



## Ixiaro

### Procedural steps taken and scientific information after the authorisation

| Application number | Scope  | Opinion/ Notification <sup>1</sup> issued on | Commission Decision Issued <sup>2</sup> / amended on | Product Information affected <sup>3</sup> | Summary |
|--------------------|--|--|--|---|---------|
| IA/0108            | A.7 - Administrative change - Deletion of manufacturing sites  | 19/03/2021                                   |  | Annex II and PL                           |         |
| IB/0106            | B.II.b.2.a - Change to importer, batch release arrangements and quality control testing of the FP - Replacement/addition of a site where batch | 29/01/2021                                   | n/a  |   |         |

<sup>1</sup> Notifications are issued for type I variations and Article 61(3) notifications (unless part of a group including a type II variation or extension application or a worksharing application). Opinions are issued for all other procedures.

<sup>2</sup> A Commission decision (CD) is issued for procedures that affect the terms of the marketing authorisation (e.g. summary of product characteristics, annex II, labelling, package leaflet). The CD is issued within two months of the opinion for variations falling under the scope of Article 23.1a(a) of Regulation (EU) No. 712/2012, or within one year for other procedures.

<sup>3</sup> SmPC (Summary of Product Characteristics), Annex II, Labelling, PL (Package Leaflet).



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|           | control/testing takes place   |            |     |  |  |
| IB/0105/G | <p>This was an application for a group of variations.</p> <p>A.5.b - Administrative change - Change in the name and/or address of a manufacturer/importer of the finished product, including quality control sites (excluding manufacturer for batch release)</p> <p>A.4 - Administrative change - Change in the name and/or address of a manufacturer or an ASMF holder or supplier of the AS, starting material, reagent or intermediate used in the manufacture of the AS or manufacturer of a novel excipient</p> <p>B.III.1.b.3 - Submission of a new/updated or deletion of Ph. Eur. TSE Certificate of Suitability - Updated certificate from an already approved manufacturer</p> <p>B.III.1.b.3 - Submission of a new/updated or deletion of Ph. Eur. TSE Certificate of Suitability - Updated certificate from an already approved manufacturer</p> <p>B.I.a.2.a - Changes in the manufacturing process of the AS - Minor change in the manufacturing process of the AS</p> | 25/11/2020 | n/a |  |  |
| IB/0104   | B.I.a.2.a - Changes in the manufacturing process of the AS - Minor change in the manufacturing process of the AS  | 27/07/2020 | n/a |  |  |
| IB/0103   | B.II.d.2.d - Change in test procedure for the finished product - Other changes to a test procedure  | 06/04/2020 | n/a |  |  |

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|           | (including replacement or addition)   |            |            |      |  |
| IB/0102   | B.I.b.2.a - Change in test procedure for AS or starting material/reagent/intermediate - Minor changes to an approved test procedure   | 29/01/2020 | n/a        |      |  |
| IB/0101/G | <p>This was an application for a group of variations.</p> <p>A.5.b - Administrative change - Change in the name and/or address of a manufacturer/importer of the finished product, including quality control sites (excluding manufacturer for batch release)</p> <p>A.5.b - Administrative change - Change in the name and/or address of a manufacturer/importer of the finished product, including quality control sites (excluding manufacturer for batch release)</p> <p>B.II.f.1.b.5 - Stability of FP - Extension of the shelf life of the finished product - Biological/immunological medicinal product in accordance with an approved stability protocol</p> <p>B.II.f.1.e - Stability of FP - Change to an approved stability protocol</p> | 20/11/2019 | 10/03/2020 | SmPC |  |
| IA/0100/G | <p>This was an application for a group of variations.</p> <p>A.4 - Administrative change - Change in the name and/or address of a manufacturer or an ASMF holder or supplier of the AS, starting material, reagent or intermediate used in the manufacture of the AS or manufacturer of a novel excipient</p> <p>A.4 - Administrative change - Change in the name</p>   | 30/08/2019 | n/a        |      |  |

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|           | and/or address of a manufacturer or an ASMF holder or supplier of the AS, starting material, reagent or intermediate used in the manufacture of the AS or manufacturer of a novel excipient   |            |            |                            |  |
| IB/0099   | B.I.a.2.a - Changes in the manufacturing process of the AS - Minor change in the manufacturing process of the AS  | 14/08/2019 | n/a        |                            |  |
| IAIN/0098 | B.II.b.2.c.1 - Change to importer, batch release arrangements and quality control testing of the FP - Replacement or addition of a manufacturer responsible for importation and/or batch release - Not including batch control/testing  | 12/04/2019 | 10/03/2020 | Annex II and PL            |  |
| IB/0097/G | This was an application for a group of variations.<br><br>B.II.b.2.a - Change to importer, batch release arrangements and quality control testing of the FP - Replacement/addition of a site where batch control/testing takes place<br><br>B.II.b.2.c.2 - Change to importer, batch release arrangements and quality control testing of the FP - Including batch control/testing | 02/04/2019 | 10/03/2020 | Annex II, Labelling and PL |  |
| IB/0096   | C.I.11.z - Introduction of, or change(s) to, the obligations and conditions of a marketing authorisation, including the RMP - Other variation   | 15/03/2019 | n/a        |                            |  |
| IB/0095   | B.I.a.2.a - Changes in the manufacturing process of the AS - Minor change in the manufacturing process  | 01/03/2019 | n/a        |                            |  |

