APPENDIX 14

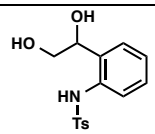
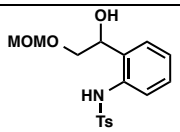
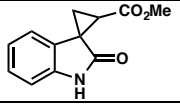
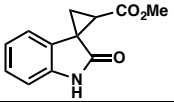
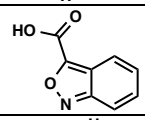
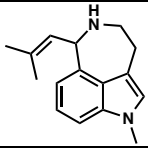
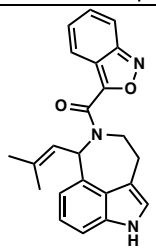
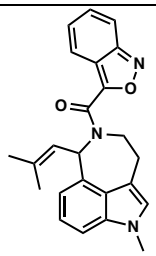
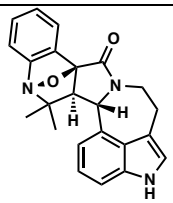
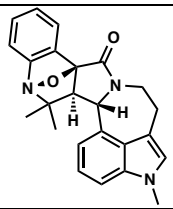
Notebook Cross-Reference for New Compounds

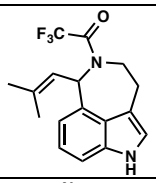
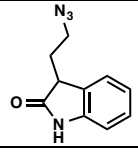
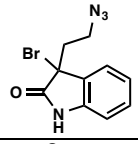
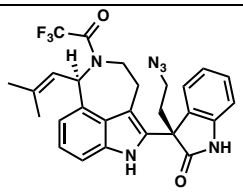
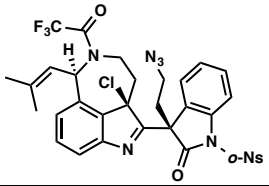
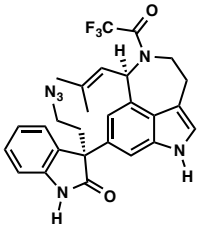
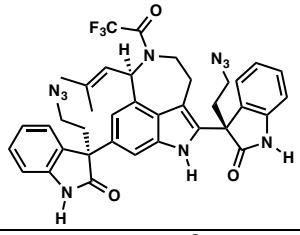
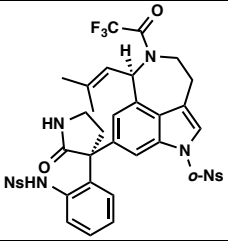
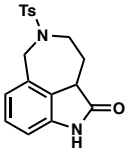
A14.1. Contents

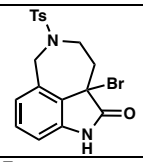
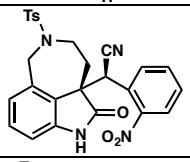
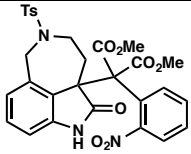
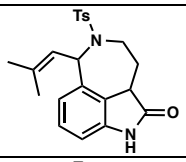
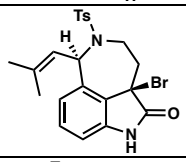
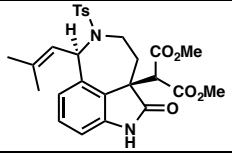
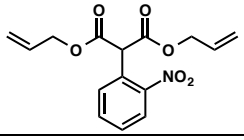
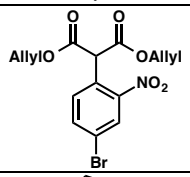
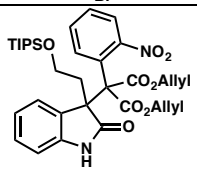
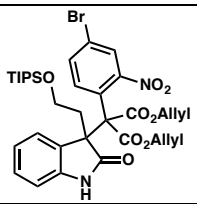
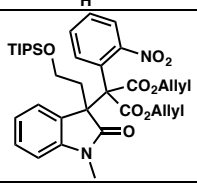
The following notebook cross-reference has been included to facilitate access to the original spectroscopic data obtained for the compounds presented within this thesis. The information is organized by chapter and sequentially by compound number, noting the instrument on which the primary NMR data was collected. All ^{1}H NMR, ^{13}C NMR, and any two-dimensional NMR data available as well as ^{19}F NMF and ^{31}P NMR, if applicable, are electronically stored on the NMR laboratory server (mangia.caltech.edu, most typically under the username 'shan') and on the Stoltz group server. All IR spectra were taken on the Stoltz group IR and an electronic copy of each spectrum as a postscript file can be found on the Stoltz group server. A hard copy of each spectrum has been provided with this text, as well. All laboratory notebooks are stored in the Stoltz group archive.

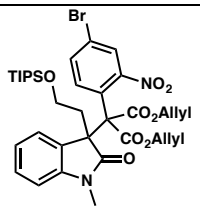
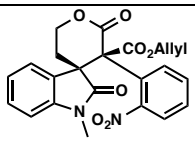
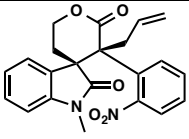
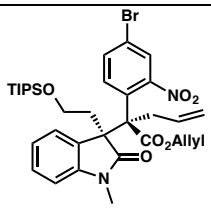
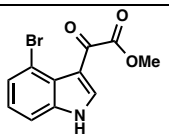
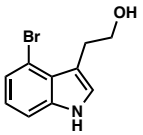
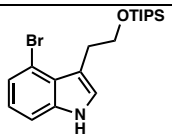
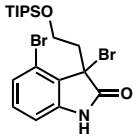
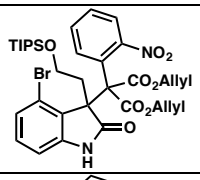
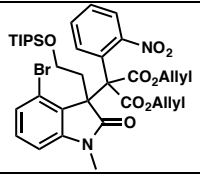
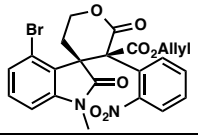
A14.2. Notebook Cross-Reference Tables

