

THE TADbit AND TADkit SOFTWARE FOR MODELING AND ANALYZING 3D GENOMES.

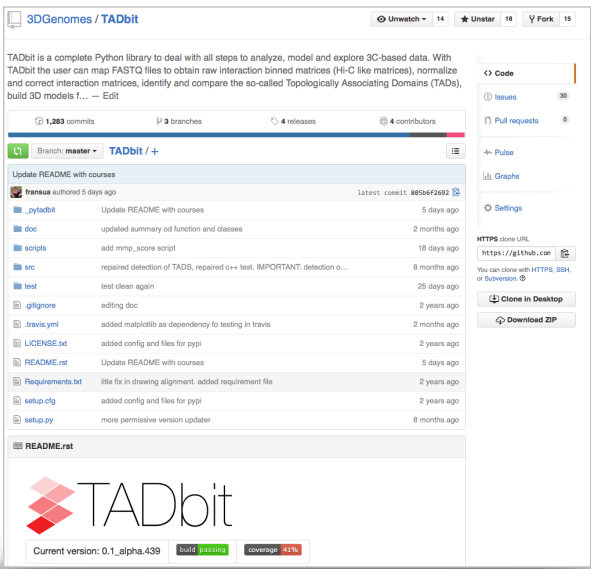
François Serra^{1,2}, Davide Baù^{1,2}, Mike Goodstadt^{1,2} and Marc A. Marti-Renom^{1,2,3}

¹Structural Genomics Group. Centre Nacional d'Anàlisi Genòmica - Centre de Regulació Genòmica (CNAG-CRG), Barcelona, Spain. ²Gene Regulation, Stem Cells and Cancer Program, Centre de Regulació Genòmica (CRG), Barcelona, Spain. ³ICREA. Institutió Catalana de Recerca i Estudis Avançats, Catalonia, Spain

The sequence of a genome alone is insufficient to characterize many genomic processes carried out in the cell nucleus. To achieve this, the knowledge of the three-dimensional architecture of a genome is necessary. Advances in genomic technologies and the development of new analytical methods, such as Chromosome Conformation Capture (3C) and its derivatives, allow now to gain insights into how the genome is organized. We have developed TADbit, a computational pipeline for the three-dimensional analysis and modeling of genomic regions, as well as TADkit a general genome browser with capability to connect 1D (genomic), 2Ds (epigenomic) and 3D (modeling) datasets. TADbit and TADkit are available as open-source code at <http://www.3DGenomes.org>.