|                   |   |            |            |                                  |                                   |
|-------------------|---|------------|------------|----------------------------------|-----------------------------------|
|                   | of the AS   |            |            |                                  |                                   |
| R/0091            | Renewal of the marketing authorisation.   | 20/09/2018 | 22/11/2018 | SmPC, Annex II, Labelling and PL |                                   |
| PSUSA/1801/201803 | Periodic Safety Update EU Single assessment - japanese encephalitis virus (inactivated)   | 31/10/2018 | n/a        |                                  | PRAC Recommendation - maintenance |
| IB/0093/G         | This was an application for a group of variations.<br><br>B.I.a.2.a - Changes in the manufacturing process of the AS - Minor change in the manufacturing process of the AS<br>B.III.1.b.3 - Submission of a new/updated or deletion of Ph. Eur. TSE Certificate of Suitability - Updated certificate from an already approved manufacturer<br>B.I.b.1.z - Change in the specification parameters and/or limits of an AS, starting material/intermediate/reagent - Other variation<br>B.III.1.b.3 - Submission of a new/updated or deletion of Ph. Eur. TSE Certificate of Suitability - Updated certificate from an already approved manufacturer | 17/10/2018 | n/a        |                                  |                                   |
| IAIN/0094         | B.II.b.1.a - Replacement or addition of a manufacturing site for the FP - Secondary packaging site  | 18/09/2018 | n/a        |                                  |                                   |
| IB/0092           | B.II.d.2.d - Change in test procedure for the finished product - Other changes to a test procedure  | 31/07/2018 | n/a        |                                  |                                   |

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|                   | (including replacement or addition)   |            |            |             |   |
| IA/0089           | B.III.1.b.3 - Submission of a new/updated or deletion of Ph. Eur. TSE Certificate of Suitability - Updated certificate from an already approved manufacturer  | 02/05/2018 | n/a        |             |   |
| IB/0088/G         | This was an application for a group of variations.<br><br>B.II.c.2.d - Change in test procedure for an excipient<br>- Other changes to a test procedure (including replacement or addition)<br><br>B.II.d.2.b - Change in test procedure for the finished product - Deletion of a test procedure if an alternative method is already authorised | 06/03/2018 | n/a        |             |   |
| PSUSA/1801/201703 | Periodic Safety Update EU Single assessment - japanese encephalitis virus (inactivated)   | 09/11/2017 | 08/01/2018 | SmPC and PL | Refer to Scientific conclusions and grounds recommending the variation to terms of the Marketing Authorisation(s)' for PSUSA/1801/201703. |
| IA/0087/G         | This was an application for a group of variations.<br><br>A.z - Administrative change - Other variation<br>A.7 - Administrative change - Deletion of manufacturing sites<br>A.7 - Administrative change - Deletion of manufacturing sites   | 14/12/2017 | n/a        |             |   |
| IB/0086           | B.I.b.2.a - Change in test procedure for AS or starting material/reagent/intermediate - Minor changes to an approved test procedure   | 26/06/2017 | n/a        |             |   |

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| IB/0084/G         | This was an application for a group of variations.<br><br>B.I.e.4.b - Changes to an approved change management protocol - Minor changes that do not change the strategy defined in the protocol<br>B.I.e.5.c - Implementation of changes foreseen in an approved change management protocol - For a biological/immunological medicinal product               | 31/05/2017 | n/a        |                                  |  |
| II/0083           | B.I.a.2.c - Changes in the manufacturing process of the AS - The change refers to a [-] substance in the manufacture of a biological/immunological substance which may have a significant impact on the medicinal product and is not related to a protocol   | 15/12/2016 | n/a        |                                  |  |
| PSUSA/1801/201603 | Periodic Safety Update EU Single assessment - japanese encephalitis virus (inactivated)  | 27/10/2016 | n/a        |                                  | PRAC Recommendation - maintenance  |
| IB/0081/G         | This was an application for a group of variations.<br><br>B.II.b.3.a - Change in the manufacturing process of the finished or intermediate product - Minor change in the manufacturing process<br>B.II.b.4.a - Change in the batch size (including batch size ranges) of the finished product - Up to 10-fold compared to the originally approved batch size | 22/06/2016 | n/a        |                                  |  |
| II/0077           | To change the in-process (Neutralised Inactivated Viral Solution (NIV)) and active Substance specifications with an ELISA testing method for the determination of antigen content:   | 26/05/2016 | 28/04/2017 | SmPC, Annex II, Labelling and PL | The Final Vaccine Lot specifications have been changed and the protein stated in the product information, 6 µg/dose, has been replaced with 6 AU/dose (Antigen units/dose). Furthermore, the MAH took the opportunity to align the |