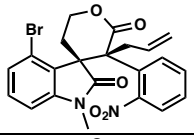
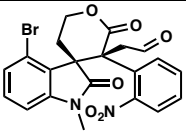
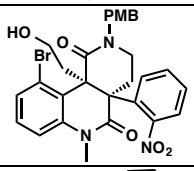
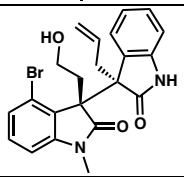
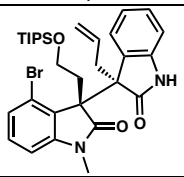
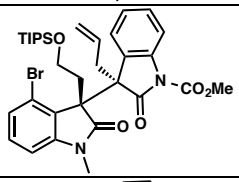
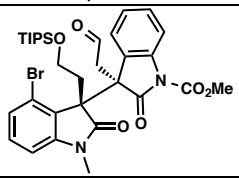
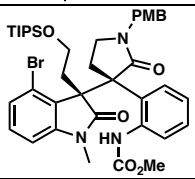
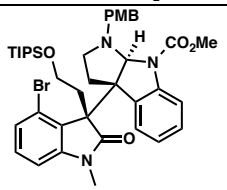
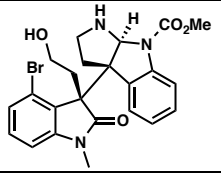
Table A14.1. *Notebook cross-reference for compounds in Chapter 1*

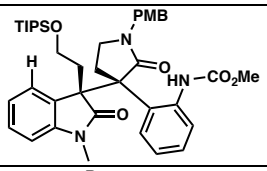
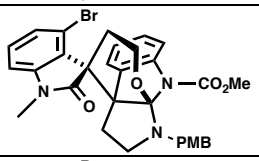
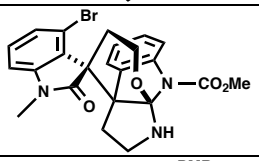
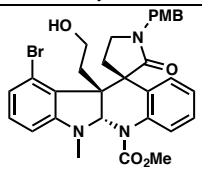
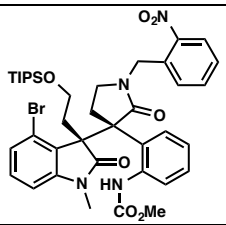
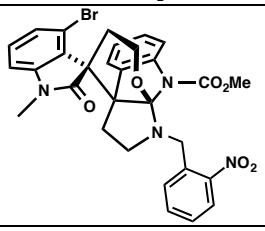
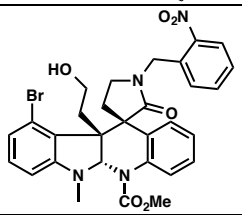
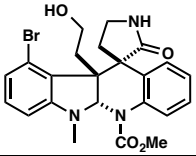
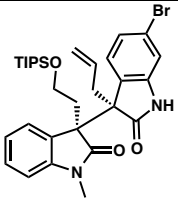
compound	chemical structure	^{1}H NMR	^{13}C NMR	IR
SI-1-2		JAMX-95	JAMX-95	JAMX-95
13		JAMX-75ii	JAMX-75ii	JAMX-75ii
16a		JAMXII-75ii	JAMXII-75ii	JAMXII-75ii
16b		JAMXII-75iii	JAMXII-75iii	JAMXII-75iii
20		JAMXVI-201	JAMXVI-201	JAMXVI-201
5		JAMXIII-45i	JAMXIII-45i	JAMXIII-45i
22		JAMXVI-157	JAMXVI-157	JAMXVI-157
19		JAMXVI-155	JAMXVI-155	JAMXVI-155
23		JAMXVI-161	JAMXVI-161	JAMXVI-161
24		JAMXVI-159	JAMXVI-159	JAMXVI-159

25		JAMXVI-41i	JAMXVI-41i	JAMXVI-41i
SI-1-7		JAMXV-243iii	JAMXV-243iii	JAMXV-243iii
26		JAMXV-243i	JAMXV-243i	JAMXV-243i
28		JAMXVI-85iib	JAMXVI-35iib	JAMXVI-35iib
29		JAMXV-233	JAMXV-233	JAMXV-233
30		JAMXVI-47iib	JAMXVI-47iib	JAMXVI-47iib
31		JAMXVI-85iv	JAMXVI-85iv	JAMXVI-85iv
32		JAMXVI-93	JAMXVI-93	JAMXVI-93
SI-1-11		SK-IV-27-2B	SK-IV-27-2B-c13	Communesin_SI_11_sk-3-281_SI-11

35		SK-5-201-2A	SK-5-201-2A_C13	Communesin_35_SK-5-125-35
37		SK-7-183-f6+7	SK-7-183-C13	37_SK-183-37
39		SK-4-219-2	SK-4-219-2_C13	39_SK-4-219-39
SI-1-13		SK-5-93-2B	SK-5-93-2B_C13	SI-13_SK-5_93_SI-13
40		SK-6-99-2A	SK-6-99-2A-C13	40_SK-6-99-40
42		SK-6-203-3-1H	SK-6-203-3-13C	42_SK-6-203-42
44		hsj_ch_comm_nas	hsj_ch_comm_nas	44_Comm_NAS
45		20130328_pero_ch_coupling_precursor	20130328_pero_ch_coupling_precursor	45_pero_coupling_precursor
46		FV-I-091	FV-I-091	46_coupling_MS
47		20130403_pero_ch_coupling	20130403_pero_ch_coupling	47_pero_coupling
48		FV-I-097-1	FV-I-097-1	48_MeI_MS

49		pero_ch_ methylation	pero_ch_ methylation	49_pero_ methylation
50		FV-I-179	FV-I-179	50_ lactonization
51		FV-I-189-1	FV-I-189-1	51_Tsuji_ model study
52		20130404_ pero_ch_ Tsuji	20130404_ pero_ch_ Tsuji	52_pero_tsuji
SI-1-16		03272012_ Oxyalyl_ column	03272012_ Oxyalyl_ column	SI-16_Com_ oxalyl
59		03282012_ Comm_ LAH	03282012_ Comm_ LAH_ reduction_C	59_Com_LAH reduc
SI-1-17		Comm_TIPS _protection	Comm_TIPS _protection	SI-17_Com _tips_protec
57		HSJ_ch_ communesin_ oxidative_ bromination	HSJ_ch_ communesin_ oxidative_ bromination	57_3-bromo oxindole
SI-1-18		ch_commune _coupling	hsj_comm_ coupling	SI-18_comm_ coupling
60		hsj_ch_ comm_ methylation	hsj_ch_ comm_ methylation	60_com_ Methylation
61		hsj_ch_TIPS _depro_cycle	hsj_ch_TIPS _depro_cycle	61_Tips_ depro_cycle

