

# Cristian Pattaro - Curriculum Vitae

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	<i>Official webpage</i> : my Eurac Research page <i>Personal website</i> : <a href="https://cristianpattaro.weebly.com">https://cristianpattaro.weebly.com</a> <i>Twitter</i> : <a href="https://twitter.com/CristianPattaro">https://twitter.com/CristianPattaro</a> <i>Scholar</i> : <a href="https://scholar.google.it/citations?user=cqlEDJ8AAAAJ%26hl=en">https://scholar.google.it/citations?user=cqlEDJ8AAAAJ%26hl=en</a>
BIRTH	July 9 <sup>th</sup> , 1974 - Padova, Italy; Citizenship: <i>Italian</i>
EDUCATION	<b>PhD in Biomedical Statistics</b> , University of Milano (2006) Thesis: <i>Haplotype Block Partitioning as a tool for Dimensionality Reduction in Complex Disease Modeling</i> - Advisor: <i>G. Parmigiani, Johns Hopkins University</i>
	<b>2<sup>nd</sup> Level Master degree in Medical Statistics &amp; Clinical Epidemiology</b> , University of Verona (2001) Thesis: <i>Geographical distribution of asthma across Italy</i> - Advisor: <i>R. de Marco</i>
	<b>MSc in Statistical and Economical Sciences</b> , University of Padova (1999) Thesis: <i>Statistical analysis and modelization of meteorological data</i> - Advisors: <i>S. Bordignon, C. Gaetan</i>
POSITIONS	Research 2013-present <b>Group leader</b> , Biostatistics & Epidemiology, Eurac Research, Institute for Biomedicine, Bolzano 2006-present <b>Senior researcher</b> , Eurac Research, Institute for Biomedicine, Bolzano 2004-05 <b>Visiting scholar</b> , Johns Hopkins University, School of Public Health & Sidney Kimmel Comprehensive Cancer Center, Baltimore MD, USA 2000-06 <b>Research fellow</b> , University of Verona, Department of Medicine & Public Health, Unit of Epidemiology & Medical Statistics.
	Teaching 2013-19 <b>Adjunct Professor of Medical Genetics</b> (Genetica Medica, 06/A1), San Raffaele Hospital University, Milano ( <i>Professore a contratto</i> ). 2001-03 <b>Adjunct Professor of Computer Science</b> , University of Verona ( <i>Professore a contratto</i> ).
QUALIFICATIONS	- Qualification for <b>Full Professor of Medical Genetics</b> (abilitazione scientifica nazionale professore ordinario 06/A1, validity: Oct 19, 2018 - Oct 19, 2024). - Qualification for <b>Associate Professor of Endocrinology, Nephrology, Science of Nutrition and Wellness</b> (abilitazione scientifica nazionale professore associato 06/D2, validity: Sep 21, 2018 - Sep 21, 2024). - Qualification for <b>Associate Professor of Genetics</b> (abilitazione scientifica nazionale professore associato 05/I1, validity: Jul 26, 2018 - Jul 26, 2024). - Qualification for <b>Associate Professor of Medical Statistics</b> (abilitazione scientifica nazionale professore associato 06/M1, validity: Jan 21, 2014 - Jan 21, 2023). - Qualification for <b>Associate Professor of Medical Genetics</b> (abilitazione scientifica nazionale professore associato 06/A1, validity: Jan 7, 2014 - Jan 7, 2023).

# Research activity

RESEARCH INTERESTS	Statistical methods for the analysis of medical, biological, and genetic data. Genetic epidemiology of complex diseases, with special interest into renal and cardiovascular diseases.
PUBLICATIONS	104 peer-reviewed publications (32 as first, last, or corresponding author), including 97 original articles and 7 among reviews, commentaries and editorials; full list in <b>Appendix 1</b>  <b>H index / citations:</b> 42 / 13,813 (Google Scholar), 41 / 14,565 (Web of Science) <b>Impact factor:</b> 879 (247 as first, last or corresponding author)
SCIENTIFIC CONFERENCES	41 contributed presentations at national and international scientific congresses, including 6 invited oral communications, 6 contributed oral presentations and 29 poster presentations (considering only those presented as first or last author). Full list in <b>Appendix 2</b> .
LECTURES	Several invited lectures at national and international courses, symposia or meetings. Full list in <b>Appendix 3</b> .
LICENSED SOFTWARE	- <b>LDEplorer</b> (2013) R-package for fast haplotype-block recognition of whole-genome SNP sequences. Website: <a href="http://www.eurac.edu/LDEplorer">http://www.eurac.edu/LDEplorer</a> - <b>nephro</b> (2013) R-package for biomarker-based renal function estimation. Website: <a href="http://cran.r-project.org/web/packages/nephro/">http://cran.r-project.org/web/packages/nephro/</a> - <b>GWAtoolbox</b> (2012) R-package for fast quality control and data handling of multiple genome-wide association studies data files. Website: <a href="http://www.eurac.edu/GWAtoolbox.html">http://www.eurac.edu/GWAtoolbox.html</a> - <b>MATILDE</b> (2008) R-package for linkage disequilibrium block identification. Website: <a href="http://bcb.dfci.harvard.edu/gp/software/matilde/">http://bcb.dfci.harvard.edu/gp/software/matilde/</a>
VISITING	- <b>Harvard University</b> , Boston MA, USA (2010) - Dept. of Biostatistics & Computational Biology, Dana-Farber Cancer Institute (Prof. <i>G. Parmigiani</i> ); Dept. of Biostatistics, School of Public Health, (Prof. <i>F. Dominici</i> ) - <b>Johns Hopkins School of Public Health</b> , Baltimore MD, USA (2008); Dept. of Biostatistics (Prof. <i>G. Parmigiani &amp; I. Ruczinski</i> ) - <b>Erasmus University Medical Center</b> , Rotterdam, The Netherlands (2006) - Dept. of Epidemiology & Biostatistics, (Prof. <i>C.M. van Duijn &amp; Y. Aulchenko</i> ) - <b>National Research Centre for Environment &amp; Health</b> (Helmholtz Zentrum), Munich, Germany (2004) - Inst. of Epidemiology (Prof. <i>M. Wjst &amp; J. Heinrich</i> ) - <b>ARPAV</b> - Regional Agency for the Environment, Meteorological Center of Teolo, Padova, Italy (1998-99).
FUNDING	Dr. Pattaro was awarded national and international funding, for a total amount of >1.7 million €, which enabled to create job opportunities (>12 employed people among students, researchers, and staff), to acquire data analysis infrastructures, and to measure innovative biomarkers.
	<b>As Principal Investigator</b> ( <i>sorted by funded period; own amount awarded is reported</i> )
	2020-22 <b>CHRIS-2D: a Dynamic Data infrastructure for biomedical research and innovation in South Tyrol</b> - European Regional Development Fund - Call: FESR 2014-2020: Asse 1 Ricerca e Innovazione 5° bando - Autonomous Province of Bolzano/Bozen, Decree no. 17751/2020 - Proposal no. FESR1157
	2020-22 <b>Molecular profiling of uncontrolled and treatment resistant hypertension in the general population: the HyperProfile study</b> - Au-

