EUROPEAN CURRICULUM VITAE FORMAT



PERSONAL INFORMATION

Name	ALA UGO
Year of birth	1977
Nationality	Italian
WORK EXPERIENCE	
2015-2016	Professor of "Abilita' informatiche" (Informatics) course at the S.U.I.S.M Scuola Universitaria Interfacoltà in Scienze Motorie di Torino (Interfaculty University School for the Motoric Sciences in Torino)
2015-2016	Professor of "Informatica" (Informatics) in the "C.I. FISICA E INFORMATICA" course at the Scuola Universitaria Interfacolta' per le Biotecnologie di Torino (Interfaculty University School for the Biotechnology in Torino)
2014-2015	Professor of "Abilita' informatiche" (Informatics) course at the S.U.I.S.M Scuola Universitaria Interfacoltà in Scienze Motorie di Torino (Interfaculty University School for the Motoric Sciences in Torino)
2014-2015	Professor of "Informatica" (Informatics) in the "C.I. FISICA E INFORMATICA" course at the Scuola Universitaria Interfacolta' per le Biotecnologie di Torino (Interfaculty University School for the Biotechnology in Torino)
2013-2014	Professor of "Abilita' informatiche" (Informatics) course at the S.U.I.S.M Scuola Universitaria Interfacoltà in Scienze Motorie di Torino (Interfaculty University School for the Motoric Sciences in Torino)
2013-2014	Professor of "Informatica" (Informatics) in the "C.I. FISICA E INFORMATICA" course at the Scuola Universitaria Interfacolta' per le Biotecnologie di Torino (Interfaculty University School for the Biotechnology in Torino)
2013	Teacher of "Statistica Applicata e Bioinformatica" (Applied statistics and Bioinformatics) – Corso IFTS - IVREA: Istituto di Istruzione Superiore "C. Olivetti»
2012-2013	Professor of "Abilita' informatiche" (Informatics) course at the S.U.I.S.M Scuola Universitaria Interfacoltà in Scienze Motorie di Torino (Interfaculty University School for the Motoric Sciences in Torino)
2012-2013	Teacher of "FISICA" (Physics) in the "Corso di Riallineamento Fisica" course at the Corso di Laurea Magistrale in Medicina e Chirurgia della Facoltà San Luigi Gonzaga - Orbassano (TO) (Master Degree in Medicine and Surgery at San Luigi Gonzaga Faculty)
2012-2013	Professor of "Informatica" (Informatics) in the "C.I. FISICA E INFORMATICA" course at the Scuola Universitaria Interfacolta' per le Biotecnologie di Torino (Interfaculty University School for the Biotechnology in Torino)
2011	Teacher of "Statistica Applicata e Bioinformatica" (Applied statistics and Bioinformatics) – Corso IFTS - TORINO: ITIS AVOGADRO
2010-2011	Teacher of "Biostatistica con Applicazioni Informatiche" (Biostatistics with Informatics applications) at the Scuola Universitaria Interfacolta' per le Biotecnologie di Torino (Interfaculty University School for the Biotechnology in Torino)
2009	Teacher of "Statistica Applicata e Bioinformatica" (Applied statistics and Bioinformatics) – Corso IFTS - BUSSOLENO: LICEO "NORBERTO ROSA"
2006-2011	Tutor for the practical course of " <i>Statistica per l'analisi dei dati di interesse biologico</i> " (Statistics for biological data analysis) in the context of the Scuola di Bioinformatica of the Fondazione per le Biotecnologie (<u>http://www.fobiotech.org/</u>)
2006-2010 Page 1 - Curriculum vitae of ALA Ugo	Tutor for the practical course of " <i>Abilita' informatiche</i> " (Informatics ability) in the context of the For more information go to www.cedefop.eu.int/transparency/ europa.eu.int/comm/education/index_en.html eurescv-search.com/

Corso di Laurea in Biotecnologie at the Universita' degli Studi di Torino; "Cultore della materia" from 2009

Molecular Biotechnology Center and the Department of Genetics, Biology and Biochemistry of

Conserved gene co-expression approaches to discover functional relationships among