62		hsj_Tsuji	Tsuji_C	62_tsuji
63		20131003_ aldehyde_fl _ch	20131003_ aldehyde_fl _ch	63_Floh_ aldehyde
65		20131001_ Floh_RA	20131001_ Floh_RA	65_FL_ reductive_ amination
67		1_comm_ nitro reduction_ 02_17	1_comm_ nitro reduction_ 02_17	67_nitro recution
SI-1-19		TIPS_ protection	TIPS_ protection	SI-19_ TIPS Protection
68		20121017_ CO2Me_ Chara	20121017_ CO2Me_ Chara	68_ CO2Me_ protection
69		1_comm_ aldehyde_ 500	1_comm_ aldehyde_ 500	69_ aldehyde
54		Comm_ PMB_ cycle	Comm_ PMB_ cycle	54_PMB_ cycle
71		1_53_ final_ cyclization_ comm	1_53_ final_ cyclization_ comm	71_5,5_ fused_ AlH3
72		Comm_final_ 2nd_last	Communesin _final_C	72_5,5_ fused_depro

73		20120621_ LAH_new	20120621_ LAH_C	73_LAH_ Debro
74		20130920_ Tf2O_PMB _char	20130920_ Tf2O_PMB _char	74_Tf2O_ PMB
75		20130926_ pmb_depro	20130926_ PMB_ depro_cage_ C	75_PMB_ depro_cage
76		20130922_ Dibal_ PMB_ch	20130922_ Dibal_ PMB_ch	76_dibal_ PMB
78		20130507_ comm_ch_ reductive_ amination	20130507_ comm_ch_ reductive_ amination	78_comm_ nitro_ reductive amination
SI-1-20		20130507_ Comm_ Tf2O	20130507_ comm_ Tf2O_C	SI-20_ch_ caged nitro
79		20130322_ dibal_nitro_ rearr	20130322_ dibal_nitro_ rearr	79_dibal_ nitro
53		20130325-final-communesin-CDCl3	20130325-final-communesin-CDCl3	53_comm_ final
82		20130405_ pero_Ti_NO2 _reduction	20130405_ pero_Ti_NO2 _reduction	82_pero_Ti_ cyclization

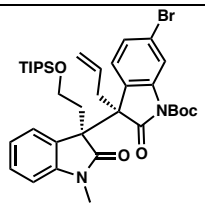
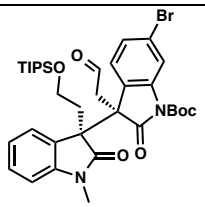
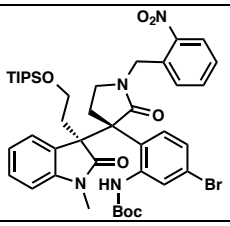
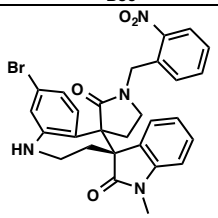
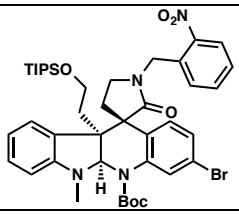
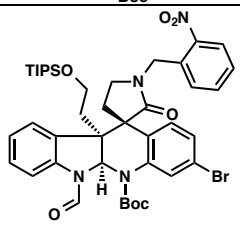
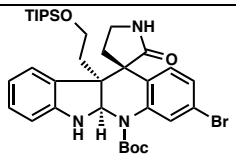
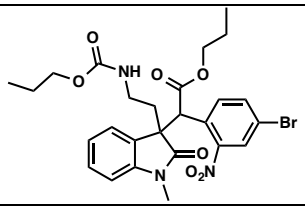
83		20130407_ pero_Boc_ protection	20130407_ pero_Boc_ protection_ch	83_pero_Boc _protection
81		20130408_ pero_ch_ aldehyde	20130408_ pero_ch_ aldehyde	81_pero_ aldehyde
84		20130409_ pero_ nitrobenzyl_ reductive_ amin	20130508_ pero_ reductive_ amination	84_pero_ nitro_ reductive_ amination
86		20130410_ pero_Tf2O	20130409_ pero_cage_C	86_pero_Tf2O
87		20130415_ pero_AlH3	20130414_ AlH3_C_ pero	87_pero_AlH3
88		20130502_ pero_PDC	20130503_ pero_PDC_C	88_pero_pdc
80		20130521_ pero_final_2	20130521_ pero_final_C	80_pero_final

Table A14.2. *Notebook cross-reference for compounds in Appendix 3*

compound	chemical structure	^{1}H NMR	^{13}C NMR	IR
105		20131031_ hydrazine	—	—

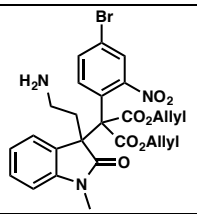
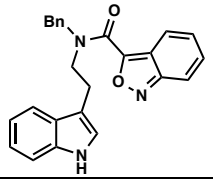
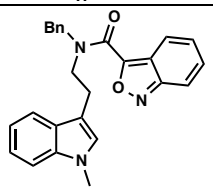
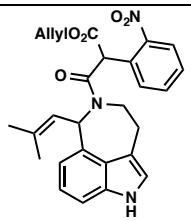
106		20131108_MeNH2 -major	—	—
112		20131125_ coupling	—	—
114		20131202_ methylation	—	—
130		20131217_ coupling	—	—

Table A14.3. *Notebook cross-reference for compounds in Appendix 4*

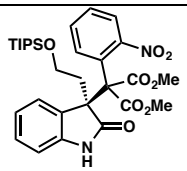
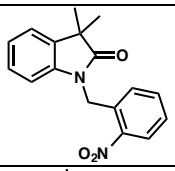
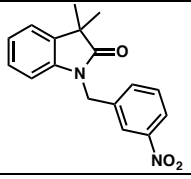
compound	chemical structure	^{1}H NMR	^{13}C NMR	IR
136		CWL-VI-141	CWL-VI-141	CWL-VI-141-oxindole