|         |  |            |            |                        |  |
|---------|--|------------|------------|------------------------|--|
|         | <p>NIV Total Protein Content <math>\geq 15 \mu\text{g/mL}</math> will be deleted</p> <p>Drug Substance Antigen Content <math>\geq 8 \text{ AU/mL}</math> to 8 - 18 AU/mL</p> <p>Drug Substance Total Protein Content 10-15 <math>\mu\text{g/mL}</math> to <math>\leq 20\mu\text{g/mL}</math></p> <p>Drug Substance Specific Activity <math>1.2 \pm 0.6 \text{ AU}/\mu\text{g}</math> will be deleted</p> <p>Consequently, the Final Vaccine Lot specifications are changed and the protein stated in the SPC (<math>6\mu\text{g/dose}</math>) will be replaced with 6 AU/dose (Antigen units/dose):</p> <p>Antigen Content (calculated) N/A to 7.6 - 17.1 AU/mL</p> <p>Total Protein (calculated) 9.5 -14.2 <math>\mu\text{g/mL}</math> will be deleted</p> <p>Furthermore, the MAH took the opportunity to align the Product information with the latest QRD template version 10.0.</p> <p>B.I.b.1.f - Change in the specification parameters and/or limits of an AS, starting material/intermediate/reagent - Change outside the approved specifications limits range for the AS</p> |            |            |                        | Product information with the latest QRD template version 10.0.   |
| II/0075 | Update of sections 4.2, 4.8 and 5.1 of the SmPC in order to update the immunogenicity and safety information and include recommendation on a booster dose in the paediatric population based on clinical trials IC51-322, IC51-324 and IC51-325. The Package Leaflet is updated accordingly. In addition,  | 01/04/2016 | 02/05/2016 | SmPC, Labelling and PL | According to the presented antibody persistence and booster data, amendment of the Section 4.2 of the SmPC is proposed, i.e. recommendation of booster dose for children and adolescents. In support of this change, the Section 5.1 has been updated accordingly with inclusion of the immunogenicity data. |



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|           | <p>the Marketing authorisation holder (MAH) took the opportunity to bring the PI in line with the latest QRD template version 9.1.</p> <p>C.I.4 - Change(s) in the SPC, Labelling or PL due to new quality, preclinical, clinical or pharmacovigilance data</p>   |            |            |                       |   |
| II/0074   | <p>Update of sections 4.2 and 5.1 of the SmPC in order to include a recommendation for a second booster dose after 10 years and to update safety information based on results from study 311_FU2013 - an open-label, uncontrolled, multicenter, Phase 3 study that investigated the persistence of antibodies about 6 years after an IXIARO booster dose administered 15 months after the primary series. The Package Leaflet is updated accordingly. In addition, the Marketing authorisation holder (MAH) took the opportunity to bring the PI in line with the latest QRD template version 9.1.</p> <p>C.I.4 - Change(s) in the SPC, Labelling or PL due to new quality, preclinical, clinical or pharmacovigilance data</p> | 01/04/2016 | 02/05/2016 | SmPC, Annex II and PL | According to the presented persistence data up to 6 years after the first booster dose and a mathematic modelling the MAH included a recommendation for a second booster dose after 10 years in adults in the section 4.2 of the SmPC. In the SmPC section 5.1 the data of PRNT50 and the used mathematic modelling have been included. |
| IB/0080/G | <p>This was an application for a group of variations.</p> <p>B.I.a.1.f - Change in the manufacturer of AS or of a starting material/reagent/intermediate for AS - Changes to quality control testing arrangements for the AS -replacement or addition of a site where</p>   | 20/04/2016 | n/a        |                       |   |

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|                   | batch control/testing takes place<br>B.I.b.2.a - Change in test procedure for AS or starting material/reagent/intermediate - Minor changes to an approved test procedure  |            |     |  |                                   |
| IB/0079/G         | This was an application for a group of variations.<br><br>A.4 - Administrative change - Change in the name and/or address of a manufacturer or an ASMF holder or supplier of the AS, starting material, reagent or intermediate used in the manufacture of the AS or manufacturer of a novel excipient<br>B.I.a.1.f - Change in the manufacturer of AS or of a starting material/reagent/intermediate for AS - Changes to quality control testing arrangements for the AS -replacement or addition of a site where batch control/testing takes place<br>B.I.b.2.a - Change in test procedure for AS or starting material/reagent/intermediate - Minor changes to an approved test procedure | 22/03/2016 | n/a |  |                                   |
| IA/0078           | A.7 - Administrative change - Deletion of manufacturing sites   | 29/02/2016 | n/a |  |                                   |
| IB/0076           | B.II.b.2.a - Change to importer, batch release arrangements and quality control testing of the FP - Replacement/addition of a site where batch control/testing takes place  | 14/01/2016 | n/a |  |                                   |
| PSUSA/1801/201503 | Periodic Safety Update EU Single assessment - japanese encephalitis virus (inactivated)   | 08/10/2015 | n/a |  | PRAC Recommendation - maintenance |

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| IB/0073   | B.II.d.2.d - Change in test procedure for the finished product - Other changes to a test procedure (including replacement or addition)   | 02/10/2015 | n/a        |    |  |
| IB/0072/G | This was an application for a group of variations.<br><br>B.I.a.1.f - Change in the manufacturer of AS or of a starting material/reagent/intermediate for AS - Changes to quality control testing arrangements for the AS -replacement or addition of a site where batch control/testing takes place<br>B.II.b.2.a - Change to importer, batch release arrangements and quality control testing of the FP - Replacement/addition of a site where batch control/testing takes place<br>B.II.d.2.a - Change in test procedure for the finished product - Minor changes to an approved test procedure | 10/09/2015 | n/a        |    |  |
| N/0071    | Minor change in labelling or package leaflet not connected with the SPC (Art. 61.3 Notification)   | 01/09/2015 | 13/04/2016 | PL |  |
| IB/0070   | B.II.c.2.d - Change in test procedure for an excipient - Other changes to a test procedure (including replacement or addition)   | 17/08/2015 | n/a        |    |  |
| IB/0069   | B.I.a.4.c - Change to in-process tests or limits applied during the manufacture of the AS - Deletion of a non-significant in-process test  | 13/07/2015 | n/a        |    |  |