tonomous Province of Bolzano/Bozen - Call: Research Südtirol/Alto Adige 2019 - Proposal no. 85

2020-21 **PACE: Partnership to Accelerate Covid-19 rEsearch in South Tyrol** - Autonomous Province of Bolzano/Bozen, Decree no. 14512/2020

#### **As Partner Investigator (sorted by funded period)**

2020-23 **TrainCKDis: Multidisciplinary Training in Chronic Kidney Disease: from genetic modifiers to drug discovery** - Horizon 2020 - Research and Innovation Framework Programme - Call: H2020-MSCA-ITN-2019 - Type of activity: MSCA-ITN-ETN:LIF - Proposal no. 860977

2015-16 **Tailoring Rituximab treatment in ANCA-associated vasculitis: a genetic and immunological approach** - Regione Emilia Romagna: "*Alessandro Liberati*" Young Investigator Grant 2013

#### **Other funding, fellowships, awards**

2009 *Fellowship*, 5<sup>th</sup> International Course on Genetics & Renal Diseases, Genova

2005 *Award for PhD research program in foreign countries (Ex Art.12)*, University of Verona

2004 *European Community Respiratory Health Survey - Travel fellowship*, German Research Center for Environmental Health.

#### **MAIN RESEARCH PROJECTS**

#### **Projects involved as Principal Investigator**

- **CHRIS-2D: a Dynamic Data infrastructure for biomedical research and innovation in South Tyrol** (2020-present). *Implementation of a data portal to enhance quality and usability of the CHRIS study, exploiting biomedical data and biobank for research & innovation.*
- **PACE: Partnership to Accelerate Covid-19 rEsearch in South Tyrol** (2020-present): *Implementation of epidemiological models for Covid-19 in the general population and patients from South and North Tyrol, with biostatistical characterization of the innate immunity effect on Covid-19* (together with P Pramstaller, Eurac Research).
- **Molecular profiling of uncontrolled and treatment resistant hypertension in the general population: the HyperProfile study** (2020-present): *Statistical characterization of the biological mechanisms of the renin-angiotensin-aldosterone system and adrenal cortex biomarkers in 2000 hypertensive individuals from the general population.*
- **Cooperative Health Research In South Tyrol (CHRIS) study** (2011-present): *population-based study on the genetic and environmental epidemiology of cardiovascular, neurological, and metabolic diseases* (together with P Pramstaller, Eurac Research);
- **Chronic Kidney Disease Genetics (CKDGen) Consortium** (2016-present): *Int'l consortium involving 800,000+ participants from 120+ population-based studies, to conduct genetic epidemiology studies on kidney function* (together with A Köttgen, Univ. of Freiburg); until 2015, I was member of the **steering committee & reference statistician** under the leadership of CS Fox, Harvard University;

#### **Projects involved as a Collaborator**

- The **Microisolates in South Tyrol (MICROS) study** (2006-present), aim at assessing the genetics of Mendelian and common diseases in three isolated villages of South Tyrol (PI: P Pramstaller, Eurac Research); role: **genetic epidemiologist**

- **Exposure to chlorpyrifos in South Tyrol: biological monitoring of 3,5,6-trichlor-2-pyridinol in the general population** (2014-17), conducted by the Hygiene and Public Health Department of the South Tyrolean Health Authority (PI: L. Wegher, South Tyrolean Health System); role: *coordination of the statistical analyses*;
- **Chronic Kidney Disease Genetics (CKDGen) Consortium** (2009-15): member of the *steering committee & reference statistician* under the leadership of *CS Fox*, Harvard University;
- **European Special Population Network (EUROSPAN)** (2007-11): consortium of European isolated population studies to identify genetic variants involved in health and disease (PI: *H Campbell*, Univ. Edinburgh); role: *biostatistician*
- **Project Ospedale Regionale di Peje/Pec: assistenza tecnica, riqualificazione e formazione professionale in ambito clinico, tecnico e manageriale (N. AID. 7347.02.3)** (2007), promoted by Regione del Veneto, Azienda Ospedaliera di Padova, Struttura Interaziendale di Formazione e Progetti Internazionali (PI: G Putoto, Doctors with Africa CUAMM); role: *statistician*.
- **Phase III Randomized Clinical Trial Gemcitabine vs Gemcitabine+Vinodesine in Elderly Lung Cancer Patient** (2002-06) and involving 360 non-small cell lung cancer patients (PI: *A Santo*, Univ. Verona); role: *reference statistician, study design*
- The **EUREYE study** (2001-02) to assess the causes of visual disability due to macular degeneration in 10,000 elderly European subjects from 7 countries (PI: *L Tomazzoli*, Univ. Verona); role: *reference statistician, study design*.
- **European Community Respiratory Health Survey** (2000-2006): longitudinal population-based study on 140,000 adults from 25 countries to assess prevalence and geographic variability of asthma and atopy (PI: *P Burney*, Imperial College London); role: *biostatistician*
- **Italian Study on Asthma in Young Adults** (2000-06), a multicenter population-based study on 27,000 adults from 9 Italian cities to assess the geographic variability, level of treatment, and economic impact of asthma, allergic rhinitis and chronic bronchitis (PI: *R de Marco*, Univ. Verona); role: *medical statistician*
- Study "**Indagine sull'ipovisione a Verona**", carried out by the Department of Public Health of the University of Verona, Unit of Epidemiology and Medical Statistics; role: *statistician*.