Table A14.4. *Notebook cross-reference for compounds in Chapter 2*

compound	chemical structure	^{1}H NMR	^{13}C NMR	IR
137a		20130830_ o-nitro_ch	20130830_ o-nitro_ch	3a_depro_ o-nitro
137b		20130830_ m-nitro	20130830_ m-nitro	3b_depro_ m-nitro

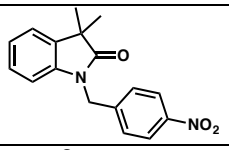
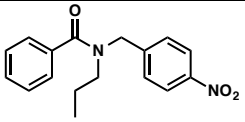
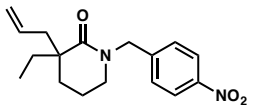
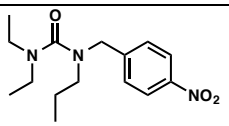
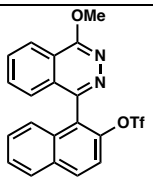
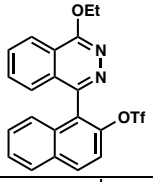
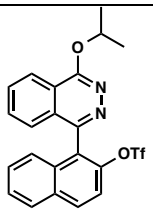
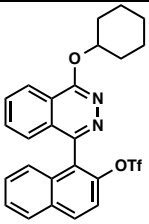
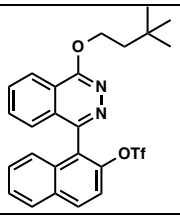
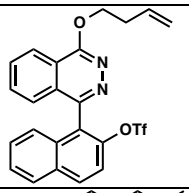
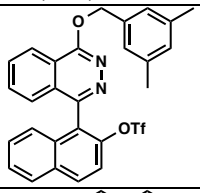
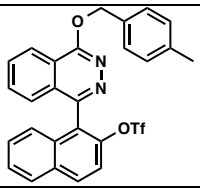
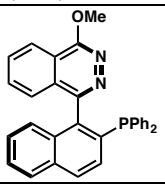
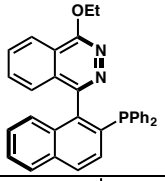
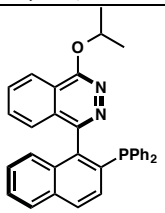
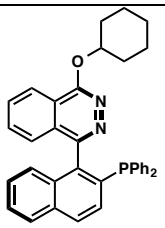
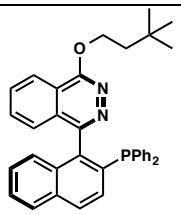
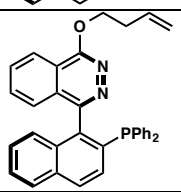
137c		20130830_ p-nitro_ch	20130830_ p-nitro_ch	3c_depro_ p-nitro
139		CH-EDCI	CH-EDCI	7_depro_ propylbenzamide _pt
141		20131024_ Boger_ substrate_ protection_ ch(C/H)	20131024_ Boger_ substrate_ protection_ ch(C/H)	9_depro_ r-lactam_pt
143		GFMI-CARBA MOYL	GFMI-CARBA MOYL	11_deprotection _urea

Table A14.5. *Notebook cross-reference for compounds in Chapter 3*

compound	**chemical structure**	**^{1}H NMR**	**^{13}C NMR**	**IR**
157a		PINAP_ OMe_OTf	PINAP_ OMe_OTf	PINAP_ sjh_OMe
157b		PINAP_Et_OTf _ch_H_C	PINAP_Et_OTf _ch_H_C	PINAP_ sjh_Et
157c		PINAP_iPr_OTf	PINAP_iPr_OTf	PINAP_ OTf_iPr_2
157d		SJHXII_127_ A_ch_H_C	SJHXII_127_ A_ch_H_C	PINAP_ sjh_A_ cyclohexyl
157e		PINAP_L_ again_tBu	PINAP_L_ again_tBu	PINAP_ OTf_L_tBu

157f		PINAP_H_ OTf	PINAP_H_ OTf	PINAP_ sjh_H_ homoallyl
157g		PINAP_N_ OTf	PINAP_N_ OTf	PINAP_ sjh_ 3,5-dimethyl phenyl
157h		PINAP_ 4-methylbenzyl _OTf_C_H_	PINAP_ 4-methylbenzyl _OTf_C_H_	PINAP_ OTf_ 4-MeBn
158a		PINAP_OMe character_P_ cdcl3_ 20140626_	PINAP_OMe character_P_ cdcl3_ 20140626_	PINAP_ P_OMe
158b		PINAP_Et_P _cdcl3_ 20140626_	PINAP_Et_P _cdcl3_ 20140626_	PINAP_P _Et
158c		PINAP_iPr_P _cdcl3_ 20140626_	PINAP_iPr_P _cdcl3_ 20140626_	PINAP_P_ iPr
158d		PINAP_P_ char_H_c	PINAP_P_ char_H_c	PINAP_P_ A
158e		PINAP_L_ P_HC	PINAP_L_ P_HC	PINAP_P_ L
158f		PINAP_H_P Ch(H,C)	PINAP_H_P Ch(H,C)	PINAP_P_ H

