

Partnering Activity Update

August 1, 2019

Partnering Activity (2010~) (1)

As of July 26, 2019

| Date | Product name, generic name, code number | Indication / MOA | Phase (JP / Overseas) | Partner |
|----------|---|--|------------------------|---|
| Sep 2010 | KYPROLIS® / Carfilzomib | Multiple Myeloma / Proteasome inhibitor | L / L | Amgen, USA (Onyx, USA) (in-license) |
| Sep 2011 | Ivabradine / ONO-1162 | Chronic Heart Failure / HCN channel blocker | Filed / L | Servier, France (in-license) |
| Sep 2011 | PARSABIV® / Etelcalcetide | Secondary Hyperparathyroidism / Calcium sensing receptor agonist | L / L | Amgen, USA (KAI, USA) (in-license) |
| Sep 2011 | ORENCIA® / Abatacept | Rheumatoid Arthritis and Juvenile idiopathic arthritis / T cell activation inhibitor | IV: L / L SC: L / L | BMS, USA (co-development & co-marketing) |
| Apr 2013 | Opicapone / ONO-2370 | Symptom Reemergence in Parkinson's disease / COMT inhibitor | Filed / L | Bial, Portugal (in-license) |
| Oct 2013 | DEMSER® / Metyrosine | Pheochromocytoma / Tyrosine hydroxylase inhibitor | L / L | Bausch Health, USA (Valeant, USA) (in-license) |
| Dec 2013 | FORXIGA® / Dapagliflozin | Type 2 Diabetes and Type 1 Diabetes / SGLT-2 inhibitor | L / L | AstraZeneca, UK (co-promotion) |

Partnering Activity (2010~) (2)

As of July 26, 2019

| Date | Product name, generic name, code number | Indication / MOA | Phase (JP / Overseas) | Partner |
|----------|---|--|-----------------------|--|
| May 2017 | MEKTOVI® / Binimetinib BRAFTOVI® / Encorafenib | BRAF-mutant Melanoma / MEK inhibitor BRAF inhibitor Combination therapy | L / L | Array, USA (in-license) |
| | | BRAF-mutant Colorectal Cancer / MEK inhibitor BRAF inhibitor Combination therapy | III / III | |
| Aug 2017 | SI-613 / ONO-5704 | Osteoarthritis / Combined drug of hyaluronic acid and NSAID | III / — | Seikagaku, Japan (co-development & marketing collaboration) |
| | | Enthesopathy / Combined drug of hyaluronic acid and NSAID | II / — | |
| Oct 2017 | Selinexor / ONO-7705 | Multiple Myeloma and Non-Hodgkin's Lymphoma / Oral XPO1 (Exportin 1) inhibitor | I / L | Karyopharm, USA (in-license) |
| | Eltanexor / ONO-7706 | Solid Tumors and Hematological Malignancies / Second generation oral XPO1 (Exportin 1) inhibitor | — / I | |
| Jun 2019 | Devimistat | Pancreatic Cancer, Acute Myeloid Leukemia / Cancer metabolism inhibitor | — / III | Rafael, USA (in-license) |
| Jul 2019 | 5F9 | Non-Hodgkin's Lymphoma, Acute Myeloid Leukemia, Myelodysplastic syndromes, Ovarian Cancer, Colorectal Cancer / Anti-CD47 mAb | — / II | Forty Seven, USA (in-license) |

Partnering Activity (2010~) (3)

