

# Incorporating Scientific Practices into the BBNJ ILBI

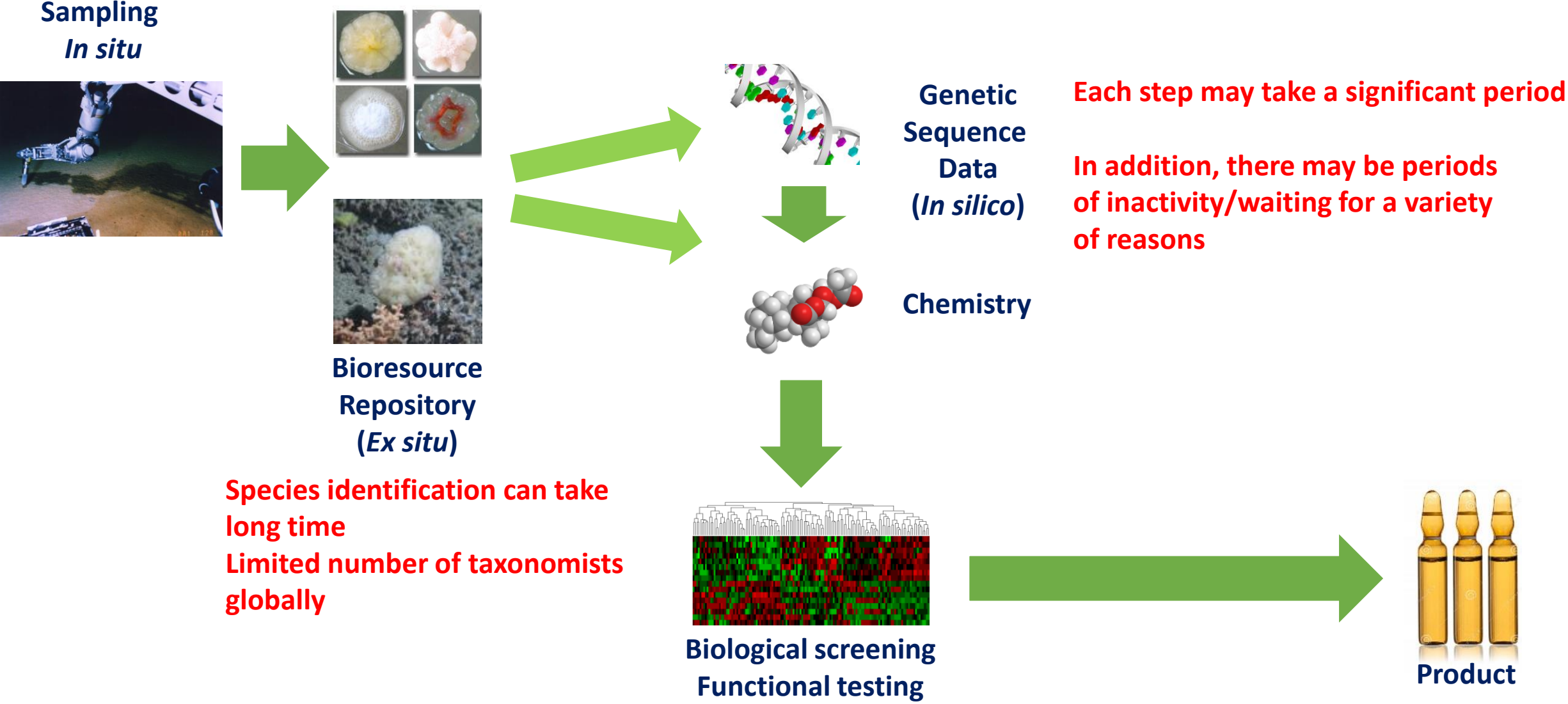
Marcel Jaspars

Marine Biodiscovery Centre

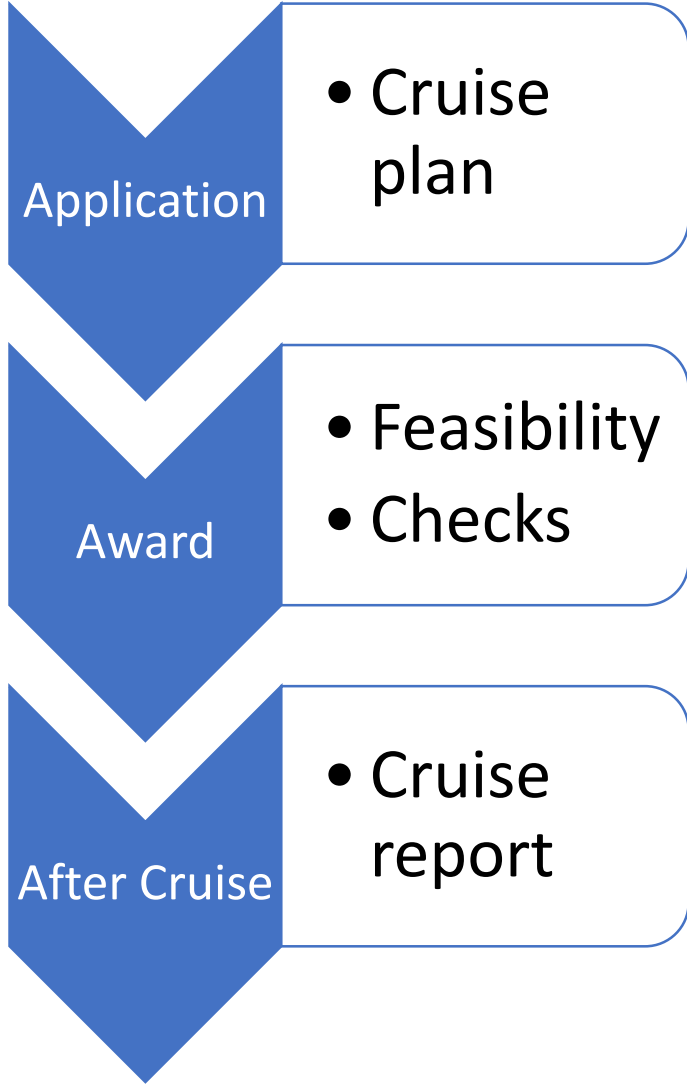
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# The Biodiscovery Pipeline



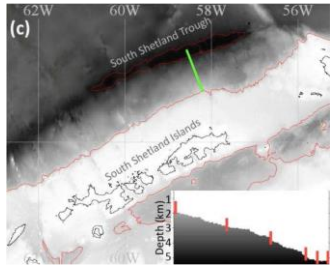
# Marine Scientific Research Planning



- Cruise plan

- Feasibility
- Checks

- Cruise report



VESSEL	CRUISE	DATE	SAMPLING GEAR	DIVE #	SAMPLE NUMBER	LATITUDE	LONGITUDE	DEPTH	SAMPLE TYPE	DESTINATION
Scotia	09155	18/07/2015	Van Veen Grab	3	09155_VV_38	57.980247N	15.548327W	1396.4	SED SubSamp	JASPARS
Scotia	09155	18/07/2015	Van Veen Grab	3	09155_VV_38	57.980247N	15.548327W	1396.4	SED SubSamp	JASPARS
Scotia	09155	18/07/2015	Van Veen Grab	3	09155_VV_54	57.956208N	15.538247W	1205.8	SED SubSamp	JASPARS
Scotia	09155	18/07/2015	Van Veen Grab	3	09155_VV_58	57.956208N	15.538247W	1205.8	SED SubSamp	JASPARS