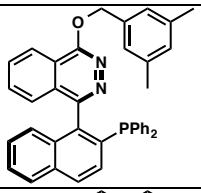
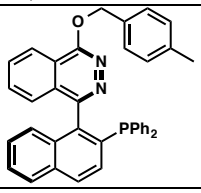
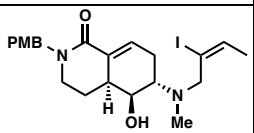
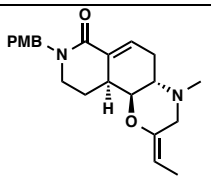
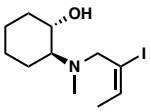
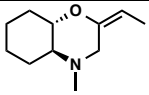
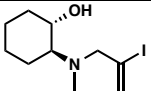
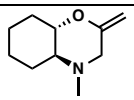
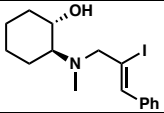
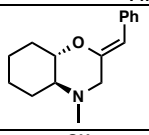
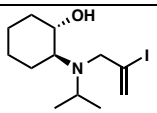
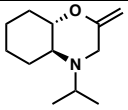
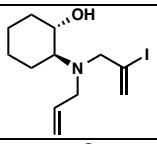
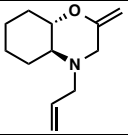
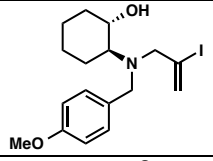
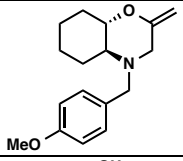
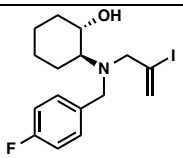
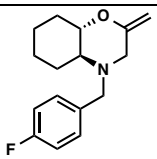
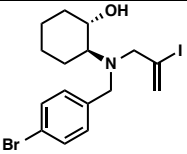
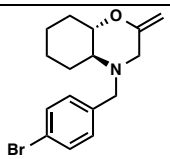
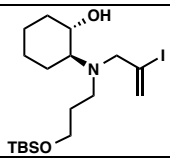
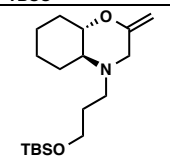
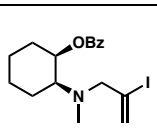
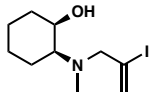
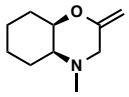
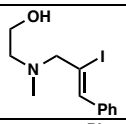
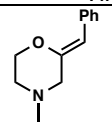
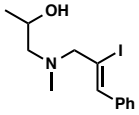
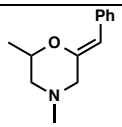
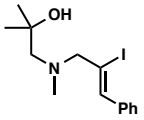
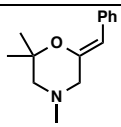
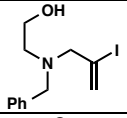
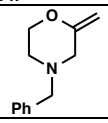
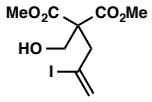
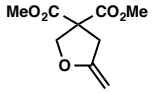
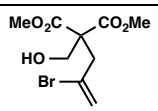
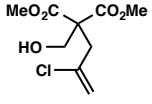
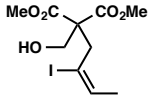
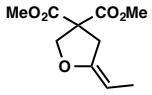
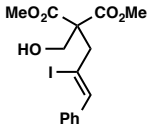
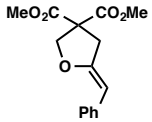
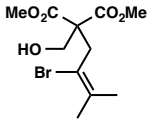
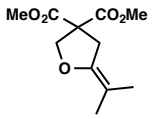
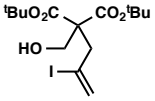
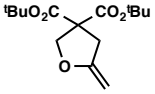
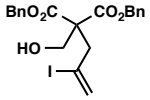
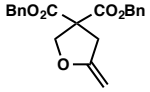
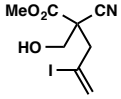
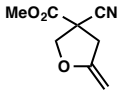
158g		PINAP_N_ PPh2_Ch(C,H)	PINAP_N_ PPh2_Ch(C,H)	PINAP_P_ N
158h		PINAP_ 4-methylbenzyl _P(H,C)	PINAP_ 4-methylbenzyl _P(H,C)	PINAP_P_ 4-methylBn

Table A14.6. *Notebook cross-reference for compounds in Chapter 4*

compound	chemical structure	^{1}H NMR	^{13}C NMR	IR
167		SJHXI_Alisto_ Ni_SM	SJHXI_Alisto_ Ni_SM	Alistonitrine _iodo_NiSM
169		SJHXI_ Alistonitrine_ Ni	SJHXI_195_ Alisto_Ni_C_ 15	Alistonitrine _Ni_SJHXI_ 195
170a		SJHXIII_ model substrate_ ch_H_C	SJHXIII_ model substrate_ ch_H_C	Ni_C_O_ Ni_catalyzed SJHXIII_ model substrate
171a		SJHXIII_Ni_ C–O_ch_H	SJHXIII_Ni_ C–O_ch_C	Ni_C_O_ SJHXIII_Ni_ C_O_
170b		RD1-76column	RD1-76carbon	RD1-76
171b		RD1-212column	RD1-212column	RD1-212
170c		SJHXV_19_Ph _ch_2	SJHXV_19_Ph _ch_2	Ni_C_O_ SJHXV_19_Ph _substrate
171c		SJHXV_Ph_ PDT	SJHXV_Ph_ PDT	Ni_C_O_ SJHXV_27_ Ph_PDT
170d		SJHXIV_281_ isopropyl	SJHXIV_281_ isopropyl	Ni_C_O_ SJHXIV_281_ iPr

171d		SJHXIV_297_ iPr_PDT	SJHXIV_297_ iPr_PDT	Ni_C_O_ SJHXIV_297_ iPr_PDT
170e		SJHXIV_281_ allyl	SJHXIV_281_ allyl	Ni_C_O_ SJHXIV_281_ allyl
171e		SJHXIV_245 _allyl_PDT	SJHXIV_245 _allyl_PDT	Ni_C_O_ SJHXIV_297_ allyl
170f		SJHXV_15_ PMB_ch_ H_C_2	SJHXV_15_ PMB_ch_ H_C_2	Ni_C_O_ SJHXV_15_ PMB_substrate
171f		SJHXV_25_ PMB_PDT	SJHXV_25_ PMB_PDT	Ni_C_O_ SJHXV_25_ PMB_PDT
170g		SJHXV_29_ 4-fluoro_ substrate	SJHXV_29_ 4-fluoro_ substrate	Ni_C_O_ SJHXV_29_ 4_F_ substrate
171g		SJHXV_37_ 4-Fluoro_ PDT	SJHXV_37_ 4-Fluoro_ PDT	Ni_C_O_ SJHXV_37_ 4_F-PDT
170h		SJHXV_61_ p-Br_ substrate	SJHXV_61_ p-Br_ substrate	Ni_C_O_ SJHXV_61_ pBr_ substrate
171h		SJHXV_65_ 4-Br_char_ inDCM	SJHXV_65_ 4-Br_char_ inDCM	Ni_C_O_ SJHXV_65_ p-Br_PDT
170i		SJHXV_31_ TBS_ substrate	SJHXV_31_ TBS_ substrate	Ni_C_O_ SJHXV_31_ TBS_substrate
171i		SJHXV_37_ TBS_ PDT	SJHXV_37_ TBS_ PDT	Ni_C_O_ SJHXV_37_ TBS_PDT
SI-4-6		SJHXV_77_ Mitsunobu_ 6membered	SJHXV_77_ Mitsunobu_ 6membered	Ni_C_O_ SJHXV_79_ Mitsunobu_ 6_membered