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| IB/0067   | B.I.e.5.c - Implementation of changes foreseen in an approved change management protocol - For a biological/immunological medicinal product  | 08/05/2015 | n/a        |             |  |
| II/0065/G | <p>This was an application for a group of variations.</p> <p>C.I.4<br/>Update of sections 4.2, 4.4, 4.5, 4.8 and 5.1 of the SmPC in order to include data of the clinical study V49_23.</p> <p>C.I.z<br/>Update of section 4.2 to include relevant data on elderly population.<br/>The requested group of variations proposed changes to the Product Information.</p> <p>C.I.4 - Change(s) in the SPC, Labelling or PL due to new quality, preclinical, clinical or pharmacovigilance data</p> <p>C.I.z - Changes (Safety/Efficacy) of Human and Veterinary Medicinal Products - Other variation</p> | 23/04/2015 | 13/04/2016 | SmPC and PL |  |
| IB/0066/G | <p>This was an application for a group of variations.</p> <p>A.5.b - Administrative change - Change in the name and/or address of a manufacturer/importer of the finished product, including quality control sites (excluding manufacturer for batch release)</p> <p>B.II.d.2.d - Change in test procedure for the finished product - Other changes to a test procedure (including replacement or addition)</p>  | 15/01/2015 | n/a        |             |  |

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|           | <p>A.4 - Administrative change - Change in the name and/or address of a manufacturer or an ASMF holder or supplier of the AS, starting material, reagent or intermediate used in the manufacture of the AS or manufacturer of a novel excipient</p> <p>B.II.b.2.a - Change to importer, batch release arrangements and quality control testing of the FP - Replacement/addition of a site where batch control/testing takes place</p> |            |     |  |                                   |
| IB/0063/G | <p>This was an application for a group of variations.</p> <p>B.I.a.4.z - Change to in-process tests or limits applied during the manufacture of the AS - Other variation</p> <p>B.I.b.1.c - Change in the specification parameters and/or limits of an AS, starting material/intermediate/reagent - Addition of a new specification parameter to the specification with its corresponding test method</p>                             | 09/12/2014 | n/a |  |                                   |
| IB/0064   | <p>B.I.b.2.e - Change in test procedure for AS or starting material/reagent/intermediate - Other changes to a test procedure (including replacement or addition) for the AS or a starting material/intermediate</p>   | 28/11/2014 | n/a |  |                                   |
| PSUV/0062 | <p>Periodic Safety Update</p>   | 06/11/2014 | n/a |  | PRAC Recommendation - maintenance |
| IB/0061/G | <p>This was an application for a group of variations.</p>   | 08/08/2014 | n/a |  |                                   |

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|         | <p>B.I.b.2.e - Change in test procedure for AS or starting material/reagent/intermediate - Other changes to a test procedure (including replacement or addition) for the AS or a starting material/intermediate</p> <p>B.I.b.2.e - Change in test procedure for AS or starting material/reagent/intermediate - Other changes to a test procedure (including replacement or addition) for the AS or a starting material/intermediate</p> <p>B.II.d.2.d - Change in test procedure for the finished product - Other changes to a test procedure (including replacement or addition)</p> <p>B.II.d.2.d - Change in test procedure for the finished product - Other changes to a test procedure (including replacement or addition)</p> |            |            |                       |   |
| II/0059 | <p>Changes in the manufacturing process of the AS</p> <p>B.I.a.2.c - Changes in the manufacturing process of the AS - The change refers to a [-] substance in the manufacture of a biological/immunological substance which may have a significant impact on the medicinal product and is not related to a protocol</p>   | 26/06/2014 | n/a        |                       |   |
| IB/0060 | B.I.a.2.a - Changes in the manufacturing process of the AS - Minor change in the manufacturing process of the AS  | 23/06/2014 | n/a        |                       |   |
| R/0055  | Renewal of the marketing authorisation.   | 18/12/2013 | 28/02/2014 | SmPC, Annex II and PL | IXIARO is an inactivated JE vaccine adsorbed to aluminium hydroxide (alum). |

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|-------------|---|------------|------------|----------------------------------|--|
|             |   |            |            |                                  | <p>It is the only vaccine indicated for active immunisation against Japanese encephalitis that is available in Europe and in the US. There is no specific (causally acting) therapy available for Japanese encephalitis infection.</p> <p>IXIARO has an established positive benefit risk profile shown both in clinical trials (high seroconversion rates, significant lack of serious adverse reactions) as well as in post-marketing (no confirmed cases of vaccination failure, limited number of serious reactions not affecting the safety profile).</p> <p>However, the post-marketing exposure of IXIARO to pediatric population is very small to date. This limited exposure, together with fewer than 2,000 pediatric subjects exposed in clinical trials, form a safety database that is too small to characterize rare or very rare adverse events, including the important identified and potential risks mentioned in the Risk Management Plan. Hence, the CHMP recommends one additional 5-year renewal of the Marketing Authorisation.</p> |
| IAIN/0058/G | <p>This was an application for a group of variations.</p> <p>A.1 - Administrative change - Change in the name and/or address of the MAH</p> <p>A.4 - Administrative change - Change in the name and/or address of a manufacturer or an ASMF holder or supplier of the AS, starting material, reagent or intermediate used in the manufacture of the AS or manufacturer of a novel excipient</p> <p>A.5.a - Administrative change - Change in the name and/or address of a manufacturer/importer responsible for batch release</p> | 25/10/2013 | 28/02/2014 | SmPC, Annex II, Labelling and PL |  |