<http://3DGenomes.org/tadbit>



<http://3DGenomes.org/tadkit>



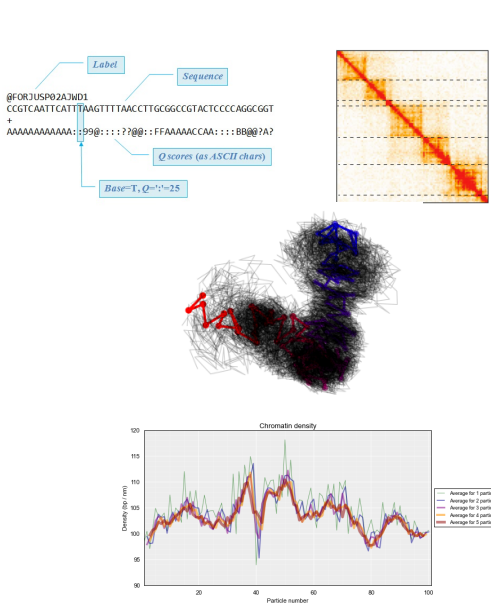
<https://github.com/angular/angular.js>



<https://github.com/mbostock/d3>

THREE.js

<https://github.com/mrdoob/three.js>



THREE.js

FragmentID	chromosome	start	end	HP1	EP	p31	POD	LOLAL	JAL
15GATCA3821	chrX	15598746	15598746	0	1	0	0	0	0
15GATCA3822	chrX	15598747	15598747	0	1	0	0	0	0
15GATCA3823	chrX	15598748	15598748	0	1	0	0	0	0
15GATCA3824	chrX	15598749	15598749	0	1	0	0	0	0
15GATCA3825	chrX	15598750	15598750	0	1	0	0	0	0
15GATCA3826	chrX	15598751	15598751	0	1	0	0	0	0
15GATCA3827	chrX	15598752	15598752	0	1	0	0	0	0
15GATCA3828	chrX	15598753	15598753	0	1	0	0	0	0
15GATCA3829	chrX	15598754	15598754	0	1	0	0	0	0
15GATCA3830	chrX	15598755	15598755	0	1	0	0	0	0
15GATCA3831	chrX	15598756	15598756	0	1	0	0	0	0
15GATCA3832	chrX	15598757	15598757	0	1	0	0	0	0
15GATCA3833	chrX	15598758	15598758	0	1	0	0	0	0
15GATCA3834	chrX	15598759	15598759	0	1	0	0	0	0
15GATCA3835	chrX	15598760	15598760	0	1	0	0	0	0
15GATCA3836	chrX	15598761	15598761	0	1	0	0	0	0
15GATCA3837	chrX	15598762	15598762	0	1	0	0	0	0
15GATCA3838	chrX	15598763	15598763	0	1	0	0	0	0
15GATCA3839	chrX	15598764	15598764	0	1	0	0	0	0
15GATCA3840	chrX	15598765	15598765	0	1	0	0	0	0
15GATCA3841	chrX	15598766	15598766	0	1	0	0	0	0
15GATCA3842	chrX	15598767	15598767	0	1	0	0	0	0
15GATCA3843	chrX	15598768	15598768	0	1	0	0	0	0
15GATCA3844	chrX	15598769	15598769	0	1	0	0	0	0
15GATCA3845	chrX	15598770	15598770	0	1	0	0	0	0
15GATCA3846	chrX	15598771	15598771	0	1	0	0	0	0
15GATCA3847	chrX	15598772	15598772	0	1	0	0	0	0
15GATCA3848	chrX	15598773	15598773	0	1	0	0	0	0
15GATCA3849	chrX	15598774	15598774	0	1	0	0	0	0
15GATCA3850	chrX	15598775	15598775	0	1	0	0	0	0
15GATCA3851	chrX	15598776	15598776	0	1	0	0	0	0
15GATCA3852	chrX	15598777	15598777	0	1	0	0	0	0
15GATCA3853	chrX	15598778	15598778	0	1	0	0	0	0
15GATCA3854	chrX	15598779	15598779	0	1	0	0	0	0
15GATCA3855	chrX	15598780	15598780	0	1	0	0	0	0
15GATCA3856	chrX	15598781	15598781	0	1	0	0	0	0
15GATCA3857	chrX	15598782	15598782	0	1	0	0	0	0
15GATCA3858	chrX	15598783	15598783	0	1	0	0	0	0
15GATCA3859	chrX	15598784	15598784	0	1	0	0	0	0
15GATCA3860	chrX	15598785	15598785	0	1	0	0	0	0
15GATCA3861	chrX	15598786	15598786	0	1	0	0	0	0
15GATCA3862	chrX	15598787	15598787	0	1	0	0	0	0
15GATCA3863	chrX	15598788	15598788	0	1	0	0	0	0
15GATCA3864	chrX	15598789	15598789	0	1	0	0	0	0
15GATCA3865	chrX	15598790	15598790	0	1	0	0	0	0
15GATCA3866	chrX	15598791	15598791	0	1	0	0	0	0
15GATCA3867	chrX	15598792	15598792	0	1	0	0	0	0
15GATCA3868	chrX	15598793	15598793	0	1	0	0	0	0
15GATCA3869	chrX	15598794	15598794	0	1	0	0	0	0
15GATCA3870	chrX	15598795	15598795	0	1	0	0	0	0
15GATCA3871	chrX	15598796	15598796	0	1	0	0	0	0