As of July 26, 2019

| Date | Product name, generic name, code number | Indication / MOA | Phase (JP / Overseas) | Partner |
|----------|---|--|-----------------------|--|
| Sep 2011 | OPDIVO® / Nivolumab | Melanoma, NSCLC, RCC, Hodgkin's Lymphoma, H&N Cancer, Gastric Cancer, etc. / Anti-PD-1 mAb | L / L | BMS, USA (out-license except JP, KR & TW) |
| Jul 2014 | OPALMON® / Limaprost α-CD | Lumber Spinal Canal Stenosis / oral PGE1 analogue | L / L | Meiji Seika Pharma, Japan (out-license in Thailand) |
| Dec 2014 | Tirabrutinib / ONO-4059 | B Cell Lymphoma, Pemphigus, Sjögren syndrome, Central nervous system lymphoma, Primary macroglobulinemia , etc. / Btk inhibitor | II / II | Gilead Sciences, USA (out-license except JP, KR, TW, CN & ASEAN) |
| Mar 2016 | Sepetaprost / ONO-9054 | Glaucoma and Ocular Hypertension / FP/EP3 dual receptor agonist | II / II | Santen Pharmaceutical, Japan (out-license globally as ophthalmologic topical formulation) |
| Dec 2017 | ONO-4578 | Solid Tumors / PG receptor (EP4) antagonist | I / I/II | BMS, USA (out-license except JP, KR, TW, CN & ASEAN) |

Partnering Activity (2010~) (4)