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| IB/0057   | B.II.d.2.d - Change in test procedure for the finished product - Other changes to a test procedure (including replacement or addition)   | 02/09/2013 | n/a        |                              |   |
| IB/0056   | B.II.d.2.d - Change in test procedure for the finished product - Other changes to a test procedure (including replacement or addition)   | 21/08/2013 | n/a        |                              |   |
| IB/0054   | B.V.c.1.c - Change management protocol - Update of the quality dossier to implement changes, requested by the EMA/NCA, following assessment of a change management protocol - Implementation of a change for a biological/immunological medicinal product  | 15/08/2013 | n/a        |                              |   |
| IB/0053   | B.II.d.1.z - Change in the specification parameters and/or limits of the finished product - Other variation  | 29/07/2013 | n/a        |                              |   |
| T/0052    | Transfer of Marketing Authorisation  | 03/05/2013 | 27/05/2013 | SmPC,<br>Labelling and<br>PL | New Marketing Authorisation Holder:<br>Intercell Austria AG<br><br>Previous Marketing Authorisation Holder:<br>Intercell AG |
| IB/0051/G | This was an application for a group of variations.<br><br>B.I.a.2.a - Changes in the manufacturing process of the AS - Minor change in the manufacturing process of the AS<br><br>B.I.a.2.a - Changes in the manufacturing process of the AS - Minor change in the manufacturing process of the AS | 16/05/2013 | n/a        |                              |   |



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|           | <p>B.I.a.2.a - Changes in the manufacturing process of the AS - Minor change in the manufacturing process of the AS</p> <p>B.I.a.2.a - Changes in the manufacturing process of the AS - Minor change in the manufacturing process of the AS</p>  |            |     |  |  |
| IB/0049   | B.II.b.2.a - Change to batch release arrangements and quality control testing of the FP - Replacement or addition of a site where batch control/testing takes place  | 02/04/2013 | n/a |  |  |
| IB/0050   | B.I.a.4.z - Change to in-process tests or limits applied during the manufacture of the AS - Other variation  | 19/03/2013 | n/a |  |  |
| IB/0048/G | <p>This was an application for a group of variations.</p> <p>B.I.a.2.z - Changes in the manufacturing process of the AS - Other variation</p> <p>B.I.b.1.c - Change in the specification parameters and/or limits of an AS, starting material/intermediate/reagent - Addition of a new specification parameter to the specification with its corresponding test method</p> | 01/03/2013 | n/a |  |  |
| IB/0047   | <p>B.I.a.1.f - Change in the manufacturer of AS or of a starting material/reagent/intermediate for AS -</p> <p>Changes to quality control testing arrangements for the AS -replacement or addition of a site where batch control/testing takes place</p>   | 09/01/2013 | n/a |  |  |

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|-----------|---|------------|------------|----------------------------------|---|
| II/0039/G | <p>This was an application for a group of variations.</p> <p>The MAH proposed the extension of indication of Ixiaro to the paediatric segment (2 months of age and older) in line with approved PIP EMEA -000559-PIP01-09-M03. Modification of syringe label to include "half dose mark" for administration of a 0.25 ml nominal dose for the paediatric sub-segment 2 months to below 3 years of age in line with the aforementioned PIP. The latter is grouped with the indication extension as direct result of the proposed extension. The Package Leaflet and Labelling were proposed to be updated accordingly.</p> <p>Furthermore, the PI is being brought in line with the latest QRD template version 8.2.</p> <p>B.II.e.6.a - Change in any part of the (primary) packaging material not in contact with the finished product formulation - Change that affects the product information</p> <p>C.I.6.a - Change(s) to therapeutic indication(s) - Addition of a new therapeutic indication or modification of an approved one</p> | 13/12/2012 | 01/02/2013 | SmPC, Annex II, Labelling and PL | Please refer to the scientific discussion in the Assessment Report: Ixiaro-H-963-II-0039-G-VAR-en |
| IB/0046   | B.II.d.2.d - Change in test procedure for the finished product - Other changes to a test procedure (including replacement or addition)  | 30/11/2012 | n/a        |                                  |   |
| IB/0044   | B.II.c.1.b - Change in the specification parameters and/or limits of an excipient - Addition of a new   | 15/11/2012 | n/a        |                                  |   |