170j		SJHXV_87_ hydrolysis_ 6_membered	SJHXV_87_ hydrolysis_ 6_membered	Ni_C_O_ SJHXV_87_ hydrolysis_ 6-membered
171j		SJHXV_89_6_ membered_cis _cyclization	SJHXV_89_6_ membered_cis _cyclization	Ni_C_O_ SJHXV_89_cis _6-membered_ cyclization
172a		RD1-140column	RD1-140column	RD1-230
173a		RD1-168column	RD1-168column	RD1-168
172b		SJHXIV_301_ monomethyl_ H	SJHXIV_301_ monomethyl_C	Ni_C_O_ SJHXIV_301_ monomethyl_ substrate
173b		SJHXV_13_ monomethyl_ PDT	SJHXV_13_ monomethyl_ PDT	Ni_C_O_ SJHXV_13_ mono_PDT
172c		SJHXIV_299_ dimethyl_ch_ H	SJHXIV_299_ dimethyl_ch_C	Ni_C_O_ SJHXIV_299_ dimethyl_ substrate
173c		SJHXV_11_ dimethyl_PDT	SJHXV_11_ dimethyl_PDT	Ni_C_O_ SJHXV_11_ dimethyl_PDT
172d		RD1-194column	RD1-194column	RD1-194
173d		RD1-206column	RD1-206carbon	RD1-206
174a		SJHXIII_289_ SM_ch	SJHXIII_289_ SM_ch	Ni_C_O_ SJHXIII_289_ cyclization_ SM
175a		SJHXIII_289_ benzene	SJHXIII_289_ benzene	Ni_C-O_ SJHXIII_289_ cyclization
174b		SJHXIV_31_ bromide_ substrate	SJHXIV_31_ bromide_ substrate	Ni_C-O_ SJHXIV_31_ vinylbromide
174c		SJHXIV_177_ vinyl_chloride _H	SJHXIV_177_ vinyl_chloride _C	Ni_C_O_ SJHXIV_177_ vinyl_chloride

				_substrate
174d		SJHXIV_151_ methyl_vinyl_ iodide_H_C	SJHXIV_151_ methyl_vinyl_ iodide_H_C	Ni_C_O_ SJHXIV_151_ methylsub_ vinyliodide_ substrate
175d		SJHXIV_157_ methylsub_ cyclization	SJHXIV_157_ methylsub_ cyclization	Ni_C_O_ SJHXIV_147_ methylsub_ vinyliodide_ cyclization
174e		SJHXIV_167_ Ph_substituted _substrate	SJHXIV_167_ Ph_substituted _substrate	Ni_C_O_ SJHXIV_167_ Ph_substituted _substrate
175e		SJHXIV_169_ ph_sub_ cyclization	SJHXIV_169_ ph_sub_ cyclization	Ni_C_O_ SJHXIV_169_ Ph_sub_ cyclization
174f		SJHXIV_77_ gemdimethyl_ substrate	SJHXIV_77_ gemdimethyl_ substrate_C	Ni_C_O_ SJHXIV_77_ gemdimethyl_ substrate
175f		SJHXIV_85_ gemdimethyl_ PDT	SJHXIV_85_ gemdimethyl_ PDT	Ni_C_O_ SJHXIV_83_ gemdimethyl_ PDT
174g		SJHXIV_47_ tbutyl_ substrate	SJHXIV_47_ tbutyl_ substrate	Ni_C_O_SJHX IV_47_tbutyl_ substrate
175g		SJHXIV_47_ tbu_cyclization	SJHXIV_47_ tbu_cyclization	Ni_C_O_ SJHXIV_57_ tbutyl_ cyclization
174h		SJHXIV_113_ Bn_substrate_ ch	SJHXIV_113_ Bn_substrate_ ch	Ni_C_O_ SJHXIV_113_ Bn_substrate
175h		SJHXIV_117_ Bn_cyclization	SJHXIV_117_ Bn_cyclization	Ni_C_O_ SJHXIV_117_ cyclization
174i		SJHXIV_67_ cyanatesubstrat e_down	SJHXIV_67_ cyanatesubstrat e_down	Ni_C_O_ SJHXIV_67_ cyanate_ substrate
175i		SJHXIV_71_ cha_proton_2	SJHXIV_71_ cyanate_ cyclization	Ni_C_O_ SJHXIV_71_ cyanate_ cyclization

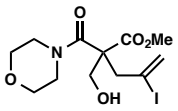
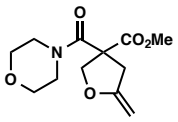
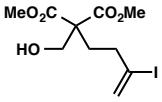
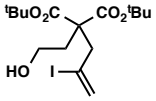
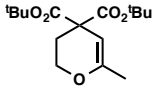
174j		SJHXIV_191_ morpholine_ substrate_H	SJHXIV_191_ morpholine_ substrate	Ni_C_O_ SJHXIV_191_ morpholine_ substrate
175j		SJHXIV_195_ cyclization_H	SJHXIV_195_ cyclization_C	Ni_C_O_ SJHXIV_195_ morpholine_ cyclization
174k		SJHXIV_37_ CH2CH2_ substrate	SJHXIV_37_ CH2CH2_ substrate	Ni_C_O_ SJHXIV_37_C H2CH2vinylio dide_substrate
174l		SJHXV_179_h ydrolysis_H_c h	SJHXV_179_c h_hydrolysis_ H_C	Ni_C_O_ SJHXV_179_ hydrolysis
175l		SJHXV_183_ cyclization_ch _H_C	SJHXV_183_ cyclization_ch _H_C	Ni_C_O_ SJHXV_183_ cyclization