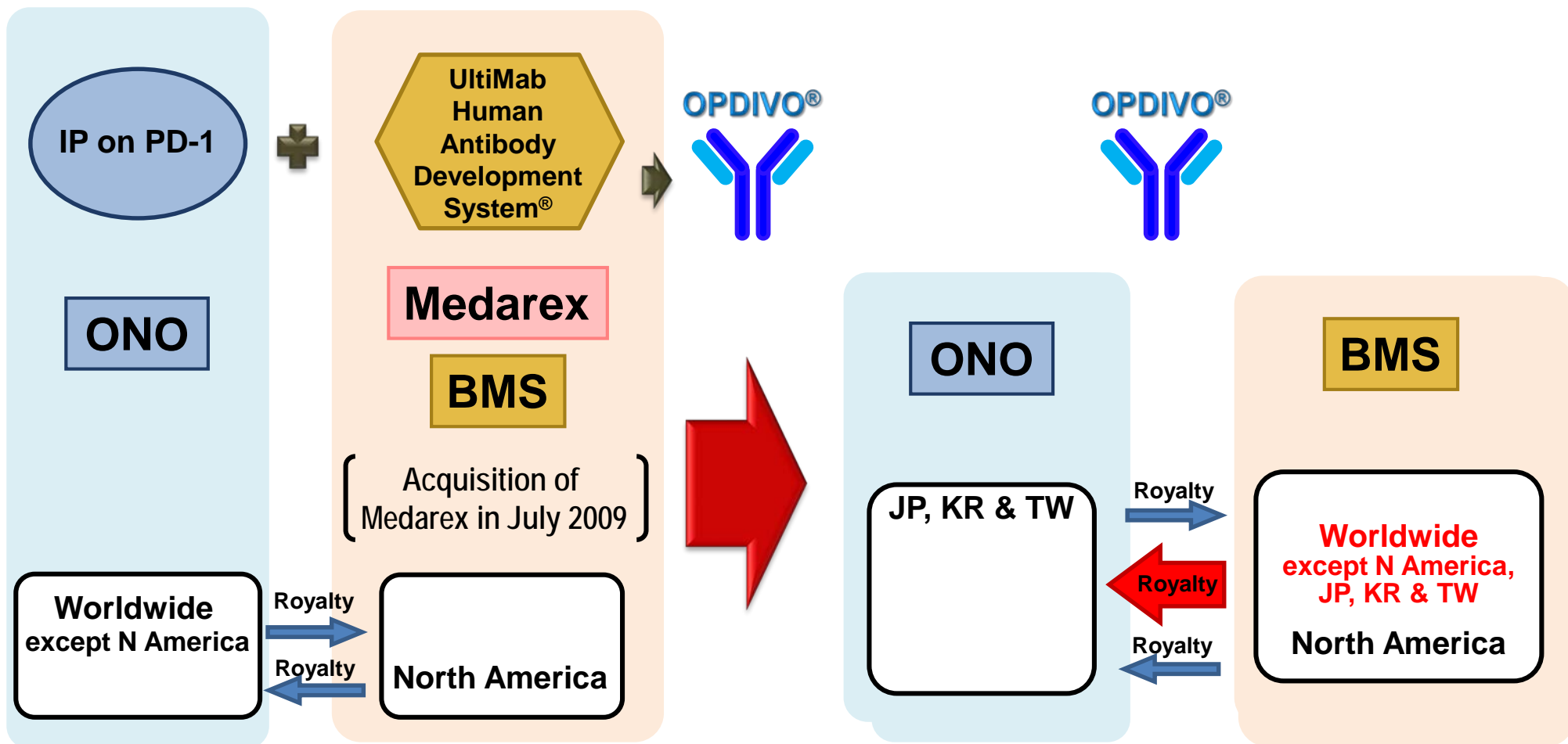
As of July 26, 2019

| Date | Product name, generic name, code number | Indication / MOA | Phase (JP / Overseas) | Partner |
|-----------------------|---|--|-----------------------|--|
| Jul 2014 | OPDIVO® / Nivolumab | Melanoma, NSCLC, RCC, Hodgkin Lymphoma, H&N Cancer, Gastric Cancer, etc. / Anti-PD-1 mAb | L / L | BMS, USA co-development & co-promotion in JP, KR & TW |
| | ONO-4578 | Solid Tumors / PG receptor (EP4) antagonist | I / I/II | |
| | YERVOY® / Ipilimumab | Melanoma, RCC / Anti-CTLA-4 mAb | L / L | |
| | Lirilumab / ONO-4483 | Solid Tumors / Anti-KIR mAb | I / I/II | |
| | Relatlimab / ONO-4482 | Melanoma / Anti-LAG-3 mAb | I/II / II/III | |
| | BMS-986207 / ONO-4686 | Solid Tumors / Anti-TIGIT mAb | I/II / I/II | |
| | Cabiralizumab / ONO-4687 | Pancreatic Cancer / Anti-CSF-1R mAb | II / II | |
| BMS-986205 / ONO-7701 | Bladder Cancer / IDO1 inhibitor | III / III | | |
| BMS-986258 / ONO-7807 | Solid Tumors / Anti-TIM3 mAb | I/II / I/II | | |
| BMS-986321 / ONO-7911 | Solid Tumors / PEGylated IL-2 | I / III | | |