**SCIENTIFIC  
SERVICE**

- Editorial board member of**
- Kidney International (2020-present)
  - Journal of Nephrology (2014-present)

**Reviewer for scientific journals:** Allergy; American Heart Journal; American Journal of Human Genetics; American Journal of Kidney Diseases; Annals of Gerontology and Geriatric Research; Atherosclerosis; BMC Genetics; BMC Genomics; BMC Medical Genomics; BMJ Open; Brazilian Journal of Medical and Biological Research; Clinical Journal of the American Society of Nephrology; Circulation: Cardiovascular Genetics; Diabetes/Metabolism Research and Reviews; Diabetologia; Epidemiology; GigaScience; Human Molecular Genetics; IEEE/ACM Transactions on Computational Biology and Bioinformatics; International Journal of Cardiology; International Journal of Computational Intelligence in Bioinformatics and Systems Biology; International Journal of Nephrology and Renovascular Disease; Journal of Environmental Research and Public Health; Journal of Nephrology; Journal of the American Society of Nephrology; Journal of Translational Medicine; Kidney International; Nature Communications; Nature Reviews Nephrology; Nephrology Dialysis Transplantation; Pediatrics; PLoS Genetics; PLoS Medicine; PLoS ONE; The Lancet; World Congress of Nephrology.

**Reviewer for funding institutions:** Ireland Health Research Board (HRB) (2019); Health Research Council of New Zealand (2018; 2019); French National Research Agency (2016); Istituto Zooprofilattico Sperimentale delle Venezie (IZSVe) (2013).

# Teaching activity

## TEACHING

### Courses taught as main instructor

2013-19 **Genetics of complex diseases** (genetica delle malattie complesse) - within the course of Genetics and Developmental Biology (Genetica e biologia dello sviluppo), Vita-Salute San Raffaele University School of Medicine (Genetica Medica, 06/A1 - Professore a contratto).

2001-03 : **Computer science** (informatica) - BSc of Laboratory Technicians (tecnico di laboratorio biomedico) of the University of Verona School of Medicine (*Professore a contratto*).

### Teaching assistant

From 2000 to 2004 I served as teaching assistant at University of Verona for the following courses: *Basic Statistics*, *Survival Analysis*, and *Molecular Epidemiology* for the 2<sup>nd</sup> level master degree in Medical Statistics & Clinical Epidemiology; *Statistics and Mathematics* for the MSc School of Medicine; *Computer Science & Epidemiology* for the Specialty School of Medicine and the BSc School of Nursing.

### Courses organization

- **Population-based studies and biobanks in the -omics era**, Graduate course within the HOROS PhD Programme by Medical University Innsbruck; Eurac Research Inst. for Biomedicine, Bolzano, Italy, Nov 30 - Dec 1, 2017.

### Participation in International PhD programs

Member of the organizing committee of the **TrainCKDis: Multidisciplinary Training in Chronic Kidney Disease: from genetic modifiers to drug discovery** a Horizon 2020 Marie Skłodowska-Curie Action for Innovative Training Network / Excellence Training Network funded program, which is **training 15 PhD students** across the EU on biological, epidemiological and pharmacological aspects of chronic kidney disease. Website: [www.trainckdis.eu](http://www.trainckdis.eu).

## ADVISING

### Post-Doctoral Fellows

2019-20 *Athina Raftopoulou* - Topic: *Neuroepidemiology* (now at University of Patras)

2018-20 *Vladimir Vukovic* - Topic: *Phenotype reclassification in population-based studies* (now at Institute of Public Health of Vojvodina)

2011-13 *Aude Saint-Pierre* - Topic: *SNP-based linkage analysis in large pedigrees* (now at Inserm U1078, Brest);

### PhD students and MD specialty students

2015-19 *Damia Noce*, Medical University Innsbruck HOROS PhD Program; Topic: *Complement 3, 7, and factor H genes and CVD in the CHRIS study;*

2011-14 *Daniel Taliun*, Free University of Bolzano, PhD School in Computer Science; Topic: *Efficient algorithms for genome-wide SNP clustering* (now at University of Michigan School of Public Health);

2011-13 *Stefano Nembrini*, Università degli Studi di Milano Bicocca, PhD School in Statistics; Topic: *Predictive models based on SNP arrays;*

2009 *Gerald Stifter*, University of Padova, Specialty School of Nephrology; Topic:  
*Glomerular filtration rate estimation: comparison between different methods*  
(now at Hospital of Bruneck);

**BSc students**

2007 *David Gritsch*, Summer Internship, University of Vienna, Faculty of Medicine;  
Topic: *Review of genetic loci associated with renal function outcomes.*

DECLARATION OF **Everything declared in this CV is true, in agreement with the Italian law,  
TRUTH articles 46 and 47 of D.P.R. 445/2000.**

Cristian Pattaro

Appiano sulla strada del vino, January 25, 2021

## Appendix 1 - Publications

### PREPRINTS

(\* indicates joint authorship or oversight)