Table A14.7. *Notebook cross-reference for compounds in Appendix 9*

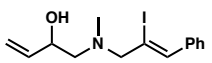
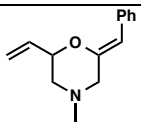
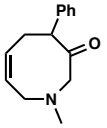
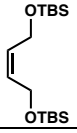
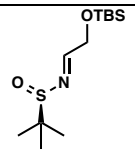
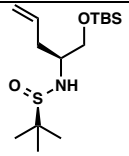
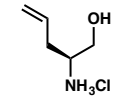
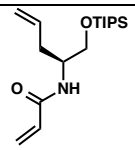
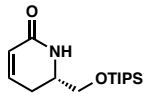
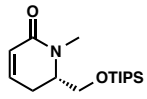
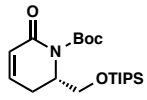
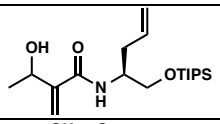
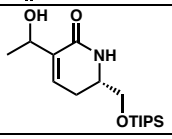
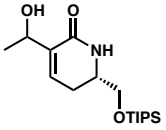
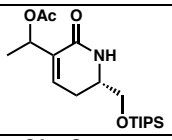
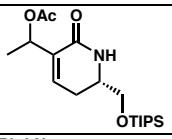
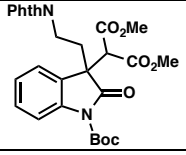
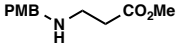
compound	chemical structure	^{1}H NMR	^{13}C NMR	IR
192		SJHXV_241_ alkylation_ch	SJHXV_241_ C_moretime	Ni_Claisen_ SJHXV_241_ alkylation
193		SJHXV_243_Ni _cyclization_ bottom_major	SJHXV_243_Ni_ cyclization_C	Ni_Claisen_ SJHXV_245_ Claisen_sub
194		SJHXV_261_ Claisen_H	SJHXV_269_ Claisen_C	Ni_Claisen_ SJHXV_261_ Claisen PDT

Table A14.8. *Notebook cross-reference for compounds in Appendix 11*

compound	chemical structure	^{1}H NMR	^{13}C NMR	IR
201		SJHVII_77_ TBS_protection	—	—
202		SJHXVI_19_ ozonolysis	SJHXVI_19_ ozonolysis	Alistonitrine_ SJHXVI_19_ ozonolysis

203		SJHXVI_21_ sulfinamide_H	SJHXVI_21_ sulfinamide_C	Alistonitrine_ SJHXVI_21_ sulfinamide
204		SJHXVI_23_ allyladdn_ major	SJHXVI_23_ allyladdn_ major	Alistonitrine_ SJHXVI_23_ allyl_addn-major
205		SJHXVI_25_ amine_MeOD	SJHXVI_25_ amine_MeOD	Alistonitrine_ SJHXVI_25_ amine2
206		SJHVII_167_ acylation	—	Alistonitrine_ SJHXVI_27_ amine_TIPS
207		SJHXVI_ Grubbs_ pdt	SJHXVI_ Grubbs_ pdt	Alistonitrine_ SJHXVI_ Grubbs_PDT
208a		SJHXVI_15_ Me_ characterization	SJHXVI_15_ Me_ characterization	Alistonitrine_ SJHXVI_ 15_Me
208b		SJHXVI_17_ Boc	SJHXVI_17_ Boc	Alistonitrine_ SJHXVI_ 17_Boc
213		SJHXVI_29_ amide_2	SJHXVI_29_ amide_2	Alistonitrine_ SJHXVI_ 29_amide
215a		SJHXVI_31_ Grubbs_up	SJHXVI_31_ Grubbs_up	Alistonitrine_ SJHXVI_ 31_Grubbs_up
215b		SJHXVI_31_ Grubbs_down	SJHXVI_31_ Grubbs_down	Alistonitrine_ SJHXVI_ 31_Grubbs_ down
199a		SJHVIII_29_ up_acetate	—	—
199b		SJHVIII_29_ down_acetate	—	—
217		SJHVIII_33_ Boc_protection	—	—
SI-A11-1		SJHIX_211_ RA_PMB	—	—

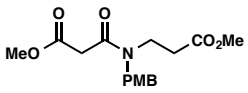
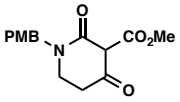
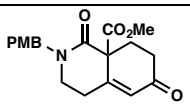
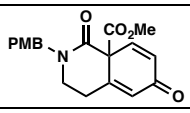
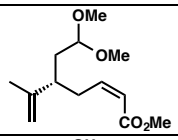
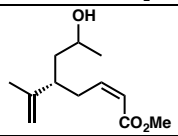
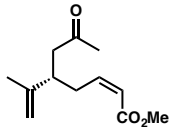
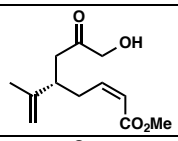
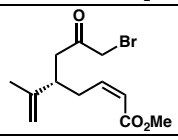
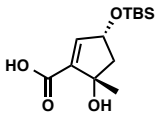
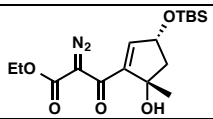
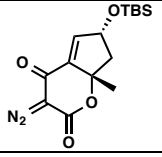
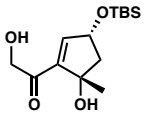
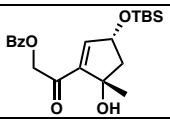
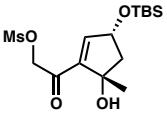
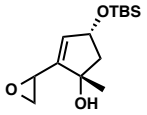
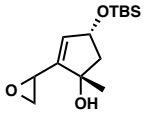
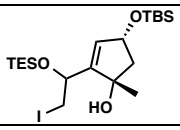
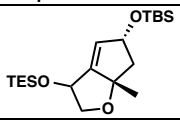
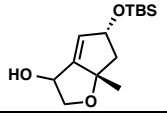
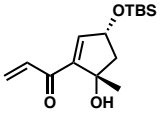
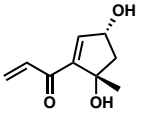
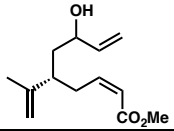
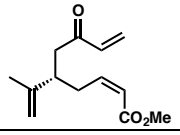
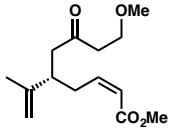
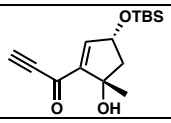
223		SJHIX-213-Acylation_ PMB	—	—
224		SJHIX-215-Dieckmann-pmb	—	—
225		SJHIX_221_ Robinson	—	—
226		SJHIX_239_ SeO2	—	—