Collaboration with BMS for OPDIVO®

Start collaboration
in May 2005

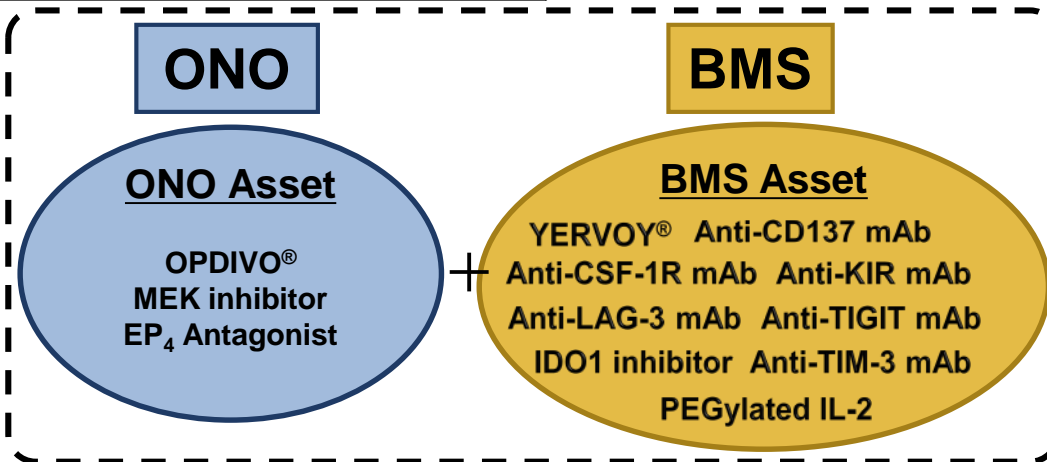
Expand collaboration
in Sep 2011



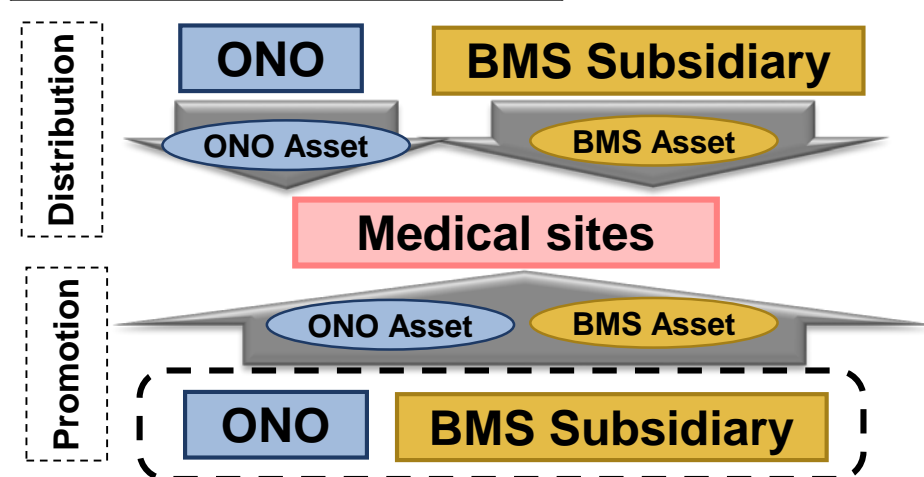
Strategic Alliance with BMS in JP, KR & TW

