects and Advances
www.bipmed.org

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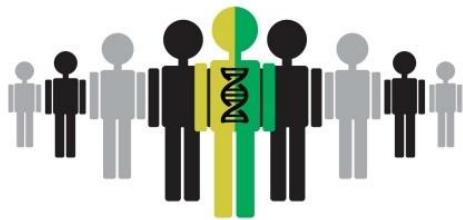
Databases

- Lieden Open Variation Database 3.0
- Web-based gene sequence variation database
- API enables simple queries or listing of gene and variant data
- Freely available tool for Gene-centered collection and display of DNA variations.
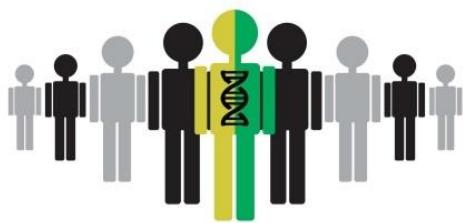
Databases

List of public LOVD installations

If you are looking for a specific gene database, please also check our list of LSDBs.

Please note that the latest available build is always installed on our Leiden server. We offer free use of this LOVD installation interested, e.g. to maintain/start a LSDB. Contact us for more information.

Show only LOVDs with gene symbol: [   ] Show

You can also download this list to see the complete list of genes in the databases.

In total: 3,913,937 variants (2,943,353 unique) in 424,351 individuals in 85 LOVD installations.		
http://databases.lovd.nl/whole_genome/	LOVD 3.0-20a	22002 genes
Whole genome datasets	A1BG,A1BG-AS1,A1CF,A2M,A2M-AS1,A2ML1,A2MP1,A4GALT,A4GNT,A	
http://bipmed.iqm.unicamp.br/	LOVD 3.0-17	20930 genes
BIPMed WES	A1BG,A1BG-AS1,A1CF,A2M,A2M-AS1,A2ML1,A2MP1,A3GALT2,A4GALT...	
https://databases.lovd.nl/shared/	LOVD 3.0-20b	22977 genes
Shared database	A1BG,A1BG-AS1,A1CF,A2LD1,A2M,A2M-AS1,A2ML1,A2MP1,A3GALT2,...	
http://proteomics.bio21.unimelb.edu.au/lovd/	LOVD 3.0-07	14772 genes
LOVD - Leiden Open Variation Database	A1BG,A1BG-AS1,A1CF,A2M,A2ML1,A4GALT,A4GNT,AAAS,AACS,AACSP,	
http://bipmed.iqm.unicamp.br/cfa/	LOVD 3.0-20	41 genes
Craniofacial anomalies	APOC2,APOC4-APOC2,AXIN2,BCL3,BMP4,CLPTM1,DVL2,ERBB2,FGF22...	
https://ab-openlab.csir.res.in/mitolsdb/	LOVD 2.0-35	37 genes
MitoLSDB	MTATP6,MTATP8,MTCO1,MTCO2,MTCO3,MTCYB,MTND1,MTND2,MTND3,M...	
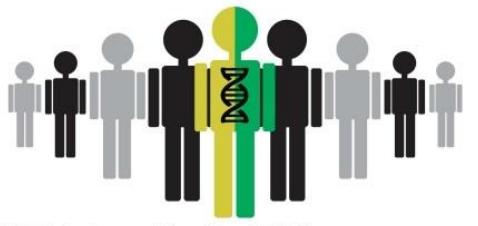
Mirrors

BIPMed has 4 installations

- Main site: IQ – Unicamp - Campinas

- Mirror 1: FCM – Unicamp - Campinas

- Mirror 2: USP – Ribeirão Preto

- Mirror 3: UNIFESP – São Paulo
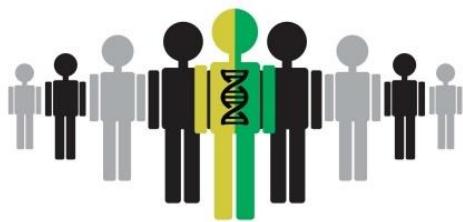
BIPMed

Our Products:

- Genomic databases:

  - BIPMed-WES-db: 256 individuals REFERENCE POPULATION

  - BIPMed-Array-db: 264 individuals REFERENCE POPULATION

  - DISEASE SPECIFIC DATABASES

- BIPMed Beacon

- GA4GH R client

- ....