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|-----------|--|------------|------------|--|--|
|           | specification parameter to the specification with its corresponding test method  |            |            |  |  |
| IB/0045   | B.II.d.1.d - Change in the specification parameters and/or limits of the finished product - Deletion of a non-significant specification parameter (e.g. deletion of an obsolete parameter)   | 29/10/2012 | n/a        |  |  |
| II/0042   | to introduce a Post-approval change management protocol during the manufacture of the active substance.<br><br>B.I.e.2 - Design Space - Introduction of a post approval change management protocol related to the AS                             | 18/10/2012 | 18/10/2012 |  |  |
| IB/0043   | B.II.b.2.a - Change to batch release arrangements and quality control testing of the FP - Replacement or addition of a site where batch control/testing takes place  | 01/10/2012 | n/a        |  |  |
| IB/0041   | B.I.b.2.a - Change in test procedure for AS or starting material/reagent/intermediate - Minor changes to an approved test procedure  | 23/08/2012 | n/a        |  |  |
| IB/0040/G | This was an application for a group of variations.<br><br>B.I.b.2.e - Change in test procedure for AS or starting material/reagent/intermediate - Other changes to a test procedure (including replacement or addition) for the AS or a starting | 16/08/2012 | n/a        |  |  |

|           |   |            |            |          |  |
|-----------|---|------------|------------|----------|--|
|           | material/intermediate<br>B.II.d.2.d - Change in test procedure for the finished product - Other changes to a test procedure (including replacement or addition)   |            |            |          |  |
| IB/0038/G | This was an application for a group of variations.<br><br>B.II.b.2.a - Change to batch release arrangements and quality control testing of the FP - Replacement or addition of a site where batch control/testing takes place<br><br>B.I.a.1.f - Change in the manufacturer of AS or of a starting material/reagent/intermediate for AS - Changes to quality control testing arrangements for the AS -replacement or addition of a site where batch control/testing takes place | 31/05/2012 | n/a        |          |  |
| A20/0029  | Pursuant to Article 20 of Regulation (EC) No 726/2004, the European Commission requested on 01 June 2011, the opinion of the CHMP on measures necessary to ensure the safe and effective use of the above mentioned medicinal product further to the CHMP review on the impact of the out-of-specification result observed for one batch of the product.  | 15/03/2012 | 25/05/2012 | Annex II | Please refer to Assessment Report: Ixiaro-H-C-963-A20-0029 |
| IB/0037   | B.II.b.2.a - Change to batch release arrangements and quality control testing of the FP - Replacement or addition of a site where batch control/testing   | 12/04/2012 | n/a        |          |  |

|           |  |            |            |    |  |
|-----------|--|------------|------------|----|--|
|           | takes place  |            |            |    |  |
| IB/0036   | B.I.b.2.e - Change in test procedure for AS or starting material/reagent/intermediate - Other changes to a test procedure (including replacement or addition) for the AS or a starting material/intermediate   | 13/03/2012 | n/a        |    |  |
| IB/0035   | B.II.e.1.z - Change in immediate packaging of the finished product - Other variation   | 08/03/2012 | n/a        |    |  |
| N/0033    | Minor change in labelling or package leaflet not connected with the SPC (Art. 61.3 Notification)   | 06/02/2012 | 25/05/2012 | PL |  |
| IB/0034   | B.II.b.3.z - Change in the manufacturing process of the finished product - Other variation   | 09/01/2012 | n/a        |    |  |
| II/0030   | To add a working cell bank to the production of Ixiaro active substance<br><br>B.I.a.2.c - Changes in the manufacturing process of the AS - The change refers to a [-] substance in the manufacture of a biological/immunological medicinal product and is not related to a protocol | 22/09/2011 | 22/09/2011 |    |  |
| IB/0031/G | This was an application for a group of variations.<br><br>B.II.d.2.d - Change in test procedure for the finished product - Other changes to a test procedure (including replacement or addition)<br>B.I.b.2.e - Change in test procedure for AS or                                   | 16/09/2011 | n/a        |    |  |

|           |   |            |     |  |  |
|-----------|---|------------|-----|--|--|
|           | <p>starting material/reagent/intermediate - Other changes to a test procedure (including replacement or addition) for the AS or a starting material/intermediate</p> <p>B.II.d.2.d - Change in test procedure for the finished product - Other changes to a test procedure (including replacement or addition)</p>  |            |     |  |  |
| IB/0028/G | <p>This was an application for a group of variations.</p> <p>B.I.b.2.a - Change in test procedure for AS or starting material/reagent/intermediate - Minor changes to an approved test procedure</p> <p>B.I.b.2.a - Change in test procedure for AS or starting material/reagent/intermediate - Minor changes to an approved test procedure</p> <p>B.I.b.2.a - Change in test procedure for AS or starting material/reagent/intermediate - Minor changes to an approved test procedure</p> <p>B.I.b.2.a - Change in test procedure for AS or starting material/reagent/intermediate - Minor changes to an approved test procedure</p> | 11/07/2011 | n/a |  |  |
| IB/0026/G | <p>This was an application for a group of variations.</p> <p>B.II.b.2.a - Change to batch release arrangements and quality control testing of the FP - Replacement or addition of a site where batch control/testing takes place</p> <p>B.II.c.2.d - Change in test procedure for an excipient - Other changes to a test procedure (including</p>   | 17/06/2011 | n/a |  |  |

|           |   |            |            |  |  |
|-----------|---|------------|------------|--|--|
|           | <p>replacement or addition)</p> <p>A.5.b - Administrative change - Change in the name and/or address of a manufacturer of the finished product, including quality control sites (excluding manufacturer for batch release)</p>  |            |            |  |  |
| II/0023   | <p>to introduce a second working virus seed bank .</p> <p>B.I.a.2.b - Changes in the manufacturing process of the AS - Substantial change to the manufacturing process of the AS which may have a significant impact on the quality, safety or efficacy of the medicinal product</p>  | 19/05/2011 | 19/05/2011 |  |  |
| IB/0027/G | <p>This was an application for a group of variations.</p> <p>B.I.b.2.e - Change in test procedure for AS or starting material/reagent/intermediate - Other changes to a test procedure (including replacement or addition) for the AS or a starting material/intermediate</p> <p>B.II.d.2.d - Change in test procedure for the finished product - Other changes to a test procedure (including replacement or addition)</p> | 16/05/2011 | n/a        |  |  |
| IA/0024/G | <p>This was an application for a group of variations.</p> <p>C.I.9.b - Changes to an existing pharmacovigilance system as described in the DDPS - Change in the contact details of the QPPV</p> <p>C.I.9.c - Changes to an existing pharmacovigilance</p>   | 02/05/2011 | n/a        |  |  |