- 2006-2010 Tutor for the practical course of "*Biologia Molecolare e Computazionale*" (Computational and Molecular Biology) in the context of the Corso di Laurea in Biotecnologie Molecolari at the Universita' degli Studi di Torino; "*Cultore della materia*" from 2010
- 2006-2007 Teacher at the Bionformatics Master organized by the *Fondazione per le Biotecnologie* in collaboration with the Universita' degli Studi di Torino. Topics: Perl programming, gene co-expression and phylogenetic analysis

1999-2006 Teacher of Mathematics and Physics in intermediate schools

EDUCATION AND TRAINING

Ph.D. in Molecular Biotechnology/Bioinformatics

 Name and type of organisation providing education and training
 Thesis title

Supervisor

2009

mammalian genes Prof. Ferdinando Di Cunto

the University of Torino (XXI cycle)

2005

 Name and type of organisation providing education and training
 Thesis title

Implementazione di un sistema per analisi di coespressione uomo-topo basato su dati

University of Torino and Fondazione per le Biotecnologie, Torino, Italy

Affymetrix ("Implementation of a tool for human-mouse co-expression analysis based on Affymetrix data")

Studio numerico della funzione di Wigner e applicazioni" ("Numerical study of Wigner function

Supervisor Prof. Ferdinando di Cunto

and applications")

108 out of 110

Dr Marco Genovese

• Final grade 110 out of 110

2004

Master's degree in Theoretical Physics University of Torino

Postgraduate Master in Bioinformatics

 Name and type of organisation providing education and training
 Thesis title

Supervisor

Final grade

POSTDOCTORAL TRAINING

12/2014 - 12/2015

Name and type of organisation providing education and training • Supervisor 12/2013 – 12/2014

Name and type of organisation providing education and training • Supervisor

05/2012 - 11/2013 Name and type of organisation

providing education and training • Supervisor 05/2011 - 04/2012

 Name and type of organisation providing education and training
 Supervisor

. 01/2010 - 04/2011

Page 2 - Curriculum vitae of ALA Ugo Postdoctoral Fellowship – Assegno di ricerca – EPIGEN - Sviluppo di approcci computazionali per l'integrazione di dati epigenomici in Drosophila melanogaster Computational Biology Unit @ Molecular Biotechnology Center (MBC) -Dept. of Molecular Biotechnology and Health Sciences Ferdinando Di Cunto, PhD and Paolo Provero, PhD Postdoctoral Fellowship - Assegno di ricerca - EPIGEN - Sviluppo di approcci computazionali per l'integrazione di dati epigenomici in Drosophila melanogaster Computational Biology Unit @ Molecular Biotechnology Center (MBC) -Dept. of Molecular Biotechnology and Health Sciences Ferdinando Di Cunto, PhD and Paolo Provero, PhD Postdoctoral Fellowship Computational Biology Unit @ Molecular Biotechnology Center (MBC) -Dept. of Molecular Biotechnology and Health Sciences Paolo Provero, PhD and Ferdinando Di Cunto, PhD Postdoctoral Fellowship BIDMC, Harvard Medical School and Molecular Biotechnology Center and the Department of Genetics, Biology and Biochemistry of the University of Torino PierPaolo Pandolfi, MD PhD and Paolo Provero, PhD Postdoctoral Fellowship For more information go to

www.cedefop.eu.int/transparency/ europa.eu.int/comm/education/index_en.html eurescv-search.com/ Name and type of organisation providing education and training
 Supervisor Molecular Biotechnology Center and the Department of Genetics, Biology and Biochemistry of the University of Torino Paolo Provero, PhD

RESEARCH OUTPUT

Scientific Publications (*first co-author)