Disease/Phenotype specific projects

- Epilepsy (BRAINN, ILAE-ALADE) – EE
  - DOOSE SYNDROME
  - DRAVET SYNDROME

- Craniofacial Anomalies – Dr. Vera Lucia Gil Da Silva Lopes
  - Cleft lip and palate (BCFP)

- BRCA Challenge (GA4GH, HVP) – Dr. Patricia Prolla and Edenir Palmero

BRCA Challenge

- Dr. Patricia Prolla, Dr. Edenir Palmero and Dr. Maria Aparecida Folgueira

- Supported by GA4GH, LOVD and the Human Variome Project
  - Understanding of the genetic basis of breast cancer, ovarian cancer and other diseases
  - Pooling data on BRCA1/2 genetic variants and corresponding clinical data from around the world.

- The BRCA Challenge on BIPMed
  - **75 variants in BRCA1**
  - **87 variants in BRCA2**

Craniofacial Anomalies

- Dr. Vera Lucia Gil Da Silva Lopes

- 253 variantes in 41 genes

- 358 Healthy individuals with no history of oral clefting in the past three generations

- 157 patients with Non-syndromic Cleft Lip and Palate
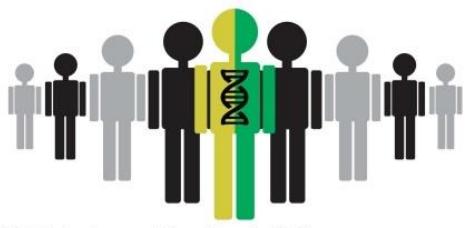
Under development

- Copy number databases;

- Craniofacial anomalies SNP Array

  - Affymetrix Genome-Wide Human SNP Array 6.0;

- Stroke (BRAINN, ISGC-Latin American Initiative);

- Pathogenic hemoglobins – Global Globin (HVP) – Dr. Monica Melo;

- ApoE Challenge (BRAINN, ABN) – Dr. Marcio Balthazar;
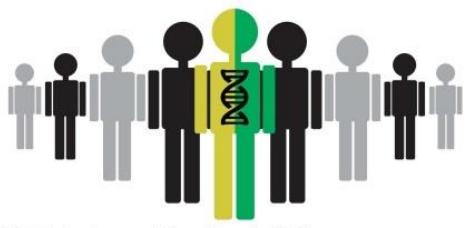
Under development