Scotia	09155	19/07/2015	Banded Lander	1	09155_M_1_E1	57.953181N	15.550793W		Amphipods	PIBERTNEY
Scotia	09155	19/07/2015	Banded Lander	1	09155_M_1_E1	57.953181N	15.550793W		Amphipods	PIBERTNEY
Scotia	09155	19/07/2015	Megacore	1	09155_MC_1_A	57.955676N	15.550255W		SED SubSamp	JASPARS
Scotia	09155	19/07/2015	Megacore	1	09155_MC_1_B	57.955676N	15.550255W		SED SubSamp	JASPARS
Scotia	09155	19/07/2015	Megacore	2	09155_MC_2_A4	57.955577N	15.550249W		Bacterial Mat	JASPARS
Scotia	09155	19/07/2015	Megacore	2	09155_MC_2_B8	57.955577N	15.550249W		Bacterial Mat	JASPARS
Scotia	09155	19/07/2015	Megacore	2	09155_MC_2_C6	57.955577N	15.550249W		Bacterial Mat	JASPARS
Scotia	09155	19/07/2015	Megacore	2	09155_MC_2_D0	57.955577N	15.550249W		Bacterial Mat	JASPARS
Scotia	09155	19/07/2015	Megacore	2	09155_MC_2_E4	57.955577N	15.550249W		Bacterial Mat	JASPARS