- Procopio MG, Laszlo C, Al Labban D, Kim DE, Bordignon P, Jo SH, Goruppi S, Menietti E, Ostano P, Ala U, Provero P, Hoetzenecker W, Neel V, Kilarski WW, Swartz MA, Brisken C, Lefort K, Dotto GP. "Combined CSL and p53 downregulation promotes cancer-associated fibroblast activation." Nat Cell Biol. 2015 Sep;17(9):1193-204. doi: 10.1038/ncb3228. Epub 2015 Aug 24.
- Karreth FA, Reschke M, Ruocco A, Ng C, Chapuy B, Léopold V, Sjoberg M, Keane TM, Verma A, Ala U, Tay Y, Wu D, Seitzer N, Velasco-Herrera MD, Bothmer A, Fung J, Langellotto F, Rodig SJ, Elemento O, Shipp MA, Adams DJ, Chiarle R, Pandolfi PP. "The BRAF Pseudogene Functions as a Competitive Endogenous RNA and Induces Lymphoma In Vivo" Cell. 2015 Apr 1. pii: S0092-8674(15)00244-5. doi: 10.1016/j.cell.2015.02.043. [Epub ahead of print]
- Lunardi A, Varmeh S, Chen M, Taulli R, Guarnerio J, Ala U, Seitzer N, Ishikawa T, Carver BS, Hobbs RM, Quarantotti V, Ng C, Berger AH, Nardella C, Poliseno L, Montironi R, Castillo-Martin M, Cordon-Cardo C, Signoretti S, Pandolfi PP "Suppression of CHK1 by ETS family members promotes DNA damage response by-pass and tumorigenesis" Cancer Discov. 2015 Feb 4. pii: CD-13-1050
- Coda DM, Lingua MF, Morena D, Foglizzo V, Bersani F, Ala U, Ponzetto C, Taulli R. "Smyd1 And G6Pd Modulation Are Critical Events For Mir-206-Mediated Differentiation Of Rhabdomyosarcoma" Cell Cycle. 2015 Feb 2:0
- Jlenia Guarnerio, Nadia Coltella, Ugo Ala, Giovanni Tonon, Pier Paolo Pandolfi and Rosa Bernardi. "Bone Marrow Endosteal Mesenchymal Progenitors Depend on HIF Factors for Maintenance and Regulation of Hematopoiesis" Stem Cell Reports j Vol. 2 j 1–16 j June 3, 2014
- Karreth FA, Ala U, Provero P, Pandolfi PP. "Pseudogenes as Competitive Endogenous RNAs: Target Prediction and Validation." Methods Mol Biol. 2014;1167:199-212. doi: 10.1007/978-1-4939-0835-6_13
- Reschke M, Clohessy JG, Seitzer N, Goldstein DP, Breitkopf SB, Schmolze DB, Ala U, Asara JM, Beck AH, Pandolfi PP. "Characterization and Analysis of the Composition and Dynamics of the Mammalian Riboproteome." Cell Rep. 2013 Sep 17. pii: S2211-1247(13)00438-5. doi: 10.1016/j.celrep.2013.08.014.
- Molineris I, Ala U, Provero P, Di Cunto F. "Drug repositioning for orphan genetic diseases through Conserved Anticoexpressed Gene Clusters (CAGCs)." BMC Bioinformatics 2013 Oct 2;14:288. doi: 10.1186/1471-2105-14-288
- Song SJ, Ito K, Ala U, Kats L, Webster K, Sun SM, Jongen-Lavrencic M, Manova-Todorova K, Teruya-Feldstein J, Avigan DE, Delwel R, Pandolfi PP. "The Oncogenic MicroRNA miR-22 Targets the TET2 Tumor Suppressor to Promote Hematopoietic Stem Cell Self-Renewal and Transformation." Cell Stem Cell. 2013 Jul 3;13(1):87-101. doi: 10.1016/j.stem.2013.06.003.
- Song SJ, Poliseno L, Song MS, Ala U, Webster K, Ng C, Beringer G, Brikbak NJ, Yuan X, Cantley LC, Richardson AL, Pandolfi PP. "MicroRNA-Antagonism Regulates Breast Cancer Stemness and Metastasis via TET-Family-Dependent Chromatin Remodeling." Cell. 2013 Jul 2. pii: S0092-8674(13)00765-4. doi: 10.1016/j.cell.2013.06.026. [Epub ahead of print]
- Taulli R, Foglizzo V, Morena D, Coda DM, Ala U, Bersani F, Maestro N, Ponzetto C. "Failure to downregulate the BAF53a subunit of the SWI/SNF chromatin remodeling complex contributes to the differentiation block in rhabdomyosarcoma." Oncogene. 2013 Jun 3. doi: 10.1038/onc.2013.188. [Epub ahead of print]
- Lunardi A, Ala U, Epping MT, Salmena L, Clohessy JG, Webster KA, Wang G, Mazzucchelli R, Bianconi M, Stack EC, Lis R, Patnaik A, Cantley LC, Bubley G, Cordon-Cardo C, Gerald WL, Montironi R, Signoretti S, Loda M, Nardella C, Pandolfi PP. "A co-clinical approach identifies mechanisms and potential therapies for androgen deprivation resistance in prostate cancer." Nat Genet. 2013 Jun 2;45(7):747-55. doi: 10.1038/ng.2650. Epub 2013 Jun 2.
- 13. Wang G, Lunardi A, Zhang J, Chen Z, Ala U, Webster KA, Tay Y, Gonzalez-