- 40 reference individuals born in Ribeirão Preto region with more than 65 years old – Prof. Wilson Silva Junior
  - Whole Exome Sequencing;
  - Affymetrix Genome-Wide Human SNP Array 6.0
- 40 reference individual born in Barretos region – Prof. Vinicius Vasquez
  - Whole Exome Sequencing;
  - Affymetrix Genome-Wide Human SNP Array 6.0
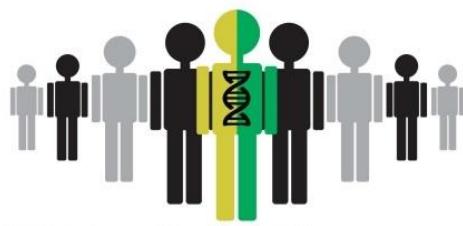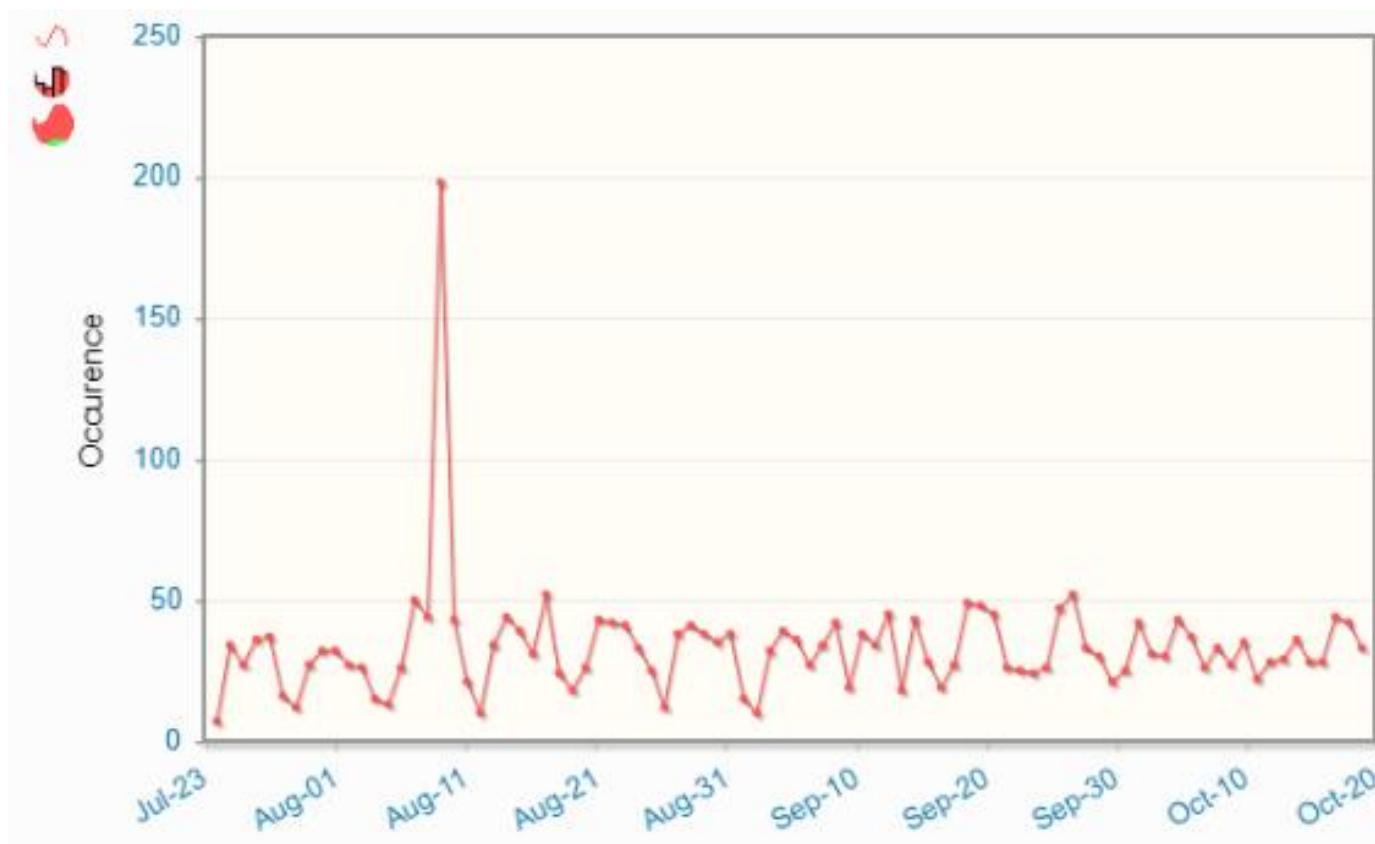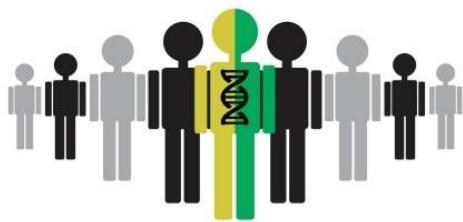
Access Statistics