2. Zheng J, Zhang Y, Rasheed H, Walker V, Sugawara Y, Li J, Leng Y, Elsworth B, Wootton RE, Fang S, Yang Q, Burgess S, Haycock P, Borges MC, Cho Y, Carnegie R, Howell A, Robinson J, Thomas L, Brumpton B, Hveem K, Hallan S, Franceschini N, Morris A, Köttgen A, **Pattaro C**, Wuttke M, Yamamoto M, Kashihara N, Akiyama M, Kanai M, Matsuda K, Kamatani Y, Okada Y, Xu M, Bi YF, Ning G, Smith GD, Barbour S, Yu C, Asvold BO, Zhang H, Gaunt T. Trans-ethnic Mendelian randomization study reveals causal relationships between cardio-metabolic factors and chronic kidney disease. medRxiv 2020.09.04.20188284; doi: <https://doi.org/10.1101/2020.09.04.20188284>
1. Stanzick KJ, Li Y, Gorski M, Wuttke M, **Pattaro C**, Köttgen A, Stark KJ, Heid IM, Winkler T. Discovery and prioritization of variants and genes for kidney function in >1.2 million individuals bioRxiv 2020.09.04.283713; doi: <https://doi.org/10.1101/2020.09.04.283713>

### ARTICLES

Original, peer-reviewed papers (\* indicates joint authorship or oversight):

98. Fazzini F, Lamina C, Raftopoulou A, Koller A, Fuchsberger C, **Pattaro C**, Del Greco M F, Döttelmayer P, Fendt L, Fritz J, Meiselbach H, Schönherr S, Forer L, Weissensteiner H, Pramstaller PP, Eckardt KU, Hicks AA, Kronenberg F; GCKD Investigators. Association of mitochondrial DNA copy number with metabolic syndrome and type 2 diabetes in 14,176 individuals from GCKD and CHRIS studies. *J Int Med* 2021; doi: 10.1111/joim.13242. Online ahead of print.
97. Gorski M, Jung B, Li Y, Matias-Garcia PR, Wuttke M, Coassin S, Thio CHL, Kleber ME, Winkler TW, Wanner V, Chai JF, Chu AY, Cocca M, Feitosa MF, Ghasemi S, Hoppmann A, Horn K, Li M, Nutile T, Scholz M, Sieber KB, Teumer A, Tin A, Wang J, Tayo BO, Ahluwalia TS, Almgren P, Bakker SJL, Banas B, Bansal N, Biggs ML, Boerwinkle E, Bottinger EP, Brenner H, Carroll RJ, Chalmers J, Chee ML, Chee ML, Cheng CY, Coresh J, de Borst MH, Degenhardt F, Eckardt KU, Endlich K, Franke A, Freitag-Wolf S, Gampawar P, Gansevoort RT, Ghanbari M, Gieger C, Hamet P, Ho K, Hofer E, Holleczek B, Xian Foo VH, Hutri-Kähönen N, Hwang SJ, Ikram MA, Josyula NS, Kähönen M, Khor CC, Koenig W, Kramer H, Krämer BK, Kühnel B, Lange LA, Lehtimäki T, Lieb W, Lifelines cohort study, Regeneron Genetics Center, Loos RJF, Lukas MA, Lyytikäinen LP, Meisinger C, Meitinger T, Melander O, Milaneschi Y, Mishra PP, Mononen N, Mychaleckyj JC, Nadkarni GN, Nauck M, Nikus K, Ning B, Nolte IM, O'Donoghue ML, Orho-Melander M, Pendergrass SA, Penninx BWJH, Preuss MH, Psaty BM, Raffield LM, Raitakari OT, Rettig R, Rheinberger M, Rice KM, Rosenkranz AR, Rossing P, Rotter JI, Sabanayagam C, Schmidt H, Schmidt R, Schöttker B, Schulz CA, Sedaghat S, Shaffer CM, Strauch K, Szymczak S, Taylor KD, Tremblay J, Chaker L, van der Harst P, van der Most PJ, Verweij N, Völker U, Waldenberger M, Wallentin L, Waterworth DM, White HD, Wilson JG, Wong TY, Woodward M, Yang Q, Yasuda M, Yerges-Armstrong LM, Zhang Y, Snieder H, Wanner C, Böger CA\*, Köttgen A\*, Kronenberg F\*, **Pattaro C\***, Heid IM\*. Meta-analysis uncovers genome-wide significant variants for rapid kidney function decline. *Kidney Int* 2020; S0085-2538(20)31239-4. Online ahead of print.
96. Li Y, Haug S, Schlosser P, Teumer A, Tin A, **Pattaro C**, Köttgen A, Wuttke M. Integration of GWAS Summary Statistics and Gene Expression Reveals Target Cell Types Underlying Kidney Function Traits. *J Am Soc Nephrol* 2020; **31**(10): 2326-2340.
95. Yu Z, Coresh J, Qi G, Grams M, Boerwinkle E, Snieder H, Teumer A, **Pattaro C**, Köttgen A, Chatterjee N, Tin A. A bidirectional Mendelian randomization study supports causal effects of kidney function on blood pressure. *Kidney Int* 2020; **98**(3): 708-716.
94. Ntalla I, Weng LC, Cartwright JH, Hall AW, Sveinbjornsson G, Tucker NR, Choi SH, Chaffin MD, Roselli C, Barnes MR, Mifsud B, Warren HR, Hayward C, Marten J, Cranley JJ, Concias MP, Gasparini P, Boutin T, Koleci I, Polasek O, Rudan I, Araujo NM, Lima-Costa MF, Ribeiro ALP, Souza RP, Tarazona-Santos E, Giedraitis V, Ingelsson E, Mahajan A, Morris AP, Del Greco M F, Foco L, Gögele M, Hicks AA, Cook JP, Lind L, Lindgren CM, Sundström J, Nelson CP, Riaz MB, Samani NJ, Sinagra G, Ulivi S, Kähönen M, Mishra PP, Mononen N, Nikus K, Caulfield MJ, Dominiczak A, Padmanabhan S, Montasser ME, O'Connell JR, Ryan K, Shuldiner AR, Aeschbacher S, Conen D, Risch L, Thériault S, Hutri-Kähönen N, Lehtimäki T, Lyytikäinen LP, Raitakari OT, Barnes CLK, Campbell H, Joshi PK, Wilson JF, Isaacs A, Kors JA, van Duijn CM, Huang PL, Gudnason V,