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Billalabeitia E, Egia A, Shaffer DR, Carver B, Liu XS, Taulli R, Kuo WP, Nardella C, Signoretti S, Cordon-Cardo C, Gerald WL, Pandolfi PP. "Zbtb7a suppresses prostate cancer through repression of a Sox9-dependent pathway for cellular senescence bypass and tumor invasion." Nat Genet. 2013 Jun 2;45(7):739-746. doi: 10.1038/ng.2654. Epub 2013 Jun 2.

- Ala U(*), Karreth FA, Bosia C, Pagnani A, Taulli R, Léopold V, Tay Y, Provero P, Zecchina R, Pandolfi PP. "Integrated transcriptional and competitive endogenous RNA networks are cross-regulated in permissive molecular environments." Proc Natl Acad Sci U S A. 2013 Apr 30;110(18):7154-9 doi: 10.1073/pnas.1222509110
- 15. Solej M, Martino V, Mao P, Enrico S, Rosa R, Fornari M, Destefano I, Ferrarese AG, Gibin E, Bindi F, Falcone A, **Ala U**, Nano M. "Early versus delayed laparoscopic cholecystectomy for acute cholecystitis" Minerva Chir. 2012 Oct;67(5):381-7.
- Ito K, Carracedo A, Weiss D, Arai F, Ala U, Avigan DE, Schafer ZT, Evans RM, Suda T, Lee CH, Pandolfi PP. "A PML-PPAR-δ pathway for fatty acid oxidation regulates hematopoietic stem cell maintenance." Nat Med. 2012 Aug 19. doi: 10.1038/nm.2882. [Epub ahead of print]
- Karreth FA, Tay Y, Perna D, Ala U, Tan SM, Rust AG, DeNicola G, Webster KA, Weiss D, Perez-Mancera PA, Krauthammer M, Halaban R, Provero P, Adams DJ, Tuveson DA, Pandolfi PP. "In vivo identification of tumor- suppressive PTEN ceRNAs in an oncogenic BRAF-induced mouse model of melanoma." Cell. 2011 Oct 14;147(2):382-95.
- Tay Y, Kats L, Salmena L, Weiss D, Tan SM, Ala U, Karreth F, Poliseno L, Provero P, Di Cunto F, Lieberman J, Rigoutsos I, Pandolfi PP."Coding-independent regulation of the tumor suppressor PTEN by competing endogenous mRNAs." Cell. 2011 Oct 14;147(2):344-57.
- Forlani G, Giarda E, Ala U, Di Cunto F, Salani M, Tupler R, Kilstrup-Nielsen C, Landsberger N: "The MeCP2/YY1 interaction regulates ANT1 expression at 4q35: novel hints for Rett syndrome pathogenesis." Hum Mol Genet. 2010 Aug 15;19(16):3114-23.
- Bianchi FT, Camera P, Ala U, Imperiale D, Migheli A, Boda E, Tempia F, Berto G, Bosio Y, Oddo S, Laferla FM, Taraglio S, Dotti CG, Di Cunto F. (2011). The Collagen Chaperone HSP47 Is a New Interactor of APP that Affects the Levels of Extracellular Beta-Amyloid Peptides.. PLOS ONE, vol. 6, ISSN: 1932-6203, doi: 10.1371/journal.pone.0022370
- 21. Ala U(*), Piro RM, Grassi E, Damasco C, Silengo L, Oti M, Provero P, Di Cunto F: "Prediction of human disease genes by human-mouse conserved coexpression analysis". PloS Comput Biol, 2008 Mar 28 ; 4(3).
- 22. Miozzi L, Piro RM, Rosa F, **Ala U**, Silengo L, Di Cunto F, Provero P:" Functional annotation and identification of candidate disease genes by computational analysis of normal tissue gene expression data." PLoS ONE. 2008 Jun 18;3(6).
- 23. Piro RM, Molineris I, Ala U, Provero P, Di Cunto F. "Candidate gene prioritization based on spatially mapped gene expression: an application to XLMR." Bioinformatics. 2010 Sep 15;26(18):i618-24.
- 24. Molineris I, Grassi E, **Ala U**, Di Cunto F, Provero P, "Evolution of promoter affinity for transcription factors in the human lineage." Molecular Biology and Evolution. 2011 Aug;28(8):2173-83. Epub 2011 Feb 18.
- Piro RM, Ala U(*), Molineris I, Grassi E, Bracco C, Perego GP, Provero P, Di Cunto F, "An atlas of tissue-specific conserved coexpression for functional annotation and disease gene prediction" European Journal of Human Genetics. 2011 Jun 8. doi: 10.1038/ejhg.2011.96. [Epub ahead of print]
- 26. Piro RM, Molineris I, **Ala U**, Di Cunto F."Evaluation of candidate genes from orphan FEB and GEFS+ loci by analysis of human brain gene expression atlases." PLoS One. 2011;6(8):e23149. Epub 2011 Aug 1
- Chapter: "Introduction to GRNs (Gene Regulatory Networks)" in "Handbook of Research on Computational Methodologies in Gene Regulatory Networks" (Edited By: Sanjoy Das, Kansas State University, USA; Doina Caragea, Kansas State University, USA; Stephen Welch, Kansas State University, USA; William H. Hsu, Kansas State University, USA); 2010
- Sections "Esercitiamoci insieme" e "Ricordati che ..." in "Dentro la fisica" Vol.2 (A. Caforio- A. Ferilli, Edumont Le Monnier Scuola)