- To Strengthen Immuno-oncology Portfolio
- To Accelerate Combination Therapies

Co-development

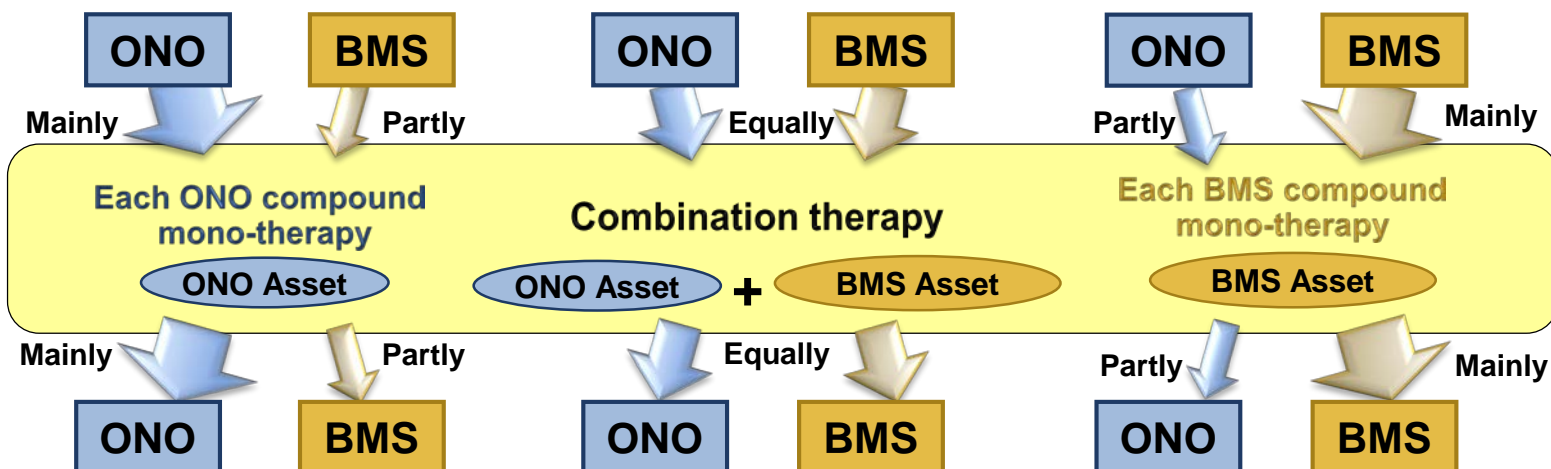


Co-promotion



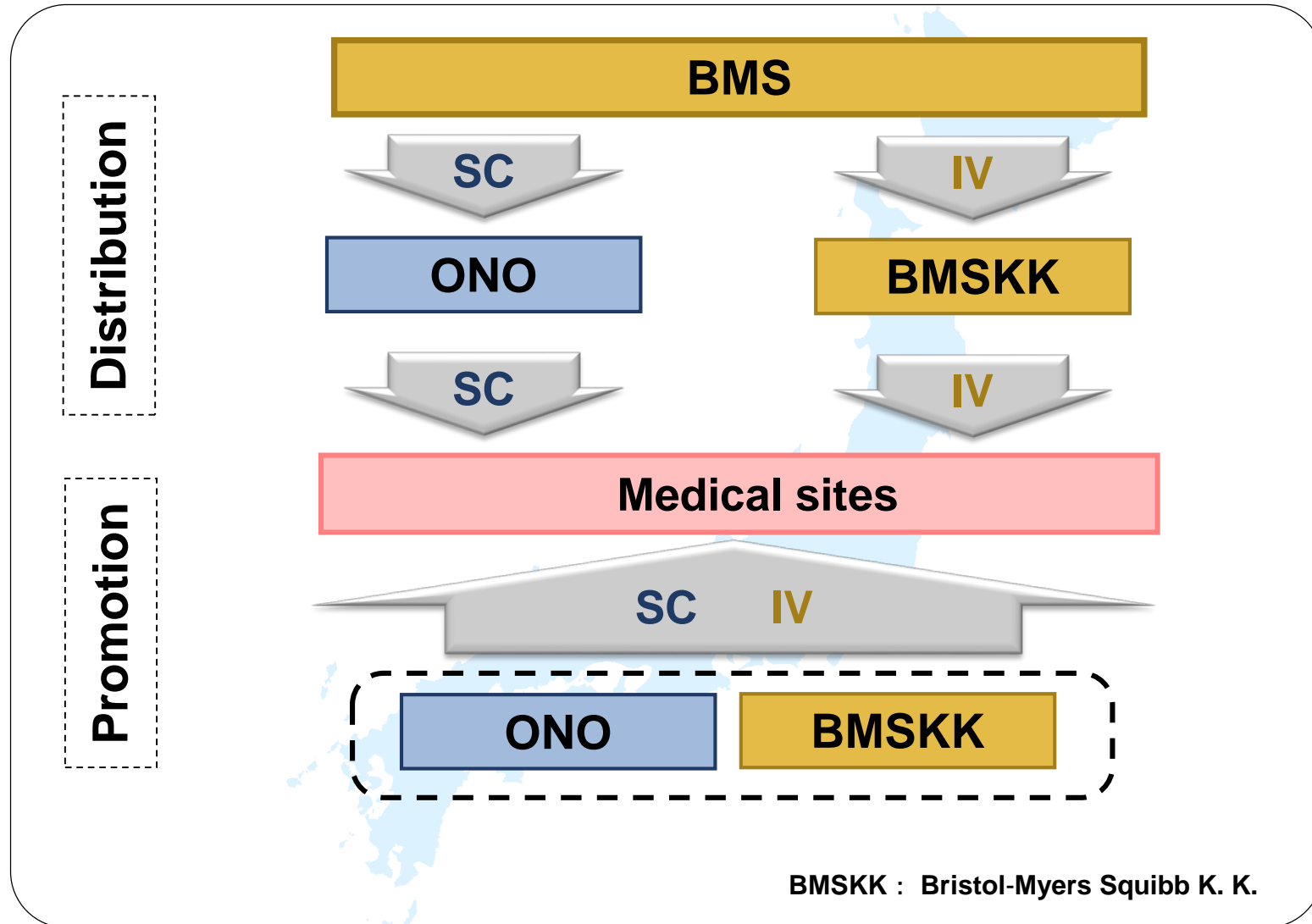
Development cost share

Profit/loss allocation



Collaboration with BMS for ORENCIA®

- Novel Biologic Inhibiting Upstream Inflammation in RA



Collaboration with AstraZeneca for FORXIGA®

- The First SGLT-2 Inhibitor in the World for Type-2 Diabetes
- In 2019, additional approval for Type-1 diabetes in Japan