## MSR

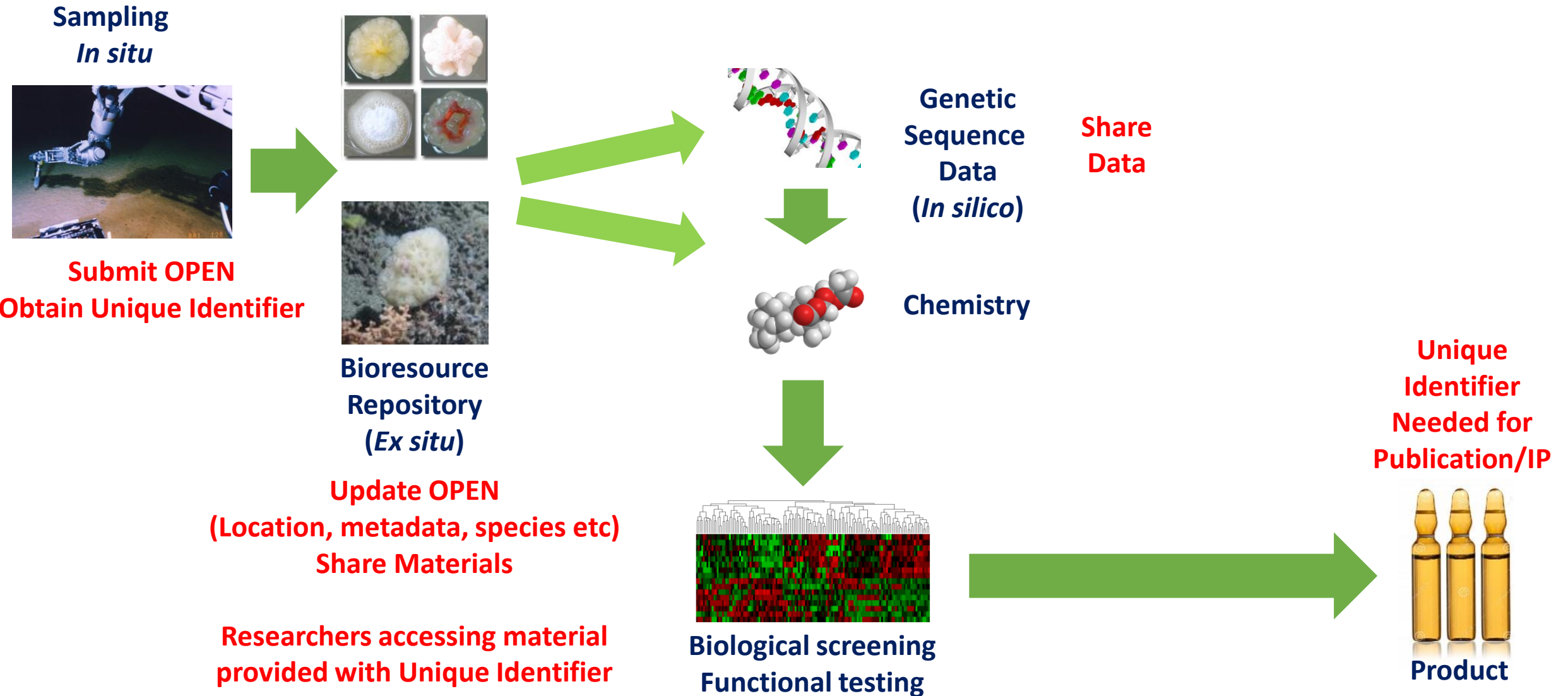
- Most cruises are for basic research
- Freedom of MSR
- File cruise report to funder