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Book contributions

Reviewer activity: Reviewer for PlosONE, Biophysical Journal - Cell and Journal of Hematology & . Oncology **EPIGEN RNA-Seq Workshop** Workshop partecipation: . December 3-4, 2013. Bari Conference talks: **EPIGEN** Annual Meeting Roma, 21-24 April 2015 Talk: "Chronic disruption of the circadian rhythmicity and chromatin epigenetic modifications in the model organism Drosophila melanogaster" Festival della Scienza – Futuro Prossimo Genova, 23 October – 3 November 2013 Talk: "Big Omics: when the knowledge meets its boundaries" Festival della Scienza – Futuro Prossimo Genova, 25 October – 4 November 2012 Talk: "Facebook al tempo della Santa Inguisizione" XII Congresso FISV. Roma, 24-27 September 2012. Talk: "The ceRNA world: a new way of looking at the role of different RNA molecules." ABCD Meeting. • Gubbio, 18-20 Giugno 2009 Talk: "Tissue-specific human-mouse conserved co-expression networks for prediction of mammalian genes functional properties." • 5° Seminario SIBBM "Frontiers in Molecular Biology". Napoli, 4-6 giugno 2009. Talk: "Tissue-specific human-mouse conserved co-expression networks for prediction of mammalian genes functional properties." IX Convegno FISV. Riva del Garda, 26-29 September 2007. Talk: "Human-Mouse conserved co-expression networks predict candidate disease genes" Conference partecipation: III European bioalpine convention. • Geneve, 3-4 December 2008 Poster: "Tissue- and state- specific co-expression analysis for prediction of mammalian genes functional properties and of human disease genes" Winner in the Bioinformatics Poster Session III Functional genomics and disease. • Innsbruck, 1-4 October 2008 Poster: "A wide collection of microarray data to infer global and specific biological relationships across species" Riunione Nazionale Dottorandi ABCD 2007. Rimini, 17-19 May 2007. Poster: "Generation and analysis of a human-mouse conserved co-expression network" BITS. Napoli, 26-28 April 2007. Poster: "Generation and analysis of a human-mouse conserved co-expression network" EuroGP-EvoCOP-EvoBIO-EvoWorkshop. Valencia, 11-13 April 2007 3th EMBO Conference: From Functional Genomics to Systems Biology. Heidelberg, 14-17 November, 2006. Poster: "Generation and analysis of a human-mouse conserved co-expression network" BITS. Bologna, 28-29 April 2006.