- Harris TB, Launer LJ, Smith AV, Bottinger EP, Loos RJF, Nadkarni GN, Preuss MH, Correa A, Mei H, Wilson J, Meitinger T, Müller-Nurasyid M, Peters A, Waldenberger M, Mangino M, Spector TD, Rienstra M, van de Vegte YJ, van der Harst P, Verweij N, Kääb S, Schramm K, Sinner MF, Strauch K, Cutler MJ, Fatkin D, London B, Olesen M, Roden DM, Benjamin Shoemaker M, Gustav Smith J, Biggs ML, Bis JC, Brody JA, Psaty BM, Rice K, Sotoodehnia N, De Grandi A, Fuchsberger C, **Pattaro C**, Pramstaller PP, Ford I, Wouter Jukema J, Macfarlane PW, Trompet S, Dörr M, Felix SB, Völker U, Weiss S, Havulinna AS, Jula A, Sääksjärvi K, Salomaa V, Guo X, Heckbert SR, Lin HJ, Rotter JI, Taylor KD, Yao J, de Mutsert R, Maan AC, Mook-Kanamori DO, Noordam R, Cucca F, Ding J, Lakatta EG, Qian Y, Tarasov KV, Levy D, Lin H, Newton-Cheh CH, Lunetta KL, Murray AD, Porteous DJ, Smith BH, Stricker BH, Uitterlinden A, van den Berg ME, Haessler J, Jackson RD, Kooperberg C, Peters U, Reiner AP, Whitsel EA, Alonso A, Arking DE, Boerwinkle E, Ehret GB, Soliman EZ, Avery CL, Gogarten SM, Kerr KF, Laurie CC, Seyerle AA, Stilp A, Assa S, Abdulla Said M, Yldau van der Ende M, Lambiase PD, Orini M, Ramirez J, Van Duijvenboden S, Arnar DO, Gudbjartsson DF, Holm H, Sulem P, Thorleifsson G, Thorolfsdottir RB, Thorsteinsdottir U, Benjamin EJ, Tinker A, Stefansson K, Ellinor PT, Jamshidi Y, Lubitz SA, Munroe PB. Multi-ancestry GWAS of the electrocardiographic PR interval identifies 202 loci underlying cardiac conduction. *Nat Commun* 2020; **11**(1): 2542.
93. Teumer A, Trenkwalder T, Kessler T, Jamshidi Y, van den Berg ME, Kaess B, Nelson CP, Bastiaenen R, De Bortoli M, Rossini A, Deisenhofer I, Stark K, Assa S, Braund PS, Cabrera C, Dominiczak AF, Gögele M, Hall LM, Ikram MA, Kavousi M, Lackner KJ, Lifelines Cohort Study, Müller C, Münzler T, Nauck M, Padmanabhan S, Pfeiffer N, Spector TD, Uitterlinden AG, Verweij N, Völker U, Warren HR, Zafar M, Felix SB, Kors JA, Snieder H, Munroe PB, **Pattaro C**, Fuchsberger C, Schmidt G, Nolte IM, Schunkert H, Pramstaller PP, Wild PS, van der Harst P, Stricker BH, Schnabel RB, Samani NJ, Hengstenberg C, Dörr M, Behr ER, Reinhard W. KCND3 potassium channel gene variant confers susceptibility to electrocardiographic early repolarization pattern. *JCI Insight* 2019; **4**(23): e131156.
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## REVIEWS

Reviews, editorials & commentaries (peer reviewed):

7. Köttgen A, **Pattaro C**. The CKDGen Consortium: Ten Years of Insights into the Genetic Basis of Kidney Function. *Kidney Int* 2020; **97**(2): 236-242.
6. Foco L, **Pattaro C**. Genetics of blood pressure regulation: possible paths in the labyrinth. *Am J Kidney Dis* 2019; **74**(3):421-424.
5. Mascalzoni D, Bentzen HB, Budin-Ljøsne I, Bygrave LA, Bell J, Dove ES, Fuchsberger C, Hveem K, Mayrhofer M, Meraviglia V, O'Brien DR, **Pattaro C**, Pramstaller PP, Rakić V, Rossini A, Shabani M, Svantesson DJB, Tomasi M, Ursin LØ, Wjst M, Kaye J. Are Requirements to Deposit Data in Research Repositories Compatible With the European Union's General Data Protection Regulation? *Ann Intern Med* 2019; **170**(5): 332-334.
4. **Pattaro C**. Genome-wide association studies of albuminuria: towards genetic stratification in diabetes?. *J Nephrol* 2018; **31**(4): 475-487.
3. Devuyst O, **Pattaro C**. The *UMOD* locus: Pathogenesis and prognostic insights for kidney disease. *J Am Soc Nephrol* 2018; **29**(3): 713-726.
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1. **Pattaro C**, Saint-Pierre A. Family-based studies to the rescue of genome-wide association studies in renal function. *Kidney Int* 2013; **83**: 196-198.

## Appendix 2 - Participation at National and International Meetings and Congresses

### INVITED TALKS

- Invited presentations at congresses:
6. *Genetics of kidney function: findings from the CKDGen Consortium.* 2<sup>nd</sup> International Congress on Personalized Health Care, Montreal, Canada; Sep 23-26, 2018.
  5. *What do renal function GWAS teach us?.* 8<sup>th</sup> International Kidney.CH Symposium, Bern, Switzerland; Sep 6, 2018.
  4. *The Cooperative Health Research In South Tyrol (CHRIS) study.* Conference *Genetic data in public research databases: which governance mechanisms should apply?,* Bolzano, Italy; Apr 27-28, 2016.
  3. *GWAS of kidney function and albuminuria traits in the general population: recent findings.* ERA-EDTA Working Group on Inherited Kidney Diseases (WGIKD) CME Symposium "Population Genetics of Kidney Diseases", Regensburg, Germany; Sep 25-26, 2015.
  2. *Genome-wide association of estimated glomerular filtration rate reveals new loci for kidney function.* 5<sup>th</sup> International meeting on complex traits and genetic isolates, Trieste, Italy; Mar 16, 2012.
  1. *Fattori genetici nelle malattie renali / Genetische Faktoren bei den Nieren-erkrankungen.* Congress "Nephrology Today on EUREGIO", Bolzano, Italy; Nov 4, 2011.