Access Statistics

Countries		
United States - 🇺🇸	889	49.1 %
Brazil - 🇧🇷	229	12.6 %
China - 🇨🇳	72	3.9 %
India - 🇮🇳	54	2.9 %
Russian Federation - 🇷🇺	37	2.0 %
France - 🇫🇷	31	1.7 %
Great Britain - 🇬🇧	29	1.6 %
Germany - 🇩🇪	26	1.4 %
Philippines - 🇵🇭	24	1.3 %
Canada - 🇨🇦	22	1.2 %
Others	394	21.8 %
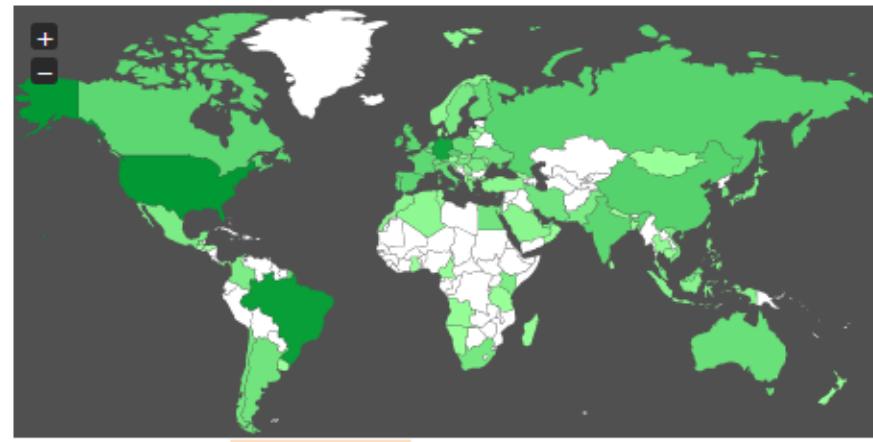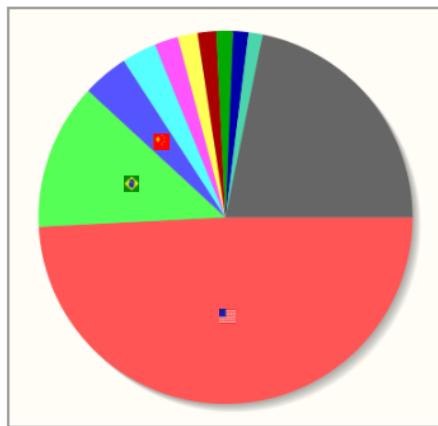
Requests   Accesses Hosts Traffic

	Hosts	Percentage	Requests	Percentage	Accesses	Percentage	Traffic (Mb)	Percentage
Europe	305	16.9 %	16786	32.4 %	12162	47.4 %	232.7	45.2 %
South-America	252	13.9 %	14412	27.8 %	7307	28.5 %	97.9	19.0 %
North-America	918	50.8 %	18132	35.0 %	5350	20.9 %	152.1	29.5 %
Central-America	7	0.4 %	7	0.0 %	7	0.0 %	0.3	0.1 %
Africa	40	2.2 %	245	0.5 %	70	0.3 %	4.0	0.8 %
Oceania	17	0.9 %	193	0.4 %	69	0.3 %	1.9	0.4 %
Asia	267	14.8 %	2067	4.0 %	686	2.7 %	26.0	5.0 %
Misc	1	0.1 %	1	0.0 %	1	0.0 %	0.0	0.0 %

LatinGen

- Development of the portal **latingen.org**
- Disseminate the idea of federated databases
- Act as a centralizer of genomic information in Latin America
- Provide assistance for other research groups

contact@latingen.org

LatinGen

- **Future projects**:
  - Develop integration of participants databases
    - Projects using the LOVD interface provide easy integration
    - Projects with other database structure can be challenging
  - Provide bioinformatics training in Latin America
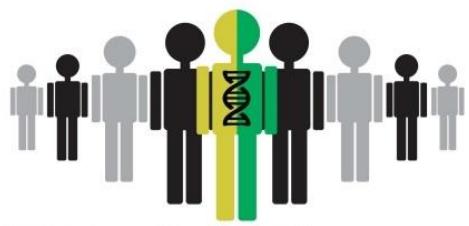
Acknowledgment

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