## How Might Bioprospecting be Accommodated?

- Require updates on cruise report to alert to change of use
- Notify when commercialisation occurs

Opportunity – Global cruise data available in consistent format will benefit scientific community

# Obligatory Prior Electronic Notification (OPEN)

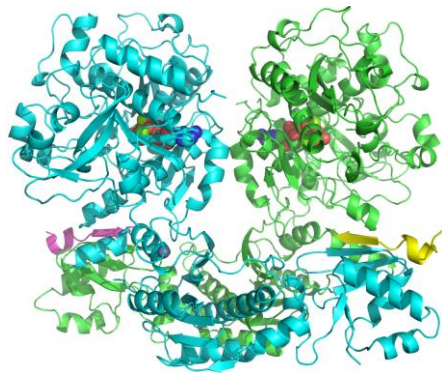


# Online Prior Electronic Notification

- Use of cruise plans and cruise reports builds on existing practice.
- Agree on minimal dataset to accompany each sample collected.
- Share materials, but have processes to ensure maximum value is obtained from rare samples.
- Develop unique identifier to work with existing ex situ collection data infrastructure and digital sequence information databases
- Fee-free access to materials and raw data – scope to be clarified but initially intended to mean nucleotide sequence data (DNA/RNA sequences).
- Possibility for exclusivity period on samples/data to enable scientific research to be completed, or for commercial research to be protected. Exclusivity period can be granted without fee for defined period, after which payment to central fund must be made.

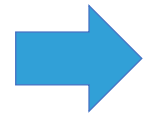
# Exclusivity Periods in Scientific Practice

- Protein Data Bank entries are placed on hold for one year from the date of deposition. They may be released earlier on a date specified by the Contact Author. When the corresponding electronic or paper publication occurs, the entry must be released if the journal policy requires release upon publication.



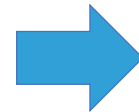
Solve protein crystal structure

<http://www.rcsb.org/pdb/home/home.do>



RCSB **PDB**  
PROTEIN DATA BANK

Deposit data  
Get PDB ID



ARTICLE  
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nature  
chemical biology

Structural analysis of leader peptide binding enables leader-free cyanobactin processing

Jesko Koehnke<sup>1</sup>, Greg Mann<sup>1</sup>, Andrew F Bent<sup>1</sup>, Hannes Ludewig<sup>1</sup>, Sally Shirran<sup>1</sup>, Catherine Botting<sup>1</sup>, Tomas Lebl<sup>1</sup>, Wael E Houssen<sup>2-4</sup>, Marcel Jaspars<sup>2</sup> & James H Naismith<sup>1,5\*</sup>



**1 Year**

Data Released

# Current Thinking on Exclusivity Periods for DSI

INSIGHTS

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**POLICY FORUM**

DATA ACCESS

## *Toward unrestricted use of public genomic data*

Publication interests should not limit access to public data

*By* Rudolf I. Amann, Shakuntala Baichoo, Benjamin J. Blencowe, Peer Bork, Mark Borodovsky, Cath Brooksbank, Patrick S. G. Chain, Rita R. Colwell, Daniele G. Daffonchio, Antoine Danchin, Victor de Lorenzo, Pieter C. Dorrestein, Robert D. Finn, Claire M. Fraser, Jack A. Gilbert, Steven J. Hallam, Philip Hugenholtz, John P. A. Ioannidis, Janet K. Jansson, Jihyun F. Kim, Hans-Peter Klenk, Martin G. Klotz, Rob Knight, Konstantinos T. Konstantinidis, Nikos C. Kyrpides, Christopher E. Mason, Alice C. McHardy, Folker Meyer, Christos A. Ouzounis, Aristides A. N. Patrinos, Mircea Podar, Katherine S. Pollard, Jacques Ravel, Alejandro Reyes Muñoz, Richard J. Roberts, Ramon Rosselló-Móra, Susanna-Assunta Sansone, Patrick D. Schloss, Lynn M. Schriml, João C. Setubal, Rotem Sorek, Rick L. Stevens, James M. Tiedje, Adrian Turjanski, Gene W. Tyson, David W. Ussery, George M. Weinstock, Owen White, William B. Whitman, Ioannis Xenarios

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