### CONTRIBUTED PRESENTATIONS

- Accepted and delivered oral communications at congresses:
6. Murgia F (*presenting author*), Melotti R, Foco L, Gögele M, Motta B, Meraviglia V, Merati G, Schmidt G, Rossini A, Pramstaller PP, **Pattaro C.** **Cigarette smoking and heart rate variability: results from the CHRIS study.** 9<sup>th</sup> Congress of the Italian Society of Medical Statistics and Clinical Epidemiology (SISMEC), Gargnano, Italy, Sep 13-16, 2017.
  5. **Pattaro C**, on behalf of the CKDGen consortium. **Meta-analysis of 50 genome-wide association studies identifies multiple novel loci for renal function and kidney damage: the CKDGen Consortium.** 50<sup>th</sup> Congress of the European Renal Association / European Dialysis and Transplantation Association (ERA/EDTA), Istanbul, Turkey, May 18-21, 2013.
  4. **Pattaro C**, Ruczinski I, Fallin DM, Parmigiani G. **Dimensionality reduction in Genome-wide association studies: a Metropolis-Hastings algorithm for the recognition of haplotype blocks.** International Biometric Society - Italian Region, 6<sup>th</sup> Congress, Pisa, Jun 20-22, 2007.
  3. **Pattaro C**, Locatelli F, de Marco R. **Early exposures and congenital factors on the incidence and remission of asthma in children, adolescents and adults.** Italian Society of Medical Statistics and Clinical Epidemiology, 2<sup>nd</sup> Congress, Brescia, Oct 1-4, 2003.
  2. **Pattaro C**, Verlato G, Sartori S, Drane W, de Marco R. **Disease cluster detection using bootstrap.** International Biometric Society - Italian Region, 5<sup>th</sup> Congress, Marina di Massa, Sep 10-12, 2003.
  1. **Pattaro C**, Zanolini ME, Accordini S, de Marco R. **Climate and distribution of asthma-like symptoms in Italy: an analysis with computer intensive methods.** International Biometric Society - Italian Region, 4<sup>th</sup> Congress, Rimini Jun 13-15, 2001.

### POSTER PRESENTATIONS

(when 1<sup>st</sup> or last author; presenting author is underlined)

29. Melotti R, Gögele M, Foco L, Mascalzoni D, De Grandi A, Rainer J, Domingues F, Fuchsberger C, Egger C, Amon VC, Hicks AA, Mian M, Mahlknecht A, Lombardo S, Gärtner T, Meier H, Weiss H, Rainer R, Dejaco C, Pizzato M, Weiss G, Lavezzo E, Crisanti A, Pramstaller PP\*, **Pattaro C\***. **Epidemiological, molecular and genetic characterization of the new coronavirus disease in Val Venosta/Vinschgau: the CHRIS Covid-19 study.** Intermediate Meeting of the Italian Society of Medical Statistics & Clinical Epidemiology (SISMEC), Nov 12-13, 2020.

28. Gögele M, Melotti R, Foco L, Mascalzoni D, De Grandi A, Rainer J, Domingues F, Fuchsberger C, Egger C, Amon VC, Hicks AA, Mian M, Mahlknecht A, Lombardo S, Gärtner T, Meier H, Weiss H, Rainer R, Dejaco C, Pizzato M, Weiss G, Lavezzo E, Crisanti A, Pramstaller PP\*, **Pattaro C\***. **Caratterizzazione epidemiologica, molecolare e genetica della malattia da nuovo coronavirus in Val Venosta: lo studio CHRIS Covid-19.** 44<sup>th</sup> Congress of the Italian Epidemiological Association (AIE), online, Nov 2-6, 2020.
27. Vukovic V, Gögele M, Rainer J, Garcia-Larsen V, Domingues F, Pramstaller PP, **Pattaro C**. **Relationship between total protein intake and kidney function in the Cooperative Health Research In South Tyrol (CHRIS) study.** 10<sup>th</sup> Congress of the Italian Society of Medical Statistics & Clinical Epidemiology (SISMEC), Rome, Italy, Sep 18-21, 2019. [poster presented as short oral communication]
26. **Pattaro C**, CKDGen Consortium. **Genetic landscape of kidney function: results from a trans-ethnic genome-wide association meta-analysis of > 750,000 individuals.** European Human Genetics Meeting, Milano, Italy, Jun 16-19, 2018. [poster selected for oral presentation in the "Best Poster" session]
25. Noce D, Foco L, Fuchsberger C, Gögele M, Kronenberg F, Würzner R, Lass-Flörl C, Pramstaller PP, Orth-Höller D, **Pattaro C**. **Genome-wide association study on the complement system activation by the classical, lectin, and alternative pathways in the Cooperative Health Research in South Tyrol (CHRIS) study.** European Human Genetics Meeting, Milano, Italy, Jun 16-19, 2018.
24. Foco L, Del Greco M F, Fuchsberger C, Gögele M, Murgia F, Huan T, Levy DB, Teumer A, Dörr M, Schmidt G, Rossini A, Pramstaller PP, **Pattaro C**. **Bioinformatic and mendelian randomization analyses characterize variants in desmosomal genes associated with ECG traits in the general population.** European Human Genetics Meeting, Milano, Italy, Jun 16-19, 2018.
23. Noce D, Foco L, Fuchsberger C, Gögele M, De Grandi A, Würzner R, Lass-Flörl C, Pramstaller PP, Orth-Höller D, **Pattaro C**. **Genome-wide association study of the three complement activity pathways: the Cooperative Health Research in South Tyrol (CHRIS) study.** American Society of Human Genetics (ASHG) Meeting, Orlando, FL, USA, Oct 17-21, 2017.
22. Foco L, Fuchsberger C, Gögele M, Murgia F, Schmidt G, Rossini A, Pramstaller PP, **Pattaro C**. **Association of common variants in arrhythmogenic cardiomyopathy desmosomal genes with ECG traits in the general population.** American Society of Human Genetics (ASHG) Meeting, Orlando, FL, USA, Oct 17-21, 2017.
21. Del Greco F, Foco L, Melotti R, Meraviglia V, Paglia G, Joshi PK, Wright AF, Campbell H, Wilson JF, Pramstaller PP, Rossini A, **Pattaro C**. **Screening the effects of lipidomics alterations on atrial depolarization.** 38<sup>th</sup> Int'l Society for Clinical Biostatistics annual conference, Vigo, Spain, Jul 9-13, 2017.
20. **Pattaro C**, Salvi E, on behalf of the CKDGen Consortium. **Meta-regression to uncover genetic interactions** CHARGE Investigator Meeting, New York City, NY, USA, Mar 23-24, 2017.
19. Noce D, Gögele M, Schwienbacher C, De Grandi A, D'Elia Y, Pramstaller PP, **Pattaro C**. **Can sequential enrollment of study participants explain part of the missing heritability?** Italian Society of Medical Statistics & Clinical Epidemiology 8<sup>th</sup> Congress, Torino, Sep 16-19, 2015.
18. **Pattaro C**, Gögele M, Mascalzoni D, De Grandi A, Schwienbacher C, Del Greco F, Melotti R, Facheris MF, Pramstaller PP. **The Cooperative Health Research in South Tyrol (CHRIS) study.** International Genetic Epidemiology Society 23<sup>rd</sup> Annual Meeting. Vienna, Austria, Aug 28-30, 2014. ISBN 978—1-940377-01-8. Available at: <http://www.geneticepi.org/meeting-abstracts/>.
17. Noce D, Gögele M, Schwienbacher C, De Grandi A, D'Elia Y, Pramstaller PP, **Pattaro C**. **Missing heritability partially explained by sequential enrollment of study participants.** International Genetic Epidemiology Society 23<sup>rd</sup> Annual Meeting. Vienna, Austria, Aug 28-30, 2014. ISBN 978—1-940377-01-8. Available at <http://www.geneticepi.org/meeting-abstracts/>.
16. Taliun D, Gamper J, **Pattaro C**. **A fast whole-genome detection of LD-based haplotype blocks.** European Conference on Computational Biology, Berlin, Germany, Jul 21-23, 2013.