|           |  |            |     |  |  |
|-----------|--|------------|-----|--|--|
|           | <p>system as described in the DDPS - Change of the back-up procedure of the QPPV</p> <p>C.I.9.h - Changes to an existing pharmacovigilance system as described in the DDPS - Other change(s) to the DDPS that does not impact on the operation of the pharmacovigilance system</p>   |            |     |  |  |
| IB/0022/G | <p>This was an application for a group of variations.</p> <p>B.I.a.1.f - Change in the manufacturer of AS or of a starting material/reagent/intermediate for AS - Changes to quality control testing arrangements for the AS -replacement or addition of a site where batch control/testing takes place</p> <p>B.I.b.2.a - Change in test procedure for AS or starting material/reagent/intermediate - Minor changes to an approved test procedure</p> | 05/04/2011 | n/a |  |  |
| IB/0021/G | <p>This was an application for a group of variations.</p> <p>B.I.a.1.f - Change in the manufacturer of AS or of a starting material/reagent/intermediate for AS - Changes to quality control testing arrangements for the AS -replacement or addition of a site where batch control/testing takes place</p> <p>B.I.b.2.a - Change in test procedure for AS or starting material/reagent/intermediate - Minor changes to an approved test procedure</p> | 05/04/2011 | n/a |  |  |
| IB/0020   | <p>B.II.e.1.z - Change in immediate packaging of the finished product - Other variation</p>  | 28/03/2011 | n/a |  |  |



|           |   |            |            |    |  |
|-----------|---|------------|------------|----|--|
| N/0018    | Minor change in labelling or package leaflet not connected with the SPC (Art. 61.3 Notification)  | 18/03/2011 | n/a        | PL |  |
| IB/0019/G | This was an application for a group of variations.<br><br>B.I.a.1.f - Change in the manufacturer of AS or of a starting material/reagent/intermediate for AS - Changes to quality control testing arrangements for the AS -replacement or addition of a site where batch control/testing takes place<br>B.II.b.2.a - Change to batch release arrangements and quality control testing of the FP - Replacement or addition of a site where batch control/testing takes place | 03/02/2011 | n/a        |    |  |
| II/0016   | To revise the in-process acceptance criteria in the manufacture of the active substance.<br><br>B.I.b.1.g - Change in the specification parameters and/or limits of an AS, starting material/intermediate/reagent - Widening of the approved specs for starting mat./intermediates, which may have a significant effect on the quality of the AS and/or the FP  | 16/12/2010 | 04/01/2011 |    |  |
| IB/0017/G | This was an application for a group of variations.<br><br>B.I.a.1.f - Change in the manufacturer of AS or of a starting material/reagent/intermediate for AS - Changes to quality control testing arrangements for  | 14/12/2010 | n/a        |    |  |

|           |   |            |     |      |  |
|-----------|---|------------|-----|------|--|
|           | <p>the AS -replacement or addition of a site where batch control/testing takes place</p> <p>B.I.b.2.a - Change in test procedure for AS or starting material/reagent/intermediate - Minor changes to an approved test procedure</p>   |            |     |      |  |
| IB/0015   | <p>B.I.a.2.a - Changes in the manufacturing process of the AS - Minor change in the manufacturing process of the AS</p>   | 29/11/2010 | n/a |      |  |
| IB/0013/G | <p>This was an application for a group of variations.</p> <p>B.I.b.2.e - Change in test procedure for AS or starting material/reagent/intermediate - Other changes to a test procedure (including replacement or addition) for the AS or a starting material/intermediate</p> <p>B.II.d.2.d - Change in test procedure for the finished product - Other changes to a test procedure (including replacement or addition)</p> | 29/11/2010 | n/a |      |  |
| IB/0014/G | <p>This was an application for a group of variations.</p> <p>B.II.f.1.b.5 - Stability of FP - Extension of the shelf life of the finished product - Extension of storage period of a biological/immunological medicinal product in accordance with an approved stability protocol</p> <p>B.II.f.1.z - Stability of FP - Change in the shelf-life or storage conditions of the finished product - Other variation</p>        | 25/11/2010 | n/a | SmPC |  |

|           |   |            |            |  |  |
|-----------|---|------------|------------|--|--|
| II/0011/G | <p>This was an application for a group of variations.</p> <p>To replace testing methodology of determining the degree of adsorption for Drug Product and to tighten the specification of degree of adsorption for Drug Product.</p> <p>B.II.d.2.c - Change in test procedure for the finished product - Replacement of a biological/ immunological/immunochemical test method or a method using a biological reagent</p> <p>B.II.d.1.g - Change in the specification parameters and/or limits of the finished product - Addition or replacement (excluding biological or immunological product) of a specification parameter as a result of a safety or quality issue</p> | 22/07/2010 | 16/08/2010 |  |  |
| IA/0012   | A.5.b - Administrative change - Change in the name and/or address of a manufacturer of the finished product, including quality control sites (excluding manufacturer for batch release)   | 16/07/2010 | n/a        |  |  |
| II/0008   | <p>Replacement of a test for bacterial endotoxins for incoming raw material.</p> <p>B.II.c.2.c - Change in test procedure for an excipient - Replacement of a biological/ immunological/immunochemical test method or a method using a biological reagent</p>   | 20/05/2010 | 03/06/2010 |  |  |