PERSONAL SKILLS AND COMPETENCES

MOTHER TONGUE	Italian
OTHER LANGUAGES	
 Reading skills Writing skills Verbal skills 	English Excellent Good Good
 Reading skills Writing skills Verbal skills 	French Excellent Good Good
SOCIAL SKILLS AND COMPETENCES	Good experience in working with other people, in positions where communication and teamwork is very important, still improved during my Post-Doc period at the Harvard Medical Schools Cancer Center in Boston, where I had the great opportunity to work in a very exciting multicultural environment.
ORGANISATIONAL SKILLS AND COMPETENCES	Good experience in team working, where the ability to cooperate and the encouragement of cooperation is essential, acquired both in the scientific environment and in other music and cultural associations, where I was in the directional board.
TECHNICAL SKILLS AND COMPETENCES	<u>Operating System</u> : Linux, Unix, Windows 2000/XP/Vista/7 <u>Programming Languages</u> : Fortran, Perl, C, R, MySQL <u>Applications</u> : OFFICE 2000, LaTeX, Mathematica, GraphPad Prism <u>Advanced use</u> of principal bioinformatics softwares for sequenze analysis, microarray normalization and statistics, NGS data: BLAST, CLUSTALW, PHILIP, Cluster 3.0, TreeView, RMA, MAS5, Aracne, MrBayes, GSEA, Bowtie, TopHat, Cufflink
NARRATIVE REPORT	From the beginning of my PhD until now, I always had great opportunities to work in many scientific teams where I had the chance to grow my attitude to collaborate with other people acquiring good experience in team working, where the ability to cooperate and the encouragement of cooperation is essential. This experience has been improved further not only in other music and cultural associations, where I was in the directional board, but mainly during my Post-Doc period at the Harvard Medical Schools Cancer Center in Boston, where I had the great opportunity to work in a very exciting multicultural environment. My major activities have been focused both on a scientific activity with the attempt to improve the field of analysis of biological networks and the integration of expression data with transcription factors binding sites and miRNA target prediction and functions. The goal is to obtain a more structured picture of cell function and the teaching activity focused to give students instruments to analyze and manipulate huge amounts of data belonging to the new biological high-throughput technologies. My major research activities have been focused on the gene functional annotation and disease gene prediction through study of gene co-expression, mostly based on analysis of micro-array data. I have shown, in a systematical way, that the integration of human-mouse conserved co-expression networks with a phenotype similarity map allows the efficient identification of disease genes in large genomic regions. Moreover, I showed that the simultaneous use of generic and tissue-specific conserved co-expression networks, when combined with phenome derived networks, is an improvement towards a more efficient prediction of human disease genes than the use of generic networks alone. Before joining Pandolfi Lab at Beth Israel Deaconess Medical Center, I worked also on the integration of transcription factors binding sites prediction, via sequence alignment of positional weight matrix and phylogenetic conservation, and miRNA
Page 6 - Curriculum vitae of ALA Ugo	For more information go to www.cedefop.eu.int/transparency/ europa.eu.int/comm/education/index_en.html eurescv-search.com/

Generation Sequencing data (in particular RNA_Seq experiments), representing an impressive new field of information far more precise and accurate.

My teaching activity began with Mathematics and Physics in the intermediate schools and moved to the Academia as "*Professore a contratto*". Now it includes two major fields: *Statistics* as a fundamental instrument for the comprehension and the design of biomedical studies and *Introduction to Programming Language* in order to provide biologists and bio-informaticians the expertise to properly query biological databases and to perform data and meta-data analysis in a more flexible way. In the group where I am working now, I have the possibility to follow and coordinate the graduation projects of some students (based mainly on the analysis of ncRNAs function, with a special interest on miRNAs and circRNAs).

During these years, I have had some satisfying and very important insights in the field of conserved gene co-expression networks, gene disease prediction and genome non-coding space functions, having the possibility to merge scientific and teaching activities in a fruitful way, sharing new acquisitions with the students I had the opportunity to follow for their graduation.

DRIVING LICENCE(S)

Driving licence of type B (from December 1995)

Il sottoscritto esprime il proprio consenso affinché i dati personali forniti possano essere trattati, nel rispetto del Decreto Legislativo n. 196/2003, per gli adempimenti connessi alla presente procedura.

Torino, 30 Settembre 2015

Ugo ALA

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