15. Taliun D, Gamper J, **Pattaro C**. **Memory and time efficient genome-wide haplotype block estimation**. European Mathematical Genetics Meeting, Leiden, The Netherlands, Apr 25, 2013.
14. Saint-Pierre A, D'Elia Y, Pramstaller PP, **Pattaro C**. **A workflow for linkage analysis on high density SNP arrays**. European Mathematical Genetics Meeting, Goettingen, Germany, Apr 12-13, 2012.
13. **Pattaro C** on behalf of the CKDGen Consortium. **Genome-wide association studies (GWASs) in homogeneous subgroups of Caucasian samples identify six novel loci for renal function: the CKDGen Consortium**. International Genetic Epidemiology Society 20<sup>th</sup> Annual Conference, Heidelberg, Germany, Sep 18-20, 2011.
12. Taliun D, Fuchsberger C, Pramstaller PP, **Pattaro C** on behalf of the CKDGen consortium. **GWAtoolbox: An R Package for Time Efficient Quality Control of Multiple GWAS Data Files**. The R User Conference 2011, Coventry, UK, Aug 16-18, 2011.
11. Saint-Pierre A, Del Greco M F, Pramstaller PP, Pfeifer A, **Pattaro C**. **On the detection of pleiotropic QTLs in extended pedigree data: evaluation of different multi-trait association approaches**. European Mathematical Genetics Meeting, London, UK, Apr 11-12, 2011.
10. **Pattaro C**, Fuchsberger C, Teumer A, Chen MH, Boeger CA, Olden M, Gao X, Parsa A, Yang Q, Taliun D, O'Connell JR, Isaacs A, Chasman DI, Heid IM, Kao WHL, Fox CS, Köttgen A on behalf of the CKDGen Consortium. **Critical issues in the meta-analysis of genome-wide association studies (GWAS) with small number of cases: the CKDGen Consortium**. International Genetic Epidemiology Society 19<sup>th</sup> Annual Conference, Boston, MA, USA; Oct 10-12, 2010; poster no. 134.
9. **Pattaro C**, Del Greco M F, Luchner A, Pichler I, Winkler T, Hicks AA, Fuchsberger C, Franke A, Melville SA, Peters A, Wichmann HE, Schreiber S, Heid IM, Krawczak M, Minelli C, Wiedermann CJ, Pramstaller PP. **Genome-Wide Association Study (GWAS) and Fine Mapping of NT-proBNP Level: Novel Loci and Novel Variants in the MTHFR-CLCN6-NPPA-NPPB Gene Cluster**. International Genetic Epidemiology Society 19<sup>th</sup> Annual Conference, Boston, MA, USA; Oct 10-12, 2010; poster no. 211.
8. Riegl P, Stifter G, Minelli C, Pramstaller PP, **Pattaro C**. **Stima del GFR negli studi di popolazione: concordanza tra le equazioni più comuni e impatto sulla stima della prevalenza della malattia renale cronica (MRC)**. Italian Society of Nephrology 51<sup>st</sup> Congress, Rimini, Italy, Oct 6-9, 2010; poster no. 161.
7. Riegl P, Stifter G, Minelli C, Pramstaller PP, **Pattaro C**. **Agreement between Glomerular Filtration Rate (GFR) estimating equations: impact on estimation of Chronic Kidney Disease (CKD) prevalence and identification of risk factors**. European Renal Association / European Dialysis and Transplantation Association 47<sup>th</sup> Congress, Munich, Germany, Jun 25-28, 2010.
6. **Pattaro C**, Köttgen A, Fuchsberger C, Böger CA, Olden M, Glazer NL, Parsa A, Gao X, Yang Q, Chen MH, O'Connell JR, Isaacs A, Teumer A, Chasman DI, Heid IM, Fox CS, Kao WH, on behalf of the CKDGen consortium. **Common Genetic Variants are Associated with Chronic Kidney Disease Stage 3b: the CKDGen Consortium**. European Renal Association / European Dialysis and Transplantation Association 47<sup>th</sup> Congress, Munich, Germany, Jun 25-28, 2010.
5. **Pattaro C**, Köttgen A, Böger CA, Fuchsberger C, Olden M, Teumer A, Chen MH, Glazer NL, Parsa A, Gao X, Yang Q, O'Connell JR, Isaacs A, Li M, Heid IM, Kao WH, Fox CS, Chasman DI, on behalf of the CKDGen consortium. **Multiple New Genetic Loci for Renal Function are Associated with eGFR across the Spectrum of Hypertension and Diabetes: The CKDGen Consortium**. European Renal Association / European Dialysis and Transplantation Association 47<sup>th</sup> Congress, Munich, Germany, Jun 25-28, 2010.
4. **Pattaro C**, Aulchenko YS, Isaacs A, Vitart V, Hayward C, Franklin CS, Polasek O, Kolcic I, Biloglav Z, Campbell S, Hastie N, Lauc G, Meitinger T, Oostra BA, Gyllensten U, Wilson JF, Pichler I, Hicks AA, Campbell H, Wright AF, Rudan I, van Duijn CM, Riegl P, Marroni F, Pramstaller PP, on behalf of the EUROSPAN consortium. **The non-muscle myosin heavy chain type II isoform A (MYH9) gene is associated with Serum Creatinine variations in three European isolated populations: the Eurospan project**. 5<sup>th</sup> International Course on Genetics and Renal Diseases - Genova, Italy, May 28-30, 2009.