|           |   |            |            |  |  |
|-----------|---|------------|------------|--|--|
| II/0007   | <p>Change in test procedure for the active substance.</p> <p>B.I.b.2.d - Change in test procedure for AS or starting material/reagent/intermediate - Change (replacement) to a biological/immunological/ immunochemical test method or a method using a biological reagent for a biological AS</p>  | 22/04/2010 | 04/05/2010 |  |  |
| II/0006/G | <p>This was an application for a group of variations.</p> <p>Changes in the manufacturing process of the active substance.</p> <p>B.I.a.2.c - Changes in the manufacturing process of the AS - The change refers to a [-] substance in the manufacture of a biological/immunological medicinal product and is not related to a protocol</p> <p>B.I.a.2.z - Changes in the manufacturing process of the AS - Other variation</p> | 22/04/2010 | 03/05/2010 |  |  |
| IB/0010/G | <p>This was an application for a group of variations.</p> <p>B.I.a.4.z - Change to in-process tests or limits applied during the manufacture of the AS - Other variation</p> <p>B.I.b.2.e - Change in test procedure for AS or starting material/reagent/intermediate - Other changes to a test procedure (including replacement or addition) for the AS or a starting material/intermediate</p>                                | 29/04/2010 | n/a        |  |  |

|           |  |            |            |                       |  |
|-----------|--|------------|------------|-----------------------|--|
| IB/0009/G | <p>This was an application for a group of variations.</p> <p>B.I.b.2.e - Change in test procedure for AS or starting material/reagent/intermediate - Other changes to a test procedure (including replacement or addition) for the AS or a starting material/intermediate</p> <p>B.II.d.2.d - Change in test procedure for the finished product - Other changes to a test procedure (including replacement or addition)</p>  | 22/04/2010 | n/a        |                       |  |
| II/0005   | <p>Update of sections 4.2, 4.4, 4.8 and 5.1 of the SPC based on the 24 and 36 months immunogenicity and safety data from studies IC51-303, -305, and -311 in line with follow-up measures 016 and 018. The PL was updated accordingly. The MAH also took this opportunity to add the approved EU numbers in section 8 of the SPC and to amend the instructions for disposal in section 6.6 of the SPC. Furthermore, the MAH took this opportunity to correct a minor spelling mistake in the address of the manufacturer in Annex II and to update the European Medicines Agency web site address.</p> <p>Update of Summary of Product Characteristics and Package Leaflet</p> | 18/02/2010 | 23/03/2010 | SmPC, Annex II and PL | <p>The data demonstrate that for the antibody response following primary immunisation regimen of 2x 6µg is long-lasting and clearly boosterable after 11 or 23 months. This is further corroborated by immunogenicity data on a booster dose given 15 months after the primary immunisation. Therefore, subjects with a continuously high risk of exposure to Japanese encephalitis should receive a booster dose within a time interval of 1 to 2 years after the primary immunisation series to ensure optimal protection.</p> <p>Moreover the data indicate that subjects, who received only a single dose of 1x 6µg respond effectively to a booster dose given 11 months after the first dose. This information is deemed to be important for travellers which are in urgent need to be at least partly protected within a short time frame and are not able to complete the primary immunisation series (e.g. last minute travellers). In addition the list of adverse events was updated to reflect the safety data from the studies submitted.</p> |

|         |   |            |            |             |   |
|---------|---|------------|------------|-------------|---|
| II/0002 | <p>The MAH applied to extend the Shelf life of Ixiaro from 12 months to 18 months.</p> <p>Quality changes</p>   | 24/09/2009 | 28/10/2009 | SmPC and PL |   |
| II/0001 | <p>Update of the Detailed Description of the Pharmacovigilance System (DDPS) to version 7.0 as a consequence of the FUMS 0016 (24 months reports from clinical studies IC51-303 and IC51-305) and to reflect updated processes. The Risk Management Plan (RMP) has also been updated to version 1.4. Consequently, Annex II has been updated with the new version numbers of the agreed DDPS and RMP.</p> <p>Update of DDPS (Pharmacovigilance)</p> | 24/09/2009 | 28/10/2009 | Annex II    | <p>The Detailed Description of the Pharmacovigilance System and Risk Management Plan (RMP) have been updated. The DDPS has been amended in its structure and organisation, inclusion of trials with long-term observations and post-marketing surveillance program, update on the processing of pharmacovigilance data from post-marketing surveillance studies and also few technical changes were included.</p> <p>Consequently, Annex II.B has been updated using the standard text including the new version number of the agreed DDPS and RMP.</p> |
| II/0004 | <p>Introduction of an internal reference material for the testing of drug substance and drug product.</p> <p>Quality changes</p>  | 24/09/2009 | 05/10/2009 |             |   |
| II/0003 | <p>The MAH applied for changes in the testing methodology of the Drug Substance.</p> <p>Quality changes</p>   | 24/09/2009 | 05/10/2009 |             |   |