Table A14.9. *Notebook cross-reference for compounds in Chapter 5*

compound	**chemical structure**	**^{1}H NMR**	**^{13}C NMR**	**IR**
248		SJHXI_201_PDT	SJHXI_201_ Still_Gennari _C	Ineleganolide _SJHXI_201_ Still_Gennari
251		SJHXI_INELE_ MeAddn_ch	SJHXI_INELE_ MeAddn_ch	Inele_SJHXI _211_Me_ Addn_PDt
252		SJHXI_211_ swern_H	SJHXI_211_ swern_C	Ineleganolide_ SJHXI_211_ Swern
254		SJHXI_ Ineleganolide_ mcpba_H	SJHXI_ Ineleganolide_ mcpba_C	Ineleganolide_ SJHXI_Inele_ mcpba
244b		SJHXV_217_ 7_bromide	SJHXV_217_ 7_bromide_C	Ineleganolide_ SJHXV_217_ NBS
260		SJH_ ineleganolide _acid_ characterization	SJH_ ineleganolide _acid_ characterization	Ineleganolide_ SJH_ acid
264		SJHXII_235_ MnO2	SJHXII_235_ MnO2_C	Ineleganolide_ SJHXII_Rh_ SM_diazo
266		SJHXII_201_H	SJHXII_201_C	Ineleganolide_ SJHXII_Rh_ TLC_prep

268		SJHXIII_25_ Rubottom_ characterization _H	SJHXIII_25_ Rubottom_ characterization _C	Ineleganolide_ SJHXIII_25_ rubottom_ RobFrag
269		SJHXIII_39_ Benzoylation_H	SJHXIII_39_ Benzoylation_C	Ineleganolide_ SJHXIII_39_ benzoyl
270		SJHXIII_27_ Mesyl_ characterization _H	SJHXIII_27_ Mesyl_ characterization _C	Ineleganolide_ SJHXIII_27_ Mesylate
271a		SJHXIII_215_ 1_H	SJHXIII_215_ 1_C	Ineleganolide_ SJHXIII_231 _epoxide_1_ cosy
271b		SJHXIII_215_ 2_H	SJHXIII_215_ 2_C	Ineleganolide_ SJHXIII_231 _epoxide2_ corey
274		SJHXV_201_ TES	SJHXV_201_ TES	Ineleganolide_ SJHXV_201 _TES
275		SJHXV_221_ cyclization_H	SJHXV_221_ cyclization_C	Ineleganolide_ SJHXV_221 _cyclization
276		SJHXV_239_ TES_depro_H	SJHXV_239_ TES_depro_C	Ineleganolide_ SJHXV_239 _TES_depro
285		SJHXIII_MnO2 _ch_H	SJHXIII_MnO2 _ch_C	Ineleganolide_ SJHXIII_ MnO2_after vinyladdn
281		SJHXIII_107_ TBAF_H	SJHXIII_107_ TBAF_C	Ineleganolide_ SJHXIII_105 _TBAF_ desilylation
286		SJH_vinyl_ addn_ characterization	SJH_vinyl_ addn_ characterization	Ineleganolide_ SJH_vinyl_ addn_left part
287		SJHXIII_41_ swern_H-ch	SJHXIII_41_ swern_C-ch	Ineleganolide_ SJHXIII_ 81_Swern
288		SJHXIII_85_ OMe_addn_H	SJHXIII_85_ OMe_addn_c	Ineleganolide_ SJHXIII_ 89_OMe_addn _unexpected

294		SJHXV_271_ MnO2_ oxidation	SJHXV_271_ MnO2_ oxidation	Ineleganolide_ SJHXV_271_ MnO2

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About the Author

Seojung Han was born on March 2nd, 1985 in Gumi, Gyeongsang buk-do Province, South Korea. She spent her early life in the company of her parents and her younger brother Sangjun in Gumi. Seojung attended Gyeongbuk Foreign Language High School, where she learned foreign languages such as English, Japanese and Chinese and developed interest in science.

In 2004, she began her undergraduate studies at Sogang University in Seoul, Korea. Seojung became attracted to organic chemistry because any of the desired new compounds could be prepared by organic synthesis. Eager to apply the knowledge from her studies, Seojung joined Prof. Duck-Hyung Lee's laboratory as an undergraduate research assistant and practiced multi-step reactions and synthesized heterocycles related to medicinal chemistry. Seojung received bachelor's degree in chemistry *summa cum laude* from Sogang University in 2008.

Upon graduation, Seojung joined the research group of Prof. Duck-Hyung Lee for an M.S. degree in organic chemistry at Sogang University and completed the enantioselective synthesis of a C9–C17 fragment of (–)-amphidinolide O and P. In addition, she synthesized fragments of ascospiroketal B and arenicolide A. Upon obtaining an M.S. degree in 2010 *summa cum laude*, she worked at the Korea Research Institute of Chemical Technology in the medicinal chemistry department to contribute to the development of novel drug candidates for treatment of metabolic diseases and new fluorescent small molecule probes for staining blood vessels.

In the fall of 2011, Seojung moved to Pasadena, California in USA, where she began her doctoral studies in synthetic organic chemistry at the California Institute of Technology. In December of 2011, she eagerly joined the research group of Prof. Brian M. Stoltz to study total synthesis of natural products and development of new

methodologies. Seojung earned her Ph.D. in chemistry in 2016. In September of 2016, she will continue her postdoctoral research under the guidance of Prof. F. Dean Toste at University of California, Berkeley.