3. **Pattaro C**, Marroni F, Pramstaller PP, Rieger P. **Genome-wide linkage scan di GFR e creatinina in popolazioni alpine isolate: lo studio MICROS.** 23<sup>rd</sup> Italian Society of Nephrology Interregional Congress. Stra, Italy, Sep 20-21, 2007.
2. **Pattaro C**, Marroni F, Rieger P, Pramstaller PP. **Genome-wide scan of Glomerular Filtration Rate and Serum Creatinine in an Isolated Alpine Population: the GenNova Study.** 3<sup>rd</sup> International Meeting on Genetics of Complex Diseases and Isolated Populations. Torino, Italy, May 26-29, 2007.
1. **Pattaro C**, Locatelli F, de Marco R. **Il contributo della conoscenza della storia naturale della malattia nella ricerca epidemiologica sull'asma nell'adulto.** Italian Epidemiological Association 26<sup>th</sup> Annual Congress, Napoli, Italy, Sep 24-26, 2002.

## Appendix 3 - Lectures & Seminars

### LECTURES

Invited lectures & seminars at national and international courses and symposia:

15. *Biostatistica... al limite (al di là delle definizioni: la statistica come strumento per la salute umana)* Biostatistics, eventually: beyond definitions, statistics as a tool for human health; teaching lecture (BSc); University of Padova, Department of Statistics; Padova, Italy, Dec 17, 2020 (guest of Prof. L. Ventura).
14. *The Cooperative Health Research In South Tyrol (CHRIS) study*, Seminar (MSc), University of Milano Bicocca, Department of Statistics and Quantitative Methods; Milano, Italy, Apr 16, 2020 (guest of Prof. R. Bellocchio).
13. *Population-based studies in biomedicine: value for public & personalized health*, within the 2nd edition of the *Population-based studies and biobanks in the -omics era* course, organized by the Eurac Research Institute for Biomedicine for the HOROS PhD Programme Medical University Innsbruck; Bolzano, Italy, Nov 28-29, 2019.
12. *Genome-wide association studies and beyond*, within the 2nd edition of the *Population-based studies and biobanks in the -omics era* course, organized by the Eurac Research Institute for Biomedicine for the HOROS PhD Programme Medical University Innsbruck; Bolzano, Italy, Nov 28-29, 2019.
11. *My genes, my kidneys: genetic research on chronic kidney disease / I miei reni, i miei geni: ricerca genetica sull'insufficienza renale cronica*. Science talk (video) at the Long night of research, Bolzano, Italy; Sep 27, 2019.
10. *Health: from individual characteristics to general knowledge / Gesundheit: Von individuellen Charakteristiken zur allgemeinen Erkenntnis / Salute: dalle caratteristiche individuali alla conoscenza generale*. Conference/Tagung: Gemeinsam für die Gesundheit aller! / Insieme per la salute di tutti!, Prato allo Stelvio (BZ), Italy; Nov 10, 2018.
9. *Genetics of renal function in the general population: evidences and perspectives*. Paris-Cardiovascular research Center (PARCC), Paris, France; Mar 30, 2018.
8. *Moving beyond genome-wide association studies: some possible pathways*. Institute of Genetics and Biophysics "Adriano Buzzati-Traverso", National Research Council (CNR), Napoli, Italy; Oct 23, 2017.
7. *Population-based studies in genomics: value for public and personalized health*. Course *Genomics in the clinic* - PhD School in Molecular Medicine - San Raffaele University Hospital, Milano, Italy; Jun 29-30, 2017.
6. *Mid-size cohorts: international perspectives of the CHRIS study*. Illumina Biobank Webinar; Apr 21, 2015.
5. *Uncovering genes for renal function: recent results and methodological issues*. HuGeF - Human Genetics Foundation, Torino, Italy; May 3, 2013.
4. *Genome-wide association studies of renal function: methodological issues and novel loci*. University Medical Center Freiburg, Germany; Jun 29, 2012.
3. *Genetic epidemiology of renal function: what we are learning from SNP array studies*. (plenary lecture) San Raffaele Hospital University, Inst. of Genetics and Cell Biology, Milano, Italy; May 22, 2012.
2. *Uncovering Common Genetic Variants Associated with Kidney Function and Chronic Kidney Disease*. Harvard School of Public Health, Dept. of Biostatistics, Correlated and High-Dimensional Data Seminar, Boston MA, USA; Oct 18, 2010.
1. *Introduction to modern Genetic Epidemiology*. Master Course in Medical Statistics & Clinical Epidemiology, University of Verona; Jul 4, 2006.